

**Economic and Social Council**Distr.: General
26 July 2017Original: English
English and Russian only**Economic Commission for Europe**

Conference of European Statisticians

Group of Experts on Population and Housing Censuses**Nineteenth Meeting**

Geneva, 4–6 October 2017

Item 2 of the provisional agenda

Innovations in census methodology and use of new data sources**Future EU Census programme: 2021 EU Census****Note by Eurostat***Summary*

This paper will highlight key aspects of the 2021 EU census data based on data produced by the national statistical institutes. This can be seen as an evolution of the 2011 census. The existing framework regulation on censuses (Regulation (EC)763/2008) remains in place, but three new implementing regulations have been developed to define in detail the 2021 data, including the exact definitions of variables, disaggregations, the programme of cross-tabulations, metadata and quality reports. The work to define the 2021 census data has been based on a number of key principles, including a simplification of the 2021 data with a reduction in the number and complexity of the hypercubes compared with 2011, and a focus on variables that are priorities for users (in particular, migration-related variables).

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I. Introduction

1. In 2021, there will be an EU-wide collection of population and housing census data based on data produced by the national statistical institutes. This is an evolution of the 2011 census that has been developed by Eurostat working jointly with a Task Force composed of census experts from 18 EU Member States, Candidate Countries and EFTA countries.
2. The existing framework regulation on censuses (Regulation (EC)763/2008) remains in place, but three new implementing regulations have been developed to define in detail the 2021 census, including the exact definitions of variables, disaggregations, the programme of cross-tabulations, metadata and quality reports. The work to define the 2021 data has been based on a number of key principles, including a simplification of the data (resulting from the 2011 experience and outputs) with a reduction in the number and complexity of the cross-tabulations, and a focus on variables that are priorities for users (in particular, migration-related variables).
3. As for 2011, data will be produced in the form of detailed multi-dimensional cross-tabulations (hypercubes) that will be accessible via the online Census Hub system, allowing users the flexibility to define tables according to their needs.
4. In parallel, the Task Force has begun work on a vision and strategy for the collection of census-type data at European level after 2021. This development, which involves major changes, is described a separate paper prepared for the Expert Group meeting.

II. The 2011 data collection - the foundation for 2021

5. The 2011 European Census of Population and Housing was the first Census conducted in EU Member States and EFTA countries based on common legislation that covered in detail all aspects of census outputs. Census legislation did exist for the 1981 and 1991 rounds but this consisted of European directives that defined only loosely a very limited common data collection.
6. In 2011, for the first time, European legislation defined in detail an extensive set of harmonised high-quality data from the population and housing censuses conducted in the abovementioned countries. The data is based on a process of output harmonisation. Countries are free to produce the required data using any appropriate methods and data sources according to national availability and preference. However, the European data must fully meet the standards as defined in the legislation – such as the definitions, breakdowns, cross-tabulations and quality reporting to be applied. The data must be produced in accordance with the 'essential features' of censuses as referred to below. This approach is also applied to the 2021 census data.
7. The 2011 Census programme was based on one framework regulation of the European Parliament and Council:
 - Regulation (EC) No 763/2008 established common rules for the decennial provision of comprehensive data on population and housing;
and three Commission implementing regulations:
 - Regulation (EC) No 1201/2009 contained definitions and technical specifications for the census topics (variables) and their breakdowns;
 - Regulation (EU) No 519/2010 required the data output that Member States transmit to the Commission to comply with a defined programme of statistical data;

- Regulation (EU) No 1151/2010 required transmission of a quality report containing a systematic description of the data sources used for census purposes in the Member States and of the quality of the census results produced from these sources.

III. The 2021 European Census programme

8. The 2021 EU census data was based on the existing European Parliament and Council Regulation (EC) 763/2008 which defined the ‘essential features’ of censuses that must be met:

- individual enumeration;
- simultaneity;
- universality within a defined territory;
- availability of small-area data; and
- defined periodicity.

9. These essential features were based on the Conference of European Statisticians (CES) Recommendations for the 2010 round of censuses, and are retained in the CES Recommendations for the 2020 round.

10. Regulation (EC) 763/2008 also lists the census topics for which data must be collected (although the exact definitions for these topics are included in the implementing regulations), as well as the geographical levels to which these topics must be broken down.

11. There are therefore certain aspects of the 2021 EU census that were already fixed before Eurostat, together with the members of the Task Force on future EU censuses, begun their work.

12. Basing the 2021 data on this existing European Parliament and Council Regulation had the advantage of greatly reducing the time required for the technical and administrative process. Consequently, the 2021 census was defined at an earlier stage in the census decennial cycle than the data for 2011, thus providing more time for countries to prepare for the 2021 Census.

13. The work of Eurostat together with the members of the Task Force consisted in creating three new implementing regulations:

- regulation covering topics and their breakdowns,
- regulation establishing the table programme, and
- regulation covering quality and metadata,

taking into account lessons learned from 2011, whilst complying with the broad legal framework set by Regulation (EC) 763/2008, and preserving the value of the census.

14. After a thorough analysis of the 2011 Census, a number of changes for 2021 have been proposed and discussed that were intended to, among others:

- develop the 2021 data following an in-depth review of 2011 to identify areas where changes were necessary;
- simplify where possible the classifications;
- avoid optional categories in classifications;

- take into account the experience gained in the 2011 census round in order to simplify the exercise by, for example, removing the cross-tabulations and/or dimensions that were little used;
 - ensure that the census data remain relevant;
 - focus on the priority needs of EU Census users;
 - recognize and preserve the uniqueness of the census as a source of multi-dimensional data, allowing analyses across different themes and topics that are not possible using other data collections.
15. After a series of discussions that lasted from 2014 to 2016, three new implementing regulations have been adopted and are now in force:
- Commission Implementing Regulation (EU) 2017/543 of 22 March 2017 laying down rules for the application of Regulation (EC) No 763/2008 of the European Parliament and of the Council on population and housing censuses as regards the technical specifications of the topics and of their breakdowns¹
 - Commission Regulation (EU) 2017/712 of 20 April 2017 establishing the reference year and the programme of the statistical data and metadata for population and housing censuses provided for by Regulation (EC) No 763/2008 of the European Parliament and of the Council²
 - Commission Implementing Regulation (EU) 2017/881 of 23 May 2017 implementing Regulation (EC) No 763/2008 of the European Parliament and of the Council on population and housing censuses, as regards the modalities and structure of the quality reports and the technical format for data transmission, and amending Regulation (EU) No 1151/2010³

A. Commission Implementing Regulation (EU) 2017/543 of 22 March 2017

16. The specifications laid down in this regulation comply with international recommendations, in particular with the ‘Conference of European Statisticians Recommendations for the 2020 Censuses of Population and Housing’ (CES Recommendations). However, the Regulation is more specific in cases where the CES Recommendations have left countries to choose between several options.

17. The Regulation specifies the breakdowns of the topics where this is not done in the CES Recommendations or where more detail was required. These breakdown specifications were a precondition for the second step: defining a unified tabulation programme.

18. Compared to 2011, changes have been made to simplify wherever possible the definitions and breakdowns, to remove optional categories (except where required by varying practices in Member States) to provide greater clarity for users and to avoid the potential confusion of having optional requirements as part of an obligation set in legislation. Definitions and breakdowns have also been updated to ensure that the census data remain relevant – to reflect new data needs, changes in society, or to take into account changes in other related statistical exercises. For example, the definitions and breakdowns

¹ <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1491315145905&uri=CELEX:32017R0543>

² http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2017.105.01.0001.01.ENG

³ http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2017.135.01.0006.01.ENG&toc=OJ:L:2017:135:TOC

used for 'Current Activity Status' have been revised to take into account changes to the ILO recommended definitions for employment statistics. Similarly, reflecting the widespread introduction of same-sex marriages and partnerships, there have been changes to the definitions used for the topic 'Legal Marital Status'.

B. Commission Regulation (EU) 2017/712 of 20 April 2017

19. The table programme for 2021 retains the richness of the census as a data source and covers the priority issues, while reducing as far as possible the burden on the National Statistical Institutes (NSIs).

20. Discussions in the Task Force identified that the number of tables was the main determinant of the workload for NSIs of preparing the data, although the number of dimensions also had some impact on this.

21. Extensive consultations were organised with European Commission Directorates General that are key users of the EU census data. These consultations allowed the identification of particular high-priority topics and cross-tabulations that needed to be retained or expanded relative to 2021. This also allowed for targeted reductions in those cross-tabulations that were of lower priority or that were little used in the 2011 census.

22. The 2021 table programme contains significant reductions in terms of the number of tables, as well as reductions in the dimensionality of the tables.

23. Regulation (EU) 2017/712 also confirms that the data will relate to a census date in 2021. Although NSIs are free to decide on the exact census date, this must fall during 2021. This Regulation also defines the textual metadata that must be supplied for the census topics.

C. Commission Implementing Regulation (EU) 2017/881 of 23 May 2017

24. The metadata and quality information defined in this regulation, complement and complete the requirements for textual metadata on the topics that were set in Annex II of the regulation that establishes the table programme for 2021.

25. The metadata and quality requirements were based closely on the metadata defined for the 2011 data. However, the metadata to be collected in 2021 represent a significant reduction in the size and complexity of the quality hypercubes, with revisions to the quality information to better reflect the widespread changes to the census methods and data sources in Europe.

26. Moreover, as agreed with the Member States, this regulation explicitly states that the data of 2011 census as well as the data of 2021 Census will be kept until 1 January 2035, thus allowing users comparisons of data between the two census rounds. This regulation also clearly defines that the data are to be based on the Statistical Data and Metadata eXchange and SDMS standard and will be disseminated using the Census Hub.

D. Grid data for 2021 Census

27. An important part of the work of the Task Force has been concerned with developing the 2021 census data geo-coded to a 1km² grid. This is a new development for the 2021 census, going beyond the core EU census data programme for 2021.

28. It is proposed that only the following data items should be collected as a part of the 2021 EU census data for each 1km² grid square:

- total population;
- sex (males, females);
- age (under 15, 15-64, 65 and over);
- employed persons;
- place of birth (in the reporting country, in another EU country, outside EU).

29. As this new development was not included within the original 2011 framework regulation for the census (Regulation (EC) 763/2008), a new legal framework is required. It is not possible for the grid data to be covered by a further implementing regulation such as those considered above. Therefore a ‘temporary direct statistical action’ will be introduced under the Regulation on European Statistics (Regulation (EC) No 223/2009). This is at an advanced state of drafting and is expected to be adopted by the end of 2018.

30. The development of the census grid data is explained in more detail in a separate paper prepared for the Expert Group meeting.
