

Some Issues in the 2005 Population Census of Japan

by

Naoki Kurihara

Statistics Bureau, Japan

I. Introduction

1. In Japan, the Population Census is conducted in the years ending with 0 and 5, and the coming Census is to be taken as of 1 October 2005, which will be one of the first censuses in the world in the 2010 Round of Population Census. Because it is forecasted that Japan's population will reach its peak in 2006 and decline after that, the 2005 Population Census is expected to give essential information on Japan's population at a critical turning point. Nevertheless, the Census is not conducted in a favorable environment due to such factors as the tight fiscal condition of the government and the less willingness of the general public to cooperate in the Census. The Statistics Bureau will try to meet the needs of the statistical users in spite of the limited resources. This paper describes major issues of the 2005 Census and the approaches that the Statistics Bureau will be taking.

II. Major Issues of the 2005 Census

Use of Information Technology (IT) in the Census Operation

2. There are many possibilities of using IT in the Census operation, such as data collection, field management, data processing, and dissemination. In the 2005 Census, the Statistics Bureau plans to use IT mainly in field management, data processing and dissemination, but not in data collection. In many developed countries, the statistical office provides options to the respondents to submit their answers by internet. While the internet response system is an attractive option as a means of data collection, this option was not taken in the 2005 Census because there are still too many problems, such as how to achieve cost effectiveness, how to maintain security of confidential data, and how to make the system compatible with the enumerators in the field. Instead of introducing the internet response system, the Statistics Bureau will concentrate its efforts of using IT in other fields which has fewer problems.

3. One area where IT is playing an increasingly important role is the demarcation of the Enumeration Districts (EDs) in which the geographic information system (GIS) is fully applied. The GIS was used in demarcation of EDs for the first time in the 1995 Census, but the ED maps produced by GIS at the time covered only 40% of all the maps. In the 2005 Census, the share of ED maps produced by GIS will increase up to 85%.

4. New methods based on information technology are also adopted in data capture. In Japan data capture operation has been centrally done by the Statistics Center, the organization specialized in data processing. In the 2000 Census, the optical character readers (OCRs) were used for the first time in the Census of Japan, which replaced the optical mark readers (OMRs)

that used to be used until then. But in the 2000 Census, use of OCRs was limited to capturing the marks and the numerals in order to achieve a high accuracy of character recognition. In the 2005 Census, the new models of OCRs will give improvements in accuracy and speed of recognition. By using new models, a possibility of capturing the Japanese characters was tested for introducing automated coding of hand-written responses in the 2005 Census, using the final pilot survey conducted in July 2004. According to the result of the test, the accuracy of recognition was not sufficiently high, and it was concluded that automated coding of hand-written responses will not be adopted in the 2005 Census. The Statistics Bureau will continue its study of automated coding from the hand-written characters toward the 2010 Census.

Privacy Consideration in Enumeration

5. In the past Censuses, the respondents were instructed to submit the questionnaires as they were so that the enumerators could check the responses on the spot. But when a respondent want his/her questionnaire not to be seen by the enumerator, he/she was allowed to wrap and seal it with the instruction brochure. In this case, the enumerators were not allowed to check the contents of the questionnaires. In this way, a high percentage of people submitted the questionnaires without wrapping them, which ensured full and correct responses.

6. But in recent years, there are an increasing number of people who do not want their questionnaires to be seen by the enumerators for privacy reasons. In response to the increased consciousness of privacy, a new measure will be introduced in the data collection in the 2005 Census, that is, an envelop will be delivered to every household along with the questionnaire so that the respondents can submit the questionnaires by enclosing them in the envelops if they wish.

7. In the 2005 Census, the rate of item non-response is expected to increase, because the questionnaires submitted in enveloped form are likely to have more mistakes or omissions compared with those submitted without enclosed envelop. To cope with the possible increase of non-response, it is necessary to instruct the municipalities, which are responsible for the field work, to follow up rigorously the missing entries in the questionnaires. In addition, guidance to the enumerators with regard to privacy concern will be strengthened. The Statistics Bureau will review the influence of the new method on the accuracy of the results after the 2005 Census, and will consider the measures to be taken in the 2010 Census.

Complementing the Data of Non-Responses

8. Because it is likely that there will be an increase in the number of unit non-responses due to the enveloped submission, the Statistics Bureau is studying the possibility of using administrative registers as a supporting tool to complement the missing data. But using administrative registers should be considered carefully because the accuracy of the information in the registers are not yet certified, and should be allowed only in exceptional cases when respondents will not provide data.

Making Improvements in Dissemination of the Census Results

9. Today more and more people are using internet, and obtain the Census results from the web sites. In Japan, about 600,000 people access the web sites of the Statistics Bureau to obtain the Census results every month. The Statistics Bureau will make efforts to redesign the web site of the Census results to become user-friendlier by hearing the users opinions. Moreover, in order to meet the diverse needs of users, the Statistics Bureau will research a mechanism of tailor-made compilation.

III. Conclusion

10. In recent years, an increasing number of countries are adopting so-called alternative approaches such as register-based or sample-based censuses. But Japan has been conservative in adopting such new approaches. This is because the traditional enumeration method is still valid, and has many advantages in terms of coverage, accuracy, and timeliness over the alternative methods. There is certainly a possibility in the future that the traditional method will not be workable even in Japan, but until such time will come, the Statistics Bureau will keep using the conventional method as long as it remains to be effective, and will introduce gradual improvements by using information technology, alleviating the respondents unwillingness to cooperate and reducing enumerators workload.

11. The 2005 Census is to be taken in about ten months from now. The Statistics Bureau will make utmost efforts to the successful execution of the 2005 Census. The experiences from the 2005 Census will be reflected in the planning of the 2010 and future Censuses.