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2010 round of censuses – innovations and lessons learned**Census 2011 in Bulgaria****Note by the National Statistical Institute of Bulgaria***Summary*

This paper introduces the experience of Bulgaria in carrying out the latest Population and Housing Census. The 17th Population and Housing Census in the demographic history of Bulgaria was conducted from 1st until 28th February 2011, now for the first time as a Member State of the European Union, complying with the requirements of Regulation (EC) No. 763/2008.

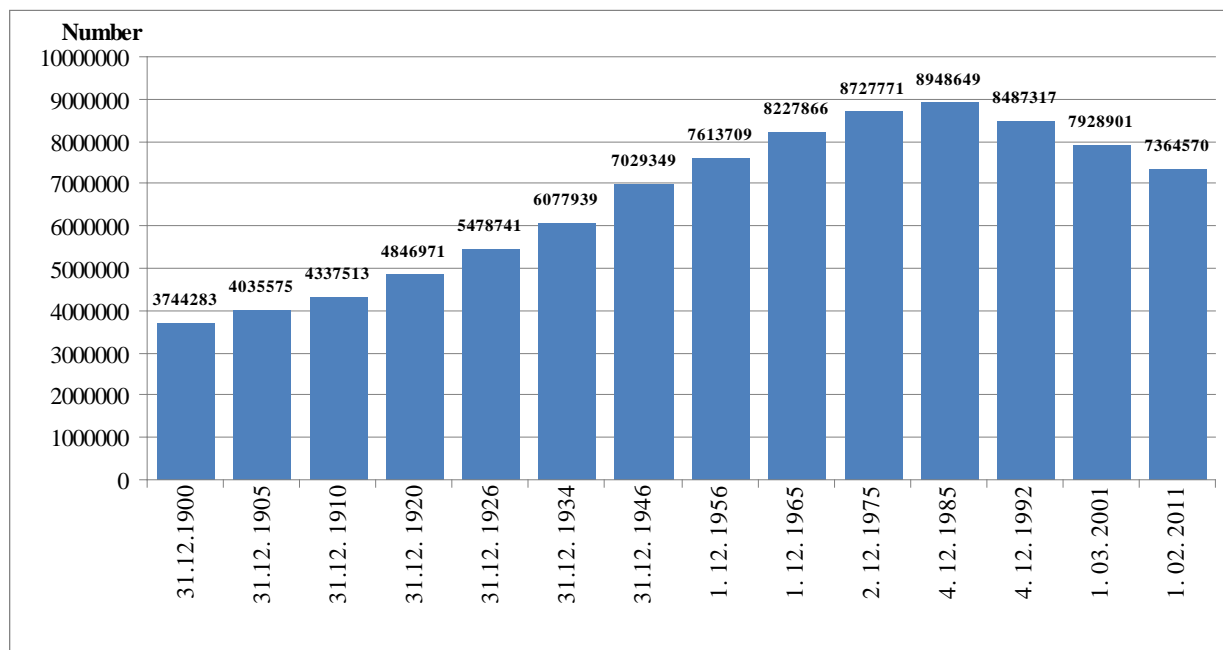
The Population Census was conducted applying two methods for collecting information: electronic (1-9 February 2011) – on-line by Internet, and traditional (10-28 February 2011). The on-line option was available for the first time in Bulgaria. It was accepted with a great interest and exceptionally high activity was registered. The persons enumerated by Internet represented 41% of the population, as this percentage in Sofia reached 66% and in Varna - 51%, and in Plovdiv - 41%.

I. 2011 population census – main results

1. As of 1 February 2011, the population of Bulgaria was 7,364,570 persons (figure 1). 3 777 999 persons (51.3%) were women and 3,586,571 persons (48.7%) were men, or 1,000 men accounted for 1,053 women.
2. The tendency for urbanization is maintained – 5,339,001 persons lived in urban areas or 72.5%, and 2,025,569 persons lived in rural areas which equals to 27.5% of the population in the country.
3. Within the period between the two censuses, 2001 and 2011, the population of the country decreased by 564,331 persons and the average annual rate of decrease was 0.7%.
4. Two thirds of the decrease was due to the negative natural increase (more deaths than births) and one third (31.1%) to the international migration, which was estimated at 175,244 persons.

Figure 1

Population by census years within the period 1900 - 2011



II. Census 2011 – special features

5. The overall procedure of creation of the census enumeration regions was done based on computer technology, as a module of the Information system “Census”. It enabled shortening the period required for the creation of census regions compared to the previous census and sparing human and financial resources. A positive result of the application of information technology (IT) in the creation of the census enumeration regions was also the possibility to use a data base containing addresses for sample surveys purposes.
6. With regard to the e-census, the census tools were adapted to the new method of registration during the census i.e. self-enumeration. Criteria for accuracy in data entry was

developed, including formal checks, logical checks between the questions, groups of errors at the census questionnaire, enumeration unit and census region level.

A. On-line Census conduction

7. Registration is based on valid e-mail address and personal data. One registration allows one single dwelling to be counted and persons living there. Registered persons must live usually in the counted dwelling. The registration allows counting of the persons temporarily present in the dwelling also.

8. The persons receive a password at the e-mail address given by them. The password might be used for repeated entries into the system within the period 1 – 9 February 2011. Thus, all persons living in the dwelling and distributed by households and families are counted at a convenient time.

9. With the assistance and the active participation of all census bodies – the Central Census Commission, district and municipal census commissions, enumerators and supervisors and the Regional Statistical Offices – the Census in the country took place in good conditions. A key success factor was that the census was turned into a state assignment of a first priority, which was cordially accepted and which engaged central and local administration, non-governmental organizations, academic community, media and all Bulgarian citizens. The massive information campaign included wide and detailed reporting in the media at each census stage and was of great importance.

10. The traditional census was conducted with the help of 46,000 enumerators and supervisors.

11. Data entered from paper questionnaires was combined with the electronic data, followed by procedures for control of the quality and data coverage. The control included the removal of double enumerated persons, incorrect reference of a particular category or settlements, incorrect unique civil numbers, data entry mistakes, etc.

12. The registers were maintained (for each register used for the 2011 census) so as to create a reliable source of data and correspond to the definitions and regulations concerning the census in the European Union (EU).

13. The administrative data, depending on its usage, could be determined as data used during the census – register based census – or it could assist the census – in creation census regions and in data validation.

14. Information from administrative sources was used in compliance with Regulation (EU) No 1151/2010 implementing Regulation (EC) No 763/2008, as regards the modalities and structure of the quality report and the technical format for data transmission.

15. The estimates of the population not covered by the census were done in compliance with the statistical methodology and the definition of the population categories used during the census. As regards the coverage, the results were analysed in comparison with other statistical sources (Information System “Demography”), such as data from administrative sources on students and pupils, insured persons, beneficiaries of pensions and others.

16. In parallel, a procedure for clarification and correction of incorrect unique civil numbers and finding missing unique civil numbers using the Information System “Demography” and other administrative sources was applied. These procedures were done at the National Statistical Institute (NSI) and the corrections were made for each separate case.

17. The benefits of using the new methodologies included improved timeliness, decreased cost and improvements in data quality. The key risks were the reduction in the

number of topics included in the census (that is, decreased content) and the use of data definitions provided by the data source instead of census definitions. For example, if a country is using an administrative register, the data categories defined by the administrative body responsible for the register may or may not be the same definitions used or required by the statistical methodology.

18. Flexibility and keeping up with the pace of new technologies will be a key for the 2020 Census round. Technology has the potential to decrease cost and time, while improving data quality. The use of the Internet and tablets is likely to increase and provide other options in data collection with the benefit of reducing the volume and therefore reducing the time needed for and the cost of data capture. The Global Positioning System (GPS), geographic information systems (GIS) and new mapping techniques will improve address listing and geospatial identification.

19. The preparation for the next Census round will start and poses questions for the international statistical community, such as:

- (a) Why is the census so important for the countries ... and why is it so challenging to achieve a good census process?
 - (b) What is the meaning for and role of the civil society, EU and state capacity?
 - (c) What kind of international support and census monitoring will be offered?
 - (d) How to share experiences in Census taking country by country?
 - (e) What is the overview of relevance, reliability and credibility of the censuses?
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