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SOVIET INDUSTRY IN MID-1961

Appendix:

Employment in the Soviet Economy:  
An Interim Solution to a Puzzle.  
(Soviet Studies, April 1961  
By G. Warren Nutter)

p. 1

Largely as a result of the shorter working week, but also partly perhaps due to more honest reporting from factories throughout the USSR, the rate of expansion of the Soviet economy again decreased modestly during the year to mid-1961. The full report of the Central Statistical Administration (Pravda, 21 July 1961) confirms that the trend established a year ago,<sup>1</sup> when 20,000,000 workers had switched to the seven-hour day, continues now that the whole state labor force is averaging approximately 39.4 hours per week:

	<u>% Growth of Gross Industrial Output</u>
mid 1958 - mid 1959	+12% ( <u>Pravda</u> , 14 July 1960)
mid 1959 - mid 1960	+10% ( <u>Pravda</u> , 13 July 1960)
mid 1960 - mid 1961	+ 8.4%

In the past two years the growth rate has there been cut by almost a third

Expressed in another way, the gradual deceleration in the pace of expansion can be shown as:

	<u>% Overfulfillment of Plan</u>
mid 1958 - mid 1959	+5%
mid 1959 - mid 1960	+4%
mid 1960 - mid 1961	+2%

This more modest rate of boom is due to the adverse effects on productivity of the 39-hour week,<sup>3</sup> not to any serious decline in the intake of labor. The productivity figures show this clearly:

	<u>% Growth Productivity</u>
mid 1958 - mid 1959	+8%
mid 1959 - mid 1960	+6.4%
mid 1960 - mid 1961	+3.5%*

\*Hourly productivity is shown as +11%

1 See Background Information, 15 July 1960.

2 Average daily output reported as +9%.

3 Appreciably shorter than that worked in W. Europe.

The CSA reports an increase of 4.2 million workers and employees during the year, but about a million of these were formerly classified as members of the industrial cooperative artels and another million are ex-kolkhozniki who have been compulsorily reclassified as state farm workers. Thus the real increase in the state labor force was probably much the same as last year (2,200,000 -- see Background Information, 15 July 1960), and it must have been swollen by the progress of the fourth demobilization. Since the transfer from the armed forces to industry has now been suspended by Khrushchev, it must be presumed that the labor intake figures for the full year 1961 will be less impressive, perhaps to the tune of some 200,000 men. Therefore unless productivity now begins to pick up again it seems likely that the full year's output report will show a further decrease in the growth rate.

It is a conspicuous fact that the latest Soviet productivity figure (+3.5%) is well below that recorded for W. Germany last year (+7.3%, see Geschäftsbericht der Deutschen Bundesbank 1960, p. 22) and below the recent figures from countries such as France, Italy and Japan.

The decision taken last winter to switch some investment resources from the steel industry to light industry and agriculture has not yet begun to show results. Light industry grew by only 2% during the year, compared with 9% last year. On the other hand the food industry showed a gain in output of 6%, suggesting that consumers had to spend most of their additional purchasing power on food rather than other types of consumption.

In this connection the expansion of average wages of workers and employees (+4%) was striking in that it implies a major, though no doubt transient and unplanned, defeat for the Soviet dogma on wages whereby productivity is assumed always to have to take precedence. In this case the growth of productivity lagged behind, and when the agricultural failure of 1960 which led to higher kolkhoz market prices is also considered, it will be noted that the inflationary pressures must have been considerable (see New York Times, 24 July 1961).

Heavy industry appears to have made steady progress during the year, with exceptionally high growth rates reported for natural gas (+28%), electric locomotives (+26%) and agricultural machinery (+28%).

Artificial and synthetic fibre output rose by 22%, instrument manufacture by 20% and ferro-concrete parts and assemblies by 23%.

In light industry the biggest growth rates were in washing machines (+41%, with 583,000 machines made in the first half-year), refrigerators (+27%, 326,000 made) and TV sets (+17%, 934,000 made). However some of the washing machines must have been going into stock, since sales are reported to have increased by only 27%.



The most serious sales failures seem to have been in meat and meat products (-10% on the first half of last year) and in cotton cloth (-9%).

State profits from the economy as a whole rose by 5%, or in other words 1% faster than wages in the state sector. In view of the greater volume of output this cannot be considered impressive, particularly when compared with the 17% rise in profits last year. Khrushchev's margins would seem to be dwindling, but the reduction may be only temporary if it has been caused by the cut in hours worked per week.

Once again the growth of Aeroflot's traffic is the most outstanding feature in the transport section. Passengers carried showed a rise of 28% (+38% last year) and air freight increased by 16%.

Investment during the 1st half-year was up by 12.2 milliard rubles, compared with 11.3 milliards last year (+8%). Probably for the first time the growth of investment in agriculture showed the fastest expansion (+19%) with light industry (+16%) and the chemicals industry (+12%) in second and third places. Thus there is clear evidence that the deemphasis of heavy industry announced in December is beginning to work its way through the pipe-line.

The rate of expansion of retail trade (+3.5%) showed a marked decline by comparison with last year (+9%). Taking into account the population growth (218,000,000 on 1 July 1961) this was not an impressive showing. Foreign trade put up an even worse display, with a growth of only 2% (cf. 6% in 1959), but presumably this was due largely to China's economic difficulties and the consequent reduction in Sino-Soviet exchanges.

The demographic losses of the war years again held down the number of graduates from the secondary schools to 1,000,000 for the second year running. The total numbers in school reached 36,000,000 (cf. 33,300,000 last year) with 590,000 in boarding schools (cf. 400,000 in 1960).

Despite all the emphasis on the housing drive, 15,000,000 square meters were completed, 2,000,000 less than in 1960. However productivity in building rose by 4%, and hourly productivity by 16%. Consequently there is clear evidence of the implementation of the gradual cuts in the number of building workers announced in Pravda<sup>4</sup> (8 August 1960), which are due to reduce the building labor force by one million during the seven-year plan (i.e. by 1965).

Thus the overall impression left by the CSA's report is one of continuing vigorous growth, at a rate considerably reduced by the seven-hour day.<sup>5</sup> During the remainder of this year a

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<sup>4</sup> See Background Information, 27 October 1960.

<sup>5</sup> Allowing for statistical inflation, the true growth rate may have been about 7½%.

new acceleration seems improbable due to Khrushchev's renewed interest in maintaining an unnecessarily large military establishment. The new consumer-oriented investment policies, despite the set-back due to the diversion of 3,000,000,000 rubles to military purposes, might well be expected to begin to show results towards the end of next year. But unless productivity can be raised more quickly in future, Khrushchev's hitherto progressive wages policy will be likely to suffer a set-back.

r.r.g.

N. B.

Analysts of the Soviet economy will be interested to note that President Nasser has learned its recent lessons:

"Working hours in the UAR would henceforth be seven instead of eight daily," he said.

"This would create more employment and factories must have 3 shifts daily to increase output -- workers to be responsible for increasing production and the Government to be responsible for marketing it." (Financial Times, July 23, 1961)



EMPLOYMENT IN THE SOVIET ECONOMY:  
AN INTERIM SOLUTION TO A PUZZLE

Soviet Studies

April 1961

by G. Warren Nutter

**NOT TO BE MICROFICED**

Despite the swelling flow of economic statistics out of the Soviet Union, one subject, employment of labor, still remains essentially on the missing list. Some types of data have, of course, been published, but nothing approaching a systematic and comprehensive set of accounts. The most promising sign so far is publication this year of selected statistics on full-time employment of agricultural labor, including collective farmers, in the first postwar handbook devoted entirely to agricultural statistics, Selskoye Khozyaistvo SSSR. Perhaps a handbook of labor statistics will now follow, but one cannot overlook the possibility that some time may intervene. The purpose of this note is to provide a stopgap set of employment accounts, pieced together from fragments published to date, with the hope that it will be better than nothing - and that it will soon be superseded.

Puzzle and Solution

The published data on employment consist of the familiar percentage distribution of persons engaged in the economy by type of employment and economic sector, supplemented by absolute figures on wage and salary earners, members of producer cooperatives, and some members of collective farms, the last being just published. Efforts to fit these pieces of puzzle together are frustrated by inadequacy of explanatory notes and a general mismatching of years and classifications. When the puzzle seems to have been solved, contradictions almost immediately show up, proving that something has gone wrong. Even when the most basic contradictions have finally been eliminated, as seems to be the case in the 'solution' presented here, one can be sure that some details are at best only approximately correct and others most likely in substantial error.

We may consider, first of all, the 'distribution of population engaged in the national economy of the Soviet Union, by branches of material production and non-productive branches', which we refer to here as the percentage distribution by type of employment. In the various editions of Narodnoye khozyaistvo since 1956, this distribution has been published for 1940, 1950, and 1955-1959. In each case, percentages are given to the nearest tenth of a point. Each of the distributions for 1955, 1956, 1958 and 1959 initially appeared shortly after the close of the year and may therefore be assumed to be based on preliminary data. This is definitely the case for 1958 since a revised version has appeared in the latest statistical handbook.

The distribution is broken down into two major categories: material production and 'non-productive' activities. The first has in turn six subdivisions: wage earners (rabochiye); engineering and technical workers, salaried personnel, junior service personnel, and trade workers (rabotniki); members of industrial cooperatives" members of collective farms engaged in collectivized activities and in private farming; self-employed

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peasants and artisans; and members of families (of rural hired personnel) engaged in private farming. The second major category has two subdivisions that are not coordinate with those just enumerated: persons engaged in education and medical care; and persons engaged in housing and communal services, passenger transport, 'non-productive' communication, staff or governmental administrative organs (including 'public' and cooperative units), and finance. The missing element making it impossible to reconstruct the absolute figures simply and directly is a statistic on members of collective farms engaged in 'non-productive' activities.

There seem, however, to be enough relationships specified to enable one to work out absolute magnitudes on the basis of simultaneous equations involving three unknowns: total number of persons engaged in the economy, total number of collective farmers, and persons engaged in 'non-productive' transportation and communication. One approach used here is the following. The first two sub-divisions under material production (see above) may be taken as covering wage and salary earners in industry, construction, agriculture, forestry, 'productive' transportation and communication, and trade, plus members of producers cooperatives in trade. Next, persons engaged in education and medical health may be taken as covering both members of collective farms and wage and salary earners in those sectors. Finally, persons engaged in other 'non-productive' activities may be taken as covering remaining wage and salary earners. These relationships, when filled in with known data, turn out to be mutually consistent and to yield a solution, as can be seen from Table 3.

The magnitudes thus derived also help one to translate the percentage distribution by economic sector into absolute quantities. Unfortunately, the two kinds of published percentage distributions - those by type of employment and by economic sector - have in common only the years since 1955: the distribution by economic sector applies in addition to 1913, 1928 and 1937. In reconstructing the latter in absolute data, one must work solely from the percentages given for economic sectors. The resulting figures are bound to have a wider margin of error than those for other years because, first, economic sectors are broadly defined and, second, percentages are rounded to the nearest point instead of to a tenth of a point. Some recently published data on employment in collective farms make it possible to derive an even more tenuous breakdown by economic sector for 1940 and 1950, years with a percentage breakdown by type of employment but not by economic sector. Reconstructed data by economic sector are presented in Table 1.

As already indicated, the main problem is the way in which members of collective farms are to be allocated. The handbook of agricultural statistics published in 1960, Selskoye khozyaistvo SSSR, gives some very useful information on this matter, but as



usual it is incomplete, ambiguous, unsystematic, and largely incomparable with other information. It takes a good deal of interpreting and inferring, sometimes from vague hints, to put together a systematic statistical account, and there are not a few opportunities for making mistakes. The product of our effort is summarized in Table 5. We may observe here that the weakest data are those for trade in all years and those for 1937 in all categories. From the estimated total persons engaged in the economy and the published percentage in trade, our estimates of collective farmers engaged in trade-like activities could be understated by 300,000 to 400,000 persons, in which case our estimates would be equally understated for collective farmers in industry and equally overstated for those in construction. In order for this to be the case, however, the actual percentages of persons engaged in trade would have to be a half percentage point above the published (rounded) percentages in all relevant years; that is, the published percentages would have to be taken as rounded downward to the maximum degree.

### Brief Observations on the Reconstructed Accounts

One point that stands out from our reconstruction of official employment data is that peasants and members of collective farms have been treated differently from wage and salary earners. The latter have been counted in terms of full-time equivalents (average annual numbers), while the former - at least those engaged in agriculture and educational activities from 1937 onward - have been counted in terms of the number engaged in the month of peak employment. To our knowledge the statistical sources do not explain how that number is calculated, but we may suppose it represents the total number of different persons who worked at any time during the month in question, normally June. This method of measuring employment of collective farmers is in process of change, since the recent handbook of agricultural statistics gives basic employment data in terms of average annual number, apparently the yearly average of monthly employment calculated in the described way. Incidentally, changes are also made in data on agricultural wage and salary earners in that handbook, and we may perhaps look forward to significant revisions in published data on employment throughout the economy. One might even speculate that systematic accounts of absolute data will soon be forthcoming, now that agricultural employment has been placed on a comparable footing with employment elsewhere in the economy.

There is some uncertainty about the basis for measuring several other categories of employment. From internal evidence one may infer that employment of members of collective farms engaged in industry, construction, and trade has been expressed in some kind of full-time equivalents, but their exact nature remains a mystery. Nothing definite is known about the units of measurement for members of cooperatives, self-employed persons, and collective farmers and unpaid family workers on private agricultural plots.

Another point that emerges from our reconstructed accounts is that only wage and salary earners are counted in industrial employment for 1913 and 1928, making the published percentage distributions by economic sector incomparable with those for later years. It is difficult to understand why this was done,



since an official estimate has been published for all persons engaged in industry in 1931, both in total number and in full-time equivalents. The latter, 5.4 million, is considerably larger than the average annual number of wage and salary earners, about 3.8 million. Hence the percentages of persons engaged in industry in both 1913 and 1928 were significantly higher than the published figures, and the percentages in other sectors significantly lower.

Adjusting agricultural employment to full-time equivalents and correcting the understatement of industrial employment for early years, we derive the data in Tables 2 and 4. The adjusted data, particularly for agriculture, would be approximate under the best of circumstances; they are even more so here. Nevertheless, they seem preferable for most purposes to the mixed bag of figures in Tables 1 and 3, since they more adequately reflect relative inputs of labor into different sectors of the economy and movements in them over time.

According to our estimates in full-time equivalents, the man years of labor employed in the Soviet economy have multiplied about 2.3 times over the entire Soviet period: 1.4 times in agriculture and 3.9 times elsewhere. Employment in agriculture rose up to World War II but has declined since then, with an absolute shift of 5 to 6 million man-years into other sectors. Over the years since 1950, the period for which our estimates are probably most reliable, agricultural employment fluctuated between 33 and 34 million man-years without any apparent trend. Beneath this overall stability, there has been an increase of about 2.4 million man-years for wage and salary earners matched by a similar decrease for collective farmers. Employment in private agriculture, on the part of collective farmers and others, rose by almost 1.5 million man-years. Out of an increase of almost 7 million man-years in the entire economy over both 1950-1955 and 1955-59, 4 million were channelled into industry in the first period in contrast with only about 1 million in the second. The composition of industrial employment changed significantly in the second period, however, with a shift to the status of wage and salary earners by collective farmers accounting for more than a million man-years and by members of producer cooperatives accounting for an additional half million. The annual increase in employment in the economy was about 2 million in 1956 and 1957, less than half a million in 1958, and almost three million in 1959. The results for the last two years may well reflect cause and effect of the recent changes in Soviet secondary education.

The rather steady decline in the importance of collective farmers and the self-employed is shown in the distribution by type of employment (see Tables 3 and 4). The man-years accounted for by collective farmers in all their activities have declined, according to our estimates, by about three million since 1940, while those accounted for by wage and salary earners have risen by more than 25 million. Self-employed persons have fallen to a token number from their level of about 3 million in 1937 and 7.4 million in 1940, just after the acquisition of new territories.

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Wage and salary earners accounted for 59 percent of all man-years of employment in 1959 as compared with 40 percent in 1940 and 49 percent in 1950.

### Concluding Remarks

As stated at the start, the purpose of this note has been to reconstruct a set of employment statistics that may be useful in economic analysis until something better comes along. Many of the figures are obviously subject to uncomfortable wide margins of error and must be handled with caution. At the same time, the various accounts seem to be internally consistent in general and to present a broad picture that makes economic sense. If nothing else, they may serve as a basis for improved estimates until adequate Soviet statistics are published.

Table 1

Estimated Persons Engaged in the Economy, by Economic Sector,  
(thousands) a, from Official Data: Soviet Union 1913-59

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	1913	1928	1937	1940	1950	1955	1956p	1957	1958p	1958	1959
1 All Sectors total	50,000 <sup>+</sup>	54,600 <sup>+</sup>	65,800 <sup>+</sup>	77,700 <sup>+</sup>	79,900 <sup>+</sup>	87,000 <sup>+</sup>	89,600 <sup>+</sup>	92,000 <sup>+</sup>	93,200 <sup>+</sup>	92,700 <sup>+</sup>	95,400 <sup>+</sup>
2 Industry	3,786	3,773	12,900 <sup>+</sup>	14,600 <sup>+</sup>	17,600 <sup>+</sup>	21,500 <sup>+</sup>	22,000 <sup>+</sup>	22,100 <sup>+</sup>	22,600 <sup>+</sup>	22,200 <sup>+</sup>	22,800 <sup>+</sup>
3 Wage and salary earners	3,786	3,773	10,112	10,967	14,144	17,367	18,500	19,144	19,641	19,675	20,205
4 Members of Producer cooperatives			1,500	1,700	1,200 <sup>+</sup>	1,600	1,000 <sup>+</sup>	1,100	1,100	1,200 <sup>+</sup>	1,200
5 Members of collective farms			800 <sup>+</sup>	1,100 <sup>+</sup>	1,900 <sup>+</sup>	2,300 <sup>+</sup>	2,300 <sup>+</sup>	1,800 <sup>+</sup>	1,800 <sup>+</sup>	1,100 <sup>+</sup>	1,100 <sup>+</sup>
6 Self-employed persons			500 <sup>+</sup>	800 <sup>+</sup>	400 <sup>+</sup>	200 <sup>+</sup>	200 <sup>+</sup>	100 <sup>+</sup>	100 <sup>+</sup>	200 <sup>+</sup>	200 <sup>+</sup>
7 Construction	500	723	2,800 <sup>+</sup>	4,600 <sup>+</sup>	5,100 <sup>+</sup>	5,400 <sup>+</sup>	5,800 <sup>+</sup>	6,200 <sup>+</sup>	6,600 <sup>+</sup>	6,800 <sup>+</sup>	7,200 <sup>+</sup>
8 Wage and salary earners	500	723	1,576	1,563	2,569	3,190	3,550	4,000	4,369	4,421	4,800
9 Members of collective farms			1,200 <sup>+</sup>	3,000 <sup>+</sup>	2,500 <sup>+</sup>	2,200 <sup>+</sup>	2,200 <sup>+</sup>	2,200 <sup>+</sup>	2,200 <sup>+</sup>	2,400 <sup>+</sup>	2,400 <sup>+</sup>
10 Agriculture	37,800 <sup>+</sup>	43,700 <sup>+</sup>	37,000 <sup>+</sup>	42,100 <sup>+</sup>	37,900 <sup>+</sup>	37,500 <sup>+</sup>	38,500 <sup>+</sup>	39,300 <sup>+</sup>	38,800 <sup>+</sup>	38,500 <sup>+</sup>	37,700 <sup>+</sup>
11 Wage and salary earners	2,850	1,660	2,609	2,697	3,445	4,400 <sup>+</sup>	4,400 <sup>+</sup>	5,400 <sup>+</sup>	5,800 <sup>+</sup>	5,700 <sup>+</sup>	5,855 <sup>+</sup>
12 MTS and RTSb		-	566	530	678	1,300 <sup>+</sup>	1,200 <sup>+</sup>	1,200 <sup>+</sup>	800 <sup>+</sup>	700 <sup>+</sup>	469
13 State farms and subsidiary enterprises		345	1,748	1,760	2,425	2,832	2,925	3,961	4,627	4,614	4,965



TABLE I (con't)

	1913	1928	1937	1940	1950	1955	1956p	1957	1958p	1958	1959
14 Others		1,315	295	407	342	260	290	278	368	362	421
15 Members of collegiate farms			29,900 <sup>+</sup>	30,900 <sup>+</sup>	30,700 <sup>+</sup>	29,700 <sup>+</sup>	30,700 <sup>+</sup>	30,400 <sup>+</sup>	29,500 <sup>+</sup>	29,300 <sup>+</sup>	29,300 <sup>+</sup>
16 Members of families of rural hi- red personnel		42,000 <sup>+</sup>	1,900 <sup>+</sup>	1,900 <sup>+</sup>	2,600 <sup>+</sup>	3,200 <sup>+</sup>	3,200 <sup>+</sup>	3,400 <sup>+</sup>	3,400 <sup>+</sup>	3,400 <sup>+</sup>	3,400 <sup>+</sup>
17 Self-em- ployed per- sons	35,000 <sup>+</sup>		2,600 <sup>+</sup>	6,600 <sup>+</sup>	1,200 <sup>+</sup>	200 <sup>+</sup>	200 <sup>+</sup>	100 <sup>+</sup>	100 <sup>+</sup>	100 <sup>+</sup>	100 <sup>+</sup>
18 Forestry	c	75	248	279	444	389	390	377	384	367	354
19 Transpor- tation	975	1,270	2,651	3,425	4,082	5,039	5,216	5,355	5,568	5,668	5,976
20 Communi- cation	72	95	375	478	542	611	624	641	668	664	692
21 Trade and allied services	4,800 <sup>+</sup>	1,600 <sup>+</sup>	2,700 <sup>+</sup>	3,500 <sup>+</sup>	3,500 <sup>+</sup>	4,000 <sup>+</sup>	4,100 <sup>+</sup>	4,400 <sup>+</sup>	4,600 <sup>+</sup>	4,600 <sup>+</sup>	4,800 <sup>+</sup>
22 Wage and salary earners	563	587	2,525	3,303	3,325	3,725	3,826	4,017	4,234	4,190	4,394
23 Eating Places	112	55	471	784	659	856	891	928	959	959	991
24 Retail trade		532	1,264	1,382	1,308	1,634	1,666	1,739	1,888	1,888	2,050
25 others	451		790	1,137	1,358	1,235	1,269	1,350	1,387	1,343	1,353

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TABLE 1 (con't)

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	1913	1928	1937	1940	1950	1955	1956p	1957	1958p	1958	1959
26 Members of Producers' co-operatives			100 <sup>+</sup>	100	100 <sup>+</sup>	200	100 <sup>+</sup>	200	200	200 <sup>+</sup>	200
27 Members of collective farms			100 <sup>+</sup>	100 <sup>+</sup>	100 <sup>+</sup>	100 <sup>+</sup>	200 <sup>+</sup>	200 <sup>+</sup>	200 <sup>+</sup>	200 <sup>+</sup>	200
28 Educational services	236	733	2,400 <sup>+</sup>	2,900 <sup>+</sup>	3,700 <sup>+</sup>	4,800 <sup>+</sup>	4,900 <sup>+</sup>	5,200 <sup>+</sup>	5,100 <sup>+</sup>	5,100 <sup>+</sup>	5,400 <sup>+</sup>
29 Wage and salary earners <sup>e</sup>	236	733	2,148	2,724	3,401	4,107	4,228	4,382	4,540	4,514	4,687
30 Members of collective farms			200 <sup>+</sup>	200 <sup>+</sup>	300 <sup>+</sup>	700 <sup>+</sup>	700 <sup>+</sup>	800 <sup>+</sup>	600 <sup>+</sup>	600 <sup>+</sup>	700 <sup>+</sup>
31 Scientific research and allied services		74	220	300	730	873	969	1,076	1,190	1,202	1,324
32 Medical and health service	71	399	1,127	1,507	2,051	2,627	2,736	2,982	3,087	3,059	3,248
33 Finance	235	95	193	262	264	265	265	261	259	260	258
34 Housing and communal services	108	147	1,023	1,221	1,210	1,400	1,503	1,579	1,697	1,632	1,710
35 Miscellaneous activities nec <sup>f</sup>	1,200 <sup>g</sup>	958 <sup>g</sup>	695 <sup>g</sup>	641	967	1,269	1,292	1,337	1,420	1,464	1,738
36 Governmental Administration and allied services	266	1,010	1,488	1,825	1,831	1,361	1,342	1,294	1,286	1,294	1,268

Sums and detail may not be consistent because of rounding.

p: Preliminary data. For 1956, only in part. nec: Not elsewhere classified. <sup>+</sup>Indeterminate rounded datum



General Note**NOT TO BE MICROFICED**

Data for 1913 cover interwar Soviet territory; for other years, current Soviet territory. Data not otherwise identified apply to wage and salary earners.... Economic sectors are defined in accordance with the coverage effective in 1959 and defined in the last two references, except that faculty members of institutions of higher learning have been transferred from line 31 to line 29, as separately footnoted. Data in the recent handbook of agricultural statistics indicate that some of the wage and salary earners in agriculture are being reclassified into other sectors... From data now available, the reclassification cannot be fully reconstructed.

A blank space indicates absence of published data. The following categories are not included among persons engaged in the economy in official statistics and hence here as well: members of the armed forces; students, probably persons forced to work while imprisoned; and probably domestic and day laborers from 1940 on.

Footnotes

<sup>a</sup>For members of collective farms in agriculture and education, apparently number of persons engaged (including juveniles and elderly persons according to *Selskoye khozyaistvo*, p. 450) in month of peak employment; for others, full-time equivalents.

<sup>b</sup>For 1955-58, members of collective farms working in tractor brigades (see Table 5, line 10) have been excluded from MTS and RTS workers and included with members of collective farms.

<sup>c</sup>Included in agriculture.

<sup>d</sup>Apparently includes self-employed persons amounting as a residual to 4.2 million for 1913 and 1.2 million for 1928.

<sup>e</sup>Faculty members of institutions of higher learning have been excluded from scientific research and allied services and included in educational services. These amount to the following (thousands) 1914: (used for 1913), 61; 1928, 8; 1939 (used for 1937), 60; 1940, 61; 1950, 86; 1955, 119; 1956, 125; 1957, 132; 1958, 136; and 1959, 138. Data are from *Narodnoye Khozyaistvo, SSSR*, (Moscow, 1956), p. 233; *Narodnoye Khozyaistvo, SSSR v 1958 godu* (Moscow, 1959), p. 843; and *Narodnoye Khozyaistvo SSSR v 1959 godu* (Moscow 1960) p. 754. The figure for 1928 is that for 1914 extrapolated by the number of students (from *Kulturnoye stroitelstvo SSSR* (Moscow, 1956), p. 209.



<sup>f</sup>Includes capital repairs to buildings and structures, well-drilling, and designing and prospecting organizations.

<sup>g</sup>Includes domestics and day laborers amounting to (thousands): 1913, 1,200; 1928, 809; and 1937, 246. Data from Harold Wool, Statistics of Population, Labor Force and Employment in the Soviet Union, Mimeographed Working Memorandum, The Study of Soviet Economic Growth, National Bureau of Economic Research, April 1959, III, p. 47.

### Special Notes on Derivation of Data

#### Line 1

1913, 1928, 1937: Derived from percentage distribution by economic sector (Narodnoye Khozyaistvo, SSSR v 1958 godu) and wage and salary earners in industry and construction, transportation and communication and education and medical services. The range of possible values is as follows (millions): 1913, 45.1-50.4; 1928, 54.6-59.9; 1937, 65.4-66.3.

Other years: See table 3, line 1.

#### Line 2

1913, 1928: Wage and salary earners only, since this is the only datum consistent with the published percentage distribution by economic sector (see line 1) and other known data.

1940, 1950: Sum of components.

Other years: Residual, combined industry and construction (derived from line 1 and published percentage distribution) minus construction (line 7). Since the percentage for industry and construction rose from 31 in 1958 to 32 in 1959, we have rounded the percentage down for 1959 and up for 1958.

#### Line 4

1937: Senko and Afanasev, Mestnaya promyshlennost i promyslovaya kooperatsiya v tretei pyatiletke (Moscow, 1939), p. 40.

1940 on: See Table 3, Line 5.

#### Line 5

1937, 1940: 1950 extrapolated by number of industrial and fishing 'collective farms' (Narodnoye Khozyaistvo, SSSR v 1958 godu, p. 349.)

1950: Residual members of collective farms minus other components (see Table 5, lines 12 and 24).

Other years: Residual, total for industry (line 2) minus other components.

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Line 6

1937: Average, 1935 (410 thousand, from P. Smilga, 'Za organizatsionno-khozyaistvennoye ukrepleniye prom-kooperatsi' Plan, 1936 No. 1, p. 14)

Other years: Residual, all self-employed persons (see Table 3, line 9) minus those in agriculture (line 17).

Line 7:

All Years: Sum of Components.

Line 9

1937: Residual, all man-years of collective farmers not in agriculture (2.3 million, from Treti pyatiletni plan razvitiya narodnovo khozyaistva Soyuza SSR, 1938-42, Moscow, 1959, p. 109) minus those in industry, trade and education, lines 5, 27 and 30.)

Line 10

Other years: See Table 5, Line 7.

1940, 50: Sum of components.

Other years: Residual, agriculture and forestry (derived from line 1 and published percentage distribution) minus forestry (line 18).

Line 15

1940, 1950: See Table 5, line 21.

Other years: Residual, all agriculture (line 10) minus other components.

Line 16

1937: Assumed same as 1940.

Other years: See table 3, line 10.

Line 17

1913: Residual, all agriculture (line 10) minus wage and salary earners (line 11).

Other years: Members of collective farms (Table 3, line 13) times ratio, independent peasant households to collective farm households (from percentage data in Narodnoye Khozyaistvo SSSR v 1958 godu, p. 346.)

Line 21

1940, 1950: Sum of components..

Other years: Derived from line 1 and published percentage distribution.

Line 26

1937: Assumed same as 1940.

Other years: See Table 3, line 7.

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Line 27

1940,1950: See Table 5, line 8.

Other years: Residual, all trade (line 21) minus other components.

Line 28

All years: Sum of components.

Line 30

1937: Assumed same as 1940.

Other years: Derived simultaneously with line 1 (see Table 3, line 1).



Table 2

Estimated Persons Engaged in the Economy in Full-Time Equivalents, by Economic Sector: Soviet Union, 1913-1959

(million full-time equivalents)

	1913	1928	1937	1940	1950	1955	1956p	1957	1958	1959p
1 All sectors, total	38.6	40.1	62.8	74.4	75.8	82.7	84.4	86.5	86.9	89.7
2 Industry	5.9	5.5	12.9	14.6	17.6	21.5	22.0	22.1	22.2	22.7
3 Agriculture	24.2	27.4	34.0	39.0	33.9	33.5	33.6	34.2	33.0	33.4
4 Educational services	0.2	0.7	2.3	2.8	3.6	4.5	4.6	4.8	4.8	5.1
Other sectors	8.2	6.5	13.6	18.1	20.7	23.2	24.3	25.4	27.0	28.6

Sums and detail may not be consistent because of rounding

p: Preliminary data. For 1956, only in part.

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General Note

Data for 1913 cover interwar Soviet territory; for other years, current Soviet territory. Except as noted below, data for members of collective farms in agriculture and education are taken from Table 5, lines 9 and 5; other data, from Table 1. The breakdown of 'other sectors' (line 5) is the same as in Table 1, since those data have not been adjusted. For 1959, the figure given here for agriculture corresponds closely to the official Soviet estimate of 33 million given in *Selskoye Khozyaistvo SSSR* (Moscow 1960), p. 450. However, wage and salary earners are given as 4.7 million in the latter as compared with 5.9 million in the present estimate. The other, offsetting difference between the two estimates would seem to be that we have adjusted the number of collective farmers in private agriculture downward to estimate full-time equivalents, whereas Soviet statisticians apparently have not.

Special Notes on Derivation of DataLine 1

1913, 1928, 1937: Sum of components.

Other years: Table 4, line 1

Line 2

1913, 1928: From study in progress, National Bureau of Economic Research. The official Soviet estimate for 1913 is 5.4 million (see *Narodnoye Khozyaistvo SSSR, v 1958 godu*, p. 131)

Line 3

1928 Estimate of S. Strumilin ('Some Problems of the Further Development of the kolkhoz Regime', by S. Strumilin, *Problems of Economics*, November 1958)

1913: Sum, wage and salary earners plus others estimated in full time equivalents. The latter is derived from peak employment (Table 1, lines 15-17) times 1928 ration of estimated full-time equivalents (25.7 million from Strumilin's estimate above minus wage and salary earners in Table 1, line 11) to estimated peak employment (42.0 million in Table 1, line 17).

Table 3

Estimated Persons Engaged in the Economy, by Type of Employment, From Official Data: Soviet Union  
1940-1959 (millions)<sup>a</sup>

	1940	1950	1955	1956p	1957	1958p	1958	1959p
1 Total Employment Sector	77.7	79.9	87.0	89.6	92.0	93.2	92.7	95.4
2 'Material production	68.3	68.9	74.1	76.3	78.1	78.6	78.0	80.0
3 Wage earners <sup>b</sup>	15.1	20.5	25.7	26.2	29.2	30.3	30.0	32.0
4 Salary earners <sup>c</sup>	7.0	7.8	8.7	9.0	9.4	9.7	9.4	9.8
5 Members of producer cooperatives <sup>c</sup>	1.8	1.3	1.8	1.1	1.3	1.3	1.4	1.4
6 Industry (1.7)	(1.7)	(1.2)	(1.6)	(1.0)	(1.1)	(1.1)	(1.2)	(1.2)
7 Trade and allied services (0.1)	(0.1)	(0.1)	(0.2)	(0.1)	(0.2)	(0.2)	(0.2)	(0.2)
8 Members of collective farms <sup>6</sup>	35.1	35.2	34.4	35.4	34.6	33.6	33.9	33.1
9 Self-employed persons	7.4	1.6	0.4	0.4	0.2	0.2	0.3	0.3
10 Members of families of rural hired personnel	1.9	2.6	3.2	3.2	3.4	3.4	3.4	3.4
11 'Non-productive' activities	9.4	11.0	12.9	13.3	13.9	14.7	14.6	15.4
12 Wage and salary earners	9.2	10.7	12.2	12.6	13.1	14.1	14.0	14.7



Table 3 (con't)

	1940	1950	1955	1956p	1957	1958p	1959	1959p
13	Transporta- tion and com- munication	(0.7)	(0.3)	(0.2)	(0.3)	(0.7)	(0.6)	(0.4)
14	Others	(8.5)	(11.9)	(12.3)	(12.8)	(13.4)	(13.4)	(14.3)
15	Members of Collective Farms	0.2	0.3	0.7	0.8	0.6	0.6	0.7
Employment Status								
16	Wage and salary earners	3.12	38.9	46.6	48.8	52.7	54.1	56.5
17	Incl. Trac- tor brigades			(48.4)	(50.5)	(54.1)	(54.6)	
18	Member of pro- ducer coopera- tives	1.8	1.3	1.8	1.1	1.3	1.4	1.4
19	Members of col- lective farms	35.3	35.5	35.1	36.1	35.4	33.5	33.8
20	Self-employed persons	7.4	1.6	0.4	0.4	0.2	0.3	0.3
21	Unpaid family members	1.9	2.6	3.2	3.2	3.4	3.4	3.4

Sums and detail may not be consistent because of rounding

p: Preliminary data. For 1956, only in part.

General Note

Data cover current Soviet territory.. Unless otherwise noted, data are derived from total persons engaged (line 1) and the published percentage distribution by type of employment (Narodnoye Khozyaistvo SSSR v 1956 godu, p. 202; Narodnoye Khozyaistvo SSSR v 1958 godu, p. 655, and Narodnoye Khozyaistvo SSSR v 1959, p. 585). For 1958, there were two such distributions, and we have assumed that the earlier one (Narodnoye Khozyaistvo SSSR v 1958 godu, p. 655) corresponds to preliminary data. Since the distribution for 1956 has not been republished in recent handbook, we have assumed that it also corresponds to preliminary data. In accord with past experience, all data for 1959 published to date may be presumed to be preliminary and subject to revision. See the text for more discussion of this point.

Footnotes

<sup>a</sup> See same Note, Table 1.

<sup>b</sup> For 1955-1958, members of collective farms in tractor brigades (see Table 5, line 10) have been excluded from wage earners and included with members of collective farms in 'material' production.

<sup>c</sup> Members of producer cooperatives in trade and allied services have been excluded from salary earners (including trade workers, and included with members of producer cooperatives).

Special Notes on Derivation DataLine 1All years

Derived from published percentage distribution by type of employment and from other data as follows. First, the categories of wage and salary earners (including trade workers) in 'material' production were taken to cover all wage and salary earners in industry, construction, agriculture, forestry, transportation, communication, and trade, plus members of producer cooperatives in trade, minus 'non-productive' wage and salary earners in transportation and communication. (an unknown datum). Second, the category of persons engaged in education, scientific research, and medical services was taken to cover wage and salary earners and members of collective farms (an unknown datum). (Geological exploration and hydrometric services were excluded before 1957 and included after.) Third, the category of persons engaged in other 'non-productive' activities was taken to cover wage and salary earners in finance, housing and communal services, miscellaneous activities, governmental administration, and 'non-productive' transportation



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and communication (an unknown datum, already mentioned). (Geological exploration and hydro-metric services were included before 1957 and excluded after.) These three relations provide three equations for solving the two unknowns already mentioned plus the third unknown: total persons engaged in the economy. Because the published percentages are rounded, solutions exist as a range of possible quantities. In the case of each year, the value selected for total persons engaged in the economy is such that the sum of wage and salary earners derived from it and the percentage distribution is equal, allowance being made for rounding, to the known figure.

Line 5

1940: Izvestia, 17 October 1940.  
1955: Narodnoye Khozyaistvo SSSR (Moscow, 1956), p. 189  
1958p: Narodnoye Khozyaistvo SSSR v 1958 godu, p. 656  
1959: Narodnoye Khozyaistvo SSSR v 1959 godu, p. 585

Other years: Sum of components. The published (preliminary) figure for 1956 is 1.2 million (Narodnoye Khozyaistvo v 1956 godu, p. 203), or 0.1 million larger than the derived figure given here.

Line 6

1955: Narodnoye Khozyaistvo SSSR (Moscow 1956), p. 44  
1958p: Narodnoye Khozyaistvo SSSR v 1958 godu, p. 131  
1959: Narodnoye Khozyaistvo SSSR v 1959 godu, p. 138

Other years: See general note above. The published (preliminary) figure for 1956 is 1.1 million (Narodnoye Khozyaistvo v 1956 godu, p. 50) or 0.1 million larger than the derived figure given here.

Line 7

1950: Assume same as 1940.  
1956: Residual, difference between published figures for lines 5 and 6, which see.  
1957: Assumed same as 1958p.  
1958: Assumed same as 1959p.  
Other years: Residual, line 5 minus line 6.

Lines 13 and 15

All years: Derived simultaneously with line 1, which see.



Table 4

Estimated Persons Engaged in the Economy in Full-Time Equivalents, by Type of Employment:  
Soviet Union, 1940-1959, (million full-time equivalents)

	1940	1950	1955	1956p	1957	1958	1959p
1 Total	74.4	75.8	82.7	84.5	86.5	86.9	89.7
Employment Sector							
2 'Material' production	65.2	64.9	70.1	72.4	73.0	72.6	74.6
3 Members of collective farms	32.0	3.12	30.3	30.5	29.5	27.5	27.7
4 Others	33.2	33.7	39.8	41.9	43.5	45.1	46.9
5 'Non-productive activities	9.3	10.9	12.6	13.0	13.5	14.3	15.1
6 Members of collective farms	0.1	0.2	0.4	0.4	0.4	0.3	0.4
7 Others	9.2	10.7	12.2	12.6	13.1	14.0	14.7
Employment Status							
8 Members of collective farms	32.1	31.4	30.7	30.9	29.9	27.8	28.1
9 Others	42.3	44.4	52.0	53.6	56.6	59.1	61.6

Sums and detail may not be consistent because of rounding. p: Preliminary data. for 1956, only in part.

General Note Data cover current Soviet territory. Members of collective farms in full-time equivalents are taken from Table 5; other data, from table 3.

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Table 5

Estimated Employment of Members of Collective Farms, by Economic Sector and Activity: Soviet Union, 1937-1959 (millions)

	1937	1940	1950	1953	1955	1956p Full-Time Equiva- lents	1957	1958	1959p
1 All activities, total	29.1	32.1	31.4		30.7	30.9	29.9	27.8	28.1
1a Excluding tractor brigades					(28.9)	(29.2)	(28.5)	(27.3)	(27.6)
2 Private agriculture	1.9	2.0	1.9		1.8	1.2	2.4	1.3	2.5
3 Collectivized activities	27.2	30.1	29.5	29.0	28.9	29.7	27.5	26.5	25.6
4 Agriculture, construction, trade and education	26.4	29.0 <sup>+</sup>	27.6 <sup>+</sup>	25.6 <sup>+</sup>	26.6	27.4	25.7	25.4	24.5 <sup>+</sup>
4a Excl. Tractor Brigades					(24.8) <sup>+</sup>	(25.7) <sup>+</sup>	(24.3) <sup>+</sup>	(24.9) <sup>+</sup>	(24.0)
5 Educational services <sup>a</sup>	0.1	0.1	0.2	0.2	0.4	0.4	0.4	0.3	0.4
6 Agriculture, Construction and Trade	26.3	28.9	27.4	25.5 <sup>+</sup>	26.2 <sup>+</sup>	27.0 <sup>+</sup>	25.3 <sup>+</sup>	25.1 <sup>+</sup>	24.1 <sup>+</sup>
7 Construc- tion	1.2	3.0	2.5	2.6	2.2	2.2	2.2	2.4	2.4
8 Trade <sup>b</sup>	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
9 Agricul- ture	25.0	25.8 <sup>+</sup>	24.8 <sup>+</sup>	22.9 <sup>+</sup>	23.9	24.6	22.9	22.5	21.5 <sup>+</sup>

Table 5 (con't)

	1937	1940	1950	1953	1955	1956p	1957	1958	1959p
					Full-time equivalents				
10 Tractor brigade	25.1 <sup>+</sup>	25.1 <sup>+</sup>	24.0 <sup>+</sup>	24.1 <sup>+</sup>	(1.8)	(1.7)	(1.4)	(1.5)	(0.5) <sup>+</sup>
11 Other agri-culture									
12 Industry	0.8	1.1	1.9	3.4	2.3	2.3	1.8	1.1	1.1
					Number in Month of Peak Employment				
13 All activities, total	31.2	35.3	35.5	35.1	36.1	35.4	33.5	33.8	
13 a Excl. tractor brigades				(33.3)	(34.5)	(34.0)	(33.0)	(33.3)	
14 Private agri-culture	2.1	2.2	2.2	2.1	1.5	2.9	1.6	3.1	
15 Collectivized activities	30.1	33.1	33.3	32.7 <sup>+</sup>	33.0	34.6 <sup>+</sup>	32.5 <sup>+</sup>	31.9 <sup>+</sup>	30.7 <sup>+</sup>
16 Agriculture, construction, trade and education	29.3	30.0	31.4	29.3	30.6	32.3	30.7	30.8	29.6
16a Excl. tractor brigades				(28.8)	(30.6)	(29.3)	(30.3)	(29.1)	



Table 5 (con't)

	1937	1940	1950	1953	1955	1956p	1957	1958	1959p
17 Education- al servi- ces <sup>a</sup>	0.2	0.2	0.3	0.3	0.7	0.7	0.8	0.6	0.7
18 Agricul- ture, con- struction and trade	29.1	31.8	31.1	29.0	29.9	31.6	29.9	30.2	28.9
19 Con- struc- tion	1.2	3.0	2.5	2.6	2.2	2.2	2.2	2.4	2.4
20 Trade <sup>b</sup>	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
21 Agricul- ture	27.8	28.7	28.5	26.3	27.6	29.2	27.5	27.7	26.2
22 Tractor bri- gades					(1.8)	(1.7)	(1.4)	(0.5)	(0.5)
23 Other agricul- ture					(25.8)	(27.5)	(26.1)	(27.2)	(25.7)
24 Industry	0.8	1.1	1.9	3.4	2.3	2.3	1.8	1.1	1.1

Sums and detail may not be consistent because of rounding.  
p: preliminary data. For 1956, only in part.

General Note**NOT TO BE MICROFICED**

Data cover current Soviet territory. Only those data marked with an asterisk (+) have been taken directly from Soviet sources; all other data have been derived indirectly and are subject to error of unknown degree. The relationships attributed to data in the lower part of the table have not been drawn from explicit statements in Soviet sources, but have been inferred from the seeming inconsistency of the component elements, some of which have been derived indirectly in Tables 1 and 3. As we have reconstructed the data, there turns out to be no difference between full-time equivalents and number in the month of peak employment in the case of members of collective farms engaged in tractor brigades, construction, trade and industry. It would seem most likely, if our reconstruction is essentially correct, that these data are expressed in full-time equivalents in both places. It is also possible that we have been wrong in our reconstruction.

The maze of interdependence of data may be less difficult to follow if we indicate here the data (by numbers of the lines involved) for each year that are either taken directly from a primary source or derived essentially independently of each other:

1937: 8, 14, 14 and 21 together, 17, 24 and 24, 20, 19 and 17 together.

1940: 4, 8, 13, 14, 17 and 24.

1950: 4, 8, 9, 13, 14 and 17.

1953: 4, 6, 8, 9 and 15.

1955 on: 4a, 6, 7, and 8 together, 8, 11, 7 and 12 together, 13, 15, 17.

Footnotes

<sup>a</sup> Apparently persons engaged in detskiye uchezhdaniya (see Selskoye Khozyaistvo SSSR, Moscow, 1960, p. 450) which would seem to include nurseries, children's summer camps and similar activities.

<sup>b</sup> Apparently persons engaged in kulturno-bytoviye uchezhdaniya (see *ibid.*) which may be translated as 'public amenities', though this does not seem to clarify the nature of activities involved.

Special Notes on Derivation of DataLine 1

All years: Sum of components.

Line 1a

1955-1959: Residual, line 1 minus line 10.

Line 2

1937, 1940: Line 14 times 1940 ration (0.90) line 9 to line 21

1950: Line 14 times 1955 ration (0.87), line 9 to line 21.  
 Other years: For each year, line 14 times ratio, line 11 to line 23. Ratios, in order of years from 1955, are: 0.86, 0.83, 0.81, and 0.82.

Line 3  
 All years: Sum of components.

Line 4  
 1937: Sum of components.  
 1940-1953, 1959: Selskoye Khozyaistvo SSSR (Moscow, 1960) p.450.  
 1955-1958: Sum, lines 5 and 6.

Line 4a  
 1937: Sum of components.  
 1940-1953, 1959: Selskoye Khozyaistvo SSSR (Moscow 1960), p. 450.  
 1955-1958: Sum, lines 5 and 6.

Line 5  
 1937: Assumed same as 1940.  
 1953, 1959: Residual, line 4 minus line 6 (both from Soviet source).  
 Other years: Line 17 times 1959 ration (about 0.6) line 5 to line 17.

Line 6  
 1937-1950: Sum of Components.  
 Other years: Selskoye Khozyaistvo SSSR (Moscow 1960), p. 459.

Line 7  
 1937: Residual derived in Table 1, line 9.  
 1940, 1950: Residual, line 4 minus sum, lines 5, 8, and 9.  
 Other years: Residual, line 6, minus sum, lines 8 and 9.

Line 8  
 1940: Assumed same as 1937.  
 1950: Assumed same as 1953.  
 Other years: Residual derived in Table 1, Line 27.

Line 9  
 1940-1953, 1959: Selskoye Khozyaistvo, SSSR (Moscow, 1960), p. 450.  
 1955-1958: Sum, lines 10 and 11.

Line 10  
 1955-1958: Residual, line 4 minus line 4a.  
 1959: Since probably a preliminary figure, assumed same as 1958.

Line 11  
 1955-1958: Selskoye Khozyaistvo SSSR (Moscow 1960), p. 450.

Line 12  
 All years: Assumed same as line 24.

Lines 13 and 13a  
 1937: Sum of components.  
 Other years: See Table 3, line 19.

Line 14  
 1937, 1940: Sum, lines 14 and 21, apportioned by 1950 data for lines individually. For 1937, sum is residual derived in Table 1, line 15; for 1940 residual



derived in this table as line 13 minus other components.

1950: Average of same item, 1955-1957.  
1955-1959: Residual, line 13 minus line 15.

Line 15

1937, 1940: Sum of components.  
1950: Residual, line 13 minus line 14.

Other years: Selskoye Khozyaistvo SSSR (Moscow, 1960), p. 460.  
Given in thousands.

Line 16

All years: Sum of componenets.

Line 17

1937: Assumed same as 1940.  
1953: Line 5 times 1959 ratio, line 17 to line 5.  
Other years: Derived simultaneously with total persons engaged in the economy (see Table 3, line 1)

Line 18

All years: Sum of components.

Line 19

All years: Assumed same as line 7.

Line 20

All years: Assumed same as line 8.

Line 21

1937, 1940: See line 14.  
1950, 1953: Line 9 times 1955 ratio (1.15), line 21 to line 9.  
Other years: Residual, collective farmers in both private and collectivized agriculture (Table 1, line 15) minus line 14.

Line 22

1955-1959: Assumed same as in line 10.

Line 23.

1955-1959: Residual, line 21 minus line 22.

Line 24:

1937, 1940: 1950 extrapolated by number of industrial and fishing 'collective farms' (Narodnoye khozyaistvo SSSR v 1958 godu, p. 349)  
1950: Residual, line 13 minus other components.  
1953: Residual, line 15 minus other components.  
Other years: Residual derived in Table 1, line 5.

Table 6

Estimates of 1959 Employment in Tables 1-5 Compared with Data from  
Soviet Census of 15 January 1959

(thousands)

	Census Data, Persons En- gaged Part and Full Time	Estimates in Tables 1-5	
		Persons En- gaged in Month of Peak Employ- ment	Full-Time Equiva- lents
Members of collective farms in collectivized activities			
All but industry	32,280 <sup>a</sup>	29,600	24,500 <sup>a</sup>
Agriculture	31,723	26,200	21,500
Rural family members in private farming	9,793	6,500	5,900
Self-employed persons	266		300
Agriculture	92		100
Others	174		200
Civilian employment excl. private farming	95,315 <sup>b</sup>		83,800
Industry, construc- tion, transportation and communication	36,575		36,700
Agriculture	38,426	32,100	27,500
Member of collec- tive farms	31,723	26,200	21,500
Wage and salary earners	6,611		5,855
Self-employed	92		100
Trade and allied services	5,171		4,800
Education, science and medical services	9,793	10,000	9,700
Others	4,660		4,974

Source: Tables in this article and census reports of TsSU in  
Vestnik statistiki, 1960, no. 12, pp. 4ff.

<sup>a</sup>Census figure assumed to exclude industrial and fishing  
'collective farms' since it is accompanied in the source with  
the same figure for full-time equivalents as given here.

<sup>b</sup>Members of the armed forces are given as 3,623 and unallocated  
persons as 192.

ADDENDUM

Shortly after this note was written, data on employment from the Soviet census for January 15, 1959 were published in Vestnik statistiki, 1960, no. 12. While not directly comparable with the estimates presented in this note, they do offer a rough cross-check as well as information of a supplementary kind. The census data apply to total numbers employed, both part- and full-time, classified by category of primary employment. For wage and salary earners (including members of producer cooperatives and a few other miscellaneous groups not normally counted in this classification), the census report gives a total number of 63.0 million and an average annual number of 58.9 million, a difference of 6 to 7 percent. It also gives comparison for collective farmers, apparently excluding members of industrial and fishing 'collective farms' (see Table 6 below, footnote a. )

Some comparisons of the census data with ours are presented in Table 6. The two sets of figures do not seem to be seriously inconsistent when account is taken of the differences in time periods and concepts of employment. As usual, agricultural collective farmers classified by the census as engaged in agriculture are only a half million fewer than those in all sectors (excluding industry), while in terms of peak employment or full-time equivalents they are at least 3 million fewer. This discrepancy may mean that farming is still considered the principal occupation of most of those who work part-time and seasonally - one would think in very large numbers - in other activities. In view of the employment of almost 10 million persons in private farming as given by the census, it may be that our figure of 6.5 million for peak employment should actually apply, without downward adjustment, to full-time employment instead.