

Distr.: General
6 July 2018

Original: English

Economic Commission for Europe

Conference of European Statisticians

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

Geneva, 26–28 September 2018

Item 4 of the provisional agenda

Future censuses beyond 2020**Envisioning the United States' 2030 Census****Note by the United States Census Bureau****Summary*

This document discusses three decades of census taking from 2010 to 2030 and beyond, as seen through the United States' experience and within the context of the international rounds of censuses. To begin, there is a quick review of the past through the 2010 World Program on Population and Housing Censuses. Moving to the present moment, this document discusses some key expectations for the 2020 world round of censuses. Over the decades, for the United States (US), innovation has been a part of our census taking and 2020 is not an exception. Finally, as we envision the US 2030 Census, this document offers insights on a potential 2030 Census and a framework for how we close-out one census, while planning for the next.

* Prepared by Arona L. Pistiner.

I. Introduction

1. At the request of the Conference of European Statisticians, the Steering Group will prepare an analysis on the future of population and housing censuses after the 2020 world round of censuses. This work will help inform the recommendations for the 2030 round of censuses. Moving beyond 2020 may require a paradigm shift in how countries conduct their censuses. This document discusses three decades of census taking from 2010 to 2030 and beyond, as seen through the United States' experience and within the context of the international rounds of censuses.

2. To begin, there is a quick review of the past through the 2010 World Program on Population and Housing Censuses. Specifically, the presentation highlights the challenges and successes which set the direction for the 2020 world round of censuses. Moving to the present moment, this document discusses some key expectations for the 2020 world round of censuses. Over the decades, for the United States (US), innovation has been a part of our census taking and 2020 is not an exception. Finally, as we envision the US 2030 Census, this document offers insights on a potential 2030 Census and a framework for how we close-out one census, while planning for the next.

II. Where we were: 2010 World Program on Population and Housing Censuses

3. To envision the future, first we must go back a little bit and understand the current thinking of the international census community. In 2011, the United Nations (UN) Statistical Commission asked the US to conduct a review of the 2010 World Population and Housing Program, covering the years 2005 thru 2014. At the forty-third session of the UN Statistical Commission on February 28, 2012, the US Census Bureau presented the results and 12 recommendations for the Commission to consider.¹ This remains the last world review of census taking for the 2010 round of censuses.

4. There were two objectives for the review:

- (a) Document early lessons learned from the 2010 census round; and
- (b) Present preliminary recommendations for the 2020 census round for consideration by the Statistical Commission.

5. The report predicted that the 2020 round of censuses would be a turning point in how censuses are fundamentally conducted around the world, by stating:

“Rapidly changing technologies, evolving census methodologies, privacy concerns and increasing needs for more timely data, in many countries of the world will significantly affect the approach to census taking during the 2020 round of population and housing censuses and beyond.”

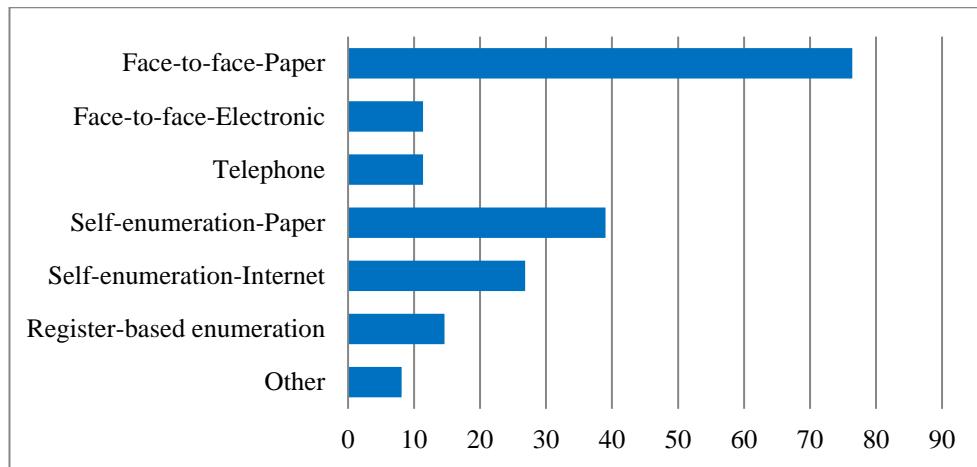
6. Some of the results from the review provide insight into the new directions of censuses taking that will impact not only the 2020 round but also 2030.

¹ United Nations (2012), Population and Housing Censuses: Report of the United States of America on the 2010 World Programme on Population and Housing Censuses. United Nations Statistical Commission, E/CN.3/2012/2, Forty-third session, 28 February – 2 March 2011. Available at: <http://unstats.un.org/unsd/statcom/sc2012.htm>.

7. For the review of the World Census Program, we emailed questionnaires to the 192 member States of the UN (South Sudan became a member state while conducting the review). In total, 126 countries responded for an overall response rate of 66%.

8. For the figure below,² 123 countries responded to the survey. The vast majority of the countries were conducting their census using the traditional method with in-person interviews, self-enumeration or a combination of the two. Only 18 countries reported their enumeration method as register-based.

Figure I
Percentage of countries by enumeration methods



9. The review included a section with a series of questions on successes and challenges. For each question, respondents could check multiple responses.

10. For the traditional census countries, the overwhelming challenge was cost (74%), followed by timeliness (45%). Among the register-based countries, 67% indicated data quality was a significant challenge.

11. Among the traditional census countries to this question, the highest success response was with implementing new technologies (61%). For the register-based countries responding to this question, their highest success response was keeping within budget (34%).

12. This is where we have been, where are we now?

² United Nations. (2013) Mid-Decade Assessment of the United Nations 2010 World Population and Housing Census Program, United Nations Expert Group Meeting on Revising the Principles and Recommendations for Population and Housing Censuses, ESA/STAT/AC.277/1, 29 October – 1 November 2013. Available at:

http://unstats.un.org/unsd/demographic/meetings/egm/NewYork/2013/USCB_Mid_decade_assessment_final.pdf.

III. Where we are: 2020 World Program on Population and Housing Censuses

13. In March 2015, at the forty-sixth session of the United Nations Statistical Commission,³ the international statistical community launched the 2020 census round⁴ to span the period from 2015 to 2024.

14. In the 2020 census round, new opportunities exist to utilize innovative technologies. Enhanced administrative data are a reality. A significant number of countries are using alternative data sources for all or a portion of their data. For countries, continuing to conduct a traditional census, there is increased use of multi-mode censuses. And the trend, for many countries, is to move away from the traditional census methodology to a register-based census, when appropriate. Overall, there will be an increased use of technology, in all aspects of census taking. While some countries have conducted a census this round, most are still in the planning phase.

15. Shifting the focus to the regional view, in particular the UN Economic Commission for Europe (UNECE),⁵ based on tentative plans for the 2020 round, the trend is to move from the traditional census to a register-based census. Of the 48 UNECE⁶ countries for which information is available, 14 countries plan to conduct a register-based census (29%), 12 countries are planning a combined census (25%) and 22 countries are continuing with a traditional census (46%). If only the 32 member countries of the EU (European Union) and EFTA (European Free Trade Association) are considered, then 13 countries plan a register-based census in the 2020 round (41%), 9 countries a combined census (28%), and just 10 countries will continue with a traditional census (31%).

³ United Nations (2015), Report of the Secretary-General on the 2010 World Population and Housing Census Programme and on preparation for the 2020 World Population and Housing Census Programme. United Nations Statistical Commission, E/CN.3/2015/6, Forty-sixth session, 3 – 6 March 2015. Available at: <https://unstats.un.org/unsd/statcom/doc15/2015-6-Censuses-E.pdf>

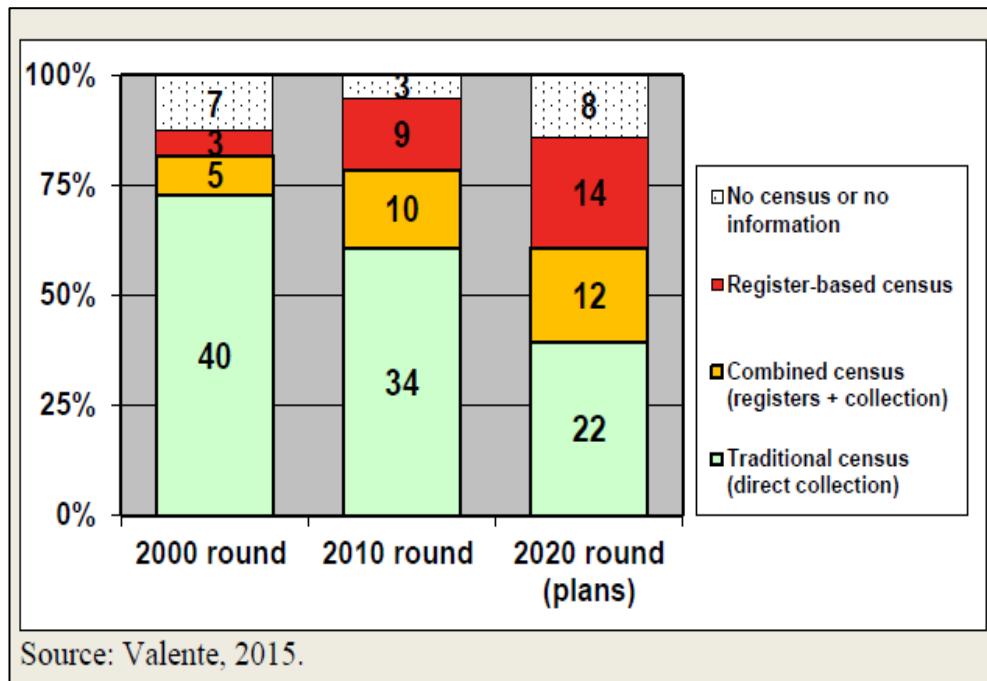
⁴ http://www.un.org/ga/search/view_doc.asp?symbol=E/RES/2015/10

⁵ Valente, 2015, From the 2010 to the 2020 census round in the UNECE region – Plans by countries on census methodology and technology. Document submitted to the Meeting of the UNECE-Eurostat Group of Experts on Population and Housing Censuses, Geneva, 30 September to 2 October 2015. Available at:

http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.41/2015/mtg1/UNECE_paper_Pao_lo_draft_0925_rev2.pdf

⁶ The UNECE region is comprised of 56 Member States from the countries of Europe, North America (Canada and United States), Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) and Western Asia (Israel).

Figure II

Number of UNECE countries by census method in the 2000-2020 Census rounds

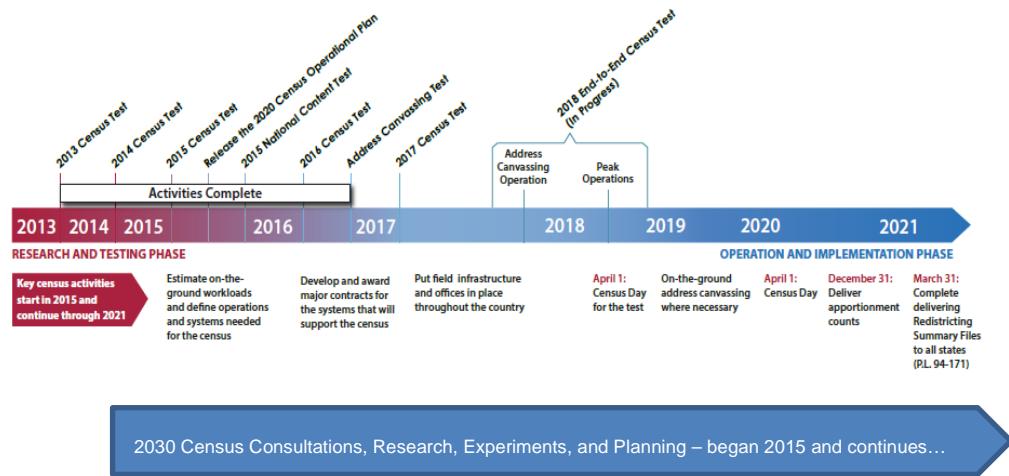
16. So, where are we going for the 2030 round of census and beyond? Let us look in more detail at the US for their future census plans.

IV. Planning for a US Census

17. The next US decennial census will be conducted in 2020, with Census Day on April 1, 2020. In the US, similar to many countries, while one census is being conducted, the next census is being researched and planned. The decennial census budget cycle is 14 years long. The next census and the current census overlap for budget purposes. The budget cycle for the 2020 Census is from 2010 to 2024. The budget cycle for the 2030 Census will start in 2020 and end in 2034. However, the actual research and planning for the next census starts much earlier for the 2030 Census, consultations begin in 2015.

18. By law, the Census Bureau must deliver decennial census topics to Congress three years before Census Day. The topics represent the necessary balance between the need for data and the Census Bureau's commitment to reduce the time it takes to complete the form. According to law, the actual questions that will appear on the census questionnaire must be submitted to Congress by March 31, two years before the census, for the 2020 Census. For the 2020 Census, this was March 31, 2018.

Figure III
2020 Census Operational Timeline with 2030 Census Overlap



19. Trying to anticipate societal, economic, demographic, political, and technological changes that could influence the scope and conduct of the census in 2030 is the goal of the planning phase. Balancing the demands to lower costs while maintaining the expected 100% coverage with high data quality is the challenge.

V. Innovation and the United States Census

20. Historically, innovation has always been a part of census taking for the US, over the decades. From the Hollerith machine (punch cards) to the UNIVAC computer to other methodological and technological advances, innovations have improved the way the census is conducted and has resolved a myriad of issues. It is an ingrained part of the census to find new ways of doing things to improve our processes and data. Census taking is not static; almost every 10 to 20 years there is a new major innovation in the US Census, including:

- 1940 – First census to use advanced sampling techniques, including probability sampling;
- 1950 – First Post Enumeration Survey Conducted;
- 1951 – Installed the UNIVAC I (Universal Automatic Computer);
- 1960 – First use of mail-out/mail-back;
- 1970 – First address register and use of short and long forms;
- 1990 – Computer matching first used for the Post Enumeration Survey;
- 2000 – Development of MAF/TIGER (Master Address File/Topologically Integrated Geographic Encoding and Referencing Database);
- 2010 – Short-form only; long-form data are collected using the American Community Survey, a continuous measurement survey.

VI. Where will we be: Envisioning the United States' 2030 Census

21. Looking ahead to the 2030 Census and even beyond, what will the census of the future look like? Current technologies will be obsolete by 2030. Many factors need to be considered to select the most appropriate methods for each country's unique situation and data needs. With the modernization of censuses come challenges, risk, and lessons learned.

22. As we begin to think about 2030, what will be the future challenges, and what will be the new innovations developed to meet these challenges? How good is good enough? At present, the expectations for the US Census is 100% coverage and high data quality. How accurate does the census have to be? Can the paradigm shift to expect a less accurate census while still producing acceptable census results?

23. Early census planning has always led to an independent office within the Census Bureau to begin concurrently early in the decade, while the current census is being planned and implemented. We start by consulting with think tanks, academia, and other organizations, such as the Committee on National Statistics, a part of the National Academy of Sciences. Research is also carried out about new technologies. We also measure how the American public reacts to the Census and areas for improvement. Changes in American society will affect Census topics, public trust, and privacy issues. Staff will also assess changes to or new Federal government policies that might influence participation in or perceptions about the census.

24. Towards the end of the census, there is an evaluation, experiment, and research program. All of the key operations are evaluated and an assessment report prepared that includes valuable lessons learned for the planning of the next census. We also conduct experiments during the census. There are a number of criteria for research to be called an experiment. Essentially, these are research projects that require testing in a census environment to be effective.

25. The Census Bureau is looking ahead to the 2030 US Census. We are seeking recommendations from a wide variety of perspectives. Currently, the thinking is to expand the use of administrative data however, to do an administrative data census will require legislative changes (to create a population register, expand data sharing with other Federal agencies, etc.). Administrative data in the US, similar to other countries have limitations, i.e., quality, limited content, data access limitations from other Federal agencies based on statute. Another area of concern is Social Security Numbers (SSNs); pending legislation has loomed for decades to limit the use of SSNs only to administer Social Security Administration programs.

VII. Summary and Conclusions

26. The next new innovation in censuses taking is waiting to be discovered. If we only move to a goal of administrative data censuses,⁷ are we missing what else may be a potential new technology or methodology for census taking? Reviewing how frequently there is a major shift in census technology or methodologies, the 2030 round of censuses will look much different than the 2020 census round. Here are just a few of the questions we will need to address:

⁷ Countries with population registers will most likely continue to conduct register based censuses and for some countries, a traditional census will remain the best method for conducting a census.

- (a) How should we push the boundaries of technology, since today's technology will be obsolete?
- (b) What are the other sources of data and how can National Statistical Offices use these data?
- (c) How will societal attitudes change around privacy, quality, data expectations?
- (d) How good is good enough? How accurate does a census have to be, to be considered the official count?
- (e) Who is the source for census data within National Statistical Offices – statisticians or information technology specialists?

27. Looking towards the 2030 Census, international cooperation may help frame our vision of census taking and the needed research to guide us to that vision. Stakeholder engagement with other National Statistical Offices will be key; identifying countries to work with and proactively engaging them to work on joint projects will become even more important.

28. There is another (of many) additional dimension to consider, i.e., how will the UN 2030 Agenda for Sustainable Development play into our vision for future censuses? The demand for data is ever increasing to support the Sustainable Development Goals and Indicators. The need for statistical capacity building is ever increasing to produce data to meet the goals. Private data suppliers, such as the Global Partners, academia, and others are all searching for the next data transformation. National Statistical Offices will need to work closely with all of these entities to find the next paradigm shift in census taking or be left behind. The next innovation in census taking is out there, waiting to be found.
