

The Failure of Demographic Statistics: A Soviet Response to Population Troubles*

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For the Communist regime in the Soviet Union, population statistics as well as other kinds of statistics served propaganda purposes. However, demographic troubles were a featured characteristic of USSR history, and the Soviet authorities frequently and blatantly interfered in the collection and publication of population data.

Recent studies show great ideological difficulties surrounding the development of demography in the USSR under the Communist regime, and the consequences thereof (Vichnevski, 1997; Avdeev, 1997). Many studies have dealt with the sorrowful history of Soviet population statistics, especially of the 1930s (see, e.g.: Blum, 1998; Volkov, 1990). However, less attention has been paid to Soviet statistics of the most recent period (an important exception: Anderson et al, 1994), and the problems accompanying the development of Soviet population statistics are far from being fully understood.

In today's world, the scientific community is mindful to prevent improper political influence in different fields of statistics (see, e.g.: Seltzer, 1994). The history of Soviet population statistics has provided us with some extreme examples of political interference. Our study is devoted to the central problem of the development of these statistics – the interference of USSR authorities in population statistics and the use of these manipulated statistics as a tool for political propaganda. Inevitably this leads us to study the suppression of outputs of Soviet statisticians, as well as secrecy and manipulation in statistical practice.

Troubled Demographic Realities and Political Propaganda

Since Joseph Stalin rose to power as a dictator in 1929 till the end of the Soviet era, demographic catastrophes and troubles were a featured characteristic of Soviet society.¹ During Stalin's reign (1929-1953), the population of the Soviet Union suffered terrible human losses in the course of forced collectivization and the 1932-1933 famine, the

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¹ For an excellent review of the demographic history of the Soviet Union, see: Blum and Darsky, 1999; see also Blum, 1994. On demographic problems in the general context of the country's development, see: Vichnevski, 2000.

Great Terror of 1937-1939, the Second World War, as well as the 1946-1947 famine and the new round of repression which followed. After Stalin demographic reality was far from good. The post-war sex imbalance affected the demographic situation and, as a consequence, there was a high level of births out of wedlock. Abortion was the principal method of birth control even at the end of the Soviet era. Since the second half of the 1960s, the demographic situation in the Soviet Union has worsened and indicators of life expectancy and infant mortality stagnated and even deteriorated.

The problems of estimating human losses under Stalin, especially during the period of forced collectivization and the 1932-1933 famine when the collection system of demographic statistics seriously deteriorated – in some parts of the Soviet Union almost to the point of collapse – have no exact solution (see, e.g.: Livi-Bacci, 1993). However, it is undeniable that human losses were great.

In general, as correctly noted by Robert Conquest (2000, p. 96) on the Soviet approach to reality: “After the economic disaster of collectivization ... the course was chosen. In fact, the Idea, contradicted by reality, coped with reality by denying it.” And Stalin himself started using falsified population figures in 1934 to conceal the terrible consequences of his policy – the 1932-1933 famine.

At the 17th Congress of the Communist party Stalin claimed that the Soviet population had increased to “168 million” by the end of 1933 (*Pravda*, January 28, 1934). According to the memories of Mikhail Kurman (1993, p. 600), who was then working for the Soviet Central Statistical Administration,² Stalin, on his own initiative, exaggerated the actual statistical estimate by about 8 million. In a subsequent conversation concerning this population figure, the head of the Central Statistical Administration was told by the dictator that he himself knew which figure to give. However, according to Kurman, Stalin’s original figure was lowered by one million in the publication of the Party Congress documents.

Today we know, thanks to the recent publication of archive documents, that for the start of 1934 the statistical estimate was at 160,465,200, and according to this estimate there was a population decrease in 1933 (Poliakov, 2000, p. 346). According to recent estimates, this human losses of the period of forced collectivization and the 1932-1933 famine were about 7 million people (Andreev et al, 1994, p. 431).

In 1935 Stalin again used demography in his propaganda, and falsely claimed a natural increase of “about 3 million” in the Soviet Union as proof of Soviet prosperity (*Pravda*, December 4, 1935). This allegedly rapid increase of Soviet population was often featured in the Soviet propaganda of the 1930s.

Since the results of the 1937 census were a population of only 162 million, they would have exposed the falsehood of both Stalin’s claims and Soviet propaganda, and were thus denied by the authorities and kept secret till

² During the period under consideration the Soviet Central Statistical Administration changed its name more than once, but throughout this paper we have used the same name.

the glasnost era (Tolts, 1991). A new census was organized in 1939, and with the help of direct falsifications³ produced a figure of 170 million for Soviet population. Stalin announced this new figure at the 18th Party Congress, obviously before the census results were actually received (Tolts, 1989).

During the Great Terror of 1937-1939, statistical personnel, including organizers of the disavowed 1937 census, paid with their lives for their attempt to adhere to professional standards – during these years, three successive heads of the Central Statistical Administration were executed, and many others statisticians were arrested (see, e.g.: Volkov, 1990). The total number of those who perished in the Great Terror is believed to have reached two million (Andreev and Kharkova, 2001; for alternative lower recent estimates, e.g., see: Getty and Naumov, 1999, Appendix 1).⁴

In the Second World War the Soviet Union suffered very great human losses. In 1946 Stalin again made a demographic announcement, which was again gross falsehood: he claimed that on the whole only 7 million had perished in the war (*Pravda*, March 14, 1946). Since this statement, of course, for many years this figure became dogma in the Soviet Union. However losses of the Red Army alone (more than 8.6 million; see: Krivosheev, 1997, p. 85) exceeded Stalin's figure. A recent estimate has given a much higher figure for the total Soviet human losses during the Second World War – about 26 million (Andreev et al, 1994, p. 436).

After the war (1946-1947), the demographic situation was aggravated by a new famine with about one million victims (Isupov, 2000, p. 226; see also: Zima, 1996). Clearly, demographic data for this period could not be used for propaganda purposes, and Stalin rejected a proposal of the Central Statistical Administration for a new census in 1949 (Oxenit, 1988).

In the post-Stalin period the demographic situation in the Soviet Union improved, however as noted above, during the entire Soviet era since 1929 the demographic situation was far from good. In 1961 at the 22nd Party Congress the new Soviet leader Nikita Khrushchev pronounced that “mortality in the USSR is the lowest in the world” (CPSU, 1961, p. 76). This misstatement became one of the most often quoted claims in the repertoire of Soviet propaganda.

Later, in emulation of Stalin's falsifications regarding Soviet population and his claim on its allegedly rapid increase in the early 1930s, new propaganda claiming Soviet achievements again damaged population statistics. In

³ Such as manipulation of census control forms, and a direct one-percent inflation of the census results; on this, e.g., see: Volkov, 1990, p. 49; Andreev et al, 1994, p. 426. The 1939 census really gave the figure of Soviet population at 167.6 million and, according to recent studies, the intentional overestimate of the population was about 3 million (Volkov, 1997, p. 18; Poliakov, 2000, p. 356). “The final results” according to the 1939 census were presented as an official figure of about 170.6 million (*Vestnik statistiki*, 1956, No. 6, p. 90). Clearly, the Soviet population even by the start of 1939 had not reached Stalin's figure of 168 million.

⁴ One of the main reasons for the failure of demographic statistics in the 1930s was that the Central Statistical Administration was not receiving reports on deaths of exiles and prisoners, or on the number of executions (Poliakov et al, 1992, p. 38; Isupov, 2000, p. 117). On an attempt to introduce such reporting, see: Yakovlev, 2000, pp. 115-116.

1967, then Soviet leader Leonid Brezhnev in his official speech on occasion of the 50th anniversary of the October Revolution made the following statement:

The conditions of a nation's life may be assessed by many indices. One of the most important of these is the expectancy of life. It is a summary, as it were, of all that is being done for man: the conditions of work and life, health protection and insurance. In this respect, the Soviet Union has made colossal progress. In old Russia the average life span [for both sexes] was only 32 years. Today the average life expectancy [for both sexes] in our country has reached 70 years, which is among the highest in the world (Brezhnev, 1972, pp. 29-30).

And when, in the 1970s, indicators of life expectancy in the Soviet Union worsened, this inevitably, in accordance with Stalin's tradition, led to a new round of suppression and manipulation of Soviet population statistics.

Politics of Demographic Data: Censorship and Manipulation

Soviet statistical publications of the 1920s contained ample data on abortions, homicide and suicide presented freely and in full. These would later become targets of Soviet censorship.

During Stalin's Great Leap Forward statistical publications were subjected to his personal censorship. As noted above, the Soviet dictator himself even fabricated population figures. During this period, population figures were suppressed. The results of the 1939 census were fabricated, and only later were some of them published. The arbitrary statistical manipulations⁵ of this period lead us to question the limits beyond which population statistics can no longer in any way measure reality (see: Zakharov, 1996).

Following the heavy losses of the war, population figures could hardly be used for propaganda purposes. At the same time, these years were the most acute of the Cold War: in the Soviet Union paranoia and secrecy became characteristics of the society, and Soviet publications in the various fields of statistics were almost closed down (Nove, 1992, p. 326). All demographic data became "Top Secret", and even the total number of Soviet population remained unpublished.

After Stalin's death the country partially returned to normality. Publication of basic demographic data was resumed. The number of published figures rose steadily till the mid-1970s when a lone demographic handbook was published (TsSU SSSR, 1975). However, today it is clear that this was only a temporary thaw. Even in this period, suppression of demographic data continued and there was incessant censorship. A worsening of Soviet demographic indicators halted this relaxation.

Since 1965 life expectancy in the country has been decreasing. Brezhnev's statement of 1967 (quoted above) on a life expectancy of 70 years in the Soviet Union created a difficult problem for the obliging managers of the Central Statistical Administration. To keep Brezhnev's figure in their publication, the Central Statistical Administration had to manipulate its figures.

To this end, first the indicator was presented for the second half of 1970 and the first half of 1971; that is, a one year period, very unusual for Soviet life tables, whereas previously the Central Statistical Administration had estimated and published this indicator covering a two year period. This publication presented life expectancy at birth for both sexes at 70 years. However, in a later publication the Soviet Statistical Administration presented life tables covering the four year period of 1968-1971, with the life expectancy at birth for both sexes at 69.50. Of course also this figure comes to 70 after rounding. Soviet publications of the glasnost era clearly show that the official life tables for the usual two year periods gave life expectancy at birth for both sexes in rounded figures at 69 years only (Table 1).

⁵ In the 1930s this approach was a featured characteristic of Soviet statistics as a whole (see, e.g.: Wheatcroft and Davis, 1994).

Table 1. Official Estimate of Life Expectancy at Birth in the USSR, 1968-1971

| Period covered | Both sexes | Males | Females |
|--|------------|-------|---------|
| Publications of the 1970s | | | |
| 1968-1971 | 69.50 | 64.56 | 73.53 |
| Second half of 1970-first half of 1971 | 70 | 65 | 74 |
| Glasnost publications | | | |
| 1969-1970 | 69.34 | 64.38 | 73.35 |
| 1970-1971 | 69.4 | 64.5 | 73.5 |

Sources: TsSU SSSR, 1973, p. 564; *Vestnik statistiki*, 1974, No. 2, pp. 94-95; Goskomstat SSSR, 1989a, p. 493; Goskomstat SSSR, 1989b, pp. 69, 71, 73.

Another important demographic indicator – the level of infant mortality – rose in the Soviet Union in the 1970s, and the Central Statistical Administration has, also in this case, responded in the usual Soviet manner: no infant mortality rates have been published since 1975. In order to conceal this problem, the official Soviet statistical yearbook (TsSU SSSR, 1974-1980) has for many consecutive years published the same unchanged statement that “presently in the USSR among newborns only 3.2 percent do not survive up to age of 5”. At the same time, between 1973 and 1976, the official Soviet infant mortality rate increased from 26.4 to 31.4 per 1,000 (Goskomstat SSSR, 1989a, p. 473).

In the Soviet Union, the period of the mid-1970s saw the disappearance of many other demographic data in the publications of the Central Statistical Administration, and this was noted and discussed in the world demographic community (see, e.g.: Feshbach, 1982, p. 6; Pressat, 1982, p. 657). However, only now may we show that there were different reasons for the suppression of demographic data.

By the mid-1970s the Soviet military industrial complex reached the apex of its influence (Bystrova and Riabov, 1997), and the consequences of this development were disastrous for demography. The last open data on the age-sex structure in the pre-perestroika era for the whole country were published for the start of 1975, and death rates by age and sex covered only 1973-1974. No such updated data were published (in 1976), when they were censored under pressure of the Soviet military which treated this information as strategic. Even data on the sex of newborns was suppressed. Internal migration data were suppressed with the intention of concealing the development of Soviet strategic potential. Clearly these changes were not acts of political censorship. On the other hand, the

disappearance of infant mortality data and death rates by age from open Soviet publications were acts of political censorship.

At the same time, there were very different reasons – with both political and strategic intentions – for the concealment of demographic data, which influenced the differing degrees of censorial suppression. Since the introduction of these restrictions, by the end of 1970s – beginning of the 1980s a multi-level system of censorship was used for the suppression of demographic data: some of these data were kept secret; others were suppressed totally from open publication; and some of demographic data had been possible published openly only with the permission of the Central Statistical Administration and its respective regional branches (Table 2).

Table 2. Degree of Censorship Suppression of Demographic Data in the USSR, End of 1970s-Beginning of 1980s

| Degree of Censorship Suppression | Demographic Data |
|--|--|
| Status of “State Secret” (Highly restricted circulation) ^(a) | Homicide; Suicide; International migration; Deaths caused by extremely dangerous infectious diseases (plague, cholera, etc.) |
| Suppressed totally for open publication (“For official use only”) ^(b) | Age-sex structure; Internal migration |
| Openly published rarely: only with permission of the Central Statistical Administration and its respective regional branch (Usually “For official use only”) ^(b) | Mortality by age (including infant mortality) |

(a) According to orders and instructions on “Protection of State Secrets”.

(b) According to “The List of Information Prohibited for Publication in the Open Press, Radio and TV Transmission”.

Of course, the existence of this system, and the documents regulating its secrecy and censorship were concealed, and these documents themselves were stamped “Secret”.⁶ However, based on a detailed study of publication practices, one may attempt to review Soviet censorial suppression of demographic data in this period.

Data on homicide, suicide, deaths caused by extremely dangerous infectious diseases (plague, cholera, etc.) and international migration had the status of “State Secret”. Only very few people in the Central Statistical Administration had permission to work with these data. They were stored specially in the secret (“the first”) department of the Administration.

Some basic demographic data were suppressed totally from open publication and were not allowed to circulate freely. These were included in “The List of Information Prohibited for Publication in Open Press, Radio and TV Transmission”. The age-sex structure is prominent in this category, and internal migration statistics data

⁶ For some general documents of Soviet censorship, see, e.g.: Gorjaeva, 1997.

were also totally prohibited from open publication. These data were published “For official use only”.⁷ Every copy of such a publication was given an individual registered number, and was distributed according to a special list of addressees – within the Central Statistical Administration and its regional branches, as well as to some party and governmental bodies. Only a few scientific institutions were among the recipients of such publications. They were not allowed to general readers in libraries even if the library had them; these publications were kept in “special storage” [*spetskhran*] (on the library’s “special storage”, e.g., see: Davis, 1997, pp. 87-88).

Other demographic data were published openly only with the permission of the Central Statistical Administration and its respective regional branches. These subjects were also included in “The List of Information Prohibited for Publication in Open Press, Radio and TV Transmission”. Mortality data by age (including infant mortality) is in this category. Study of Soviet open publications by regions shows that such demographic data were published only in cases of good situations (relative to current Soviet circumstances), for example for Belorussia and the Baltic republics (see, e.g.: TsSU Latvian SSR, 1978; TsSU Lithuanian SSR, 1979; see also: Shakhotko, 1985; Zvidrins, 1986). However, these cases were the exceptions, and mortality data by age (including infant mortality) was usually suppressed from open publication and published “For official use only”.

In general, the role of the Central Statistical Administration and its regional branches in the suppression of demographic data was instrumental in their restriction of scholarly use of and access to any unpublished data. The Administration has had a monopoly on the use of demographic data and their publication.

This situation changed only in the period of glasnost (1987 onwards), when the censorial suppression of demographic data was abolished. However, some well-kept secrets of the military-industrial complex hidden by Soviet censuses have survived the Soviet regime.

Secrecy at Work: Soviet Censuses

Soviet leadership consistently treated the military potential and the penal system of the country as highly protected secrets. Therefore, since the Stalin era, within the framework of each Soviet census, a secret “special census” of military personnel, prisoners, and (in the post-war period) inhabitants of secret cities was organized, and these groups of Soviet population were enumerated by “special procedures”.

All documents concerning the counting of these population groups were secret. And of course, the results were also secret. Moreover, in order to preserve these secrets all other census results were mixed with them using special secret procedures, thus rendering the original figures totally inaccessible.

Table 3. Groups Enumerated by “Special Procedures” in Soviet Censuses,

⁷ For a listing of such publications of the Central Statistical Administration, see: Polian, 2001.

1939-1989, Millions

| Census | Total population | Military personnel ^(a) | Prisoners | Inhabitants of secret towns |
|--------|----------------------|-----------------------------------|-----------------------|-----------------------------|
| 1939 | 170.6 ^(b) | 2.1 ^(c) | 3.1 ^{(c)(d)} | - |
| 1959 | 208.8 | 3.6 ^(c) | 1.0 | ... |
| 1970 | 241.7 | 3.8 | 1.1 | ... |
| 1979 | 262.4 | 4.2 ^(e) | 1.3 | ... |
| 1989 | 286.7 | 4.3 | 1.4 | ~1.0 ^(f) |

(a) For the post-war period this does not include the KGB and the Ministry of Interior military formations, which as of the last Soviet census of 1989 possibly numbered about 0.6 million (see: Odom, 1998, p. 33).

(b) Official inflated census result; on recent revaluations of this figure, see text.

(c) Census figure.

(d) Including exiled ("labor") settlers (*trudposeletsy*) who had been living in labor settlements of the GULAG.

(e) 1980.

(f) Author's minimum guesstimate; on the secret towns, see text.

Sources: Goskomstat SSSR, 1989a, pp. 8; Luneev, 1997, pp. 394, 437-438; Poliakov, 1992, p. 9; *Pravda*, April 8, 1989, p. 2; Simchenko, 1990, Part 3, p. 658; TsSU SSSR, 1962, pp. 104-105.

The groups enumerated in the Soviet censuses by "special procedures" were rather sizable (Table 3). Moreover, as military personnel they belong almost exclusively to one sex and a very narrow age range. Thus, manipulation of these population groups could seriously damage the census results, and we can show some examples where this was done.

The 1939 census was a model for all subsequent Soviet censuses.⁸ Fortunately, in the glasnost era the secret instructions for this census were published, as were many of its raw materials (Simchenko, 1990). For post-war censuses we have no access to such documents.

Re-evaluation of the 1939 census results allows us to see what are apparently unintentional consequences of these manipulations. For example, distortions in the data of the ethnic composition in the various areas (i.e., provinces, territories, autonomous and union republics) resulted from inflation of real census figures, namely, the secret additions (*tsentralizovannyi kontingent*). These "additions" differed (in percent) for each area, and within these areas, urban and rural populations were differentiated as well. Possibly included are the one percent inflation of the population of the USSR as a whole, military personnel, and redistribution of a large number of prisoners.

Regarding the prisoners, Soviet officials engaged in a massive deception. Most of them were included in the population of the region in which they actually were imprisoned, and their census forms were distributed proportionally within different parts of the region and mixed with those who really were counted there. However, in order to conceal a huge concentration of prisoners in the northern and eastern parts of the Russian Federation (Buriat-Mongol, Karelian, and Komi autonomous republics, the Far Eastern Territory, and Arkhangelsk, Novosibirsk and Sverdlovsk provinces) the census forms for 759,550 of these prisoners were ostensibly "redistributed", i.e. they were added to the populations of other parts of the Soviet Union (Poliakov et al, 1992, pp. 84-89; see also Simchenko, 1990, part 14, pp. 2738-2740).

⁸ For a general overview of Soviet censuses, see, e.g.: Clem, 1986; Kingkade, 1989; Pavlov, 1972.

And we have confirmation for most of the areas noted that this was actually done (Poliakov et al, 1992, p. 80; Simchenko, 1990, part 3, p. 657.)

On the other hand, from secret correspondence of that period we now know that in order to conceal the great population losses which were caused by the forced collectivization and famine of 1932-1933, census forms for 383,563 people residing elsewhere were sent to Ukraine and, simultaneously, 375,180 to Kazakhstan (Simchenko, 1990, part 1, pp. 18-19, 24-25; concerning demographic consequences of the famine in Ukraine and Kazakhstan see for example, Adamets et al, 1994, pp. 14-17; Pirozhkov, 1996). These 758,743 people were included among the rural populations of the two republics. This figure closely approximates the number of prisoners noted above whose census forms were redistributed from their places of incarceration in the RSFSR. This allows us to surmise with a high degree of probability that the people whose census forms were added to the census results of Ukraine and Kazakhstan were prisoners confined within the Russian Federation.

Moreover, from prison statistics for the beginning of 1939 we know that the percentages of males and females were 91.6 and 8.4 percent in the GULAG, respectively (Yakovlev, 2000, p. 416). The percentages among those people whose census forms were sent to Ukraine and Kazakhstan were 92.3 and 7.7 percent (Simchenko, 1990, part 1, pp. 19, 24). The great similarity of these percentages tends to confirm our previous surmise.

The percentage of overall inflation of the 1939 census figures varied among the different union republics, and was highest in Kazakhstan: 13 percent (computed by Poliakov, 1992, p. 22; Simchenko, 1990, part 1, pp. 19-22). We have therefore chosen this republic to serve as the example for our evaluation of the distortions in ethnic composition (see: Appendix 1). The general percentage of inflation for the total population of the republic was found to be 18 percent for Russians and 6 percent for Kazakhs. Such differentiations in inflation of the census figures actually changed our understanding of the ethnic structure.

Table 4. Comparison of Estimated and Official Ethnic Structure of Kazakhstan, 1939 Census, Percent

| Ethnic group | Total population | | Rural population | |
|--------------|------------------|------------------|------------------|------------------|
| | Official figure | Estimated figure | Official figure | Estimated figure |
| Kazakhs | 37.8 | 40.4 | 44.0 | 48.2 |
| Russians | 40.0 | 38.4 | 33.1 | 30.2 |
| Ukrainians | 10.7 | 10.5 | 11.7 | 11.5 |
| Uzbeks | 2.0 | 2.0 | 1.9 | 1.9 |
| Tatars | 1.7 | 1.7 | 1.1 | 1.0 |
| Germans | 1.5 | 1.5 | 1.8 | 1.8 |
| Poles | 0.9 | 0.9 | 1.1 | 1.1 |
| Jews | 0.3 | 0.2 | 0.2 | 0.1 |
| Others | 5.1 | 4.4 | 5.1 | 4.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Appendix 1.

According to official census data on the total population, Russians (40.0 percent) outnumbered Kazakhs (37.8 percent); but according to our re-evaluation the contrary was true: Kazakhs (40.4 percent) outnumbered Russians (38.4 percent). Thus we see that there are actual differences in the ethnic structure of the total population according to official and estimated figures (Table 4). There is a larger discrepancy between the estimated and official figures from the 1939 census for the Jews than for any of the other ethnic groups (on the census distortions concerning this ethnic group, see: Tolts, 1994).

Analysis of the detailed data on the age-sex structure of different regions according to the official results of the post-war Soviet censuses show very unusual age-sex ratios which can be explained only as a consequence of manipulation with military personnel in these censuses (Andreev et al, 1998, p. 46). Prisoners in post-war censuses were possibly included in the population their of region of incarceration (ibid). However, here an important question arises: in which part of a region's population were they included? We may surmise that in some regions with sizable numbers of prisoners they may have been added to cities and towns situated far from the sites of imprisonment.

Table 5. Estimated Redistribution of Population from Russia's Hidden Settlements to Other Regions in the 1989 Census, Thousands

| Region | Published census population figure ^(a) | Redistribution: | | Corrected population figure ^(a) | Redistribution as % of corrected figure |
|----------------------------|---|-----------------|-------------|--|---|
| | | from | to | | |
| Volga-Vyatka | | | | | |
| Kirov | 1,693 | | +43 | 1,650 | +2.6 |
| Nizhegorod ^(b) | 3,714 | -43 | | 3,757 | -1.1 |
| Volga | | | | | |
| Samara | 3,266 | | +40 | 3,226 | +1.2 |
| Penza | 1,504 | -40 | | 1,544 | -2.6 |
| Ural | | | | | |
| Orenburg | 2,174 | | +29 | 2,145 | +1.4 |
| Perm | 3,100 | | +55 | 3,045 | +1.8 |
| Sverdlovsk | 4,717 | -55 | | 4,772 | -1.2 |
| Chelyabinsk | 3,624 | -73 | | 3,697 | -2.0 |
| West Siberia | | | | | |
| Kemerovo | 3,176 | | +74 | 3,102 | +2.4 |
| Novosibirsk | 2,782 | | +44 | 2,738 | +1.6 |
| Tomsk | 1,002 | -74 | | 1,076 | -6.9 |
| East Siberia | | | | | |
| Irkutsk | 2,831 | | +50 | 2,781 | +1.8 |
| Chita | 1,378 | | +61 | 1,317 | +4.6 |
| Krasnoyarsk ^(c) | 3,027 | -111 | | 3,138 | -3.5 |
| Total | x | -396 | +396 | x | x |

(a) Actual (*nalichnoe*) population.

(b) Within the borders on the date of the census.

(c) Not including Khakassia.

Source: Appendix 2.

If the presence of the Army and places of imprisonment were well known,⁹ at the same time the very existence of hidden settlements (secret towns) was a top secret of Soviet authorities. These towns have been under development since the mid-1940s in the course of Soviet efforts to develop nuclear industry, as well as other most secret parts of military industry. Some towns were bedroom communities for personnel of secret military bases with their families. As an unusual exception to common practice, following their establishment they were not subordinated to regional party authorities (Bystrova and Riabov, 1997). These towns were so secret that they were never shown on openly published Soviet maps. The fact of their existence was officially disclosed only in the post-Soviet period (Rowland, 1996).

According to published information some inhabitants of these hidden settlements were included in the census tabulations of other regions (Andreev et al, 1995, p. 11). We have attempted to evaluate these distortions from the last Soviet census of 1989 (Appendix 2); the result of our re-evaluation shows that the magnitude of the distortions is impressive.

According to our findings based on actual (de facto) population, about 396,000 inhabitants of hidden settlements were “redistributed” to other regions. In some cases the percent of distortion was quite high. In Tomsk province, manipulation with census results created an understatement of the total actual population by about 7 percent (Table 5). The understatement of the actual urban population of this region can be estimated at an even higher level: about 10 percent.

Naturally such distortions in regional population figures inevitably lead to distortions of demographic indicators based on these figures. For this statistical failure statistical personnel, or Soviet demographers¹⁰ should not be blamed, but rather the Soviet regime. These distortions were part of the sorrowful history of Soviet population statistics.

From our findings we may conclude that secrecy prevailed for other purposes as well. Distorting population figures certainly created real difficulties for local authorities. For example, the official figures can hardly advise the authorities in the organization of rationed food and consumer goods for the population of different localities, a very demanding task given the conditions of permanent shortages of the Soviet era.

⁹ However, their numbers were disclosed only after the 1989 census (see, e.g.: *Pravda*, April 8, 1989; and *Pravda*, March 15, 1991 for the Army and prisoners, respectively). Thus, the last Soviet census of 1989 was organized according to the usual Soviet practice of secrecy and manipulation.

¹⁰ It should be noted that according to outside observers “...there were many well-trained demographers in the Soviet Union” (Anderson et al, 1994, p. 6).

Concluding Remarks

Our study has shown the intolerable level of interference of USSR authorities in population statistics and the use of these statistics as a tool of political propaganda.

We have revealed the constant manipulation of the statistical outputs regarding Soviet population. Stalin personally falsified the demographic data of the Soviet Statistical Administration. Moreover, Leonid Brezhnev, like Stalin and Nikita Khrushchev before him, used demographic indicators for the purposes of propaganda. In the 1970s, when the demographic indicators actually deteriorated, this led to the start of new suppressions of statistical information. The situation was exacerbated by the paranoid intention of concealing the Soviet military potential. We also find that by the end of 1970s-beginning of 1980s in the Soviet Union there was a multi-level system of censorship suppression for demographic data .

Results of Soviet censuses were seriously distorted due to permanent concealment of military personnel, prisoners and inhabitants of hidden settlements (secret towns). Thus, the Soviet legacy raises serious problems of credibility of Soviet regional demographic indicators, such as the results of the last Soviet census of 1989, which inevitably must serve as the base for comparison with the data of censuses of the Soviet successor states.

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Appendix 1. Re-evaluation of Ethnic Composition of Kazakhstan, 1939¹¹

A correct evaluation of the actual ethnic structure in our chosen example can be made despite the most blatant falsehoods in the 1939 census if we progress according to the necessary successive steps.

In our analysis of the recently published secret census instructions (Simchenko, 1990, part 1, pp. 79-82; part 11, p. 2076, a.o.) we found that the census data were tampered with twice: first, census forms from Kazakhstan were supplemented by the census forms of prisoners in camps outside this republic; then, the resulting sums were inflated by an arbitrary percentage, which we can calculate.

All census forms of prisoners from the Russian Federation sent to Kazakhstan (375,180), were added to the rural population of the republic, and we therefore began our re-evaluation from this sector. First, the total number of people who actually filled in census forms in the countryside was estimated by taking the official total (4,441,075) and subtracting the secret addition,¹² but not the redistributed GULAG prisoners from the Russian Federation (233,889); this gave a total of about 4,207,200. Thus, we subtracted only part of the inflation, which we suspect is proportional for each ethnic group.

However, the people whose census forms were redistributed to Kazakhstan had an ethnic structure which was different from that of the rural population of this republic, and we must therefore estimate the ethnic structure of this group separately. The ethnic structure of the prisoners from the Russian Federation whose census forms were sent to Kazakhstan can not be estimated directly but only roughly according to the general GULAG statistics by ethnic groups for the start of 1939 (these data were drawn from Getty, et al, 1993, p. 1028; for slightly different figures, see: Yakovlev, 2000, pp. 416-417).

In the GULAG as a whole, Russians constituted 63 percent, whereas the Kazakhs accounted for only 1.3 percent. For this reason, in our estimate of the rural population of Kazakhstan, the general inflation was found to be 27 percent for Russians, but only 6 percent for Kazakhs (Table A1).

Of course, the ethnic structure of the total GULAG population and the people whose census forms were sent to Kazakhstan probably differ to some extent, but we found that the percentages of males and females among the total GULAG population closely approximated those in the census forms that were sent to the Ukraine and Kazakhstan as a whole. Moreover, our estimate was prepared for total Kazakhstan rather than for individual provinces; this should reduce the probability of error in the results.

The next step in our estimate is the evaluation of the ethnic structure of the urban population: this is easier because there was no addition of census forms from outside Kazakhstan to this group. We estimated the total number of people who filled in census forms for this group as the official total minus the secret addition; the

¹¹ Abridged presentation of the author's earlier estimate, see: Tolts, 1995.

¹² For Kazakhstan it was 609,069.

individual figures were proportionately distributed according to the ethnic groups. The last step was to estimate the correct total population by ethnic group, as a sum of the estimated number for each in urban and rural populations.

Table A1. Estimated and Official Ethnic Structures of Kazakhstan, 1939 Census

| Ethnic group | Official figures | | | Estimated figures | | |
|--------------|------------------|------------------|------------------|-------------------|------------------|------------------|
| | Total population | Urban population | Rural population | Total population | Urban population | Rural population |
| Kazakhs | 2,327,625 | 374,615 | 1,953,010 | 2,198,800 | 353,600 | 1,845,200 |
| Russians | 2,458,687 | 987,194 | 1,471,493 | 2,089,400 | 932,000 | 1,157,400 |
| Ukrainians | 658,319 | 136,827 | 521,492 | 571,400 | 129,200 | 442,200 |
| Uzbeks | 120,655 | 37,095 | 83,560 | 107,200 | 35,000 | 72,200 |
| Tatars | 108,127 | 60,054 | 48,073 | 95,100 | 56,700 | 38,400 |
| Germans | 92,571 | 13,811 | 78,760 | 82,300 | 13,000 | 69,300 |
| Poles | 54,809 | 5,202 | 49,607 | 47,100 | 4,900 | 42,200 |
| Jews | 19,240 | 10,106 | 9,134 | 12,600 | 9,500 | 3,100 |
| Others | 311,069 | 85,123 | 225,946 | 242,400 | 80,400 | 162,000 |
| Total | 6,151,102 | 1,710,027 | 4,441,075 | 5,446,300 | 1,614,300 | 3,832,000 |

Sources: Poliakov, 1992, pp. 75-76; author's estimate.

A comparison of the estimated results for the 1939 census data with the results of the 1937 census quite clearly confirms most of these figures, except for the Uzbeks (cf. Poliakov, 1991, p. 96).

Appendix 2. Redistribution of Population from Secret Cities to Other Regions, 1989

In the mid-1990s the Russian authorities made known the existence of hidden settlements in the Russian Federation. However, 1989 census data publications were not corrected accordingly. On the contrary, new population figures for some regions were published for 1990-1994. In our study of the differences between the actual (de facto) population figures initially published by region for 1990, and the new figures which appeared after the disclosure of the existence of the hidden settlements, we found that the population estimates increased for 6 regions, whereas the population estimates for 8 other regions decreased, and the ultimate sum remained equal - rounding the figures to thousands gave 397,000 and 396,000, respectively (Table A2). At the same time, there was no territorial change other than the acquisition of a small part of Ivanovo province by Nizhegorod province. A comparison of the 1994 figures – the last year before the disclosure – gave the same result (cf. Goskomstat Rossiï, 1994, pp. 13-15; Goskomstat Rossii, 1999, pp. 54-55). Thus, based on these findings we may, with high probability, estimate the redistribution of population from Russia's hidden settlements to other regions in the results of the 1989 Census (presented in Table 5).

Table A2. Differences between Published and Corrected Population Figures^(a) Attributed to Redistribution from Russia's Hidden Settlements to Other Regions, 1990, Thousands

| Region | Published figure | Corrected figure | Difference: | |
|----------------------------|------------------|---------------------|-------------|-------------|
| | | | negative | positive |
| Volga-Vyatka | | | | |
| Kirov | 1,697 | 1654 | | +43 |
| Nizhegorod | 3,717 | 3760 ^(b) | -43 | |
| Volga | | | | |
| Samara | 3,278 | 3,238 | | +40 |
| Penza | 1,507 | 1,547 | -40 | |
| Ural | | | | |
| Orenburg | 2,183 | 2,154 | | +29 |
| Perm | 3,106 | 3,051 | | +55 |
| Sverdlovsk | 4,728 | 4,784 | -56 | |
| Chelyabinsk | 3,637 | 3,710 | -73 | |
| West Siberia | | | | |
| Kemerovo | 3,176 | 3,102 | | +74 |
| Novosibirsk | 2,789 | 2,745 | | +44 |
| Tomsk | 1,009 | 1,083 | -74 | |
| East Siberia | | | | |
| Irkutsk | 2,848 | 2,798 | | +50 |
| Chita | 1,385 | 1,324 | | +61 |
| Krasnoyarsk ^(c) | 3,612 | 3,723 | -111 | |
| Total | x | x | -397 | +396 |

(a) Actual (*nalichnoe*) population.

(b) Excluding about 20,000 added in territorial acquisition from Ivanovo province.

(c) Not including Khakassia.

Sources: Goskomstat Rossii, 1990, pp. 8-11; Goskomstat Rossii, 1999, pp. 54-55.

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Measuring Intercensal Regional Population Change in Russia, 1989-2002: An Evaluation Based on Corrected Results of the 1989 Soviet Census*

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According to our previous findings based on actual (de facto) population, in the 1989 Soviet census about 396,000 inhabitants of hidden settlements in the Russian Federation were “redistributed” to other regions of the republic (see pp. 12-13 of the paper for which this postscript was written). Now the first regional results of the post-Soviet census of Russia taken in 2002 have been released, and inevitably the problem of measuring the regional population change in the intercensal period based on the 1989 Soviet census has become actual.

The 1989 Soviet census recorded both de jure and de facto categories of population. However, the first post-Soviet census of Russia in 2002 counted only resident (de jure) population. This difference requires further study, and to establish the resident population from the 1989 Soviet census for purposes of comparison we re-evaluated the published regional results of this census following the same method. According to our new findings based on resident population, in the 1989 Soviet census about 400,000 inhabitants of hidden settlements in the Russian Federation were “redistributed” to other regions of the republic (Table P1). Thus, estimates of redistribution to other regions separately received for both categories of population counted in the 1989 Soviet census gave us very close general results. Moreover, for each problematic region under analysis the estimated size of redistribution was identical or very close for both categories of population. Clearly, our new findings have confirmed our previous ones.

Table P1. Estimated Redistribution of Population from Russia’s Hidden Settlements to Other Regions in the 1989 Census, Thousands

| Region | Published census population figure ^(a) | Redistribution: | | Corrected population figure ^(a) | Redistribution as % of corrected figure |
|--------|---|-----------------|----|--|---|
| | | from | to | | |
| | | | | | |

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| | | | | | |
|----------------------------|----------|-------------|-------------|----------|----------|
| Volga-Vyatka | | | | | |
| Kirov | 1,694 | | +44 | 1,650 | +2.7 |
| Nizhegorod ^(b) | 3,739 | -44 | | 3,783 | -1.2 |
| Volga | | | | | |
| Samara | 3,263 | | +39 | 3,224 | +1.2 |
| Penza | 1,505 | -40 | | 1,545 | -2.6 |
| Ural | | | | | |
| Orenburg | 2,171 | | +29 | 2,142 | +1.4 |
| Perm | 3,091 | | +55 | 3,036 | +1.8 |
| Sverdlovsk | 4,707 | -56 | | 4,763 | -1.2 |
| Chelyabinsk | 3,618 | -74 | | 3,692 | -2.0 |
| West Siberia | | | | | |
| Kemerovo | 3,171 | | +75 | 3,096 | +2.4 |
| Novosibirsk | 2,779 | | +45 | 2,734 | +1.6 |
| Tomsk | 1,002 | -75 | | 1,077 | -7.0 |
| East Siberia | | | | | |
| Irkutsk | 2,825 | | +49 | 2,776 | +1.8 |
| Chita | 1,375 | | +63 | 1,312 | +4.8 |
| Krasnoyarsk ^(c) | 3,039 | -111 | | 3,150 | -3.5 |
| Total | x | -400 | +399 | x | x |

(a) Resident (*postoiannoe*) population.

(b) Within the borders of the 2002 census.

(c) Not including Khakassia.

Source: Goskomstat Rossii. *Rossiiskii statisticheskii ezhegodnik, 2003* (Russian Statistical Year Book, 2003). Moscow, 2003, pp. 75-76; author's estimates based on: Ibid, pp. 82-83; Goskomstat Rossii, *Chislennost', sostav i dvizhenie naseleniia v RSFSR* (Size, Structure and Dynamics of the Population in RSFSR). Moscow, 1990, pp. 54-57 (on the method used, see Appendix 2 of our paper).

At the same time, preliminary official results of the 2002 Russian census were published accompanied by old (uncorrected) results of the 1989 Soviet census for all regions, including those which were problematic according to our findings.¹³ The same flawed base was used to measure intercensal regional population change in Russia.¹⁴ This approach led to an incorrect presentation of the dynamics for many regions.

¹³ Goskomstat Rossii. *Rossiiskii statisticheskii ezhegodnik, 2003* (Russian Statistical Year Book, 2003). Moscow, 2003, pp. 75-76.

¹⁴ See: Heleniak, T., "The 2002 Census in Russia: Preliminary Results," *Eurasian Geography and Economics*, 2003, Vol. 44, No. 6, pp. 436-438.

Table P2. Dynamics of Population,^(a) by Region, Based on Published and Corrected Figures of the 1989 Census, 1989-2002, Thousands

| Region | 1989 census | 1989 census | 2002 census | Intercensal population change according to: | |
|---------------------|----------------------|----------------------|-------------------|---|------------------------|
| | Published figures | Corrected figures | Published figures | Published 1989 figures | Corrected 1989 figures |
| Volga-Vyatka | | | | | |
| Kirov | 1,694 | 1,650 | 1,504 | -190 | -146 |
| Nizhegorod | 3,739 ^(b) | 3,783 ^(b) | 3,524 | -215 | -259 |
| Volga | | | | | |
| Samara | 3,263 | 3,224 | 3,240 | -23 | +16 |
| Penza | 1,505 | 1,545 | 1,453 | -52 | -92 |
| Ural | | | | | |
| Orenburg | 2,171 | 2,142 | 2,179 | +8 | +37 |
| Perm | 3,091 | 3,036 | 2,820 | -271 | -216 |
| Sverdlovsk | 4,707 | 4,763 | 4,486 | -221 | -277 |
| Chelyabinsk | 3,618 | 3,692 | 3,604 | -14 | -88 |
| West Siberia | | | | | |
| Kemerovo | 3,171 | 3,096 | 2,899 | -272 | -197 |
| Novosibirsk | 2,779 | 2,734 | 2,692 | -87 | -42 |
| Tomsk | 1,002 | 1,077 | 1,046 | +44 | -31 |
| East Siberia | | | | | |
| Irkutsk | 2,825 | 2,776 | 2,582 | -243 | -194 |
| Chita | 1,375 | 1,312 | 1,156 | -219 | -156 |
| Krasnoyarsk | 3,039 ^(c) | 3,150 ^(c) | 2,966 | -73 | -184 |

(a) Resident (*postoiannoe*) population.

(b) Within the borders of the 2002 census.

(c) Not including Khakassia.

Sources: Table P1; Goskomstat Rossii, *Osnovnye itogi Vserossiiskoi perepisi naseleniia 2003 goda /The All-Russia Population Census: Main Results* [sic!]. Moscow, 2003, pp. 25-27.

According to the results of our re-evaluation of the 1989 Soviet census, intercensal regional population change in the 14 regions of Russia was very different from that given by the published results of this census (Table P2). In two cases even the direction of the dynamics was opposite: in Samara province we found increase instead of decrease, and in Tomsk province – decrease instead of increase. Thus, we can not ignore the “redistribution” of the inhabitants of hidden settlements in the Russian Federation to other regions as this was found in the 1989 Soviet census if we desire to have real knowledge on intercensal regional population dynamics.

â€œThe Failure of Demographic Statistics: A Soviet Response to Population Troubles,â€ Paper presented at the IUSSP XXIVth General Population Conference, Salvador-Bahia, Brazil, 18-24 August 2001 [Revised as of 12 July 2012]. â€œJewish Demography of the Former Soviet Union,â€ S. DellaPergola and J. Even (eds.), Papers in Jewish Demography 1997.Â â€œThe Soviet Censuses of 1937 and 1939: Some Problems of Data Evaluation,â€ Paper presented at the International Conference on Soviet Population in the 1920s and 1930s, Toronto, 27-29 January 1995 [Revised as of 30 May 2009]. â€œTrends in Soviet Jewish Demography since the Second World War,â€ Y. Roâ€™i (ed.), Jews and Jewish Life in Russia and the Soviet Union. b. Mark Tolts, â€œThe failure of demographic statistics: a Soviet response to population troublesâ€, paper presented at the IUSSP XXIV General Population Conference, Salvador de Bahia, Brazil, 18â€“24 August 2001. Human rights indicators 49. III. >> Methodological Approaches to Human Rights Indicators. >> Ethical, statistical and human rights considerations in indicator selection. Box 12 RIGHTS criteria for indicator selection In selecting human rights indicators, the RIGHTS criteria, which take into account the desired statistical and methodological properties in an indicator as well a