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MAIN RESULTS OF THE UNECE-UNSD SURVEY ON THE 2010 ROUND OF POPULATION AND HOUSING CENSUSES

Note by the UNECE

I. INTRODUCTION

1. This report provides a general overview of the results of a world wide survey conducted by the United Nations Statistic Division (UNSD) in June 2009, to collect information on the national data collections for the 2010 World Programme on Population and Housing Censuses. This survey was conducted in cooperation with the UN Regional Commissions, including the UNECE for our region. The report is based on information provided by the 50 UNECE member countries who responded to the survey, together with 4 other territories and countries member of the Conference of European Statisticians located outside the UNECE Region.

2. Some of the results presented in this report are compared to those published in the report of the Practices of UNECE countries in the 2000 round of censuses, which was published by the United Nations in 2008.[1]

[1] United Nations publication Sales No. E.07.11.E.15 ISBN 978-92-1-116968-3 ISSN 0069-8458 or on the internet at http://www.unece.org/stats/publications/Publication_on_2000_censuses.pdf

II. CENSUS METHODOLOGY

3. The individual countries that returned the questionnaire on the 2010 round of censuses are shown in Table 1, with information on the census type (based on the main source of data used for the population count) and census date.

Table 1. Countries by main method of census enumeration and census date 2010 round

Country	Main Census Type	Census date
UNECE Member Countries		
Albania	Traditional	01 April 2011
Armenia	Traditional	12 October 2011
Austria	Administrative registers	31 October 2011
Azerbaijan	Traditional	13 April 2009
Belarus	Traditional	14 October 2009
Belgium	Administrative registers	01 January 2011
Bosnia and Herzegovina	Traditional	31 March 2011
Bulgaria	Traditional	10 March 2011
Canada	Traditional	10 May 2011
Croatia	Traditional	31 March 2011
Cyprus	Traditional	1 October 2011
Czech Republic	Traditional - combination	26 March 2011
Denmark	Administrative registers	1 January 2011
Estonia	Traditional	18 September 2011[2]
Finland	Administrative registers	31 December 2010
France	Rolling census	1 January 2010
Georgia	Traditional	20-21 January 2010
Germany	Administrative registers	9 May 2011
Greece	Traditional	16 March 2011
Hungary	Traditional	1 October 2011
Iceland	Administrative registers	[3]
Ireland	Traditional	April 2011
Israel	Other (Integrated census)	27 December 2008
Italy	Traditional	23 October 2011

[2] Estonia, Republic of Moldova: proposed, but to be confirmed by the government
[3] Iceland: not decided yet.

Country	Main Census Type	Census date
Kazakhstan	Traditional	25 February 2009
Kyrgyzstan	Traditional	24 March 2009
Latvia	Other (Register & Traditional)	1 March 2011
Lithuania	Other (Register & Traditional)	1 March 2011
Luxembourg	Traditional	1 February 2011
Malta	Traditional	November 2011
Montenegro	Traditional	31 March 2011
Netherlands	Other (Register & surveys)	1 January 2011
Norway	Administrative registers	19 November 2011
Poland	Other (Register & surveys)	31 March 2011
Portugal	Traditional	March 2011
Republic of Moldova	Traditional	1 April 2012[2]
Romania	Traditional	March 2011
Russian Federation	Traditional	14 October 2010
Serbia	Traditional	31 March 2011
Slovakia	Traditional	21 May 2011
Slovenia	Administrative registers	1 January 2011
Spain	Administrative registers	1 November 2011
Sweden	Administrative registers	31 December 2011
Switzerland	Administrative registers	31 December 2010
Tajikistan	Traditional	20 -27 January 2000
The Former Yugoslav Republic of Macedonia	Traditional	31 March 2011
Turkey	Administrative registers	2011[4]
Ukraine	Traditional	2011
United Kingdom	Traditional	27 March 2011
United States	Traditional	1 April 2010
Other territories and members of the Conference of European Statisticians		
Australia	Traditional	9 August 2011
Japan	Traditional	1 October 2010
Mexico	Traditional	13 June 2010
UNMIK Kosovo	Traditional	31 March 2011

[4] in line with the EU requirements, Turkey postponed its census from 2010 to 2011.

4. Table 2 shows a broad overview of the census methods used in the 2000 census round compared with those proposed for the 2010 census round. This table is limited to the 42 counties[5] that completed both the 2004 UNECE survey on practices in the 2000 census round and the 2010 UNSD-UNECE survey on practices proposed for the 2010 census round.

Table 2. Number of countries by type of population census methods 2000 and 2010

		Main method 2010 census round			
		Traditional	Register	Rolling	Other*
Main method 2000 Census round	Traditional	**30**	2	1	1
	Register	0	**3**	0	0
	Rolling	0	0	**0**	0
	Other*	0	2	0	**3**

** Countries that used more than one method and did not define the main method*

Note: Only includes the counties that completed both the 2004 UNECE survey on practices in the 2000 census round and the 2010 UNSD survey on practices proposed for the 2010 census round (see footnote 5 below)

5. Table 2 indicates that the majority of countries are using the same main method for both the 2000 census round and the 2010 census round. Traditional censuses remain the most common form of census collection method; although there has been a move away from traditional censuses with four countries which used the traditional census as their main method in the 2000 round no longer have this as their main method for the 2010 round. Also, France is the only country that undertakes a "rolling" census. This census which commenced in 2004 uses mainly traditional collection methodologies.

6. This high level description masks some of the major collection changes that are occurring with the 2010 census round when compared with the 2000 census round. Significant country changes in the collection phase include:

(a) Bosnia and Herzegovina, Germany, Iceland and Sweden did not conduct a population census in the 2000 round but are doing so in the 2010 round. Germany, Iceland and Sweden are using registers as the main methodology, whereas Bosnia and Herzegovina is undertaking a traditional census;

(b) Italy is using for the 2010 round a long and a short form and introducing sampling for the short form for the first time;

[5] These countries are Albania, Armenia Azerbaijan, Austria, Belarus, Belgium, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Greece, Hungary, Ireland, Israel, Italy, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta, Montenegro, Netherlands, Poland, Portugal, Romania, Russian Federation, Serbia, Spain, Switzerland, the Former Yugoslav Republic of Macedonia, Turkey, Ukraine, United Kingdom, United States of America, and Australia.

(c) Only a small number of countries utilized the internet in the 2000 round, sometimes with limited success. During the 2010 round 16 countries are going to use the internet for on line data collection (these are shown in Table 3 below).

7. Table 3 explores in more detail the various methods of enumeration being utilized in the 2010 census round. This table shows that while new methods of enumeration are being explored, the option of face to face interview is still extensively used with 30 countries using face to face interviews either exclusively or in combination with other methods. Self-enumeration questions are utilized in 17 countries.

8. Many countries are offering their citizens for the first time the opportunity of completing their census forms on line using the internet. A total of 14 ECE countries (Canada, Czech Republic, Estonia, Germany, Hungary, Italy, Latvia, Lithuania, Poland, Portugal, Slovakia, Spain, Switzerland, United Kingdom) and two other members of the Conference of Europeans Statisticians (Australia and Japan) are offering on line data collection using the internet in the 2010 round. Only five countries offered this option in the 2000 round. Four countries (Italy, Portugal, Spain and United Kingdom) have provided detailed papers outlining their testing experiences of online completion of census forms. The test results are encouraging with cost savings and better quality data likely to result. The proportion of households completing the census on line is likely to be significant but less than 20 per cent in most cases.

Table 3. Methods of census enumeration adopted for the 2010 census round

Country	**Face to face interview**	**Self –enumeration (questionnaire)**	**Self-enumeration (Internet-based)**	**Based on registers**
UNECE Member countries				
Armenia	x			
Austria				x
Belarus	x			
Bosnia&Herzegovina	x			
Bulgaria	x			
Canada	x	x	x	
Croatia	x			
Cyprus				
Czech Republic	x	x	x	x
Denmark				x
Estonia	x		x	x
Finland				x
France		x		
Georgia	x			
Germany	x	x	x	x
Greece	x			

Country	Face to face interview	Self –enumeration (questionnaire)	Self-enumeration (Internet-based)	Based on registers
Hungary	x	x	x	
Iceland				x
Ireland		x		
Israel	x	x		x
Italy		x	x	
Kazakhstan	x			
Latvia	x		x	x
Lithuania	x		x	x
Luxembourg		x		
Montenegro	x			
Netherlands				x
Norway				x
Poland	x		x	x
Portugal	x	x	x	
Republic of Moldova	x			
Romania	x			
Serbia	x			
Slovakia		x	x	
Slovenia				x
Spain		x	x	x
Sweden				x
Switzerland		x	x	x
Tajikistan	x			
TFYR Macedonia	x			x
Turkey	x			x
Ukraine	x	x		
United Kingdom		x	x	
United States of America	x	x		
Other territories and members of the Conference of European Statisticians				
Australia	x	x	x	
Japan		x	x	
Mexico	x			
UNMIK Kosovo	x			

III. CENSUS COSTS

9. Countries were asked to provide the estimated total cost of the population census in USD million. Countries provided an overall cost estimate and the table below shows the census cost per capita (USD) and per capita Purchasing Power Parity (PPP). The table has been ordered with the lowest per capita PPP cost first and the highest last. The reason for estimating census costs in PPP's is that they are used, among other things, to convert various national statistics, denominated in national currencies, into a common international currency in order to facilitate international comparisons.

Table 4. Country by main method of census enumeration and costs 2010 census round

Country	Main Methodology of Census	COSTS (2010 census round)		
		Census Cost in million USD	Census cost per capita in USD	Census Cost per capita in PPP (x.x) =2000round
Denmark	Administrative Registers	0.285	0.05	0.03 (na)
Netherlands	Other (Register & surveys)	2	0.1	0.1(0.2)
Finland	Administrative Registers	1.5	0.3	0.2 (0.2)
Norway	Administrative Registers	2.5	0.5	0.3 (2.8)
Slovenia	Administrative Registers	1.3	0.6	0.7 (6.5)
Belgium	Administrative Registers	14	1.3	1.0 (2.7)
Austria	Administrative Registers	14	1.7	1.3 (na)
Kyrgyzstan	Traditional Census	6.65	1.3	2.9 (3.3)
Republic of Moldova	Traditional Census	6.5	1.8	3.2 (na)
Georgia	Traditional Census	8.5	1.94	3.2 (2.7)
Belarus	Traditional Census	16.4	1.7	3.3 (1.7)
Iceland	Administrative Registers	1.7	5.5	3.8 (na)
Kazakhstan	Traditional Census	46	3.0	4.0 (2.2)
France	Rolling Census	360	5.8	4.3 (na)
Ukraine	Traditional Census	120	2.6	4.9 (na)
Russian Federation	Traditional Census	570	4.0	5.4 (3.5)

Country	Main Methodology of Census	COSTS (2010 census round)		
		Census Cost in million USD	Census cost per capita in USD	Census Cost per capita in PPP (x.x) =2000round
Malta	Traditional census	2	4.9	5.6 (5.4)
Switzerland	Administrative Registers	65.4	8.7	5.7 (11.1)
Latvia	Other (Register & Traditional)	13.5	5.9	6.8 (4.8)
Romania	Traditional Census	99.9	4.6	7.0 (4.0)
Portugal	Traditional Census	74	7.0	7.0 (7.1)
Lithuania	Other (Register & Traditional)	20	5.9	7.9 (6.7)
Croatia	Traditional Census	30	6.8	8.2 (8.4)
Serbia	Traditional Census	44	5.9	10.0 (6.8)
United Kingdom	Traditional Census	750	12.3	10.1 (6.5)
Luxembourg	Traditional Census	7	14.6	10.3(10.6)
Greece	Traditional Census	130.2	11.6	10.7 (6.5)
Italy	Traditional Census	822	13.8	11.1 (6.5)
Cyprus	Traditional Census	9.4	12.0	11.0 (4.9)
Slovakia	Traditional Census	43.3	8.0	11.5(8.1)
Bosnia and Herzegovina	Traditional Census	29.4	7.5	12.8 (na)
Australia	Traditional Census	365	17.4	14.0 (9.1)
Czech Republic	Traditional Census	130	12.6	14.8 (19.3)
The Former Yugoslav Republic of Macedonia	Traditional Census	14.7	7.2	15.4 (na)
Ireland	Traditional Census	105.7	24.3	16.9 (12.6)
Canada	Traditional Census	575.1	17.4	20.1 (11.1)
Israel	Other (integrated Census)	130	18.1	20.7 (10.8)
Estonia	Traditional census	28.9	21.5	25.6 (16.8)
United States	Traditional Census	14734	48.9	48.9 (22.7)

Note: The following countries did not provide estimates of the cost of their census – Armenia, Bulgaria, Germany, Hungary, Montenegro, Poland, Spain, Sweden, Tajikistan, Turkey and UNMIK Kosovo.

10. Table 4 indicates that the cost of the census is cheaper for those countries that rely on administrative registers. The costs shown in the table are only the direct costs associated with the population census and do not take into account the cost of creating and maintaining registers which are of course also used for other purposes. The per capita census cost in PPP terms varies widely. For traditional censuses the lowest per capita PPP cost is for Kyrgyzstan with a cost of 3PPP/person. At the other end of the scale is the United States where the PPP cost is 49/person. Generally, it would be expected that the per person cost for the 2010 census would be more than for the 2000 census round because of inflation. This is usually the case. A notable exception is the Czech Republic where the per person PPP cost reduced from 19.3 to 14.8 between the two census periods. In this case the Czech Republic currency has strengthened significantly against the USD while at the same time the PPP has remained fairly constant.

IV. CENSUS TESTING

11. All countries, other than those who get their census information from registers are planning to undertake or have undertaken a pilot census or dress rehearsal. In the case of Latvia, this will be dependent on the availability of finances. After the census has been conducted, the only countries that have indicated that they will not be doing a census evaluation are Austria, Denmark, Netherlands, Slovenia, Turkey and Finland.

12. Thirty eight countries have indicated they will be undertaking a post enumeration survey. The countries are Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Estonia, Georgia, Germany, Greece, Italy, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Malta, Montenegro, Poland, Portugal, Romania, Russian Federation, Serbia, Slovakia, Sweden, Switzerland, Tajikistan, TFYR Macedonia, Ukraine, United Kingdom, United States of America, Australia, Mexico, Japan and UNMIK Kosovo.

13. Of these, 7 countries (Cyprus, Czech Republic, Estonia, Malta, Japan, Sweden and UNIMIK Kosovo) have not yet decided or specified the sample size for their post enumeration survey. Twenty countries have decided on a sample size of 1% or less while 3 (Armenia, Greece and the United States of America) have sample sizes of between 2% and 2.5%. In contrast 8 countries will have a sample size for their post enumeration survey of 10% or greater. With the exception of Mexico all of these countries were members of CIS. Mexico is only doing a coverage check, whereas the remaining countries with large sample sizes are doing both coverage and content checks. This information highlights two very different approaches to the size of post enumeration surveys.

V. CENSUS PROCESSING

14. Only 19 countries indicated they will be using manual data entry for data capture. Most of these countries are also using other forms of data capture with Armenia, Kyrgyzstan, Luxembourg, Malta, Montenegro, Romania and UNMIK Kosovo being the only countries relying solely on manual data entry for data capture.

15. As mentioned earlier, a significant number of countries will be offering online data collection via the internet.

16. Interestingly, only five countries (Czech Republic, Poland, Portugal, Spain and the United States) indicated they will be making use of Personal digital assistants (PDA) as part of data capture.

17. Optical Mark recognition (OMR) and Optical Character Recognition (OCR) is being used for data capture by 19 and 21 countries respectively with many countries using both methods. In addition, ten countries are using Intelligent Character Recognition (ICR) often in conjunction with other forms of character recognition.

18. A total of 35 countries indicated they impute missing values in existing data records. Fourteen of these 35 countries also impute missing data records (i.e. full set of information on a person)

VI. DATA DISSEMINATION

19. Not surprisingly nearly all countries will continue to have paper publications for their census results. The web is being used for data dissemination by virtually all countries along with paper publications. Denmark only sends data to Eurostat and Sweden has yet to decide on the format of data dissemination. Belgium and Italy have indicated they will not have paper publications, but both countries will have both static web pages and interactive online databases. France, with its rolling census only provides static web pages for data dissemination.

20. GIS web based mapping tools are not being used by all countries as a data dissemination tool but they will be offered by 31 countries as a data dissemination format.

21. In terms of individual requests for data from the census, most countries charge a fee. The countries who indicated that they do not charge individual request fees are Armenia, Austria, Azerbaijan, Belarus, Bosnia and Herzegovina, Croatia, Georgia, Luxembourg, Netherlands, Poland, Republic of Moldova, Russian Federation and Slovakia.

VII. CONCLUSION

22. The survey provides an opportunity to provide interesting summary information about what is occurring in the 2010 census round. There is no doubt that significant changes are occurring in methods of census taking. These changes are being driven by cost and quality issues as well as changes in technology. To some extent, broad figures as shown in this paper do not show the true extent of the changes that are occurring. Individual case studies from different countries provide more detail about the extent of change and the seriousness with which different countries approach census taking.

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