

WP 7.1  
16 October 2013

**UNITED NATIONS STATISTICAL COMMISSION**      **STATISTICAL OFFICE OF THE**  
**and ECONOMIC COMMISSION FOR EUROPE**      **EUROPEAN UNION (EUROSTAT)**

Joint Eurostat/UNECE Work Session on Demographic Projections  
organised in cooperation with Istat  
(29-31 October 2013, Rome, Italy)

**Item 7 – National and international population projections out of the EU region**

**Qualitative and methodological aspects of population projections in  
Georgia; Georgian Population Prospects: 1950-2050**

Shorena Tsiklauri, Ilia State University  
Avtandil Sulaberidze, Ilia State University

---

## Qualitative and methodological aspects of population projections in Georgia; Georgian Population Prospects: 1950-2050

---

Shorena Tsiklauri – [sh\\_tsiklauri@yahoo.com](mailto:sh_tsiklauri@yahoo.com)

PhD student at Ilia State University; Researcher - Institute of Demography and Sociology, Ilia State University

Avtandil Sulaberidze – [asulaberidze@yahoo.com](mailto:asulaberidze@yahoo.com)

Doctor of economic sciences; Director - Institute of Demography and Sociology, Ilia State University

**DRAFT CONFERENCE PAPER – DO NOT CITE OR QUOTE**

### *Abstract*

Population of Georgia has decreased since its independence. Some of the population's decline was due to the decrease of fertility and increased mortality levels, but the main impact is related to the emigration. In the period between two population censuses, 1989 and 2002 Georgia lost more than one million persons due to the emigration. In the years followed independence, an economic crisis, civil war and other armed conflicts led to the displacement of many people.

According to all of the exits projection population of Georgia continues to decrease. In order to discuss the Georgian population prospects, it is very important to have better estimates of the population and vital statistics, as well as migration statistics.

**Keywords:** *Methodology, Georgia, Population, Projections*

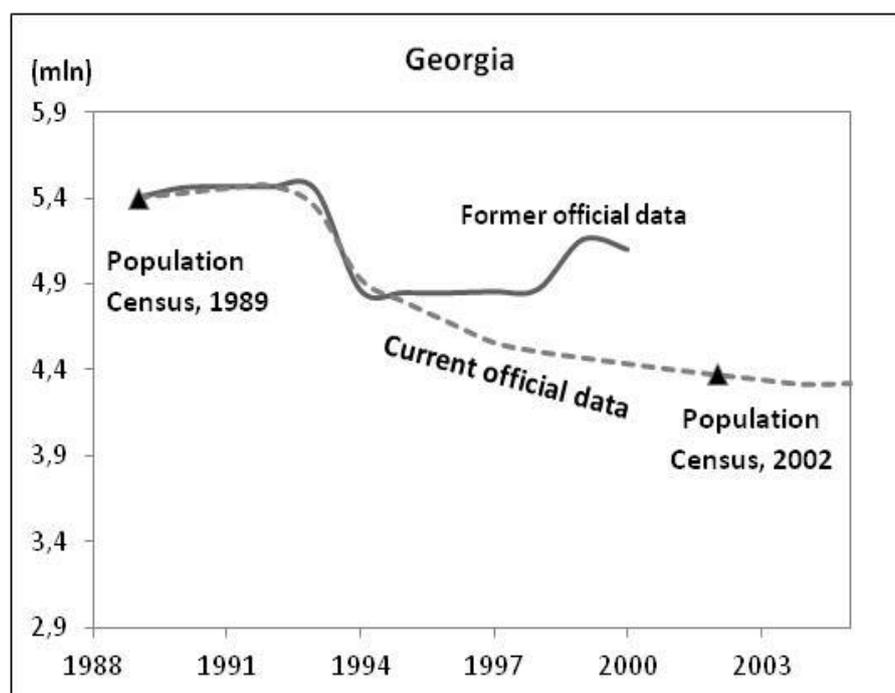
## Qualitative and methodological aspects of population projections in Georgia; Georgian Population Prospects: 1950-2050

---

### Introduction

According to the National Statistic Office of Georgia, number of Population has decreased from 5.5 million in 1991 to 4.5 million in 2013 since its independence from the USSR. Some of the population's decline was due to decrease of the fertility and increased the mortality levels, but the main impact is related to the emigration. In the period between two population censuses, 1989 and 2002 Georgia lost more than one million persons due to the migration. In the years followed independence, an economic crisis, unemployment, civil war and other armed conflicts led to the displacement of many people. The growing poverty, unemployment, limited access to the basic social services, low income and its unequal distribution have had a clear direct impact on the population dynamics of Georgia. According to all the exits projection, population of Georgia continues to decrease. In order to discuss the population prospects, it is very important to have better estimates of vital statistics and annual number of population.

In Georgia, data quality has always been at issue, but since collapse of Soviet Union in 1991, the population statistics has deteriorated rapidly. It concerns both, reliability of vital statistics and population estimates. In the 1990s, demographic statistics published by national statistics office of Georgia were far from the real levels. Not only due to the increasing migration flows, along with a conflicts in the country that disrupted many statistical data-series, but the current data collection system for birth and death have been deteriorating. In the 1990s, political instability in the country and socio-economic crisis caused the collapse of population registration system. Especially registration of international migrants hence number of population which statistics office published was unreal. Several surveys conducted in Georgia shows that the level of fertility and mortality and especially level of infant mortality has been considerably underestimated, by approximately 20- 25 percent (Badurashvili and Kapanadze, 2003). Therefore after census of 2002 in Georgia it becomes necessary to correct estimation population number since 1996.

**Figure 1:** The population trends of Georgia

Source: National Statistics office of Georgia

The next very important issue in data quality problems is the discontinuity of statistical data-series due to territories being in fact out of control of Georgian governments. Since 1993-1994 Abkhazia and a large part of South Ossetia and since 2008 the whole South Ossetia have been out of control of Georgian government.

In Georgia, besides official statistics, alternative statistics made by local experts are available. In most cases these two sources of population statistics provide with very different data.

All the above mentioned, first of all it is important to explore the data-quality problem in Georgia and in case of necessity to re-estimate annual numbers of population. Next step for our research will be discussing the methodological and specific qualitative aspects of Georgian population prospects. For our research we are going to use several data sources: (1) Official data which provided by National Statistical Office of Georgia; (2) estimated data made by local experts<sup>1</sup> and (3) UN estimates<sup>2</sup>.

<sup>1</sup> Tsuladze, G., Maglaperidze, N., and Vadachkoria, A., 2011 - *Demographic Yearbook of Georgia-2010*, UNFPA, Ilia State University Institute of Demography and Sociology

<sup>2</sup> United Nations Population Division, *World Population Prospects: The 2012 Revision*

## I. Statistical Data quality in Georgia

Official statistical data in Georgia can be grouped into two categories according to the methodology used in the collection and processing of the statistics: before 1990s and later.

During the Soviet time, data collection and processing system is characterized by a unified methodology of population statistics established and developed by statistical agency in Moscow and delivered to branch offices in the Soviet republics for strict implementation. Some scholars argue that data quality problem only was related to the data availability in the Soviet time (Anderson and Silver 1985, 1989). Detailed demographic data for Georgia can be found since the late 1950s. Before 1959, only limited demographic information periodically published in statistical abstracts is available for Georgia, namely data on annual population counts and crude data on vital statistics. Even population structure by age and sex according to the censuses of 1926 and 1939 has never been published and was available only for restricted list of people having access to original statistical tables.

After the population census conducted in 1959, the systematic collection, processing and tabulation of routine vital statistics were set up. But, during the whole Soviet time statistical offices used to publish only aggregated demographic data on the whole “Soviet territory”, as more detailed information on population was considered as being a “secret”. However, detailed demographic data for Georgia in the form of original statistical tables processed on the annual basis by the national statistical offices since the late 1950s can be found in the national statistical archives. At the same time there are many gaps in the time-series on population and vital statistics in Georgia (Badurashvili and Kapanadze, 2003).

The significant problem in this regard is the statistical data on migration, the matter is that the data on migration used for annual population estimates were produced by central statistical authorities in Moscow and figures on migrants’ flows presented in original statistical tables on migration produced by the “republican” statistical offices did not correspond to those used in these official population estimations (Badurashvili, 2009).

The main demographic indicator such as number of population, which is used as denominator in most demographic and many other population-based indicators represents the best example of inconsistency of Georgian population statistics. The problem of discontinuity in the data on population by age and sex is caused by the change of the basic concept of population in the Soviet population censuses. Until the 1979 census, post-censal population estimates were based on the present (de facto) population. Later on, they were based on the permanent

population, which is close to the “de jure” concept. This change causes two consequences: inconsistency of long-term data series on population by age and sex and problem of denominator for demographic rates. From a methodological point of view, updating census counts of present population with vital events of the permanent population is inconsistent. On the level of crude rates such an inconsistency creates only minor differences but for more sophisticated indicators the differences could be statistically significant. The discussions concerning incomparability of the Soviet demographic statistics with international methodology often refer to the deficiency of infant mortality statistics. The definition of live birth and infant death used in Soviet Union as well as the reporting procedure did not follow the World Health Organization’s recommendations until 1996.

Indeed statistical data quality has always been at issue in Georgia, but after the collapse of the Soviet Union population statistics has deteriorated rapidly. The political instability in the country and socio-economic crisis caused the collapse of population registration system. Especially registration of migrants hence number of population which statistics office published was unreal (Badurashvili, 2001; Duthé et al., 2010).

As it was mentioned before, local and international experts in population statistics conclude that since 1990s, the quality of demographic data has even been suffered. The reasons behind such experience are different: the Georgian statistical office that during long time was supervising by Moscow-based central authorities had not developed the necessary methodological capacity and it requires time to take over the former centrally performed functions. The next very important issue in data quality problems is the discontinuity of the statistical data-series due to territories being out of control of Georgian government. Since 1993-1994 Abkhazia and a large part of South Ossetia and since 2008 the whole South Ossetia have been out of control of Georgian government.

As a whole, instability of the political and economical situation, at the beginning of the 1990s, caused a worsening of the quality of official population statistics: noticeable and indisputable overestimates of population numbers for the 1990s, and unreliability of statistical data on births and deaths caused by the disorientation of migration and vital registration systems in the last decade.

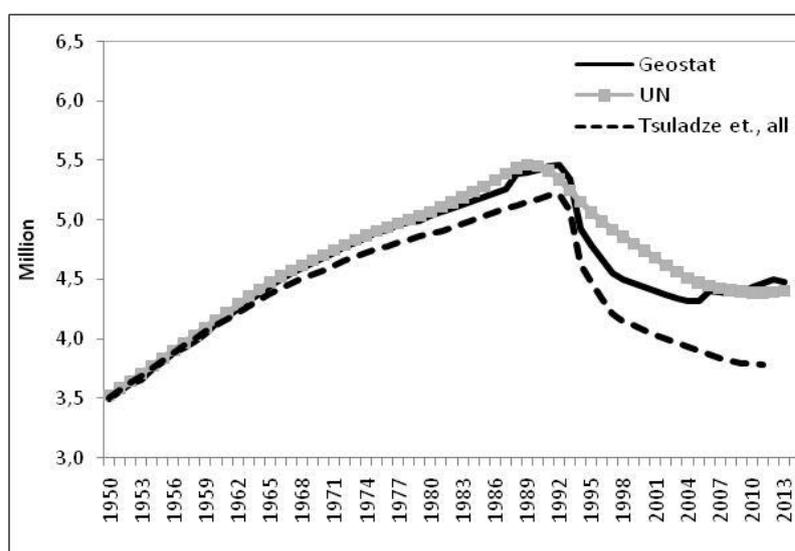
All abovementioned caused the situation when experts’ estimations of demographic processes for 1990s sharply distinguished from those published by official statistics in the relevant period.

## II. Demographic picture of Georgia

Demographic situation in Georgia seems a negative since 1990's. The population of Georgia was steadily growing until the beginning of 1990s, when the social-economical instability caused to emigrate many people, resulting in a decline of population growth.

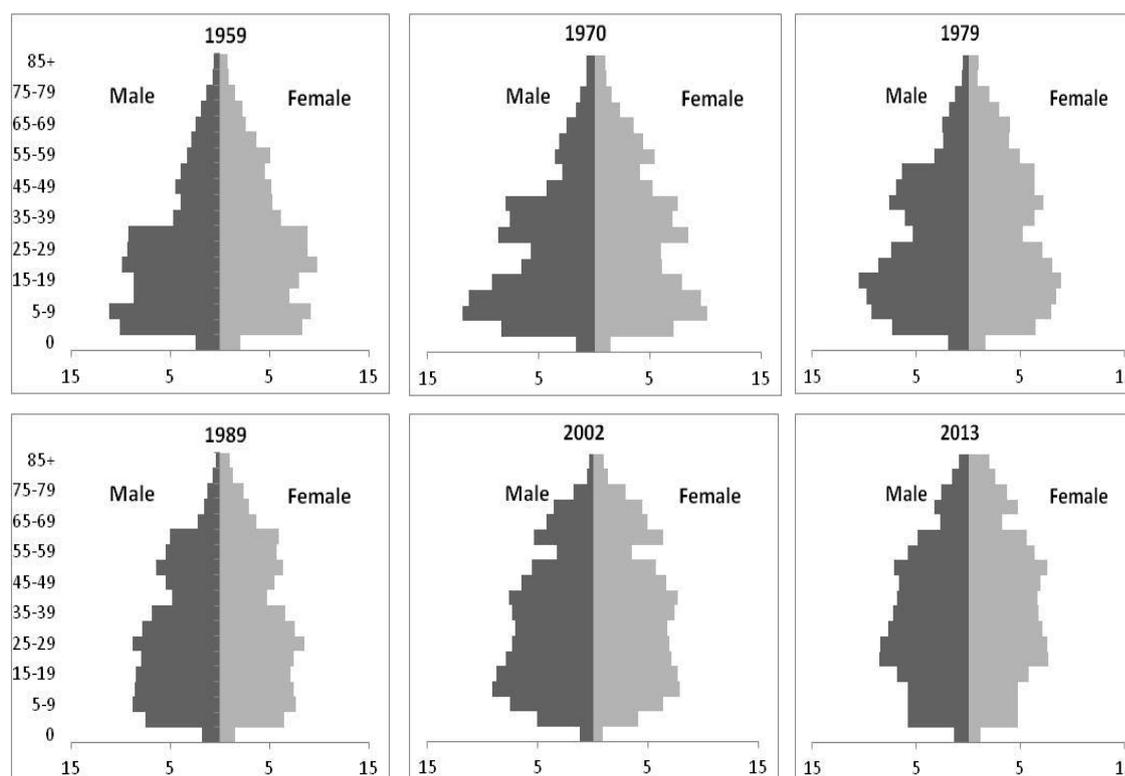
The population of Georgia faces challenges of depopulation and ageing. The birth rate has dropped dramatically.

**Figure 2:** The population trends of Georgia according to the different estimates (the UN and Tsuladze et., all estimates and Official Statistics)



Source: (1) National Statistics office of Georgia; (2) Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat (2013). *World Population Prospects: The 2012 Revision*. New York: United Nations; (3) Tsuladze, G., Maglaperidze, N., and Vadachkoria, A., 2011 - *Demographic Yearbook of Georgia-2010*, UNFPA, Ilia State University Institute of Demography and Sociology

It should be mentioned that since 1993-1994 Official data and local experts estimation is given excluding Abkhazia and South Ossetia, while UN estimate number of population with population of Abkhazia and South Ossetia. As already has been mentioned temporary these territory is out of control of Georgian Government and National Statistics Office could not collect the statistical data.

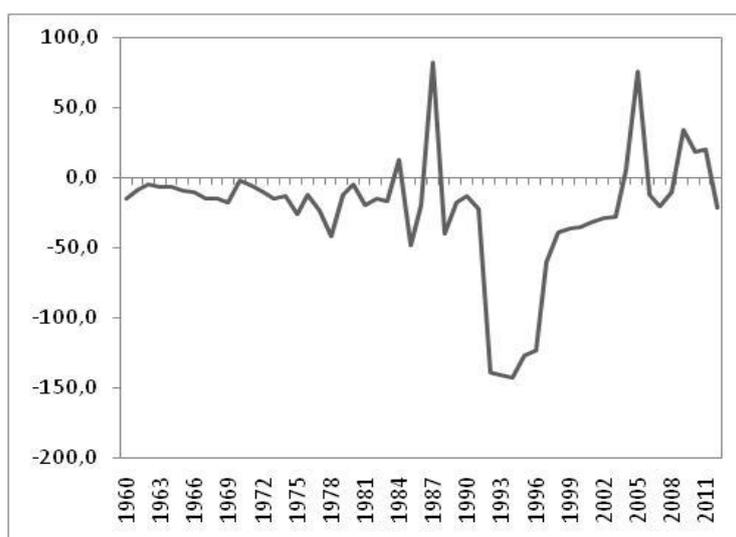
**Figure 3: Age-sex Population pyramids for Georgia**


*Source:* National Statistics Office of Georgia;

*Note:* data for 1959, 1979, 1989 and 2002 comes from population censuses conducted in Georgia; and annual number at 1st January, 2013

The proportion of persons 60 years and older increased from 11.0 to 19.1 per cent between the period from 1959 to 2013. In 1989 Georgia was the initial stage of population ageing, the proportion of persons 60 years and older was 14.4, but in 2013 the proportion of persons classified as older are 15.8 for males and 22.1 for females.

The ageing process that in many European countries is caused by the two conditions: decline of fertility and increasing of life expectancy at birth. In Georgia population aging is mainly addressed to the fertility decrease since 1990s. The total fertility rate (TFR) has decreased during period of 1989-2012 from 2.1 to 1.7. Although the main impact of population decline in Georgia is related to the emigration.

**Figure 4:** Net migration (thousands) for 1960-2012


*Source:* National Statistics Office of Georgia

In Georgia net-migration was slightly negative and was relatively stable until the early 1980s, the pick in 1987 seems unrealistic, without any specific event to explain it. In the 1990's the net migration is negative which is related to the collapse of the Soviet Union. After independency, Georgia has experienced a sharp increase in out-migration flows: all citizens of the former Soviet Union had the chance to travel abroad without any of the artificial impediments of the past and suddenly internal migration interchange with international migration.

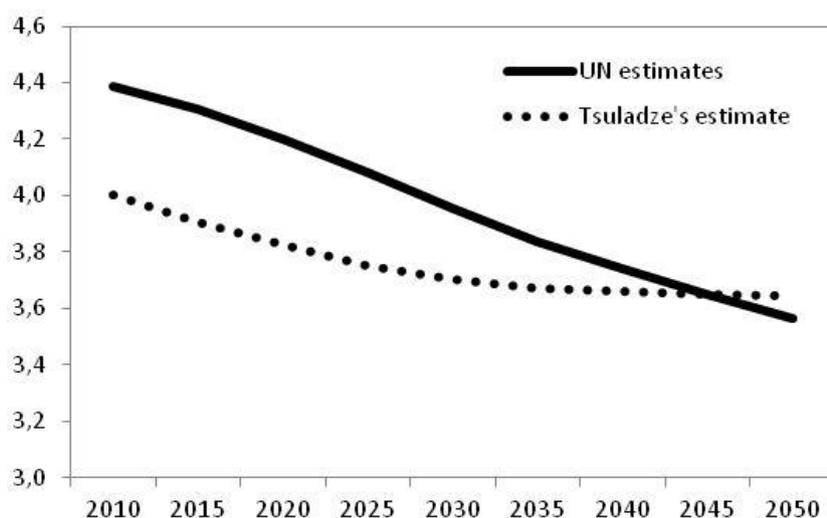
The trend of net-migration in the mid of 2000's seems unrealistic, which could only be explain by the changing of the methodology in 2003. In that period, the official statistical estimations are based on the data on passenger-flows provided to the National Statistics Office of Georgia by the Georgian Border Department. This data informs only about the gross numbers of entries and exits and there was no way to track individual comings and goings in order to distinguish migrants from other passengers. Consequently, the annual population estimates in Georgia were produced on the basis of data on cross-border flows.

Since 2012, the National Statistics office of Georgia has changed the methodology of estimating of the annual migration flows for Georgia. Now a Georgian Border Department tracking the individual record on each person crossing Georgian border provides statisticians with data on number of persons who entered to Georgia and spent here period at least 6 months. These categories of passengers are considered to be international migrants according to UN methodology.

### III. Population Prospects

According to all of the exits projection population of Georgia is decreasing.

**Figure 4:** Number of Population for 2010-2050 (million) according to different projection; medium fertility



Source: (1) Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat (2013). *World Population Prospects: The 2012 Revision*. New York: United Nations; (2) Tsuladze, G. (2013) – *Demographic prospects of Georgia: 2015-2030* - Iliia State University Institute of Demography and Sociology

It should be mentioned that according to the both sources population of Georgia includes Abkhazia and the South Ossetia.

It is obvious that for development of the country the one of the important issue is to have a good demographic projection, but first of all is important to have significant estimated number of population. But Georgia is the situation when the estimation of the population of Abkhazia and South Ossetia is temporary difficult because of the abovementioned situation. The next problem is related to the data quality problems caused the unrealistic trends of migration.

### IV. Discussion

Before being able to draw conclusions about population prospects in Georgia, present results have to be discussed as different points are still questionable. First, we noticed registration of the vital statistics getting better but for estimate number of population is important to have better estimates of migration. Second, the estimates number of population of Abkhazia and

South Ossetia may be discussed: as the year 1993-1994 National Statistics Office doesn't publish the annual numbers. Indeed, this study is still in progress and further analysis must be done before providing demographic projections.

## References

- Anderson B.A., Katus, K., and Silver, B.D. (1994). Developments and Prospects for Population Statistics in Countries of the Former Soviet Union. *Population Index* 60(1): 4-20. doi:10.2307/3645322.
- Anderson, B.A. and Silver, B.D. (1986). Infant mortality in the Soviet Union: Regional differences and measurement issues. *Population and Development Review* 12(4): 705-738. doi:10.2307/1973432.
- Anderson, B.A. and Silver, B.D. (1989). The Changing Shape of Soviet Mortality, 1958-1985: An Evaluation of Old and New Evidence. *Population Studies* 43(2): 243-265. doi:10.1080/0032472031000144106.
- BADURASHVILI I., 2001. – Problems of comparability of population data in South-Caucasian region. *in: Demography of Armenia in the threshold of millennium*, p. 5-9. UNFPA, Yerevan, 100 p. *In Russian*
- BADURASHVILI Irina, 2001. - Problemi nepravilnoi trudovoi migracii v Gruzii (Problems of irregular labour migration of Georgian population). *in: Demography of Armenia in the threshold of millennium*, p. 5-9, UNFPA, Yerevan, *In Russian*
- BADURASHVILI I. and KAPANADZE E., 2003 – South-Caucasian Region: Armenia, Azerbaijan and Georgia, *in: Kalev KATUS and Allan PUUR (eds.), Unity and Diversity of Population Development: Baltic and South-Caucasian Regions*, p. 1-48. – Estonian Interuniversity Population Research Centre, Tallinn, 353 p. *In English*
- BADURASHVILI I., 2009. – Out migration from Georgia after 1990, *in: Tessa Savvidis (Hg.) International Migration, Local Conditions and Effects*, p. 80-108. Free University Berlin, 135 p.
- DUTHÉ G., BADURASHVILI I., KUYUMJYAN K., MESLÉ F. and VALLIN J., 2010 – Mortality in the Caucasus: An attempt to re-estimate recent mortality trends in Armenia and Georgia *in Demographic research*, vol. 22, p. 691-732
- Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, 2013. - *World Population Prospects: The 2012 Revision*. New York: United Nations;
- TSULADZE, G. AND BADURASHVILI, I., 1999 - *Demographic Yearbook of Georgia, 1998*. Tbilissi: Centre for Social Studies
- TSULADZE, G., MAGLAPERIDZE, N., AND VADACHKORIA, A., 2001 - *Demographic Yearbook of Georgia, 2000*. Tbilissi: Georgian Academy of Sciences, Institute of Demographic and Sociological Research, and Centre for Social Studies.
- TSULADZE, G., MAGLAPERIDZE, N., AND VADACHKORIA, A., 2011 - *Demographic Yearbook of Georgia, 2010*. Tbilissi: UNFPA, Ilia State University Institute of Demography and Sociology
- TSULADZE, G., 2013 – *Demographic prospects of Georgia: 2015-2030* - Ilia State University Institute of Demography and Sociology