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LABOR FORCE MATERIALS FOR THE STUDY OF UNEMPLOYMENT IN THE SOVIET UNION

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1. Introduction

IN THE Soviet Union, a conference on the "measurement and behavior of unemployment" could be concerned only with other countries, because in the official view unemployment at home simply does not exist. "In 1953, as in preceding years, there has been no unemployment,"[1] is typical of pronouncements which have appeared repeatedly in Soviet publications since the abolition of unemployment insurance on October 9, 1930.

Unemployment in capitalist countries, on the other hand, is found to be on a large scale. For example, a Soviet source reports the number of "fully and partially unemployed" in the United States in 1952 as 13 million, which is calculated by adding to the number of fully unemployed (about 2 million) the number of persons working less than thirty-five hours per week. The latter are called "unemployed," in the Soviet view, because "the overwhelming majority work less than half a week, and their meager salary places them in a situation which can be distinguished only in small degree from that of the unemployed."[2] The alleged high degree of unemployment in capitalist countries and the absence of unemployment at home are frequently contrasted in the Soviet press.

It is quite conceivable on the face of it that a planned society such as the Soviet Union, undergoing rapid economic expansion, would

[1] *Pravda*, January 31, 1954.

[2] Akademiia nauk SSSR, *Ekonomika kapitalisticheskikh stran posle vtoroi mirovoi voiny: statisticheskii sbornik*, Moscow, 1953, pp. 238-239, 251-252 and 262-263. The *Monthly Labor Review*, No. 3, 1950, 1951 and 1952, is given as the source for data on the fully unemployed and the number working less than thirty-five hours.

The following comments on official U.S. unemployment data are also offered: "Bourgeois statisticians employ other diverse contrivances in order to understate the number of unemployed. As a rule, only the number of insured unemployed are included, while persons seeking work for the first time are not—this concerns a great mass of youth and women. Also not included are beggars, hobos, etc., a significant stratum of declassed, degraded people, spawned continuously by capitalism. . . . in addition, American bourgeois statisticians resort even to such tricks as excluding the number with a job but not working; and of these there is a large number." (p. 239.)

eliminate unemployment, at least of the type associated with the business cycle and with the failure of the economy to grow (and the demand for labor to increase) rapidly enough to absorb the services of an expanding labor force. In addition, if planning itself were a success, other types of unemployment, stemming from frictions, seasonality, labor immobility, etc., would tend toward an irreducible minimum.

This general view would seem to be the basis for the "right to work" enjoyed by every Soviet citizen according to Article 118 of the Soviet Constitution:

> "Citizens of the U.S.S.R. have the right to work, that is, are guaranteed the right to employment and payment for their work in accordance with its quantity and quality.
>
> "The right to work is insured by the socialist organization of the national economy, the steady growth of the productive forces of Soviet society, the elimination of the possibility of economic crises, and the abolition of unemployment."

In the sense that a citizen has the opportunity to work at going wage rates and under existing working conditions, there is little evidence that this guarantee is not carried out in practice, although it should be noted that existing working conditions may include the particularly severe conditions prevailing in the remote areas of the U.S.S.R. Furthermore, persons may be restricted from certain types of work for political reasons, work for which they are otherwise qualified. However, beyond a certain point political considerations can subject the individual to forced labor.

Prior to the abolition of unemployment insurance at the end of 1930, unemployment varied from a low of 0.2 million in 1922 to a high of 1.7 million in 1929. At the peak, the unemployed were about 2 per cent of the civilian labor force, but 18 per cent of the labor force of wage and salary workers.[3] (The overwhelming majority of the civilian labor force was "self-employed" on family farms.)

The first question is whether the rate of economic growth under the Five-Year Plans could have led to a sufficient increase in the demand for labor to have eliminated this unemployment and to have kept abreast or ahead of the increases in the labor force. In general, this seems to have been the case: National income has been growing since 1928 at an average rate of from 5 to 10 per cent per year,[4] while the

[3] Data on unemployment are from Soviet sources in S. M. Schwarz, *Labor in the Soviet Union*, Praeger, 1952, p. 38. Data on the labor force are adapted from Table 1 (1926), below.

[4] Gregory Grossman, "National Income," in *Soviet Economic Growth: Conditions and Perspectives*, Abram Bergson, editor, Row, Peterson, 1953, pp. 5-11.

growth of the labor force has averaged less than 2 per cent per year.[5] The expansion of output, together with the relatively high rate of investment, would seem to have been adequate for the full employment of the labor force.

The prospect for unemployment under the Five-Year Plans therefore arises in connection not with the fundamental growth characteristics of the economy, but with the problems of resources allocation within the broad outlines of the Plans, and in connection with the planning technique itself.

Soviet attempts to solve this problem include the method of balanced estimates, incorporated into the Plans.[6] Among others, there is a manpower balance (*balans rabochei sily*) in which the supply of labor by geographical areas and the labor requirements of respective industries are brought into line with each other.[7] Assuming that the balanced estimates are accurately drawn, in both real and money terms, and that prices and wages reflect the supply and demand conditions of the Plan, fulfillment requires that managers of enterprises not only meet the planned output but conduct their operations, including the hiring (and firing) of labor, on the basis of strict financial accountability. Fulfillment also requires that labor's services be provided according to the projected manpower balance. Failure of any or all conditions to be satisfied could lead to imbalance in the operation and fulfillment of the Plan, i.e. to a less than optimum allocation of resources from the standpoint of the Plan, including the theoretical possibility of unemployment at some points while the demand for labor was unsatisfied at others.

A particularly significant departure from optimum conditions appears where the manager of an industrial enterprise or collective farm acquires or retains labor in excess of that warranted by strict financial or economic considerations, motivated perhaps by greater concern for the fulfillment of output goals than for real or money costs or, in the case of the collective farm, by the difficulty of getting collective farm members to work an adequate number of days. Labor hired beyond the point dictated by economic rationality has been said to represent "hidden unemployment."[8]

[5] Warren W. Eason, "Population and Labor Force," in *ibid.*, p. 121.

[6] For a discussion of the method of balanced estimates, see Alexander Baykov, *The Development of the Soviet Economic System: An Essay on the Experience of Planning in the U.S.S.R.*, Macmillan, 1946, pp. 444ff.

[7] For example, B. Babynin, "Voprosy balansa rabochei sily," *Planovoe khoziaistvo*, No. 9, 1939, pp. 56-70.

[8] Alfred R. Oxenfeldt and Ernest van den Haag, "Unemployment in Planned and Capitalist Economies," *Quarterly Journal of Economics*, February 1954, pp. 43-60.

The expression "hidden *unemployment*" is suggested because the general economic effect of the excess hired labor is the same as with unemployment proper, namely, a less-than-optimum utilization of labor resources from the standpoint of productivity in the economy as a whole. It is considered "hidden" because the distinguishing feature of unemployment, an excess of labor supplied over labor demanded at going wage rates, has been eliminated.

To conceive in this way of one manifestation of the less-than-optimum utilization of labor in terms of an explicit characteristic (unemployment) of another manifestation is a useful descriptive device, but it does not move us very far toward a real understanding of a very complex construct of interrelationships. Furthermore, the problem of expressing the less-than-optimum utilization of labor quantitatively in unemployment equivalents is a formidable if not impossible task.[9]

In any event, the aim of this paper falls short of such an ambitious undertaking. As far as unemployment is concerned, attention will be given to several instances in which explicit unemployment might be expected to exist, as suggested by available data on employment and on the population; and some further remarks will be made on the subject of "hidden unemployment" in connection with specific examples.

The principal purpose of the paper is to discuss the impact of Soviet planning and economic expansion on the supply of labor, with particular attention to the proportion of the population in the labor force and the distribution by economic sectors, and to examine trends in the percentage of full-time participation of the labor force.

The introduction of economic planning after 1928 modified the operation of the Soviet labor market, and together with the program of rapid industrialization and economic expansion, brought about marked changes in the composition of the labor force. On the eve of the Five-Year Plans, at the time of the 1926 census, more than 85 per cent of

[9] As Oxenfeldt and van den Haag express it (*ibid.*, pp. 58-59) ". . . we must therefore measure . . . hidden unemployment through . . . productivity. . . . Since it is impossible to isolate hidden unemployment from other factors affecting productivity, we cannot hope to measure it accurately."

Incidentally, the Soviet source cited in note 2, above, has the following to say about "hidden unemployment" in the United States, in a discussion of the implications of "partial unemployment," by which is meant persons working less than thirty-five hours per week:

> "Partial unemployment is a characteristic of the general crisis of capitalism; it is one of the signs of the rotting of the capitalist economy, the growth of unutilized productive capacity, and the increasing impoverishment of the proletariat. Enterprises working with a large amount of unutilized capacity frequently prefer not to discharge workers, but to shorten the workweek. By this means, capitalists endeavor to shift the burden of unemployment to as large a number of wage and salary workers as possible, and at the same time to conceal the true amount of unemployment" (p. 239).

the civilian labor force were self-employed or unpaid family workers, and of these, the overwhelming majority were occupied in agriculture. Wage and salary workers comprised only 11.5 per cent of the civilian labor force, the unemployed 1.2 per cent, and the number working as members of producer cooperatives and collective farms, between 1 and 2 per cent.

The consequences of the introduction of the Five-Year Plans were a large increase in the number of wage and salary workers, the transfer of most of the agricultural labor force from the status of self-employed and unpaid family workers to membership in collective farms while permitting the retention of small homestead garden plots, the widening of the producer cooperative network within the handicrafts sector, and the increased use of forced labor. The most important development was the increase in the number of wage and salary workers, linked with the expansion of industry, which will be discussed in this paper by way of comparison with changes in the other economic sectors.

Of special interest is the fact that in spite of the increase in the socialized sectors of the labor force (wage and salary workers, collective farmers, cooperative handicraftsmen, and the military), to include by the late 1930's between 75 and 80 per cent of the total labor force estimated from reported data, the majority of the labor force still retains at least a part-time link with what is strictly a "self-employed and unpaid family worker" status. This link is through the homestead farm operated by all collective farmers and by a certain number of wage and salary workers, especially in rural areas, and through the continued existence of a small number of private farmers and artisans.

Finally, the yearly average number of persons "working" or "employed" in all sectors as a percentage of the total reported labor force is seen to display a substantial increase by the late 1930's, the result of the increase in the number of wage and salary workers, the relative decline of the agricultural labor force, and widened demands on the available labor time of the collective farmer and his family. This development forms the basis for a general discussion of trends in "labor utilization."

The paper is divided into three parts. The first deals with the overall relationship of the labor force to the population and the second, with the distribution of the labor force by economic sectors. The third part discusses labor utilization and includes summary remarks on unemployment.

2. *Relationship of Labor Force to Population*

At the time of the 1926 census, two years before the start of the Five-Year Plans, 86.2 million persons, or 58.7 per cent of the total population,

were "economically active"[10] (see Table 1). Of these, 84.4 million were gainfully occupied, unemployed, or in the military and the remainder (1.9 million) were dependents of institutions and persons receiving "unearned income."[11] Borrowing terminology now current in the United States, the sum of the gainfully occupied and the unemployed will be called the "civilian labor force," and including the military, the "total labor force."[12]

The overwhelming majority of the civilian labor force in 1926 consisted of self-employed or unpaid family workers—73.1 million, or 87.3 per cent; and of these, 70.5 million were in agriculture. In other words, the dominant economic unit in the Soviet economy before the Five-Year Plans, at least in terms of the labor force, was the family farm. The remainder of the civilian labor force was made up of wage and salary workers, mostly nonagricultural, and the unemployed (see Table 1).

Unpaid family workers comprised 48.5 million or 57.4 per cent of the civilian labor force, with all but a negligible number (349,000) in agriculture; and among unpaid family workers, 32.2 million or 66.4 per cent were females. The percentage of females in other groups was lower

[10] "Economically active" (*samodeiatel'nye*) under the census is defined to include all persons receiving wages or other income, as well as unpaid family workers, plus dependents of State and other institutions and persons receiving so-called "unearned income." In other words, "noneconomically active" are persons dependent on other individuals for their source of livelihood.

[11] Under the census, persons "having an occupation" included wage earners (*rabochie*), salaried employees (*sluzhashchie*), professionals (*litsa svobodnykh professii*), proprietors with hired labor (*khoziaeva s naemnymi rabochimi*), proprietors working only with members of their families, and members of artels (*khoziaeva, rabotaiushchiesia tol'ko s chlenami sem'i i chleny arteli*), persons working alone (*odinochki*), and family members helping in the occupation (*chleny sem'i, pomogaiushchie v zaniatii*). Listed separately are the unemployed (*bezrabotnye*), the military (*voennosluzhashchie*), and economically active persons not having or not indicating an occupation (*litsa, ne imeiushchie ili ne ukazavshie zaniatii*).

[12] Soviet censuses have no concept strictly analogous to our "labor force," i.e. referring to the number of persons working or wanting work during a given week. The category of "having an occupation" of the 1926 Census is more or less equivalent to that of the "gainful worker" used by the U.S. Census prior to 1940, and indicates one's general occupational status without reference to any particular period of time.

The section on "occupations" from the Soviet censuses of 1937 and 1939 was similar to that of the 1926 Census. However, data have been released only for 1939 and only from the section on "social groups," which is based on a substantial modification of the principle of "occupational status," tending to inflate the proportion of the population associated with State as distinct from cooperative and private economic activity (see I. V. Sautin, *Vsesoiuznaia perepis' naseleniia 1939 goda*, Moscow, 1939, pp. 55-60).

In the general field of Soviet labor statistics the expression "*rabochaia sila*," usually translated "manpower," refers to the available stock of labor in the sense of the number of persons expected to work (see, for example, M. Sonin, *Voprosy balansa rabochei sily*, Moscow, 1949, *passim*).

TABLE 1

The Labor Force and the Economically Active, U.S.S.R., 1926

(*number in thousands*)

LABOR FORCE STATUS	BOTH SEXES			MALE			FEMALE			FEMALE AS A PERCENTAGE OF BOTH SEXES		
	Total	*Agriculture*	*Nonagriculture*	*Total*	*Agriculture*	*Nonagriculture*	*Total*	*Agriculture*	*Nonagriculture*	*Total*	*Agriculture*	*Nonagriculture*
Wage and salary workers	9,583	1,201	8,382	6,637	836	5,801	2,946	365	2,581	30.7	30.4	30.8
Self-employed and unpaid family workers	73,129	70,533	2,596	37,351	35,335	2,016	35,778	35,198	580	48.9	49.9	22.3
Self-employed workers[a]	24,666	22,419	2,247	21,078	19,269	1,809	3,588	3,150	438	14.5	14.1	19.5
Unpaid family workers	48,463	48,114	349	16,273	16,066	207	32,190	32,048	142	66.4	66.6	40.7
Unemployed[b]	1,014	119	895	599	79	520	415	40	375	40.9	33.6	41.9
Total Civilian Labor Force	83,726	71,853	11,873	44,587	36,250	8,337	39,139	35,603	3,536	46.7	49.5	29.8
Military	631	0	631	631	0	631	[c]	0	[c]			
Total Labor Force	84,357	71,853	12,504	45,218	36,250	8,968	39,139	35,603	3,536	46.4	49.5	28.3
Dependents of institutions and persons receiving "unearned income"	1,863			996			867			46.5		
Total economically active	86,220			46,214			40,006			46.4		

Percentage Distribution of the Civilian Labor Force, by Labor Force Status

LABOR FORCE STATUS	BOTH SEXES			MALE			FEMALE			NONAGRICULTURE AS A PERCENTAGE OF TOTAL		
	Total	*Agriculture*	*Nonagriculture*	*Total*	*Agriculture*	*Nonagriculture*	*Total*	*Agriculture*	*Nonagriculture*	*Both*	*Male*	*Female*
Wage and salary workers	11.5	1.7	70.6	14.9	2.3	69.6	7.5	1.0	73.0	87.5	87.4	87.6
Self-employed and unpaid family workers	87.3	98.2	21.9	83.8	97.5	24.2	91.4	98.9	16.4	3.5	5.4	1.6
Self-employed workers	29.4	31.2	18.9	47.3	53.2	21.7	9.2	8.9	12.4	9.1	8.6	12.2
Unpaid family workers	57.9	67.0	3.0	36.5	44.3	2.5	82.2	90.0	4.0	0.7	1.3	0.4
Unemployed	1.2	0.1	7.5	1.3	0.2	6.2	1.1	0.1	10.6	88.3	86.8	90.4
Total Civilian Labor Force	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	14.2	18.7	9.0

(notes on next page)

Notes to Table 1

[a] Including a small number of cooperative handicraftsmen, not enumerated separately by the census.

[b] Since the census does not give a distribution by agriculture and nonagriculture for the unemployed, the distribution by rural and urban is used.

[c] Less than 500.

Source: *Vsesoiuznaia perepis' naseleniia 1926 goda*, Moscow, TsSU, 1928-1931, Vol. XXXIV, pp. 2-3 and 8-12.

(14.5 per cent of self-employed workers, 30.7 per cent of wage and salary workers and 40.9 per cent of the unemployed); but taken together, females constituted almost half (46.7 per cent) of the civilian labor force.

The relatively high percentage of females reflects in part the deficit in the number of males relative to females in the adult population—5.3 million in the total population sixteen years and over and 4.8 million in the rural.[13] The deficit appears to have been an effect of World War I, the Revolution, and the Civil War, since the population at the time of the 1897 census showed almost no deficit.[14]

More important is the fact that the proportion of the female population in the labor force was exceptionally high. As shown in Table 2, 75.5 per cent of the female population age sixteen to fifty-nine were in the labor force. The percentage was much higher for the population dependent on agricultural than on nonagricultural occupations. Of the female population age sixteen to fifty-nine dependent on agricultural occupations, 87.9 per cent were in the labor force, compared to 36.7 per cent of the female population age sixteen to fifty-nine dependent on nonagricultural occupations.

The percentage of the total female population in the labor force exceeds that for all other countries listed in a recent compendium of the United Nations,[15] where in no case is the proportion of females age twenty to sixty-four who are "economically active" greater than 49.9 (Japan). Only in certain eastern European countries does the proportion approach that of the U.S.S.R.[16]

The high labor force percentages among Soviet males shown in Table 2, on the other hand, are not exceptional.[17] In 1926, 98.6 per cent of the male population age sixteen to fifty-nine dependent on agricul-

[13] *Vsesoiuznaia perepis' naseleniia 1926 goda*, Volume XVII.

[14] *Pervaia vseobshchaia perepis' naseleniia Rossiiskoi imperii 1897 goda*, St. Petersburg, TsSK, 1905, Summary Volume.

[15] *Demographic Yearbook 1948*, United Nations, 1949, pp. 232-233.

[16] "A Comparison of the Gainfully Occupied Population by Sex and Age in the Various Countries of the World," *International Labour Review*, May 1940, pp. 541-550.

[17] *Ibid.*

TABLE 2

The Labor Force and the Economically Active as a Percentage of the Corresponding Population, by Age and Sex, U.S.S.R., 1926

AGE AND SEX	LABOR FORCE					ECONOMICALLY ACTIVE		
	Total	*Rural*	*Urban*	*Agriculture*	*Nonagriculture*	*Total*	*Rural*	*Urban*
Both sexes:								
10-15	58.2	66.8	9.1	69.3	12.8	59.5	67.5	14.6
16-59	85.0	91.4	60.8	92.9	65.4	86.4	91.7	66.3
60 and over	54.6	59.1	29.3	60.7	36.8	58.4	60.5	46.5
0 and over	57.5	61.1	41.0	62.9	43.1	58.7	61.4	45.9
Male:								
10-15	60.6	69.1	9.7	71.8	16.2	62.0	69.9	15.9
16-59	95.6	98.2	86.3	98.6	93.5	97.2	98.5	92.9
60 and over	74.9	77.5	57.9	78.6	71.7	78.3	78.6	76.1
0 and over	63.7	64.8	58.6	66.2	62.3	65.1	65.3	64.1
Female:								
10-15	55.9	64.4	8.4	66.8	8.9	57.3	65.0	13.3
16-59	75.5	85.5	35.7	87.9	36.7	76.6	85.8	40.1
60 and over	38.6	44.0	11.4	45.7	15.0	42.8	45.6	28.1
0 and over	51.6	57.5	24.0	59.9	24.2	52.6	57.8	28.4

Source: *Vsesoiuznaia perepis' naseleniia 1926 goda*, Moscow, TsSU, 1928-1931, Vol. XXXIV.

tural occupations were in the labor force, and 93.0 per cent of those dependent on nonagricultural occupations.

The high labor force percentages for females reflect a distinguishing feature of the economic life of the countryside in pre-Soviet Russia as well as in the Soviet Union of the preplan era, namely, that women worked in the fields alongside their husbands. Indeed, most able-bodied members of the family, regardless of age, did a share of the work when the season required it.[18] Nevertheless, the indicated percentages are so high that a question is raised whether they may include some persons who should really be classed as dependents within the meaning of the census instructions.

According to the instructions, the word of the respondent sufficed to indicate an occupation, including work as an unpaid family member, except that in the latter case, work was supposed to have been "regular" and in connection with the principal occupation of the head of the family. There was no precise frame of reference, from the standpoint either of measuring period, amount of income or hours of work. In other words, "having an occupation" referred to one's general or usual status.[19]

[18] For example, John Maynard, *The Russian Peasant: and Other Studies*, Gollancz, 1947, p. 22.

[19] For comments on the subject of "occupation" in Soviet labor force analysis,

One did not have to be working at the time of the census (December 17, 1926) in order to be counted as having an occupation, providing seasonal work was reported "of a permanent character [which] occurs year after year."[20] This held not only for cases where the family was the economic unit, but also where persons worked (seasonally) for hire; for example, "construction workers [*rabochie*] must indicate their summer work . . . even though at the moment of the census they are not so occupied." In the case of persons with more than one occupation, a summer seasonal job bringing the major income for the year was listed as the principal occupation, even though the individual was otherwise occupied at the time of the census.

Persons "completely without work and seeking it" at the time of the census, including those who never worked before, were registered as "unemployed." However, judging from tables on principal and secondary occupations, persons reporting seasonal summer work but seeking work in December, were registered as "occupied" in the summer job and not as unemployed.[21]

The absence of a quantitative standard in terms of money earned or hours worked raises the possibility that persons working relatively little throughout the year would nevertheless be counted as occupied. The possibility is especially evident with respect to unpaid family workers, although the clear intent of the census is to include only those who "help" in the fullest sense of the word:[22]

> "In the category of family members helping in the occupation are included those who regularly [*postoianno*] help the head of their own family by their work in his craft or occupation; and as helping family members in agriculture, persons, regardless of age, who take part in the principal agricultural work (field work, threshing, pasturage of cattle, etc.), even though also working in the home."

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see note 12, above; and for a general discussion of methods and concepts in this field, see A. J. Jaffe and Charles D. Stewart, *Manpower Resources and Utilization: Principles of Working Force Analysis*, Wiley, 1951.

[20] *Vsesoiuznaia perepis' naselenita 1926 goda*, Supplement to Volumes XVIII-XXXIV, pp. 10-11.

[21] *Ibid.*, Volume XXXIV, pp. 118-119. This may explain why the census total of unemployed (1,014,000) is less than the yearly average number registered in fiscal year 1926-1927 (1,242,000) as well as the number on April 1, 1927 (1,478,000), although seasonal factors distinguishing December from April may also be involved. Unemployment data from Soviet sources in Schwarz, *op.cit.*, p. 38. It seems probable, furthermore, that the census underenumerated persons with a seasonal occupation for hire in agriculture but not working (and not unemployed) at the time of the census (see Warren W. Eason, "The Agricultural Labor Force and Population of the U.S.S.R., 1926-1941," Rand Corporation, hectographed, RM-1248, May 4, 1954).

[22] *Vsesoiuznaia perepis' naselenita 1926 goda*, Supplement to Volumes XVIII-XXXIV, p. 10.

The difficulty of delineating regular work from irregular or occasional, and housework from farm work, is recognized in another section of the instructions:[23]

> "Members of the family helping in the occupation introduce elements characteristic, chiefly, of the peasant economy, and to a certain degree of trade and handicrafts. In this group is included wives and daughters and sons who have not left the household, regularly helping the head of the family in the principal agricultural work; and also the sons of artisans working together with the father in the handicraft as an apprentice, as well as wives working over the counter in the shops of their husbands.
>
> "For the most part, we have here a case of labor which is insufficiently differentiated, and which stands on the border between professional labor and the home economy (female work and peasant economy). The fact that they are actually working, under the direction of a primary person, places them in the production process, but the filial or marital connection with the head of the economic unit makes their social position different from the position of persons working for hire."

It will be noticed that the emphasis is on *regular* participation in the *principal* work of the head of the family, and the census goes further to demand a straightforward indication to the enumerator of help in the principal occupation on the part of the family member.

It is clear that the census instructions were formulated to include in the labor force only persons with more than a transient or casual relationship to it, although not necessarily working a full year, or even a full agricultural year. In fact, since the demand for labor in agriculture is concentrated in a few months of the year, it would seem that relatively little work on an annual basis would suffice for compliance with the spirit of the instructions. Subject to the qualification that the results may embody wide variation in the amount of work per year and per day in the given case, therefore, the census probably gives a fairly accurate measure of the number of persons "having an occupation."

We now ask what effect the Plans may have had on the percentage of the population in the labor force. Unfortunately, comprehensive figures on the total labor force of the U.S.S.R. have not been released since the Five-Year Plans began. The 1937 census was officially abrogated shortly after it was taken;[24] and although tabulation was subsequently completed,[25] the results have never admittedly been pub-

[23] *Ibid.*, p. 12.
[24] *Izvestiia*, September 26, 1937.
[25] Testimony of a former Soviet demographer now in this country.

lished. Releases from the 1939 census, on the other hand, have been confined to population data with partial detail, including a classification by "social groups" which is only of indirect aid in deriving labor force figures. Soviet estimates of the total labor force after 1929 from non-census sources have never been published. In the absence of adequate data on the total labor force, therefore, any indication of the change in the percentage of the population in the labor force must be to a certain extent speculative.

Under the conditions of the Five-Year Plans, certain factors would appear to have increased the percentage of the population in the labor force and others to have decreased it; but on balance, the effect has probably been to decrease the percentage to some degree. Tending to decrease it would be the increase in the number of students and the large-scale migration of females from rural to urban areas. Tending to increase it would be the efforts of the Soviet government to get the maximum proportion of the adult population into the labor force; the increase in the population age sixteen to fifty-nine relative to other groups; and possibly the indirect effects of the fall in real wages, which were low before the Plans and which apparently remained below the 1928 level until as recently as 1952.[26] These factors will now be considered briefly, and an indication will be given of their effect on the percentage in the labor force at the time of the 1939 census.

Increase in School Attendance. The number of students, excluding those in universities, rose from 41.5 per cent of the population age eight to sixteen in 1928-1929 to 89.6 per cent in 1938-1939,[27] which would imply that the contribution of youths to the labor force at the same time decreased. However, for comparability with the concepts of the 1926 census, students continuing to supply seasonal labor would be considered occupied. Although urban youths attending school may not as a rule have worked during the summer[28]—as seems to have been the case even in 1926, judging by the relatively small percentage in the labor force[29]—youths from collective farms (as well as other rural

[26] Janet G. Chapman, "Real Wages in the Soviet Union, 1928-1952," *The Review of Economics and Statistics*, May 1954, pp. 134-156.

[27] The number of students in 1928-1929 (12,548,000) relative to the population age 8-16 from the 1926 census (30,257,000); the number of students in 1938-1939 (32,711,000) relative to the population age 8-16 from the 1939 census (36,519,000) as adjusted by Lorimer (Frank Lorimer, *The Population of the Soviet Union: History and Prospects*, Geneva, League of Nations, 1946, p. 141). Children entered school officially at 8 years of age during this period.

[28] From time to time, however, special circumstances may have existed. For example, during and shortly after World War II, a large number of urban youths were pressed into working in rural areas during harvest time (see Schwarz, *op.cit.*, p. 122).

[29] In 1926, 9.1 per cent of urban youths age 10-15 were in the labor force, com-

youths) probably did work, either for the collective farm or on the homestead farm of the household. The increase in school attendance would thus appear to have had no marked effect on the over-all percentage of youths having an occupation, within the concept of the 1926 census.

Specifically, it would seem that the percentage of the population age twelve to fifteen in the labor force (by rural and urban areas) remained unchanged from 1926, although the percentage of children age ten to eleven probably fell to negligible proportions.[30]

Rural-Urban Migration of Females. In 1926, 85.5 per cent of the rural female population age sixteen to fifty-nine and 40.1 per cent of the urban were in the labor force. A differential of this magnitude maintained throughout the 1930's would mean that rural-urban migration of between 11 and 14 million females by 1939,[31] including a relatively high percentage of adults, would have a downward effect on the percentage of the total female population age sixteen to fifty-nine economically active.

It is felt that the percentage of the *rural* population age sixteen to fifty-nine in the labor force has not changed significantly since 1926. This conclusion is reached by ruling out, for different reasons, the possibility of an increase or decrease. An increase is ruled out because the 1926 percentage (85.5) would seem to represent more or less an upper limit consonant with a minimum number of females attending full time to home and family obligations. A decrease is ruled out on the grounds that certain basic conditions of rural economic life had not changed, namely, the low standard of living and family type agriculture retained in the form of the homestead garden plot. Finally, it may be noted that only a fraction of the total number of dependents of institutions and persons receiving "unearned income" were in rural areas.[32] It is therefore assumed that 85.5 per cent of the rural female population age sixteen to fifty-nine were in the labor force in 1939.

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pared to 66.8 per cent of rural (*Vsesoiuznaia perepis' naselenia 1926 goda*, Volume XXXIV).

[30] The evidence for an unchanged percentage of the rural population age 12-15 in the labor force is the relatively large number of youths age 12-15 earning labor-days on collective farms (see Eason, "The Agricultural Labor Force and Population of the U.S.S.R., 1926-1941," p. 25). The evidence for assuming a negligible number age 10-11 is, first, that the percentage of children age 10-11 in the labor force in 1926 must have been very small (but cannot be determined exactly because the age-group 10-14 is reported as a unit); and, second, that all discussion of the labor of children and youths on the collective farms during the 1930's was confined to those age 12-15 (although there was no age limit on the earning of labor-days).

[31] Eason, "Population and Labor Force," Appendix B, p. 30.

[32] Of 1.9 million in this group (see Table 1), 1.5 million were in urban areas.

In the case of *urban* females age sixteen to fifty-nine, it is generally presumed that the percentage in the labor force increased during the Five-Year Plans in response to the efforts by the government to get females into the wage and salary group. The presumption seems to be borne out by the reported increase in the number of female wage and salary workers, from 2.9 million at the time of the 1926 census to 10.7 million on January 1, 1939, or from 30.7 to 37.4 per cent of both sexes (see Table 3, below).

However, this increase arose not only from an increase in the percentage of the urban female population in the labor force, but also from the absolute increase in the urban female population and from the proportionate shift of females in the labor force from a nonhired to a hired status. The last two factors alone could have accounted for almost all of the increase in the number of wage and salary workers between 1926 and 1939, if it is assumed (1) that the rural-urban distribution of the reported number of female wage and salary workers in nonagricultural sectors was the same in 1939 as in 1926 and (2) that the proportion of the urban labor force in nonhired occupations was relatively small. On this basis, it may be assumed that about 40 per cent of the urban female population age sixteen to fifty-nine in 1939 was in the labor force, compared to 35.7 per cent in 1926.[33]

However, if in fact the percentage was higher than 40 in 1939, it

[33] In 1926, 72 per cent of female wage and salary workers lived in urban areas (*Vsesoiuznaia perepis' naseleniia 1926 goda*, Vol. XXXIV). The same proportion in 1939 would mean that 7.4 million female wage and salary workers lived in urban areas. On the assumption that 40 per cent of the urban female population age 16-59 were in the labor force, this would be about 85 per cent of the urban female labor force, while if 50 per cent of the urban female population age 16-59 were in the labor force, the proportion of female wage and salary workers in the urban female labor force would be about 65 per cent.

In 1926, 52 per cent of the urban female labor force were wage and salary workers. The percentage would be expected to be higher in 1939 through the switch of certain occupations from a nonhired to hired status. Data on the nonagricultural nonhired labor force for 1939 are very poor, but the impression conveyed in Soviet sources is that the number was proportionately much smaller than in 1926. According to this, the proportion of the urban (female) labor force in the wage and salary group was relatively large, which would be more consistent with the higher estimate above (85) than the lower (65). The assumption that 40 per cent of the urban female population age 16-59 in 1939 were in the labor force is made on this basis.

The assumption is obviously not well supported, but it conforms to available evidence better than any alternative. The principal weakness lies in the grounds for assuming that the number of persons in the nonhired urban labor force was relatively small; in fact, the percentage could have been higher than the Soviets are willing to admit. Furthermore, it must be kept in mind that the estimates of the urban population for 1939 by age-groups are subject to a considerable margin of error.

would imply one or more of the following conditions: (1) a higher proportion of female nonagricultural wage and salary workers residing in urban areas in 1939 than in 1926, (2) a larger number of female private artisans (noncooperative handicraftsmen) than indicated by partial information presently available, (3) a relatively large number of females temporarily unemployed or not in the labor force, or (4) a relatively large number in urban nonreported sectors. Except for (1), which is felt to be unlikely on the basis of indirect evidence,[34] and the inadequate fragmentary data on (2), there is no direct information on these categories in Soviet sources.

Government Efforts and General Conditions Operating to Increase Percentage of Population in Labor Force. The existence of these pressures has already been indicated and need not be elaborated.[35] The salient factor concerning their effect is that the percentage of the population in the labor force in 1926 was already very high, and in the case of rural areas, high enough to leave little room for expansion. The percentage of the rural male population age sixteen to fifty-nine in the labor force (98.2) could exclude only those physically and mentally incapable of work, and, as noted above, the percentage of the female (85.5) would seem to exclude only the minimum number required for household and family duties. For all practical purposes, therefore, an increase in the percentage of the adult rural population in the labor force does not seem plausible.

In urban areas, the percentage of the male population age sixteen to fifty-nine in the labor force is assumed to have increased from the 1926 level (86.3) to 97.1, an estimated figure which purports to include all those physically and mentally capable of work (see Appendix Table A-1). The percentage of the urban female population age sixteen to fifty-nine in the labor force, as discussed above, is assumed equal to 40. The percentage of males and females sixty years of age and over in the labor force (rural and urban) is assumed unchanged.

The foregoing discussion suggests possible change in the age-specific proportion of the urban and rural population in the labor force under the Five-Year Plans. In Appendix C and Table 4, the proportions assumed above are applied to the urban and rural population by age

[34] If anything, the proportion of the female nonagricultural wage and salary workers living in urban areas may have declined by 1939, or, in other words, the proportion in rural areas may have increased. This observation is based on the fact that the nonagricultural proportion of the total rural population apparently increased between 1926 and 1939 (see Warren W. Eason, "Population Growth and Economic Development in the U.S.S.R.," to be published in the proceedings of the World Population Conference, 1954).

[35] For a further discussion of the subject, see Schwarz, *op.cit.*, Chap. II.

and sex to derive a hypothetical labor force at the time of the 1939 census. The results, compared to 1926, are as follows:

	1926 (census)	*1939 (hypothetical)*	*Percentage Increase*
Both sexes:			
Labor force (thousands)	84,357	94,019	11.5
Labor force as per cent of population	57.5	55.2	
Male:			
Labor force (thousands)	45,218	52,938	17.1
Labor force as per cent of male population	63.7	64.8	
Female:			
Labor force (thousands)	39,139	41,081	5.0
Labor force as per cent of female population	51.6	46.3	

The higher percentage of the male population in the labor force in 1939 reflects predominantly the assumption of a higher percentage of the urban male population age sixteen to fifty-nine in the labor force. The lower percentage of the female population in the labor force shows the effect of rural-urban migration only partly balanced by the assumption of an increase in the percentage of urban females age sixteen to fifty-nine in the labor force. The percentage increase in the total labor force (11.5) is somewhat less than the percentage increase in the population (15.9), in spite of the larger proportion of adults in the population, because of the assumptions concerning the percentage of children age ten to eleven and youths age twelve to fifteen in the labor force and the net effect of rural-urban migration.

3. Labor Force by Reported Groups

Although information is not available on the total labor force under the Five-Year Plans, as discussed in the preceding section, data by certain of the most important occupation groups have been reported, but with diminishing frequency and consistency. During the intercensal period, the following were the major developments in the size and distribution of the labor force by these groups:

1. The number of wage and salary workers tripled, from 9.6 million according to principal occupation at the time of the 1926 census, to 28.6 million employed on January 1, 1939. The expansion of industry, construction, transportation, education, and administration, carried out by state enterprises working with hired labor, accounted for virtually all of the increase. The number of wage and salary workers in agriculture (after the early 1930's these were associated with state farms

and machine-tractor stations) declined from 13 per cent of the total in 1926 to 7 per cent in 1939.

2. The number of self-employed and unpaid family workers was drastically reduced by the collectivization of agriculture and the expansion of the producer cooperative network, as well as by the movement of labor into the wage and salary group. The number of self-employed fell from 72.1 million in 1926 to less than 4 million individual farmers and a relatively small number of private artisans in 1939. Within the collective farm organization, however, the existence of the individual homestead garden plot, attracting considerable full- and part-time labor from the members of the household, has meant the continuation *de facto* of a relatively large amount of "self-employment," principally among females.

3. There was an increase in the number of persons earning "labor shares," especially the number earning *trudodni* (labor-days) as collective farmers, but also those earning *zarabotki* as members of producer cooperatives. By 1939, roughly half of the total labor force earned one or more labor shares during the year, although a large number of collective farmers also earned wages (from work outside the collective farm) and self-employment income (from work on the homestead farm).

4. The number of persons on active duty with the military increased after the middle 1930's, and by early 1939 (before the widening of military activity later in the year) was near 1.6 million, or almost triple the level at the time of the 1926 census.[36]

These over-all trends did not develop in a regular fashion. On the contrary, the growth of the various sectors was extremely irregular, related to fundamental changes in the economic system. In describing the salient features of the period, the following stages may be differentiated: 1928-1930, inclusive; the year 1931; 1932-1936, inclusive; and 1937 until the annexation of territory and the start of World War II in 1939.

From the beginning of the first Five-Year Plan to the end of 1930, the total number of wage and salary workers increased by an amount somewhat greater than projected by the Plan, reaching 15.6 million on January 1, 1931, as against 13.8 million planned for fiscal year 1930-1931.[37] The planned increase in the number of wage and salary workers, incidentally, was deliberately set below the average annual increase over the preceding five years.

[36] Eason, "Population and Labor Force," as cited, p. 108 and Appendix A, Table A-1.

[37] *Piatiletnii plan narodno-khoziaistvennogo stroitel'stva*, Moscow, Gosplan, 1930, Volume II, Part 2, p. 165.

The number of registered unemployed increased initially during the Plan, from 1.4 million on October 1, 1928 to 1.7 million on April 1, 1929, and then decreased to 1.1 million on April 1, 1930.[38]

In spite of some correspondence between the planned and actual increases in the number of wage and salary workers from 1928 through 1930, and the continued existence of unemployment, labor shortages apparently developed in certain areas. Measures to get the unemployed to work and to ensure adequate manpower for expanding industry were discussed with increasing frequency.[39] To this end, on October 9, 1930, unemployment insurance was abolished, and the state labor exchanges were told to "take all steps necessary to put the unemployed to work at once,"[40] even though this meant accepting work outside one's specialty which might have been refused given the alternative of insurance. From that moment to the present, unemployment has officially not existed in the U.S.S.R.

Immediately thereafter—although only partly if at all due to the abolition of unemployment insurance—the number of wage and salary workers rose sharply. As shown in Table 3, the increase during 1931 was 6.3 million, starting from 15.6 million on January 1 and reaching 21.5 million on October 1 and 21.9 million on January 1 of the next year. This increase by more than 30 per cent in one year was equal in absolute terms to that over the preceding four.

The exceptional growth in the number of wage and salary workers during 1931 was undoubtedly an indirect result of the major and irreversible moves toward collectivization in agriculture which took place at the end of 1930 and throughout 1931. The adverse reaction of many of the peasants to collectivization would appear to have motivated a large number to seek work in the cities. Following a sharp rise and fall in early 1930,[41] the number of collective farms grew from 85,000 on July 1, 1930, to 230,000 a year and a half later. The related increase in the number of collectivized households did not begin until 1931, when in the course of the year it went from 6.6 million to 15.4 million, or from 26.4 to 62.6 per cent of all households in agriculture.[42] The population of collective farms increased from 4.8 million in 1929 to 68.7 million in 1932, and the number of able-bodied members sixteen years of age and over, from 2.3 million to 42.1 million.[43]

[38] See note 21.

[39] See Schwarz, *op.cit.*, Chap. II.

[40] *Izvestiia*, October 11, 1930.

[41] Between February and March, 1930, the number of collective farms increased from 87,500 to 110,200, and the number of collective farm households from 8 million to 14 million; then, responding to official objections to the speed of collectivization, the respective numbers fell by May to below the February levels (see Eason, "The Agricultural Labor Force and Population of the U.S.S.R., 1926-1941," Table B-1 in Appendix B, p. 122).

[42] *Ibid.*

[43] *Ibid.*, pp. 17 and 22.

TABLE 3

Wage and Salary Workers, U.S.S.R., 1926-1939
(*thousands*)

MONTH AND YEAR[a]	BOTH SEXES			MALE			FEMALE			FEMALE AS A PERCENTAGE OF BOTH SEXES		
	Total	*Agriculture*	*Nonagriculture*	*Total*	*Agriculture*	*Nonagriculture*	*Total*	*Agriculture*	*Nonagriculture*	*Total*	*Agriculture*	*Nonagriculture*
1926 census	9,583	1,201	8,382	6,637	836	5,801	2,946	365	2,581	30.7	30.4	30.8
1926-1927 yearly av.	10,944	..	..	..	..	..	..	..	..	..	..	..
1928 yearly av.	11,599	1,676	9,923	..	..	..	..	..	..	..	..	..
1929 yearly av.	12,168	1,576	10,592	8,864	1,135	7,729	3,304	441	2,863	27.2	28.0	27.0
1930 yearly av.	14,531	1,552	12,979	10,654	1,127	9,527	3,877	425	3,452	26.7	27.4	26.6
1931:												
January	15,602	957	14,645	11,405	736	10,669	4,197	221	3,976	26.9	23.1	27.1
April	..	..	..	..	..	..	..	..	..	..	..	..
July	..	..	..	..	..	..	..	..	..	..	..	..
October	21,494	..	..	..	..	..	..	..	..	..	..	..
yearly av.	18,990	2,060	16,930	..	..	..	..	..	..	..	..	..
1932:												
January	21,923	1,850	20,073	15,916	1,456	14,460	6,007	394	5,613	27.4	21.3	28.0
April	20,827	..	..	15,120	..	..	5,707	..	..	27.4	..	..
July	24,064	3,736	20,328	16,797	2,269	14,528	7,267	1,267	6,000	30.2	33.9	29.5
October	24,131	..	..	16,771	..	..	7,360	..	..	30.5	..	..
yearly av.	22,943	2,858	20.085	16,190	..	..	6,753	..	..	29.4	..	..
1933:												
January	22,649	2,099	20,550	15,741	1,591	14,150	6,908	508	6,400	30.5	24.2	31.1
April	21,517	2,227	19,290	14,945	..	..	6,563	..	..	30.5	..	..
July	22,141	3,458	18,683	14,989	2,250	12,739	7,152	1,208	5,944	32.3	34.9	31.8
October	22,776	3,323	19,453	15,556	..	..	7,220	..	..	31.7	..	..
yearly av.	22,325	2,819	19,506	15,292	1,979	13,313	7,033	840	6,193	31.5	29.9	31.7

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TABLE 3 (continued)

(*thousands*)

MONTH AND YEAR[a]	BOTH SEXES			MALE			FEMALE			FEMALE AS A PERCENTAGE OF BOTH SEXES		
	Total	*Agriculture*	*Nonagriculture*	*Total*	*Agriculture*	*Nonagriculture*	*Total*	*Agriculture*	*Nonagriculture*	*Total*	*Agriculture*	*Nonagriculture*
1934:												
January	22,726	2,382	20,344	15,522	1,777	13,745	7,204	605	6,599	31.7	25.4	32.4
April	21,595	2,450	19,145	14,749	..	..	6,846	..	..	31.7	..	..
July	24,814	3,725	21,089	16,402	2,384	14,018	8,412	1,341	7,071	33.9	36.0	33.5
October	24,294	3,496	20,798	16,180	..	..	8,114	..	..	33.4	..	..
yearly av.	23,681	3,094	20,587	15,856	2,096	13,760	7,825	998	6,827	33.0	32.3	33.2
1935:												
January	23,844	2,489	21,355	15,880	1,817	14,063	7,964	672	7,292	33.4	27.0	34.1
April	23,130	2,503	20,627	15,405	..	..	7,725	..	..	33.4	..	..
July	25,837	3,592	22,245	16,768	2,319	14.449	9,069	1,273	7,796	35.1	35.4	35.0
October	24,996	3,230	21,766	16,497	..	..	8,499	..	..	34.0	..	..
yearly av.	24,770	2,974	21,796	16,300	2,030	14,270	8,470	944	7,526	34.2	31.7	34.5
1936:												
January	24,976	2,379	22,597	16,484	1,751	14,733	8,492	628	7,864	34.0	26.4	34.8
April	24,247	2,321	21,926	16,003	..	..	8,244	..	..	34.0	..	..
July	26,375	3,015	23,360	17,038	1,983	15,055	9,337	1,032	8,305	35.4	34.2	35.6
October	26,239	..	..	16,950	..	..	9,289	..	..	35.4	..	..
yearly av.	25,771	2,615	23,159	16,765	1,808	14,957	9,009	807	8,202	35.0	30.9	35.4
1937:												
January	26,432	2,121	24,311	17,075	1,576	15,499	9,357	545	8,812	35.4	25.7	36.2
April	26,005	..	..	16,799	..	..	9,206	..	..	35.4	..	..
July	27,922	2,907	25,015	17,703	1,933	15,770	10,219	974	9,245	36.6	33.5	37.0
October	26,830	..	..	17,064	..	..	9,766	..	..	36.4	..	..
yearly av.	26,990	2,483	24,507	17,262	1,734	15,528	9,728	749	8,979	36.0	30.2	36.6

(continued on next page)

TABLE 3 (continued)

(*thousands*)

MONTH AND YEAR[a]	BOTH SEXES			MALE			FEMALE			FEMALE AS A PERCENTAGE OF BOTH SEXES		
	Total	*Agriculture*	*Nonagriculture*	*Total*	*Agriculture*	*Nonagriculture*	*Total*	*Agriculture*	*Nonagriculture*	*Total*	*Agriculture*	*Nonagriculture*
1938:												
January	26,830	2,039	24,791	17,228	1,535	15,693	9,602	504	9,098	36.4	24.7	36.7
April	26,401	..	..	16,791	..	..	9,610	..	..	36.4	..	..
July	28,175	2,361	25,814	17,581	1,619	15,962	10,594	743	9,851	37.6	31.4	38.2
October	28,610	..	..	17,910	..	..	10,700	..	..	37.4	..	..
yearly av.	27,800	2,142	25,658	17,500	1,524	15,976	10,300	618	9,682	37.1	28.9	37.7
1939:												
January	28,610	1,808	26,802	17,910	1,386	16,524	10,700	422	10,278	37.4	23.3	38.3
April	28,152	..	..	17,623	..	..	10,529	..	..	37.4	..	..
July	29,427	..	..	18,039	..	..	11,388	..	..	38.7	..	..

[a] Monthly data are the first of each month; yearly averages are calendar year except 1926-1927, which is fiscal year (October-September).

Source: Appendix B.

Rural-urban migration statistics and data on the growth of the population also show a pattern of concentration in 1931:

Urban Population, 1928-1934
(*thousands*)

Year	*January 1*[a]	*Increase during Year*	*Rural-Urban Migration*[b]
1928	27,571	59	1,062
1929	27,630	3,270	1,392
1930	30,900	1,100	2,633
1931	32,000	4,340	4,100
1932	36,340	3,399	2,719
1933	39,739	1,361	772
1934	41,100		

[a] Warren Eason, "Population Growth and Economic Development in the U.S.S.R.," to be published in the proceedings of the World Population Conference, Table 2.

[b] *Sotsialisticheskoe stroitel'stvo SSSR, 1936*, Moscow, TsUNKhU, 1936, p. 545.

The several years following 1931 were relatively stable. The average number of wage and salary workers was lower in 1933 than in 1932, but increased by somewhat over 1 million per year thereafter until 1939. The number in nonagriculture fell off after 1931 and then recovered; however, it did not rise significantly above the level of January 1, 1932, until 1937 (see Table 3).

The number of wage and salary workers in agriculture, i.e. on state farms and machine-tractor stations,[44] had grown more rapidly in 1931 than the number in nonagriculture. This growth continued in the 1931-1934 period, when the number of nonagricultural wage and salary workers remained more or less constant, and reflected the planned effort to widen the share of state relative to collective and individual farming. By the mid-1930's, however, the poor record of state farms had led to a process of contraction,[45] which appears as an absolute decline in the number of wage and salary workers in agriculture after 1934, to the 1931 level by 1939.

In collectivized agriculture, following 1931 the absolute number of collective farm households did not increase again until the beginning

[44] Only the permanent staff of the Machine-Tractor Stations is included, seasonal labor being supplied by collective farms, for the most part, and paid in labor-days. Through the summer of 1932, the number of wage and salary workers in agriculture included a significant number working for hire on individual farms (see *ibid.*, Appendix C, p. 143).

[45] Naum Jasny, *The Socialized Agriculture of the U.S.S.R.: Plans and Performance*, Stanford University Press, 1949, p. 254ff.

of 1935.[46] However, collectivized households as a percentage of the total (in agriculture) continued to increase as a result of the decrease in the number of individual farm households. This led, through the movement of population into existing collective farm households and a rise in the average population per household, to a continuous increase in the collective farm population, reaching a prewar peak near 100 million in 1936.[47]

Following 1936, for reasons which are not entirely clear, the labor force and population of collective farms dropped sharply, primarily through a decline in the number of males sixteen years of age and over. The number fell from 25.3 million in 1936 to 20 million in 1937 and 18.5 million in 1938, for an over-all decline of almost 7 million in two years, while the corresponding number of females changed very little. The number of males earning labor-days fell by 4 million—less than the decrease in the total because fewer were earning no labor-days.[48]

In an attempt to explain the drop in the number of males, the following factors are considered relevant, although they do not necessarily add up to a completely satisfactory explanation:

1. Because 1936 was a year of relatively poor harvest, a large number of males may have moved from the farms to the cities. If this were true, however, one would expect to see an increase in the number of male wage and salary workers; and although there was an increase, it was a modest one. Between the end of 1936 and the beginning of 1939, the number of male wage and salary workers increased by less than 1 million.

2. Theoretically, expansion of the military could account for a certain number, but the increase prior to 1939 was only about 580,000 and took place during 1934-1935.[49]

3. During 1937 and 1938, many official protests were registered concerning large-scale expulsions from collective farms the year before for "trivial" reasons. Laws were established stipulating the conditions for expulsion and listing the relatively minor offenses which could not thereafter be considered as valid.[50] Here too, one would expect a rise in other sectors of the labor force, unless the expulsions, however "trivial," justified imprisonment—and we have no data on the size of the prison population.

[46] Eason, "The Agricultural Labor Force and Population of the U.S.S.R., 1926-1941," Table B-1 in Appendix B, p. 122.
[47] *Ibid.*, p. 17.
[48] *Ibid.*, p. 25.
[49] Eason, "Population and Labor Force," Appendix A, p. 2, note g.
[50] Eason, "The Agricultural Labor Force and Population of the U.S.S.R., 1926-1941," p. 29.

4. Entering the group sixteen years of age and older between 1933 and 1937 were persons born during World War I, the Revolution, and the Civil War, when the birth rate was low.[51] This presumably could have at least slowed down the rate of natural increase of the collective farm population sixteen years of age and older, although it does not explain the differential change between males and females.

5. Finally, it should be noted that where the decline involved persons already working much of the year for hire outside the collective farm, their quitting the farm entirely and working full time for hire would have a relatively small effect on the yearly average number of wage and salary workers. Perhaps 1 or 2 million persons fell into this category.[52]

In any event, during 1939 and 1940 the number of males on collective farms continued to decline, by about 1 million each year; but in these years there was a parallel increase in the number of male wage and salary workers and in the military.

Turning once again to the intercensal period as a whole, what general conclusions can be reached concerning the labor force trends outlined above?

First, we may aggregate the data by reported groups as of January, 1939, and, allowing for double counting and seasonal fluctuations, arrive at a total which is conceptually more or less consistent with that of the 1926 census. This total, which will be called the "reported labor force" for 1939, is 84.3 million (see Table 4)—almost identical to the total labor force in 1926. The number of males is about 1 million greater than in 1926 and the number of females 1 million less.

The fact that the "reported labor force" in 1939 is not very different from the total labor force in 1926 does not necessarily imply a rejection of the hypothetical increase in the labor force proposed in the preceding section, from 84 million to 94 million. The difference of 10 million between the reported and the hypothetical totals for 1939 could be due to statistical shortcomings in the original data, to estimating and aggregating errors, and to the nonreporting of certain sectors, notably forced labor.[53]

[51] Lorimer, *op.cit.*, p. 41.

[52] Between 1936 and 1937, of the total decline of 5.3 million in the number of able-bodied males 16 years of age and over, more than 3 million occurred in groups earning *more* than 51 labor-days per year. The latter are generally not considered to work for hire to any great extent, if at all, and many persons earning less than 51 labor-days do not work much for hire (Eason, "The Agricultural Labor Force and Population of the U.S.S.R., 1926-1941," pp. 27 and 181-192).

[53] Attempts to measure these factors are not very successful. Possibilities in this

This makes it difficult to establish and analyze certain basic trends in the growth of the Soviet labor force. Consider, for example, the shift from agricultural to nonagricultural employment. Using the reported labor force for 1939, the increase in the nonagricultural sectors of about 17 million compared to 1926, is balanced by an equal decline in the agricultural sectors.[54] Using the hypothetical labor force, on the other hand, which would mean increasing both the agricultural and nonagricultural components (relative to the reported labor force) by, say, 5 million,[55] the absolute increase in the nonagricultural component over the intercensal period, rather than being equal to the decline in the agricultural, would be almost twice as great in absolute terms.

We can minimize such difficulties arising from our inability to estimate the total labor force accurately and at the same time gain some insight into the fundamental growth relationships of the labor force under the Five-Year Plans by concentrating attention on wage and salary workers. The wage and salary sector, since it includes the bulk of the industrial labor force and has been a priority sector from the standpoint of manpower allocation, is an important index of the impact of industrialization on the growth and distribution of the labor force.

We shall therefore compare trends in the number of wage and salary workers with those of nonwage and nonsalary workers as a group, and with trends in the growth and age-sex composition of the population. The statistical problems are minimized by this procedure because data on wage and salary workers seem to be more reliable than for other reported groups.

The expansion of the industrial sector of the economy under the Plans increased the demand for wage and salary workers. The demand was satisfied during the 1930's partly by the available supplies of manpower already in the urban areas, consisting of both the unemployed and persons in other categories of the urban labor force; partly by the large-scale migration of labor from rural to urban areas; and partly by the drawing of persons into the labor force. Of these, rural-urban migration and the transformation of formerly rural communities

connection are discussed in Eason, "Population and Labor Force," Appendix A, pp. 1-7.

[54] The data are from the section on the labor force in Table 4, including the number of wage and salary workers in agriculture from Eason, "Agricultural Labor Force and Population of the U.S.S.R., 1926-1941," p. 55.

[55] This is but one of many conceivable ways of making the distribution between agriculture and nonagriculture. In particular, it should be noted that the distribution with respect to nonreported sectors (including forced labor) could involve both nonagriculture and agriculture, or the rural economy (e.g. forestry).

into urban areas appear to have accounted for more than 80 per cent of the increase in the labor supply of the urban areas.[56]

At the same time, the adult population was growing, although the average rate of growth during the intercensal period was less than projected (from 1926) on the basis of pre-Plan survival ratios.[57] The events of the early 1930's had caused a temporary but marked decline in population growth, including a low birth rate and high death rate for several years.[58] Nevertheless, the absolute increase in the adult population age sixteen to fifty-nine between 1926 and 1939 was at a rate of 1.5 per cent per year, for a total increase of 16.5 million, compared to 18.4 million for wage and salary workers. Allowing for a certain number of females not entering the labor force, the absolute increase in the adult population accounts for almost two-thirds of the increase in the number of wage and salary workers.

Since population growth would therefore seem to have been no deterrent to the expansion of the wage and salary sector, it is difficult to explain the pattern of growth in the sector, specifically in the case of males. Almost the entire intercensal increase of 10.6 million male wage and salary workers in nonagricultural employment took place by the end of 1931. During 1931 alone, the number increased from 10.7 to 14.5 million, or by 40 per cent, after which it declined somewhat and then rose again to the 1932 level; but it did not increase above 15 million until the end of 1936, and it increased by only 500,000 during 1937 and 1938.

The increase in the number of female wage and salary workers was proportionate to males through 1931, i.e. the distribution of the sexes remained more or less unchanged. But thereafter, in the five-year period during which the number of males did not increase, the number of females increased by more than 2 million or 40 per cent; and even after 1936, the rate of increase of females was greater than that of males.

An explanation for the relatively low rate of increase of male wage and salary workers is difficult to find in other reported labor force data. The number of males in the collective farm labor force declined sharply after 1936, as shown above; and the individual farm labor force, as judged by the number of individual farm households, was declining throughout the 1930's. In each case, the release of males to work for hire is implied.

It may also be noted that in the period from 1939 to 1950, the increase in the number of male wage and salary workers was less by 4

[56] S. I. Sul'kevich, *Territoriia i naselenie SSSR*, Moscow, 1940, p. 30.
[57] Lorimer, *op.cit.*, p. 113.
[58] Eason, "Population Growth and Economic Development in the U.S.S.R."

million than the estimated increase in the male population age sixteen to fifty-nine, which includes a relatively high allowance for military deaths during the war. Thus, over the period 1926-1950 as a whole, the increase in the number of male wage and salary workers was no greater than the absolute increase in the male population age sixteen to fifty-nine.

The irregularity of the rate of growth of the industrial labor force during the 1930's appears as evidence of "hidden unemployment" in the Soviet economy. It may be argued that if industrial enterprise managers had been economically prudent, payrolls would not have increased by such a large amount in one year (1931) and remained more or less unchanged for several years thereafter. The mass exodus to the cities in 1931 would seem necessarily to have led to unemployment under "normal" conditions.

On the other hand, it is possible to view the "hiding" of manpower in these years as an investment in training, or at least "indoctrination." One of the big problems facing the Soviet leaders during the 1930's was the acclimatization of the peasant migrant to industrial life. In this sense his inclusion on the payrolls, rather than being left unemployed and forced to return to the countryside, may be viewed as a contribution tending to balance the negative effects in terms of per capita productivity.

For later years, the rate of growth of the number of wage and salary workers gives no clear indication of the existence of "hidden unemployment," except perhaps in the case of the fourth Five-Year Plan (1945-1950). There the planned increase was overfulfilled by 75 per cent,[59] but this could have been the result of an incorrect estimate of the needs of industry (in recovering from the war and in further expansion) on the part of the planners, as much as of the excessive hiring of labor.

4. Percentage Utilization of the Labor Force

The discussion thus far has been concerned primarily with trends in the size and distribution of the "labor force," defined to include the number of persons having an occupational status. According to this definition, it will be recalled, persons in agriculture, for example, were considered "occupied" even though actually working only a fraction of the year because of seasonal variation in work requirements.

The labor force by occupational status would thus normally be greater than the average number of persons actually working or employed at any one time during the year; and in a predominantly agricultural economy such as the Soviet Union before the Five-Year

[59] Eason, "Population and Labor Force," p. 112.

Plans, the difference between the two figures could be large. This part of the paper presents a measure of the average number of persons working or employed in the Soviet Union in 1926 and in 1938, and examines the trends in the percentage utilization of the labor force which the measures reveal. The question of unemployment is also discussed.

According to a survey of peasant households for the year 1924-1925 (March-February), the average number of persons working per day during the year, calculated from primary data on days of labor, was equal to 55.3 per cent of the total labor supply of individual peasants and wage and salary workers (in agriculture).[60] Working time is exclusive of housework, but includes in addition to agriculture, nonagricultural pursuits within the rural economy. These are supplementary to agriculture, for the most part, such as handicrafts, but also include work for hire. The average number of persons working in agriculture alone was equal to 34.8 per cent of the total.

If we apply the average percentages by sex calculated from the survey to the labor force principally in agriculture according to the 1926 census (Table 1),[61] and add the number of wage and salary workers and self-employed and family workers principally occupied in nonagricultural employment, as well as the military—on the assumption that persons in nonagricultural employment were by and large "working" or "employed" throughout the year—the result is an estimate of the average number of persons working or employed during 1926 of 50.4 million, equal to 59.7 per cent of the total labor force.

The Soviet government has tried to increase the percentage utilization of the total labor supply, in addition to increasing the supply as a percentage of the population, through the movement of labor from agriculture to industry, and through the reduction of seasonal variation in agricultural labor requirements (by mechanization and improved organization). In the process much of the labor force has been

[60] L. E. Mints, *Agrarnoe perenaselenie i rynok truda SSSR*, Moscow-Leningrad, 1929, pp. 22-31.

[61] This method of applying percentages from the survey to the number of persons from the census may be supported as follows: About 63 per cent of total time worked according to the survey (34.8/55.3) was in agriculture proper; however, almost 93 per cent of the rural population according to the census received their principal source of livelihood from agriculture. In other words, activities supplementary to agriculture and those strictly nonagricultural performed by members of the peasant household, although occupying a substantial portion of total time worked, constituted by and large a secondary source of livelihood. It is for this reason that the percentage of total labor going to agriculture from the total labor supply according to the survey may be used to estimate the number of persons "working" among the labor force having a *principal* occupation in agriculture according to the census.

"socialized," as seen in the increase in the number of wage and salary workers (of state enterprises), the collectivization of agriculture, and the widening of the producer cooperative network; while the number of persons occupied solely in private economic activity has declined. The homestead garden plot of collective farmers, tolerated by the government to avoid further repercussions over collectivization, has always been considered by the government as subordinate to the work of the collective farm, although it still attracts a large proportion of the collective farmer's time; and it was Stalin's view that the homestead plot would ultimately be eliminated in favor of "communalizing" all of agriculture.[62]

A measure of the average number of persons working or employed within the reported groups in the late 1930's would include the following: (1) the average number employed in the reported socialized sectors, defined as the number earning wages and salaries, labor-days (collective farmers), *zarabotki* (cooperative handicraftsmen) or military stipends; and (2) the average number working in the reported private sectors, i.e. on the homestead farm and the private farm and as private handicraftsmen. A measure of this type for 1938 is constructed as follows:

Socialized Sectors. The average number of persons earning labor-days is estimated on the basis of data from a special survey of a small number of collective farms, converted into all-U.S.S.R. equivalents (see Appendix Table D-2). The result is then aggregated directly with employment data from other reported socialized sectors—i.e. the number of wage and salary workers, which is reported as a yearly average (from periodic enterprise payroll data); the number of persons *hired* by collective farms during July and August, which may be converted into a yearly average; and the number of cooperative handicraftsmen and the military, who are assumed "employed" throughout the year.

Private Sectors. The average number of persons working on the homestead farms is estimated from survey data giving the distribution of the labor time of members of collective farm households.[63] The average number working on private farms and as private handicraftsmen is assumed the same percentage of the labor force (by sex) as in 1926.

The resulting aggregate average number of persons employed (in socialized sectors) or working (in private sectors) for 1938 is 60.9

[62] J. V. Stalin, "Economic Problems of Socialism in the U.S.S.R.," *Bol'shevik*, No. 18, 1952, translated in *The Current Digest of the Soviet Press*, April 18, 1952.

[63] *Proizvoditel'nost' i ispol'zovanie truda v kolkhozakh vo vtoroi piatiletke*, Moscow and Leningrad, TsUNKhU, 1939, pp. 67-68; and I. Merinov, "Trudovye resursy kolkhozov i ikh ispol'zovanie," *Sotsialisticheskoe sel'skoe khoziaistvo*, No. 3, 1941, pp. 17-19.

million or 72.3 per cent of the reported labor force (see Table 4). In 1926, the average number of persons working or employed in all sectors was equal to 59.7 per cent of the total labor force.

The reason for the higher rate of participation in 1938 is, first, the larger proportion of wage and salary workers, which was 8 per cent

TABLE 4

The Labor Force and the Average Number Working or Employed, by Principal Occupation, U.S.S.R., end of 1938

(*number in thousands*)

PRINCIPAL OCCUPATION	BOTH SEXES		MALE		FEMALE	
	Number	*Per Cent of Total*	*Number*	*Per Cent of Total*	*Number*	*Per Cent of Total*
			Labor Force			
Wage and salary workers	27,983	33.2	17,283	37.5	10,700	28.1
Collective farmers	32,893	39.1	17,089	37.1	15,894	41.7
Collective farm hired laborers	2,228	2.6	1,524	3.3	704	1.8
Co-op handicraftsmen	1,650	2.0	1,229	2.7	421	1.1
Military	1,550	1.9	1,550	3.3	0	
Socialized sectors	66,394	78.8	38,675	83.9	27,719	72.7
Homestead farmers (collective farm)	13,429	15.9	5,087	11.0	8,342	21.9
Private farmers	3,863	4.6	1,935	4.2	1,928	5.1
Private handicraftsmen	569	0.7	424	0.9	145	0.3
Private sectors	17,861	21.2	7,446	16.1	10,415	27.3
Total	84,255	100.0	46,121	100.0	38,134	100.0
			Average Number Working or Employed			
Wage and salary workers	27,800	45.6	17,500	49.0	10,300	40.8
Collective farmers	19,087	31.3	11,482	32.2	7,605	30.1
Collective farm hired laborers	371	0.6	254	0.7	117	0.5
Co-op handicraftsmen	1,650	2.7	1,229	3.4	421	1.7
Military	1,550	2.6	1,550	4.3	0	0
Socialized sectors	50,458	82.8	32,015	89.7	18,443	73.1
Homestead farmers (collective farm)	7,808	12.8	1,961	5.5	5,847	23.2
Private farmers	2,090	3.4	1,300	3.6	790	3.1
Private handicraftsmen	569	1.0	424	1.2	145	0.6
Private sectors	10,467	17.2	3,685	10.3	6,782	26.9
Total	60,925	100.0	35,700	100.0	25,225	100.0
			Average Number Working or Employed as a Percentage of the Labor Force, 1926 and 1938			
1926		59.7		72.4		45.0
1938		72.3		77.4		66.1

Source: Appendix C.

of the total labor force in 1926 and 33 per cent of the reported labor force in 1938. Most of this increase took place in nonagricultural employment, largely by drawing labor from agricultural sectors where the average rate of participation was relatively low.

Second, the rate of participation in collective and homestead farm agriculture in 1938 was higher than in private agriculture (and the related rural economy) in 1926. The average number of persons sixteen years of age and over earning labor-days or working on the homestead farm in 1938 was 69 per cent of the total labor force sixteen and over from collective farm households; while in 1926, the average number of persons working from peasant households was 55 per cent of the total. The combined demands of collective and homestead farm agriculture seem to have attracted a higher percentage of work time in 1938 than the demands of private agriculture in 1926. However, the average number employed on the collective farm alone was equal to only 48 per cent of the total.

The indicated increase in the number of wage and salary workers and the higher rate of participation in agriculture was relatively greater among females. That is, while the average number of males working or employed in all reported sectors rose slightly, from 72 per cent of the labor force in 1926 to 77 per cent of the reported labor force in 1938, the average number of females rose from 45 to 66 per cent.

In collective and homestead farming, a relatively greater share of the labor time of males went to the collective farm proper, and of females to the homestead farm. According to the survey data on which the estimates in Table 4 are based, adult females spent about 25 per cent of their available time on the homestead farm, compared to about 7 per cent for males. This relationship appears in Table 4 as an estimated average of 5.8 million females working on the homestead farm compared to 2.0 million males.

On the other hand, males spent about 75 per cent of their time earning labor-days and females about 35 per cent. This relationship appears in Table 4 as an estimated average of 11.5 million males earning labor-days compared to 7.6 million females. However, the number of males principally occupied on the collective farm, i.e. earning more than fifty labor-days during the year, was only slightly higher than the number of females—17.1 million compared to 15.9 million; while the number of males earning one or more labor-days was less than the number of females—20.3 million compared to 21.6 million.[64] In other words, males were in the minority among the total number of persons

[64] Eason, "The Agricultural Labor Force and Population of the U.S.S.R., 1926-1941," p. 84.

earning one or more labor-days but, because of a higher rate of participation, contributed about 50 per cent more in total labor time to the collective farm.[65]

The major portion of time (in days) not spent on the collective farm or homestead farm, for males, was spent working for hire outside of the collective farm, such that only about 5 per cent of available time remained "nonutilized," according to the survey. Females, on the other hand, spent less time working for hire, and as a result about 30 per cent of available time was "nonutilized."

The major portion of the "nonutilized" labor time of females was probably taken up with the activities of the household. In any event, for both males and females, "nonutilized" time would seem to be spent neither working (outside the household) nor, in all probability, seeking work.[66]

The over-all increase in the percentage utilization of the labor force, as pointed out, is traceable in part to the relative increase in the socialized sectors. Nevertheless, the socialized sectors in Table 4 are considerably smaller, and the private sectors considerably larger, as a percentage of the total, than the Soviet government would have us believe is the case. For example, according to the classification of the population by "social groups" in the 1939 census, only 3.4 per cent of the population was listed in private sectors or other marginal groups, while in Table 4, 21.2 per cent of the reported labor force by principal occupation, and 17.2 per cent of the average number working or employed, were in the private sector. The percentages in Table 4 are higher because homestead farming is listed as private economic activity. The census treated it as "subsidiary agriculture" and classified such persons either as collective farmers or, if the case warranted, as wage and salary workers. In addition, the number of private farmers is minimized by the census, since only those with no occupation other than private agriculture were included, while in Table 4 this category is based on the reported number of individual peasant households.[67]

[65] The same relationships hold on a month-by-month basis, as may be seen by comparing Appendix Table D-1 with Table D-2. More females earned one or more labor-days per month in the summer months, and more males in the winter (D-1); but the average number of males earning labor-days per day by months was higher every month of the year (D-2).

[66] It is customary for collective farmers seeking work for hire and unable to find it in the vicinity of the farm, to leave the household temporarily and to live away (to be in *otkhod*) while working (or seeking work). Since absence from the collective farm is reckoned as "utilized" time in the survey, it may be concluded that persons living on the collective farm and not working (on the collective or homestead farm or for hire) would also not be seeking work.

[67] The difference between the reported labor force and the hypothetical labor force (11 million), when "distributed" between socialized and private sectors,

The question of "explicit" unemployment (as distinct from "hidden" unemployment) in the Soviet Union centers on the seasonal and frictional varieties. Incidentally, a former employee of a Soviet census bureau currently writing as a refugee in Europe, insists on the existence of temporary unemployment in the Soviet Union and refers to provisions which were taken in the 1937 census to register it.[68]

Seasonal labor outside of agriculture is supplied primarily by persons from collective farm households. Other sources, including private farm and other rural households, can not be insignificant, however, because in 1939 about 25 per cent of the rural population was noncollective farm.[69]

In 1938, 4 million males and 1.5 million females from collective farm households worked for hire (outside the collective farm) at one or another time during the year, although not all of this work was for seasonal industries. Nevertheless, the variety of seasonal industries (e.g. forestry in the winter, construction in the summer) means that a substantial fraction of aggregate labor working outside the collective farm was so engaged throughout the year.

Seasonal labor is included in the manpower balance referred to in the introduction to this paper. In order to link the labor supply (by areas) with seasonal labor requirements, furthermore, collective farmers were required to contract for work for hire through the collective farm manager. Absence from the collective farm without the manager's permission was declared illegal. Nevertheless, in spite of these regulations, by the late 1930's a major share of labor outside the collective farms was contracted for on an individual basis, beyond direct or indirect controls.[70]

A certain amount of temporary unemployment would therefore seem to be inevitable in the market for seasonal labor, with such a large portion of the market outside effective controls. Unfortunately, the data do not permit us even to estimate the number of people involved at a given time.

The evidence of frictional unemployment during the 1930's centers on the relatively high rate of labor turnover, as seen in the following

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could affect the over-all distribution. However, the percentage in private sectors would still be significantly larger than that shown by the census, for the reasons given.

[68] P. Galin, *Kak proizvodilis' perepisi naseleniia v SSSR*, Munich, 1951, p. 18.

[69] Eason, "The Agricultural Labor Force and Population of the U.S.S.R., 1926-1941," p. 105.

[70] N. Aristov, "Organizovannyi nabor rabochei sily," *Planovoe khoziaistvo*, No. 11, 1939, pp. 93ff.

data for production workers in large-scale industry (turnover as a percentage of the yearly average number of production workers):

Year	*Entries*	*Departures*
1928	100.8	92.4
1929	122.4	115.2
1930	176.4	152.4
1931	151.2	136.8
1932	127.1	135.3
1933	124.9	122.4
1934	100.5	96.7
1935	91.6	86.1
1938	66.0	68.4
1939	84.0	96.0

Source: 1928-1935, from *Sotsialistieheskoe stroitel'stvo SSSR, 1936*, Moscow, TsUNKhU, 1936, p. 531; 1936-1937, not available; 1938-1939, derived from monthly data for 1938 and the first half of 1939, in S. Trubnikov, "Istochniki komplektovaniia rabochei sily v SSSR," *Problemy ekonomiki*, No. 6, 1939, p. 138.

Considering that the average number of production workers in large-scale industry at the end of the 1930's was more than 9 million, labor turnover represents an equivalent of about 8 million persons. Of course, labor turnover does not necessarily connote frictional unemployment. But if each instance of turnover were to involve on the average one month off the payrolls (and looking for work), it would be equivalent to an average of more than 600,000 persons frictionally unemployed with respect to large-scale industry at all times. This number is more than 2 per cent of the total of wage and salary workers (28 million).

Efforts to curb labor turnover and to channel and retain graduates where they were needed in industry were stepped up markedly in the late 1930's,[71] but the effect on labor turnover cannot be learned from available information.

This paper has dealt almost exclusively with the period of the 1930's, because postwar data are inadequate for the type of analysis presented. Nevertheless, the transformation of Soviet society under the impact of the Plans, as seen in the collectivization of agriculture and the expansion of state and other cooperative enterprises, had progressed sufficiently far by the end of the 1930's, that many of the impressions conveyed by the discussion would hold for the more recent period.

However, just before the war, several developments took place which may have had a significant effect on the utilization of labor: (1) the requirement of an obligatory minimum number of labor-days

[71] Schwarz, *op.cit.*, Chap. III.

on the collective farm and (2) the measures prohibiting wage and salary workers from quitting work without permission.

Starting in 1939, collective farmers were ordered to work a minimum number of labor-days or face possible expulsion from the collective farm.[72] This may have raised the rate of participation in collective farm work, but whether it has been at the expense of other activities (homestead farm or work for hire) or has led to a further increase in the over-all rate of participation in all types of economic activity is impossible to say.

In 1940, it was decreed that wage and salary workers could not quit a job (sickness and retirement excepted) or take a new one without the permission of plant management.[73] The decree was designed to strengthen labor discipline and reduce labor turnover.

It is unfortunate that we cannot measure the effectiveness of either decree, but the results of postwar collective farm budget surveys such as for the prewar used in this paper, have not been released, and there are no data on labor turnover. The decrees are directed at increasing and stabilizing the rate of participation of the labor force. The dearth of information about their results leaves an important gap in our understanding of trends in the utilization of labor in the Soviet Union.

[72] *Postanovlenie TsK VKP(b) i SNK SSSR*, May 27, 1939.
[73] Portions of the decree are reproduced in Schwarz, *op.cit.*, pp. 106-107.

Appendix A

TABLE A-1

Calculation of Hypothetical Labor Force, U.S.S.R., January 17, 1939
(*number in thousands*)

	AGE 12-15			AGE 16-59			AGE 60 AND OVER			AGE 12 AND OVER
	Total	*Rural*	*Urban*	*Total*	*Rural*	*Urban*	*Total*	*Rural*	*Urban*	*Total*
Both sexes:										
Labor force	10,848	10,486	362	77,762	51,275	26,487	5,409	4,396	1,013	94,019
Male:										
Population	8,519	6,800	1,719	45,268	26,487	18,781	4,369	3,064	1,305	
Hypothetical labor force percentage	65.2	78.9	11.2	97.7	98.2	97.1	71.7	77.5	57.9	
Labor force	5,558	5,365	193	44,249	26,010	18,239	3,131	2,375	756	52,938
Female:										
Population	8,455	6,729	1,726	50,169	29,550	20,619	6,847	4,594	2,253	
Hypothetical labor force percentage	62.6	76.1	9.8	66.8	85.5	40.0	33.3	44.0	11.4	
Labor force	5,290	5,121	169	33,513	25,265	8,248	2,278	2,021	257	41,081

Source: Population data are from the 1939 census, as adjusted by Warren W. Eason, "Population and Labor Force," in *Soviet Economic Growth: Conditions and Perspectives*, Abram Bergson, editor, Row, Peterson, 1953, Appendix B, pp. 25 and 34. Labor force percentages by age, sex, and rural-urban distribution are taken directly from the 1926 census, as in Table 2, except for the following: (1) age 12-15, which is estimated from 1926 census data reported by age groups 10-14 and 15; (2) urban females age 16-59, which is hypothetical on grounds discussed in footnote 33; and (3) urban males age 16-59, estimated by means of a calculation of the absolute number excluded from the labor force as physically and mentally incapable of work. For details on the latter, see *ibid.*, Appendix A, pp. 2-3.

Appendix B:
Sources of and Commentary to Table 3

The data in Table 3 are from Soviet sources and by estimation, as summarized below. Sources report the yearly average number of wage and salary workers for most of the 1930's, as well as selected quarterly figures. In estimating the number for certain dates, an equation is used which sets the reported yearly average for a given year (calculated by Soviet statisticians from daily or monthly payroll data) equal to the average of the number on January 1 of the given year and the following year, April 1, October 1, and twice the number on July 1. The assumption is that the average of the quarterly figures is approximately equal to the reported yearly average, which can be shown to be the case in agriculture, where the data are adequate (Warren W. Eason, "The Agricultural Labor Force and Population of the U.S.S.R.," Appendix C, p. 135), although it cannot be shown for the total because a complete set of data is not available for any one year. Since the yearly average and quarterly number are reported separately in Soviet sources, the question must be raised as to whether the data are comparable to each other; as to whether, for example, the yearly average number of wage and salary workers for a given year covers the same enterprises and institutions as the number for January 1. Unfortunately, except for the data for April 1, 1934-1936, the sum of sector data, where given, falls short of the reported total by at least a few hundred thousand, even when the two appear in the same source. However, a reasonably careful, although preliminary, sector-by-sector comparison of the data grouping the seasonal and nonseasonal sectors separately, too detailed to be presented here, indicates that differences are a function of seasonal and secular movements, and cannot (at least to any measurable degree) be attributed to varying degrees of comprehensiveness.

Sources and derivations of the data may be listed by the columns of Table 3:

Total

Yearly average. Both sexes: 1928-1935, *Trud v SSSR, statisticheskii spravochnik*, Moscow, TsUNKhU, 1936, p. 10; 1936, Ia. Joffe, *SSSR i kapitalisticheskie strany*, Moscow, 1939, p. 90; 1937, *Bol'shaia sovetskaia entsiklopediia*, Moscow, 1947, col. 68; 1938, preliminary figure, *Sotsialisticheskoe stroitel'stvo SSSR, 1933-1938*, Moscow and Leningrad, TsUNKhU, 1939, p. 20. Males: derived from the equation relating

yearly average to quarterly data (above). Females: both sexes minus males.

January 1. Both sexes: 1931-1937, E. Orlikova, "Zhenskii trud v SSSR," *Planovoe khoziaistvo*, 1939, No. 10, p. 113; 1938, assumed 1.016 of April 1 (relationship from corresponding dates for 1937) and derived simultaneously with it, by means of equation relating yearly average to quarterly data (above); 1939, *Gornyi zhurnal*, 1940, No. 3, p. 4. Males: 1931-1937 and 1939, same sources as both sexes; 1938, on basis of percentage of females interpolated between January 1, 1937 and 1939. Females: both sexes minus males.

April 1. Both sexes: 1932 and 1933, assumed .95 of the respective January 1 figure (relationship taken from data for 1934); 1934, derived from the monthly average for March, 1934 (21,704,000), as given in TsUNKhU, *Trud v SSSR, 1934, ezhegodnik*, Moscow, 1935, p. 42, by assuming the same percentage differential with respect to the March average (.995) as given for 1935 and 1936; 1935, *Trud v* SSSR . . . (1936), p. 31; 1936, *Chislennost' i zarabotnaia plata rabochikh i sluzhashchikh v SSSR*, Moscow, TsUNKhU, 1936, p. 13; 1937, derived from Trade Union data in *Handbook on the Soviet Trade Unions*, A. Lozovsky, editor, Moscow, Cooperative Publication Society of Foreign Workers in the U.S.S.R., 1937, p. 19 (see comment below on utilization of Trade Union data); 1938 and 1939, assumed .984 (1/1.016) of respective January 1 figure (relationship taken from data for 1937), and in case of April 1, 1938, derived simultaneously with January 1, 1938 (see January 1, above). Males and females: derived below.

July 1. Both sexes: 1932-1935 and 1937, derived from equation relating yearly average to quarterly data (above); 1936, assumed 1.056 of January 1 (relationship taken from 1937); 1938 and 1939, derived from following type of Trade Union information in VTsSPS, *Statisticheskii spravochnik*, Moscow, 1939, Vypusk III, pp. 4-13:

	July 1, 1939
Total number of wage and salary workers	28,581,600
Members of unions, among wage and salary workers	22,828,800
Total members of unions, including students	24,338,200
Per cent of members of unions among wage and salary workers	82.7%

It is seen that the indicated per cent does not follow from any of the absolute figures, i.e., wage and salary workers who are members of Unions (22,828,800) is 79.9 per cent of the total number of wage and salary workers (28,581,600); and total Union members including students (24,338,200) is 85.2 per cent of the total number of wage and salary workers.

The explanation apparently lies in a footnote to the original table, concerning the comprehensiveness of the data, which states that the total number of wage and salary workers is from VTsSPS (All-Union Central Council of Trade Unions), the compiler of the book in which the figures appear, and that it is less than the number for the corresponding date in the TsUNKhU series, by 700,000-800,000. Since all other possibilities can be ruled out as inconsistent with one or another aspect of the given data, the given percentage must relate the total union membership to the number of wage and salary workers according to TsUNKhU. The latter is therefore derived as 29,427,000 (24,338,200 ÷ .827), or 845,000 greater than the total given by VTsSPS.

A similar calculation for July 1, 1938, using similar data in the same source, yields 28,175,000 as the TsUNKhU figure, which is 665,000 greater than the total according to VTsSPS (27,510,000).

Males and females (July 1): derived below.

October 1. Both sexes: 1931-1935, derived from Trade Union data in *Trud v SSSR* . . . (1936), p. 56, in the manner described above (July 1); 1936, derived from the equation relating yearly average to quarterly data (above); 1937 and 1938, assumed equal to the number on subsequent January 1, from an inspection of corresponding data for 1935 and 1936. Males and females: derived below.

Agriculture

All data under these columns are from Eason, "The Agricultural Labor Force and Population of the U.S.S.R., 1926-1941," Appendix C.

Nonagriculture

All data in these columns are obtained by subtracting the number in agriculture from the total.

Males and Females

Except as indicated for particular cases above, the data in these columns are derived as follows:

The total number of wage and salary workers by sex is available, after 1930, only for January 1, 1931-1937 and 1939 (and in addition, for several years after 1939). The yearly average number of female wage and salary workers is not given after 1930, nor is the number for dates other than January 1. However, the distribution of the sexes *by certain sectors* of the wage and salary group is available with varying frequency for dates other than January 1 (but even in these cases, not the yearly average). Sufficient of the sector data are available for July 1, 1935, to construct an estimate of the number of male and female wage

and salary workers for that date. The calculations are too detailed to be summarized here, but the result is 16,768,000 males and 9,069,000 females, with females 35.1 per cent of both sexes. The latter percentage is greater than for January 1, 1935 (33.4) or January 1, 1936 (34.0), showing, in other words, a seasonal increase in the per cent of females for 1935. A straight-line increase between the two January 1 percentages would give 33.7 per cent for July 1, 1935. The estimated per cent (35.1) is thus 1.04 times the straight-line per cent based on January 1 data.

With the per cent of females given for January 1, each year after 1930, the per cent of females for July 1 of years other than 1935 is estimated arbitrarily therefrom, as follows: (1) The per cent for July 1, 1931-1934, inclusive, is assumed to be 1.04 times the calculated straight-line increase between consecutive January 1 figures. (2) The per cent for July 1, 1936-1939, inclusive, is assumed to be 1.02 times the calculated straight-line increase between consecutive January 1 figures, a factor (1.02) which is less than that for 1935 (1.04), by an arbitrary degree, in order to reflect the fact that the absolute seasonal increase in the number of wage and salary workers in agriculture (a major share of the seasonal sector in the wage and salary worker series) dropped sharply between 1935 and 1936, signifying a secular decline.

The per cent of females on October 1 and April 1 is assumed the same as given for the nearest January 1.

Given the number for both sexes the number of males and females for the first of each quarter is derived from the percentages just discussed.

Appendix C:
Sources and Commentary to Table 4

Table 4 presents the results of aggregating the reported labor force data according to (1) an estimated distribution by principal occupation and (2) an estimate of the average number working or unemployed in each sector. The steps used in the aggregation may be summarized by the rows of Table 4:

Labor Force by Principal Occupation

Wage and Salary Workers. Number on January 1, 1939 (Table 3) minus (1) an estimate of those included whose principal occupation is collective farmer, plus (2) an estimate of those not included whose principal occupation is wage and salary worker. (1) and (2) are estimated from the number of collective farmers also working for hire. The assumption is that, on the average, one-quarter of those principally

in collective and homestead farm agriculture (4,249,000) were working for hire at any given time during the year (1,062,000), and under (1) are subtracted from the number of wage and salary workers; and that one-quarter of those principally working for hire (1,743,000) were not actually doing so at any given time during the year (435,000), and under (2) are added to the number of wage and salary workers. The evidence is that the share of time working for hire is roughly the same throughout the year (*Proizvoditel'nost'* . . . , pp. 67-68; and I. Merinov, "Trudovye resursy kolkhozov i ikh ispol'zovanie," *Sotsialisticheskoe sel'skoe khoziaistvo*, No. 3, 1941, pp. 17-19), although the assumed proportion (one quarter/three quarters) is arbitrary, to conform to the notion of a "principal" occupation, i.e., that which brings in from one-half to total income.

Collective Farmers. Number earning fifty-one or more labor-days during the year (Eason, "The Agricultural Labor Force and Population of the U.S.S.R., 1926-1941," p. 84).

Collective Farm Hired Laborers. Number working in July and August, on the assumption that they had no other source of income (*ibid.*, pp. 198-200).

Cooperative Handicraftsmen and Military. Estimated from Soviet sources (Eason, "Population and Labor Force," Appendix A, p. 2).

Homestead Farmers (Collective Farm). Those with a principal occupation in collective *and* homestead agriculture but earning less than fifty-one labor-days (Eason, "The Agricultural Labor Force and Population of the U.S.S.R., 1926-1941," p. 84).

Private Farmers. Estimated from the reported number of individual peasant households (*ibid.*, pp. 201-203).

Private Handicraftsmen. Estimated from the population by "social groups" in the 1939 census (Eason, "Population and Labor Force," Appendix A, p. 2).

Average Number Working or Employed

Wage and Salary Workers. Yearly average number for 1938 (Table 3).

Collective Farmers. Average number earning labor-days per day (Appendix Table D-2).

Collective Farm Hired Laborers. Annual average equivalent of the number working in July and August.

Cooperative Handicraftsmen and Military. Same as the labor force.

Homestead Farmers (Collective Farm). Estimated as 5.7 per cent of total males sixteen and over from collective farm households (18,946,000) and 24.1 per cent of total females (20,713,000). (Per-

centage data from *Proizvoditel'nost'* . . . , *op. cit.*, pp. 67-68; absolute numbers from Eason, "The Agricultural Labor Force and Population of the U.S.S.R., 1926-1941," p. 25). Average number working age twelve to fifteen is assumed same percentage (19.7) of total number from collective farm households (8,946,000) as in private agriculture according to the survey of 1924-1925 (Mints, *op.cit.*, pp. 22-31).

Private Farmers. Assumed same percentage of the labor force as in 1926.

Private Handicraftsmen. Same as the labor force.

Appendix D

TABLE D-1

Collective Farmers Earning Labor-Days to Any Extent During Each Month and During Year, by Sex, U.S.S.R., 1938

MONTH	AGE 12-15			AGE 16 AND OVER			AGE 12 AND OVER		
	Both Sexes	*Male*	*Female*	*Both Sexes*	*Male*	*Female*	*Both Sexes*	*Male*	*Female*
				Number in Thousands					
January	861	448	413	15,410	10,068	5,342	16,271	10,516	5,755
February	887	461	426	16,275	10,437	5,838	17,162	10,898	6,264
March	1,141	593	548	19,374	11,667	7,707	20,515	12,260	8,255
April	1,556	809	747	23,466	12,897	10,569	25,022	13,706	11,316
May	2,464	1,281	1,183	27,430	13,618	13,812	29,894	14,899	14,995
June	3,761	1,956	1,805	29,187	14,250	14,937	32,948	16,206	16,742
July	4,223	2,196	2,027	30,862	15,181	15,681	35,085	17,377	17,708
August	3,839	1,996	1,843	30,020	15,006	15,014	33,859	17,002	16,857
September	2,661	1,384	1,277	28,025	14,022	14,003	30,686	15,406	15,280
October	2,433	1,265	1,168	26,851	13,459	13,392	29,284	14,724	14,560
November	1,940	1,009	931	22,848	11,860	10,988	24,788	12,869	11,919
December	1,427	742	685	19,895	11,368	8,527	21,322	12,110	9,212
Yearly av.	2,226	1,178	1,088	24,137	12,819	11,318	26,403	13,997	12,406
Total	5,188	2,698	2,490	36,648	17,571	19,077	41,836	20,269	21,567
				Percentage Distribution of Sexes[a]					
January				100	65.3	34.7	100	64.6	35.4
February				100	64.1	35.9	100	63.5	36.5
March				100	60.2	39.8	100	59.8	40.2
April				100	54.9	45.1	100	54.8	45.2
May				100	49.6	50.4	100	49.8	50.2
June				100	48.8	51.2	100	49.2	50.8
July				100	49.2	50.8	100	49.5	50.5
August				100	50.0	50.0	100	50.2	49.8
September				100	50.0	50.0	100	50.2	49.8
October				100	50.1	49.9	100	50.3	49.7
November				100	51.9	48.1	100	51.9	48.1
December				100	57.1	42.9	100	56.8	43.2
Yearly av.				100	53.1	46.9	100	53.0	47.0
Total	100	52.0	48.0	100	47.9	52.1	100	48.4	51.6

[a] Percentage distribution for persons age 12-15 by months and for yearly average assumed the same as for total.

Source: Figures other than total derived from data in a survey of a small number of collective farms, in *Proizvoditel'nost'* . . . , Moscow and Leningrad, TsUNKhU, 1939, pp. 77-126. The survey gives the number of persons per on-hand household earning labor-days to any extent each month of the year, as well as for the year as a whole. Monthly data as a percentage of annual are then multiplied by the total, above, for all collective farms to derive monthly data in this table.

TABLE D-2

Collective Farmers Earning Labor-Days per Day during Each Month and during Year, by Sex, U.S.S.R., 1938

MONTH	AGE 12-15			AGE 16 AND OVER			AGE 12 AND OVER		
	Both Sexes	*Male*	*Female*	*Both Sexes*	*Male*	*Female*	*Both Sexes*	*Male*	*Female*
				Number in Thousands					
January	231	120	111	10,661	7,860	2,801	10,892	7,980	2,912
February	232	121	111	10,609	7,729	2,880	10,841	7,850	2,991
March	288	150	138	13,085	9,312	3,773	13,373	9,462	3,911
April	391	203	188	16,854	11,232	5,622	17,245	11,435	5,810
May	563	293	270	21,324	12,082	9,242	21,887	12,375	9,512
June	853	443	410	23,135	12,588	10,547	23,988	13,031	10,957
July	948	493	455	27,508	14,864	12,644	28,456	15,357	13,099
August	856	445	411	25,452	14,210	11,242	26,308	14,655	11,563
September	645	335	310	22,831	12,823	10,008	23,476	13,158	10,318
October	574	299	275	20,870	11,952	8,918	21,444	12,251	9,193
November	416	216	200	15,397	9,753	5,644	15,813	9,969	5,844
December	334	172	162	13,842	9,492	4,350	14,176	9,664	4,512
Yearly av.	623	324	299	18,464	11,158	7,306	19,087	11,482	7,605
				Percentage Distribution of Sexes[a]					
January				100	73.7	26.3	100	73.3	26.7
February				100	72.9	27.1	100	72.4	27.6
March				100	71.2	28.8	100	70.8	29.2
April				100	66.6	33.4	100	66.3	33.7
May				100	56.7	43.3	100	56.5	43.5
June				100	54.4	45.6	100	54.3	45.7
July				100	54.0	46.0	100	54.0	46.0
August				100	55.8	44.2	100	55.7	44.3
September				100	56.2	43.8	100	56.0	44.0
October				100	57.3	42.7	100	57.1	42.9
November				100	63.3	36.7	100	63.0	37.0
December				100	68.6	31.4	100	68.2	31.8
Yearly av.	100	52.0	48.0	100	60.4	39.6	100	60.1	39.9

[a] Percentage distribution for persons age 12-15 by months and for yearly average assumed the same as for total in Table D-1.

Source: Data in this table are derived from survey of a small number of collective farms, in *Proizvoditel'nost'* . . . , Moscow and Leningrad, TsUNKhU, 1939, pp. 77-126. The survey gives the number of days worked per on-hand household each month and total for year, as well as total number of persons working any days. Percentage relationships between the three types of data are then converted to all-U.S.S.R. equivalents, given the total number of persons working one or more labor-days from all collective farms (Appendix Table D-1).

COMMENT

EUGENE M. KULISCHER, Library of Congress

On the eve of World War II, the Soviet government was continuing its efforts to include in the ranks of the workers and employees (wage and salary earners) as many housewives as possible, but at the same time the Soviet authorities were the first to acknowledge that there was a surplus of 5 million unused people in the agricultural labor force. We will gain a better understanding of this paradox if we approach it as incidental to the industrial revolution that has taken place in Russia since the end of the nineteenth century.

Russia's rapidly progressing industrialization was interrupted when the Communists seized power. With the introduction of the Five-Year Plans, industrialization was vigorously resumed in a new form—ruthless state capitalism covered by Socialist verbiage about the interests of the working class. With regard to employment, the industrial revolution pursued two intrinsically connected goals: to provide manpower for industrial development and to liquidate agrarian overpopulation—a form of hidden unemployment. Hidden unemployment due to agrarian overpopulation in Russia dates back to the time before the liberation of the serfs. In 1923-1926, i.e. in a period when industrialization had regressed compared with the World War I situation, estimates of excess persons in agriculture (based mainly on a comprehensive inquiry of the Research Institute for Colonization) went as high as 10 to 20 million. In the early 1930's, hastened industrialization and compulsory collectivization seemed to have put an end to agrarian overpopulation.

Soon it appeared, however, that the same processes of industrialization and collectivization that earlier had helped to absorb excess persons in agriculture were now beginning to produce new rural labor surpluses. For as mechanization of agriculture progressed (the only positive aspect of collectivization), manpower requirements were reduced, and such reductions built up a group of superfluous *kolkhozians.* In spite of millions absorbed by industry and additional millions who had perished from famine, there was in the *kolkhozes* (according to an official estimate of 1940) a surplus labor force of 5 million. Communist terror against well-to-do peasants and famine (resulting from enforced collectivization), drove millions of peasants to urban centers, where they found employment in industries which developed rapidly with the help of capital investment squeezed out of the rural economy.

I quote from an article of Sonin, a leading Soviet planner (*Problemy Economiki,* 1940):

Editor's Note: Members of the Conference deeply regret Mr. Kulischer's death on April 2, 1956.

"Owing to industrialization and socialist reconstruction of agriculture, unemployment and agrarian overpopulation were definitely liquidated as early as in 1930. In consequence of a high degree of mechanization and rapid increase of labor prductivity in socialist agriculture, there is in the kolkhozes a surplus labor force (due to its better utilization) that can shift to employment in industry and construction or move from regions with not enough arable land to those having much land. The number of such kolkhozians runs for the whole Soviet Union to about 5 million."

The mass of rural people who streamed to the new industrial centers in search of employment were unskilled workers, and they could be utilized since there also was an influx of skilled workers from the old Russian industrial areas. As a Frenchman would say, "Avec un cadre de travailleurs qualifiés on peut encadrer de nombres beaucoup plus grands de la manoeuvre non-qualifiée." But when, in certain cases, the flow of skilled workers ceased, there was no work for the rough rural inmigrants, at least for a time. So, such activities as roadbuilding were organized in the Urals to employ them during the very period of industrialization boom. In other words, there was structural unemployment which ultimately led to a sort of Works Progress Administration.

However, this was the industrial machine thrown temporarily out of gear. The broad effort to industrialize was continued and intensified. As an indication of the degree to which these efforts were pursued one needs only to consider the frantic efforts of the Soviet government to enlist a marginal group among the wage and salary earners—housewives, a part of whom formerly were semiemployed as helpers to their husbands, small shopkeepers and artisans. There was indeed a substantial increase of female workers and employees, promoted both by the necessity to contribute to the earnings of the husband, insufficient for the family budget, and by the expansion of child care facilities. To round out the perfect paradox, on the eve of the war, with 5 million superfluous agricultural hands, the enlistment of women among wage and salary earners had reached an all-time high and was still being vigorously pushed.

At present there is no more superfluous labor force in the *kolkhozes*; there is rather a deficiency of farm labor. How was the pre-World War II hidden unemployment liquidated?

Huge military and civilian casualties in the war with Germany reduced the manpower base mainly of the rural areas of the German-occupied territory, for evacuation of personnel and equipment was almost entirely from urban areas. In the postwar years, after a relatively short period of reconstruction, the cities picked up where they had left

off. As before the war, the magnet of industrialization was strong enough to attract a sum of migrants equivalent to the entire natural increase of the rural population. In 1939 the adult agricultural labor force numbered 39 million collective and independent farmers (excluding *kolkhozians* who worked only on their own plots) and 4 million agricultural and related wage and salary earners; adding 7 million in the subsequently annexed territories, we obtain 50 million who before the war worked in agriculture on what was to be Soviet territory. In 1950 the corresponding total was about 46 million, almost all of the decrease having occurred in the male contingent.

The hidden unemployment in agriculture, formerly so large, has been liquidated not by peculiar planning magic but by changes of the two elements of the economico-demographical relation, both changes tending to the same result—an increase of available nonagricultural jobs and a physical decimation of people looking for jobs. However, there is hidden unemployment produced by another factor—not mechanization, but ineffective planning. Unlike the former, the latter is essentially a characteristic of urban economy.

Oxenfeldt and van den Haag have made a detailed study of various other factors that obstruct a full utilization of the available labor force in the Soviet Union, juxtaposing situations under planned and market economies that tend to favor unemployment. The authors observe that in Soviet economy nonutilization of resources appears mostly not as unemployment, but as low productivity (in essence our old friend hidden unemployment). Planned economy experiences a real depression if output goals are set so low as to leave available resources, goods, or workers unutilized. On the other hand, managers are eager to reduce the risk of underfulfilling their output goals; consequently, they tend to hoard raw materials and workers. The result is again labor productivity reduced through excess of workers (hidden unemployment).

Yet a convinced adherent of planned economy would not be silenced by such shortcomings. He would say that in all these cases unemployment is due to defects in planning. If honest, he would add that these defects show only that Russia is not ripe for planned economy. And I must admit, I think too, if—Heaven forbid—we had here in the United States a planned economy, several of the mistakes leading to hidden unemployment would be avoided.

The Soviet Union—as well as the capitalist world—has been unable to eliminate frictional unemployment originating from labor turnover. Certainly the Soviet worker is by far not as free to leave his work as the Western worker. Still, the stronger legal ties to the working place are combined with chronic dissatisfactions over working conditions and

the human urge to find something better. As a matter of fact, turnover is probably even higher in the U.S.S.R. than in the free West.

There are many other such specific differences, but when it comes to the question of unemployment in its broadest sense, we must not forget the great *similarity* between the problems faced by the Soviet Union and the Western World. And in this connection, I think we have lost perspective. I do not believe that Adam Smith would have been as concerned as we have become with the differing results of the planned versus the monetary economy. We look condescendingly upon Adam Smith and other founders of political economy when they introduce a Robinson or a primitive fisherman in order to lay open the nucleus of an economic process. We have lost interest for the economic *Ding an Sich*. Since Keynes, monetary economy has become for us an organism where everything is explained by the functioning of the system. It is wholesome to be reminded from time to time that it is neither the monetary system nor Socialist planning, but production, distribution, and consumption that are by themselves as well as in their relation to population the basic components of the economico-demographic equation.

A. David Redding, Council on Foreign Relations

Warren W. Eason's paper provided much new information, especially on the labor force in Soviet agriculture. It is a careful, scholarly study of high quality, rich in empirical research. However, because the Soviet data were inaccurate and incomplete and were often withheld by Soviet authorities, Eason found it necessary to lean heavily on assumptions in making some estimates. He was careful to point this out in evaluating the difference between his estimates of the total and reported labor force in 1939—largely because of interest in the "residual" as a basis for estimating the extent of forced labor. I wondered, therefore, why he appeared to overlook the "explanation" of statistical deficiencies in other parts of his paper and, consequently, to make in one instance what seemed to me to be a less reasonable estimate than could have been made on the basis of the evidence he cited.

For example, it does not seem unreasonable, a priori, to suggest that Soviet statisticians may have overestimated the number of collective farmers in 1936. This possibility deserves at least explicit rejection by Eason, especially since other explanations were unsatisfactory to him.

More important, in rejecting a higher labor force–population ratio for urban females in 1939 (than in 1926), Eason did not consider the possibility of statistical deficiencies accounting for what he considered would be an unreasonable phenomenon: namely, "a substantial num-

ber of non-worker-and-employee females economically active in urban areas, principally in the non co-op handicrafts sector. . . ."* He assumed, in the absence of evidence, that the same percentage (72 per cent) of female nonagricultural workers and employees lived in urban areas in 1939 as in 1926. If, however, that percentage were raised to (say) 80 per cent, his estimate of 7.4 million female nonagricultural workers and employees would be raised to 8.2 million; and these workers would represent 92 (instead of 85) per cent of *his estimate* (itself subject to sizable error) of the urban female labor force in 1939—leaving only a small number to be accounted for as "female private artisans." A labor force–population ratio for urban females greater in 1939 than in 1926 thus would not be inconsistent with the evidence on employment cited by Eason; and, further, it seems indicated by other evidence cited by him on the greater participation of urban females in economic activities in the later year.

Use of a higher labor force–population ratio in computing the number of females in the urban labor force in 1939 would, it should be noted, result in a larger total labor force in that year and a larger discrepancy between the total and reported labor force. The extent of the increase in both magnitudes would depend, of course, on the adjustments made to the ratio in question.

I am aware of the need for "numbers" in this field where data have been notably inadequate. Eason's estimates are indeed a valuable contribution to our knowledge; and, therefore, I should like to express again my appreciation and admiration for the magnitude and high quality of his work. However, I feel I should also stress the sharp limitations to those estimates which are based (necessarily) on inadequate data. Awareness of the limitations is especially important to readers who might otherwise use the estimates as a basis for still further estimates or conclusions, which would in many instances be unwarranted by the underlying statistics.

* Editor's Note: The comment is as given originally; in his revised paper Eason uses a higher labor force–population ratio.