

UNITED NATIONS SECRETARIAT
Department of Economic and Social Affairs
Statistics Division

ESA/STAT/AC.104/3
12 August 2005
English only

United Nations Expert Group Meeting on the
2010 World Programme on Population and Housing Censuses
22-26 August 2005
United Nations, New York

Major Issues on Census Planning and Management
(Report of Working Group 2)*

By

TAKAMI, Akira
Statistics Bureau of Japan,
Chair of Working Group 2

* This document is being reproduced without formal editing.

Introduction

1. Among the various topics discussed in the on-line discussion forum of WG2 (including TSG2-1 and TSG2-2), some topics were categorized into the same group. In this paper, I categorize and discuss each of the following four topics:

- I Necessity and Importance of the Census
- II Alternative Approaches and the Definition of Census
- III Methodology for the Censuses
- IV Contracting Out

I Necessity and Importance of the Census

2. I propose that new paragraphs be added to the beginning of the Principles and Recommendations (P&R) for emphasizing the necessity and importance of the Census for a country and the national statistical system as well, since said importance has already been discussed and agreed upon on many past occasions, such as at the UN Symposium on the Population and Housing Censuses in New York (in Sept. 2004).

3. This point may be self-evident for statisticians, but may necessarily not be well understood by the general public. In fact, many developing countries are facing difficulties in obtaining the necessary support within the government or from the general public. To alleviate such difficulties, some clear and authoritative statements in the P&R that could be quoted by the NSOs (National Statistical Offices) (whenever necessary) would prove helpful in describing the reasons why the census is necessary and important for a country and the national statistical system. This would help improve public perception about the census in many countries to some extent, although may not fully solve the problem. The following paragraphs describe the main reasons why the Census is necessary and important .

I believe that there are four main reasons why the Population Census is necessary and important.

First of all, the results of the Population Census are used as a standard to ensure equity and fairness among citizens (e.g., by determining districts for national and local elections, distributing and allocating public funds derived from taxes and budgets among various regions). Given the close relationship between census data and public interest, it is necessary to rely on the method agreed upon by the citizens. In this sense, complete enumeration is the simplest method that is easy for anyone to understand, and one of the reasons why the counting of all the people has been supported.

Secondly, the Census is used as a benchmark or sampling frame for other sample surveys. Nowadays, most countries conduct various sample surveys by utilizing the results of the Census as a sampling frame. To use the Census as a benchmark or

sampling frame, it is also essential to count all the people, and not by using the sampling method.

Thirdly, the Census can produce results for very small geographic areas. While the results for these small areas are useful in their own right, they are most useful due to the fact that said results can be combined to apply to larger areas. These results do not restrict users to the study of relatively large areas composed of such administrative units as municipalities and local communities. Some user groups that stand to benefit include:

- Private sector businesses that undertake market analysis or promotion for specially targeted territories;
- Environmental protection agencies that study watersheds and other bio-geographic zones whose boundaries do not coincide with administrative boundaries; and
- Emergency services agencies that develop and implement plans for dealing with natural disasters such as tsunamis and bushfires.

Finally, the results of the Population Census are used not only by the national and local governments to formulate policies, but are also used by private companies as a basis on which to judge economic activities. Some examples of using the Population Census in Japan include:

- Changes in the household structure (e.g., growing number of households of elderly and single persons)
- Increases in the number of single (unmarried) persons and part-time workers
- Changes in the structure of industry and occupations (e.g. growing numbers of employees in IT-related industry and care providers for the elderly).

To satisfy the needs of various users, the Population Census should provide essential information on various socioeconomic aspects for formulating policy and conducting analysis.

For these reasons, the Population Census will remain the most fundamental statistics for counting all the people to supply essential information on the actual counting of people, various socioeconomic aspects, and small area statistics.

II Alternative Approaches and the Definition of Census

4. The ECE proposed that the Census should be defined on the basis of output rather than the methodology used. However, I believe that it is still too early to drastically change the definition of Census as proposed, even though an appropriate description regarding alternative approaches should be added to the P&R.

5. While the proposal above offers a novel way to define the Census by encompassing alternative approaches as well as the conventional census, the newly proposed definition is apparently difficult for non-statisticians to understand since they are probably not yet aware of the alternative approaches that have emerged relatively recently. Therefore, the P&R should be written in a way that is easy for statisticians as well as non-statisticians to easily understand.

6. Many countries conducted a traditional census in the 2000 round, and many will do the same in the 2010 round, although more countries are adopting new approaches. The reason why so many countries still rely on the traditional methodology is that alternative approaches are not yet feasible in such countries. For example, in Japan ,(where there is a well-developed registry system for its citizens), there are many technical, administrative, and social obstacles to be overcome for shifting to a register-based census. Given the fact that a majority of countries have conducted and will be conducting a census in the conventional way, perhaps it is better to retain the conventional definition based on methodology rather than output at least for the 2010 round.

7. Changing the definition as proposed would pose a high risk of causing misunderstanding that the alternative approaches might be introduced in any country without many problems or limitations. The proposed change of definition may create wrong impressions that the data equivalent to the conventional census might be obtained without conducting complete enumeration. Since many governments are keen to streamline their budgets, such a misunderstanding would lead to rather difficult discussions between the NSO and the budget authority. But in fact, the alternative approaches require certain conditions such as the existence of a reliable population registry, which is not necessarily available in many developing countries. Such misunderstanding may not deter the NSOs that are seriously considering the possibility of shifting to alternative approaches, but countries that have no alternative other than the conventional census would face difficulties in securing the necessary budget or winning public support for a traditional census.

8. Therefore, regarding alternative approaches in the next P&R, I propose that we should clearly distinguish the alternative approaches from the conventional census. I also propose that the definition of census not be rewritten completely, but only to revise the existing definition by supplementing it with additional explanations of the alternative approaches.

9. If the alternative approaches can produce output that is truly compatible with the conventional census, there is no problem in treating said output as being equivalent to the

conventional census results. Whether we call such alternative approaches “census” or not is a matter of preference. Still, I believe that the alternative approaches should still be distinguished from the conventional census, because the concept of the conventional census has been long established while the implications of taking “alternative censuses” are not yet fully understood. Perhaps in a decade or so, when all alternative censuses have completed their first collection cycles (so that users can fully analyze the results), it will be the time to consider rewriting the definition of census.

10. “Simultaneity” should be retained as an essential feature of the census from the standpoint of data consistency in the reference period. The requirement of “simultaneity” is ideally achieved by the simultaneous collection of data regarding a specific reference period (or time point). From this standpoint, the traditional census (i.e., simultaneous complete enumeration in a specific short period) is the most preferable and reliable methodology (although costly and not easy in terms of operation).

11. Retaining this feature poses the problem of how to treat such new alternative approaches as the “rolling sample census” or “virtual census” (linking various registers and survey data) that are not necessarily based on simultaneously collected data. From a practical standpoint, I believe that these alternative approaches need not be excluded from the concept of the census, provided that all items of data are properly estimated and processed in reference to a specific reference period (or time point). To avoid possible misunderstanding, however, such alternative censuses should be given more appropriate names such as “rolling census” or “register-based census”, thus implying “census equivalence,” but not a census in the traditional sense.

12. I would, therefore, like to propose that:

- i) the previous definition of census should be retained,
- ii) such new approaches as the rolling census and register-based census should be included in the P&R as “alternatives,” and
- iii) the description of new approaches should clearly state that said approaches are not feasible in all countries, but only in those countries that can meet various requirements, such as (in the case of the register-based census) the availability of high quality registers, compatible concepts and definitions between the registers and the census, availability of reliable estimation and linking methods, and other requirements. All requirements should be clearly stated.

13. I think it is rather difficult to describe the alternative approaches in existing Chapter II,

because the work required for the alternative approaches is quite different from that of the conventional census and also varies depending on the conditions of the countries concerned. Therefore, perhaps it is preferable to create a new section (or chapter, if necessary) that briefly describes the essence of the alternative approaches, rather than simply revise the existing paragraphs.

14. Should we create a new section (or chapter, if necessary) on the alternative approaches in the P&R, the existing chapter, "Use of Sampling in Population and Housing Censuses," should also be reconsidered to avoid confusion between this chapter and the use of sampling in alternative approaches.

III Methodology for the Censuses

III-1 Concurrent operation of the Population and Housing Censuses

15. In principle, concurrent operation should be pursued as much as possible to assure the comparability and consistency of the results. However, too many questions asked in the census would pose an excessive response burden and make it difficult to obtain accurate responses from all respondents. In such case, it would be necessary to either reduce the number of questions according to priorities or conduct a separate survey (perhaps a sample survey) for the remaining questions at a different time point. The main census should not be overburdened with too many questions.

16. For example, in the Japanese census, questions on housing are limited to basic items, and a separate sample survey on housing is conducted three years after the census to cover more detailed questions about housing. While it is preferable to collect all the information (including housing) in one census, it is also important from a practical standpoint to limit the response burden by separating more detailed questions in a different survey. Such a survey is not called a census, but a survey associated with a census. Therefore, in principle, I am in favor of maintaining the concurrent census operation, but believe it is necessary to allow for some deviation in certain cases.

17. To avoid confusion over the use of terminology in the P&R, we propose that the word "simultaneity" or "simultaneous" be used in the context of within-census activities, and that "concurrent" or "concurrently" be used to refer to cases where operating two censuses at the same time is being considered.

III-2 Different Methods of Enumeration

18. In addition to the traditional face-to-face method, several different methods, such as mailing, telephone surveys, and using the Internet, have recently been adopted. That is to say there are diverse survey methods. Thus, we propose that an effective survey method incorporating the use of other methods (along with some notes about application) should be incorporated into the P&R. In particular, we suggest that when a country adopts a mixed survey method (including the face-to-face method), measures to coordinate the collection of data over the Internet and via mail, and measures taken by the enumerators (e.g., timely feedback from the NSO to enumerators of situational information regarding the collection of questionnaires) should be incorporated into the P&R.

19. Considering the growing public awareness regarding the protection of privacy and confidentiality, we propose that the necessity for considering such issues during the phase of data collection should be incorporated into the P&R.

III-3 Use of IT

20. The use of IT in each process of the population and housing censuses provides various advantages. We propose that a description of the various uses of IT should be incorporated into each process of the censuses (Part One, II, A to I) in the P&R. At the same time, the advantages and disadvantages of using IT should also be included to help countries decide whether to use IT.

21. Examples of the tools making use of IT to be examined here include: GIS software for making maps of the enumeration districts, hand-held devices for data collection, internet, scanning devices for data capture, a user-friendly website for data dissemination, and GIS software for analyzing results.

IV Contracting Out

22. Recently, cases of contracting out some work tasks of the population census have increased. Contracting out is one means of working efficiently by using methods and technologies (not necessarily available in the public sector), and reducing costs through a competitive selection process. However, this issue is not adequately addressed in the 2000 P&R. Therefore, we propose that a proper description of contracting out be included in the next P&R. The points that I would like to propose for the next P&R as are follows:

23. As the organizations responsible for data processing of the Census, NSOs should build a system that can strictly protect the confidentiality of respondents obtained in the process of the survey, and encourage respondents to perceive that the provision for protecting confidentiality is secure. To protect confidentiality, it is desirable to restrict the number of persons involved in work dealing with confidential data. When work is contracted out, the staff of the private company entrusted can freely access the personal information of individual citizens. Although NSOs oblige said company to keep such data confidential, the greater the number of persons involved in work dealing with confidential data, the higher the risks of leaking of confidential information. Moreover, the risk of a secret breach of a contract exists and information leaks are difficult to find. Consequently, the risk of suspicion by the citizens increases, even after adequate assurances by the NSOs. Therefore, it is desirable that the NSOs process the data.

24. In practical terms, it is difficult for the NSOs in some countries to conduct all work tasks by themselves when they lack sufficient capability to handle some jobs or when cost reduction is urgently requested. In these cases, contracting out is a possible alternative. The major precondition for contracting out is strictly protecting the confidentiality of respondents and earning the trust of citizens. Moreover, the NSOs must also pursue a very careful design by considering not only effectiveness and costs, but also building their statistical capability and quality management. As for quality management, it is necessary to avoid a “black box” of the work being contracted out and carefully monitor the progress of the work. NSOs should fully realize that such management costs are apt to rise.

25. In practical terms of contracting out, the risks of leaking confidential information should be minimized. To minimize such risks, dividing the overall work project into several steps is effective. Although such division into steps may adversely affect work efficiency, I believe that the risks are smaller than in the case of comprehensive outsourcing. Therefore, I propose to contract out step-by-step, by considering the advantages and disadvantages of contracting out by dividing the overall work project into several steps. Therefore, when NSOs decide to outsource the overall work of a census, they should be very careful to ensure the confidentiality of data.

26. Among various steps, some are appropriate for contracting out, while others are not. The criterion of judgment on such propriety is based on how trust can be earned and the confidentiality of data protected. From this standpoint, typical examples of the targets of contracting out are data processing and systems development, which require special knowledge and skills. Conversely, interviewing (where respondents and enumerators meet directly) is not appropriate for contracting out, because it is closely related to the earning of trust from citizens and strictly protecting confidentiality.

27. When selecting a company to which to entrust work, NSOs should reach a careful conclusion so that respondents have a sense of security about the protection of confidentiality, and that trust in the Population Census is not lost. It is desirable to engage in fair competition among several companies to reduce costs, but a price too low may adversely affect the quality of work. Therefore, the price as well as the quality of work should be fully considered and judged for determining the successful bidder.