

**Economic and Social Commission for Western Asia (ESCWA)****REPORT****EXPERT GROUP MEETING ON THE EVALUATION OF POPULATION
CENSUS DATA IN ARAB COUNTRIES
BEIRUT, 12-13 JUNE 2013****Summary**

To improve quality assurance techniques, especially with regard to general censuses of population, housing and facilities in Arab countries, the ESCWA Statistics Division held an expert group meeting on the evaluation of population census data in Arab countries, at the United Nations Office in Beirut, on 12 and 13 June 2013. The aim of the meeting, attended by experts from the Arab region and international experts on data quality assurance and population censuses, was to present and discuss a study on the evaluation of age and sex census data in some Arab countries and reports on national experiences in the area of census data evaluation, national data quality assurance frameworks and quality assurance in statistical surveys on the labour force and family health.

The participants reached a series of recommendations regarding national quality assurance frameworks and evaluation of census data in Arab countries.

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Introduction

1. The ESCWA Statistics Division held an expert group meeting on the evaluation of population census data in Arab countries, at the United Nations Office in Beirut, on 12 and 13 June 2013. The aim of the meeting, attended by experts from the Arab region and international experts in the area of data quality assurance, was to present and discuss a study entitled “A study of age reporting in some Arab censuses of population”. Participants also discussed reports on national experiences in the area of census data evaluation; national quality assurance frameworks; and quality control in statistical surveys on the labour force and family health.

I. RECOMMENDATIONS

2. The participants reached the following recommendations regarding national quality assurance frameworks and evaluation of census data in Arab countries:

(a) To urge national statistical offices (NSOs) to especially focus on data quality in statistical work and to establish internal independent technical units to monitor and apply national quality assurance frameworks, in accordance with national specificities;

(b) To also urge ESCWA to assist in raising awareness in the area of data quality through participation in statistical capacity-building activities relevant to member States as well as the formation of relevant technical teams;

(c) To request ESCWA to transfer quality assurance expertise from States that apply it to States that aspire to do so;

(d) To emphasize the importance of encouraging NSOs to disseminate microdata samples to users; to employ international metadata standards and records approved by the International Household Survey Network; and to collaborate with the Integrated Public Use Microdata Series International (IPUMS) and the ESCWA Statistics Division;

(e) To encourage national statistical offices to participate in initiatives to harmonize international and regional data, such as IPUMS and the data portal of the Economic Research Forum, given that they provide significant advantages in terms of data comparability and effectiveness;

(f) To request ESCWA, PAPFAM and the Minnesota Population Centre to facilitate the process of data harmonization among relevant surveys;

(g) To also request ESCWA to issue a unified guide on the use of common standards for evaluating population census data in Arab countries;

(h) To request member States to evaluate census data and conduct a dimensional survey that they would then make available to the public;

(i) To disseminate the paper submitted by ESCWA after adding comments and amendments raised during the discussion;

(j) To request ESCWA to develop specialized training programmes in quality evaluation of census data at the regional and national levels, in collaboration with research institutions and the League of Arab States;

(k) To request ESCWA to undertake studies and activities to evaluate other types of population data in national censuses;

(l) To intensify efforts and work with relevant data providers in ways that benefit census data evaluation efforts.

II. TOPICS FOR DISCUSSION

3. The meeting activities were divided under various themes and sessions, including national quality assurance frameworks and census data quality in Arab countries. The following agenda was adopted:

A. DATA QUALITY ASSURANCE AND NATIONAL DATA QUALITY ASSURANCE FRAMEWORKS

4. The presentations at the first session of the meeting covered the issue of national data quality assurance frameworks. Mr. Ismail Lubbad of ESCWA gave an overview of the importance of data quality assurance, how to benefit from it and how to apply it at the local, regional and international levels. ESCWA also reviewed the paper submitted by the Statistics Division on national data quality assurance frameworks, which proposes three different models that could be applied at the national level, in accordance with the specificities of each country.

5. The representative of the State of Palestine, Mr. Ali Hussein, Head of Statistical Quality Assurance, gave a presentation on the Palestinian experience with regard to the use of data quality assurance systems and tools. He explained the importance of data quality and how work had progressed in the field of data quality assurance, giving the example of a department that had been established to monitor statistical quality, carry out data quality assurance activities and define the data quality assurance systems and tools employed. He also explained the function and requirements of the data quality assurance database in statistical projects and the self-evaluation system for project managers (DESAP). He also outlined how to evaluate data, reports and specialized studies on quality assurance, and the application of the European Statistics Code of Practice in the Palestinian Central Bureau of Statistics, the peer review mission, the General Data Dissemination System and the ISO 9001 quality management system. He encouraged Arab States to establish quality assurance departments, with a dedicated specialised staff, in their statistical offices.

6. In the ensuing discussion, participants underscored the necessity of examining user needs and statistical quality in the public and private sectors. They highlighted the need to provide metadata in each survey and meet publication deadlines; and the importance of self-evaluation and sharing weaknesses to gain people's trust. They also tackled the issue of database errors and data reconciliation following the first and second interview. They confirmed the importance of the system in raising statistical awareness and of the role of ESCWA in coordinating efforts and evaluating statistical bodies to benefit from their experiences regarding quality assurance.

B. DATA QUALITY ASSURANCE IN FAMILY SURVEYS

7. Mr. Raji Asaad, an expert from the University of Minnesota, gave a presentation at the second session of the meeting on lessons learned in the undertaking of longitudinal surveys of the labour force in Egypt and Jordan. He reviewed some individual data sources from Arab States, samples of labour force surveys and lessons learned from them. He evaluated unemployment in Egypt and said that disparities in the unemployment rates were not a reflection of the classification of unemployed persons as being active in the labour but rather were the result of labour force surveys not revealing underemployment, which increased markedly after the revolution of 25 January 2011. He indicated that the significant drop in employment rates in labour force surveys, in contrast to the rate given in longitudinal surveys (ELMPS), was the result of data discrepancies from data providers. He stressed the importance of quickly changing the age groups for young people, which greatly affected unemployment rates over time. He added that it was becoming increasingly

difficult to define the concept of family and to use appropriate descriptions when enquiring about employment status.

8. Mr. Ahmed Abdel Monem, PAPFAM Manager, gave a presentation on data quality assurance in Arab family health surveys. He said that the League of Arab States had been implementing PAPFAM since 1999. He presented the major activities for PAPFAM implementation in terms of the various training stages for conducting statistical surveys and studies and providing substantive support to countries in the region, and the relevant goals and strategies. He gave an overview of the overall survey framework and implementation mechanism; the PAPFAM questionnaires that had been used to conduct surveys (2001-2012); the legal framework for conducting surveys; the national bodies that carried them out; and survey outcomes. He added that data quality assurance was conducted during the preparatory stage; the preparation of questionnaires; data collection, processing and analysis. He stressed the importance of data quality indicators, the enumeration of a sample, the number of families surveyed, response rates, accuracy of information, age registration and completion dates. He used some of the indicators to demonstrate the high quality level of data and results and confirmed the possibility of accessing microdata by sending a request to the Project Director.

9. In the ensuing discussing, the participants discussed the PAPFAM harmonization proposal and the means of facilitating it. They also tackled the issue of statistical awareness and the need to take into account the specificities of each country in terms of evaluation and data quality assurance, and of the possibility of developing a trilateral project with PAPFAM and ESCWA to centralize the results of all surveys in one data bank, creating a family survey data bank for the Arab region.

C. EVALUATION OF POPULATION CENSUS DATA IN SOME ARAB COUNTRIES: COUNTRY PRESENTATIONS: EGYPT, OMAN AND TUNISIA

10. The representative of Egypt gave an evaluation of the 2006 census data for Egypt. She highlighted inadvertent and intentional mistakes in age-sex reporting and explained how international standards could be used to test age-sex data, how to calculate mortality rates to evaluate age data in the 2006 census and compare it to the 1996 census data; and the use of Whipple's Index, Myer's Blended Index and the United Nations Secretariat age-sex accuracy index to evaluate age data in the 2006 census in comparison to age data in the 1996 census. She said that the Whipple and Myer indexes showed that the results of the age-sex reporting in the 2006 census fell in the middle of the recommended scale range, meaning that the data was of average accuracy. The United Nations index also found that the data precision level was relatively good. She concluded by saying that age-sex reporting had improved in the 2006 census compared to the 1996 census, but that did not mean that the data was highly accurate.

11. Ms. Sawsan Al-Watiya, the representative of Oman, gave a presentation on evaluating age data in the Oman 2010 census. She outlined the age data collection methodology and said that the 2010 census had included a list of age ranges for those who did not know their date of birth. The census had evaluated age data at the provincial and national levels. She also mentioned the major outcomes of age data quality evaluation. The Omani people considered the 2010 census to be more accurate than the 1993 and 2003 censuses. The data of the 2010 census was deemed good but not excellent. Requesting a date of birth contributed to improving age data quality. Errors in age data were normally characterized by certain individuals over the age of 50 favouring ages that ended in 0 and to a lesser extent 5 (age heaping). Age data quality rose in Muscat and dropped to unacceptable levels in the Central and Musandam provinces, which combined contain 2 per cent of the total population of Oman. She added that the age data for infants and children under the age of 5 recorded in the 2010 census were largely consistent with administrative data on births and deaths. Data processing would however reduce the number of individuals in that age group by redistributing them into subsequent groups, which would undoubtedly generate mistakes in future population estimates.

12. The representative of Tunisia, Mr. Mohamed Morabet, gave a presentation on the evaluation of age-sex reporting in the 2004 population and housing census. He reviewed population censuses in Tunis and stressed the importance of age-sex data and their evaluation in censuses. He said that conducting a census was a complicated and vast process and that attention should be given to the issue of rounding up ages. He noted that the 2014 training sessions should focus on accurately registering dates of birth and ages. Questionnaire monitors should give special attention to age and sex questions and researchers in the field should correct any errors. The Handbook on Population and Housing Census Editing, published by the Statistics Division, should be consulted when data was checked and longitudinal surveys were conducted, to evaluate the results of a census, especially the enumeration of age and sex data.

13. In the ensuing discussion, several comments were made regarding data on population projection and the accuracy of mortality data gathered through life charts; and whether there were any developments regarding the evaluation of marital status by focusing on the issue of age and sex. Participants asked whether it was compulsory to use the four measures put forward at the current meeting, or whether one measure for all the States in the region would suffice. Participants also emphasized the importance of a single reference manual for all researchers and the need for examining data throughout the process and only drawing conclusions at the end of the process. They considered the reasons behind the improvement of the United Nations index over the years and their degree of confidence in its results. They also encouraged States to share successful experiences, especially with regard to the use of personal digital assistants, and requested the re-establishment of census task teams.

D. EVALUATION OF AGE CENSUS DATA IN SOME ARAB COUNTRIES: METHODOLOGICAL STUDY

14. At the fourth session of the meeting, the representative of Yemen, Mr. Tariq Al-Kabsi, gave a presentation on age distribution data and the distribution index. He noted that, for the general evaluation of data, the statistical office had prepared a chapter in a book on the basics of demography and one on health surveys and demographic data. The book also assessed age, sex, fertility, reproductive health and mortality data, among other things. He said that data users were requesting data on population projections and also noted the significant improvement between the 1994 and 2004 censuses in the accuracy of age and sex data by province and urban locality, according to the United Nations index. He mentioned the problem of defining the term "urban" appropriately and the urgent need to expand the data evaluation process accordingly.

15. In the ensuing discussion, external factors that affected the quality of data comparisons were discussed, such as war and migration (especially in Iraq) and foreign workers (in Bahrain in particular), in addition to the different indicators employed by the Whipple and Myers indexes, and the importance of agreeing on a guide. Some participants asked whether data quality and comparability could be impacted by the type of census conducted, the questions asked and responses given.

16. Mr. Abdelatif Lfarakh gave a presentation on the first part of a systematic study prepared by the Statistics Division on age reporting in some Arab censuses of population. The data used in the study was collected from special tabulations on age sex distributions in five groups obtained from national statistical offices of member countries and from sample micro data files from IPUMS. ESCWA also sent a questionnaire to countries to update information on dates and census methodologies, and methods of evaluation and dissemination in Arab countries. He gave an overview of demographic statistics, including some historical background on censuses in some Arab countries, and a summary of the statistical methodology employed by member States according to ESCWA research. He then explained how to evaluate the quality of age and sex data through a qualitative assessment of age heaping and its relation to age and sex categories. The study concluded that data on women was less accurate than data on men and that many Arab countries failed to conduct longitudinal surveys and publish the results, which resulted in a lack of transparency regarding the accuracy of census data in some Arab countries.

17. In the ensuing discussion, the paper prepared by Mr. Lfarakh was reviewed and comments to improve data evaluation and comparability were made, such as adding war, migration and foreign workers (i.e., natural and non-natural events), as well as other specific policies and factors. He was asked to clarify the reason for the low enumeration rate in the Egyptian census and to make the correction that in Yemen direct interviews were conducted for censuses. Participants also suggested clarifying the differences between the indicators used in the Whipple and Myer indexes and stressed the importance of agreeing on an evaluation guide. Some participants asked about the feasibility of adding a paragraph on the impact of census type on data quality and comparability (practical and theoretical analysis) and the impact of questions asked, responses given and the use of technology to fill in census questionnaires.

18. Mr. Ivan Brand gave a presentation on the second part of the study prepared by the Statistics Division on age reporting in some Arab censuses of population (Egypt, Iraq, Jordan, Morocco, Palestine and the Sudan). The data in the second part of the study was derived from national statistical offices in those countries or from IPMUS statistical data. The study descriptively analysed the errors resulting from age heaping at the district level in population censuses in the region and examined the relationship between age heaping and selected household characteristics. The latter was accomplished by building a linear model that uses Whipple's Index as the response variable and known or suspected correlates of age heaping as explanatory variables, namely age, literacy, sex, area of residence and household wealth. Since income data are not available, a wealth index was constructed from a linear combination of asset ownership. The study found a negative correlation between literacy and wealth on the one hand and age heaping on the other, while there was no correlation between women and age heaping other than in their later years, in all censuses.

19. In the ensuing discussion, participants discussed the importance of the study as it was the first prepared by ESCWA to assess the quality of census data in the Arab region. They also tackled the possibility of calculating new data and indexes for a more accurate character analysis, including examining the education level of a certain group. Experts indicated the need for accuracy when collecting data, especially in terms of variables that could differ among countries. They made several suggestions, such as conducting a similar study using Myer's Index.

20. In conclusion, the findings and recommendations of the meeting were presented and discussed by the participants, who shared their opinions on the issue.

III. ORGANIZATION OF WORK

A. VENUE AND DATE OF THE MEETING

21. The expert group on the evaluation of population census in Arab countries was held at the United Nations Office in Beirut, on 12 and 13 June 2013. Eleven regional and international experts participated in the meeting. The list of participants is set out in the annex to the present report.

B. OPENING OF THE MEETING

22. The meeting was opened by Mr. Marwan Khawajah, Head of the ESCWA Statistics Division. He welcomed the participants and stressed the aims and significance of the meeting, focusing on the importance of quality statistical data.

C. ADOPTION OF THE AGENDA

23. The agenda consisted of four sessions on the following themes: Data quality assurance and national data quality assurance frameworks; Data quality assurance in family surveys; Evaluation of population census data in some Arab countries: country presentations: Egypt, Oman and Tunisia; Evaluation of age census data in some Arab countries: systematic study.

Annex*

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