

## **Experiences in Conducting the 2005 Population Census and Strategies for the 2010 Census of Japan**

Statistics Bureau of Japan

### **I Experiences in Conducting the 2005 Population Census**

#### **1 Outline of the 2005 Population Census**

Japan's Population Census has been conducted every five years since 1920, and the 2005 Census was the eighteenth. The 2005 Census was administered by the Statistics Bureau of Japan in the following way:

- A. Legal basis  
The Statistics Law and the Population Census Ordinance
- B. Date of the Census  
As of zero hour of the first of October of the Census year, that is the Christian calendar year ending with zero or five.
- C. Coverage  
All the persons are enumerated that usually live in the territory of Japan (the de jour concept). Persons usually living in Japan are defined as such if they have lived or are going to live for three months or longer in Japan.
- D. Topics investigated  
The Population Census investigates 22 topics in the Christian calendar years ending with zero when a large scale Census is conducted, and 17 topics in the years ending with five when a simplified Census is conducted. The 2005 Census was a simplified one, and investigated 12 topics for the household members, and five topics for the household.
- E. Census organization  
Statistics Bureau --- Prefectures --- Municipalities --- Supervisors --- Enumerators --- Households
- F. Supervisors and enumerators  
About 90,000 Supervisors and about 830,000 enumerators were assigned to the census field work.

The supervisors supervise the enumerators and examine entries on the questionnaire forms. The enumerators are part-time employees of the central government, and are appointed as such by the Minister of Internal Affairs and Communications on the recommendation of the municipalities concerned.

G. Enumeration

The Census questionnaire forms are delivered by the enumerator to all the households residing in the Enumeration District he/she is assigned to, filled in by the households, and collected by the enumerator (self-enumeration).

H. Data processing

Data processing is performed according to the following procedures: (i) registration and storing of the questionnaire forms, (ii) data capture by OCR, (iii) coding according to the industrial and occupational classifications, (iv) data editing, (v) tabulation, and (vi) certifying the statistical tables produced.

## **2 Measures taken for and operations of the 2005 Population Census**

A. Measures taken for the 2005 Population Census

In conducting the 2005 Population Census, the following measures were taken to ensure public cooperation and hence the coverage of the Census.

a. Confidentiality of personal information

In the 2005 Population Census, taking into consideration the greater sensitivity to privacy of households, for the first time ever envelopes were distributed to every household to contain the completed questionnaire form(s) for submission to the enumerator. Moreover, at the allover enforcement of the Act on the Protection of Personal Information in April 2005, all possible efforts were made to guide persons engaged in the Census to ensure the confidentiality of information on individuals. One such measure was improvement and distribution to enumerators of the Personal Information Confidentiality Protection Manual, which details considerations for the protection of confidentiality.

b. Measures for areas where enumeration was feared to be difficult

In the 2000 Population Census, cases were reported mostly in urban areas in which enumerators found it difficult to gain access to households living in apartment buildings equipped with self-locking systems at the entrance. To address this issue, efforts were made to boost requests for cooperation in the Census to the caretakers of those apartments and to the organizations concerned, at both central and local levels.

c. Improved publicity

Especially, as it was likely that many members of the younger generation would be unaware of the Population Census, publicity aimed at younger people was intensified by producing specially-targeted posters and by employing such new media as the Internet, cellular phones and street displays.

B. Operations of the 2005 Population Census

On the whole, the 2005 Population Census was successfully conducted with no significant trouble, but the following problems were observed:

- a. An increase in cases where enumerators were not able to contact households because they were away from home.
- b. An increase in cases where households did not cooperate in completing the questionnaire.
- c. Reluctance to answer certain topics such as the Name of the Establishment for which One Works, Type of Work, Total Floor Space of Dwelling, etc.
- d. An increase in cases where households made a complaint against enforcement of the Census.

Due to the above problems, the percentage of the households that “ended up being enumerated by hearing from their neighbors” more than doubled to 4.4% from 1.7% recorded in the 2000 Population Census.\*

\* When the enumerator is not able to contact a household and cannot collect the completed questionnaire form(s) because the household members are away from home, etc., he/she is instructed to enumerate the household by “hearing”, i.e. to obtain name and sex information concerning the household members from the neighbors. At the same time, the enumerator asks such households to mail the original form(s) back to the municipal office. Households that “ended up being enumerated by hearing” are those who fail to do so within a certain period of time.

The factors underlying these problems can be identified as follows:

- a. People’s consciousness of privacy is increasing year by year.
- b. Double harness households or single households who tend to be away from home are increasing.
- c. An increase in households that live in apartment buildings equipped with self-locking systems at the entrance.
- d. It is becoming more difficult to interview households as people are cautious about endangering security.
- e. An increasing number of the younger generation do not understand the

meaning of the Census. The meaning of Census topics and people's obligation to comply with the Census are not well known, and thus understanding of the intent of the Census and the methodologies of the Census do not penetrate.

- f. The communities which used to recommend their citizens as Census enumerators have weakened, resulting in difficulty in recruiting enumerators.

### **3 Processing of the 2005 Population Census Data**

#### **A. Schedule for release of the results of the 2005 Population Census**

- Preliminary counts of the population by sex and those of the households from the Summary Sheets: December 2005
- Results of the one percent sample tabulation: June 2006
- Final counts on the population, households, and dwellings were released in October 2006.
- Statistics on employment status, distribution of persons engaged in economic activities by industry were released in January 2007.
- Statistics on employment status by occupation, type of household and so forth will be released from now on.

#### **B. Data dissemination through the Internet**

The released data are disseminated not only by publication, but also through the Internet.

#### **C. Small area statistics with geographical maps**

Small area statistics of the 2005 population census are provided in conjunction with geographical maps using GIS.

## **II Strategies for the 2010 Population Census**

Problems were reported in the 2005 Population Census as shown above. The failure to enumerate households directly may affect the accuracy not only of the results of the Census, but also of other related statistics. It is apparent that drastic measures should be taken to solve them. The Statistics Bureau of Japan set up a committee of academics and specialists on the Population Census of Japan in January 2006 to analyze the problems with the 2005 Census and their causes, and to improve the enumeration methodologies etc. for the 2010 Census. The committee made the following Report in July 2006:

## **1 Basic characteristics of the Population Census**

The Report reconfirms that the Population Census is a fundamental statistical enumeration to produce statistics on the population and households; i.e. that the results are used as basic information not only in various administrative tasks including the demarcation of electoral districts of the House of Representatives and the allocation of Local Allocation Tax, but also in research, education, business and so on; and that it provides statistical information shared by people as common property that forms the infrastructure of democracy. The Report then stated that the Population Census should be conducted as a complete field enumeration.

### **(1) Complete enumeration**

Recently, a few countries like France have developed what could be described as a rolling census, which enumerates people not all at once, but successively over a certain period of time. However, the United Nations Principles and Recommendations describe as basic features of the population census (a) individual enumeration, (b) universality within a defined territory, (c) simultaneity and (d) defined periodicity, and state that the population census needs to be conducted for all the people of the country universally and simultaneously.

Japan needs to have the Population Census conforming to these basic principles in order to secure international comparisons amidst socio-economic globalization.

Moreover, the Report reaffirms that the Population Census needs to be conducted as a complete enumeration because its results are used for the following objectives:

- a. To produce the national sampling frame for sample surveys on persons and households, and benchmark figures for ratio estimation, allowing the conduct of sample surveys efficiently and effectively, and to produce consistent estimates; and
- b. To produce statistics for smaller areas than cities, towns and villages.

### **(2) Field enumeration**

A few Northern European countries have developed a register-based population census, in which a register of residents created by integrating related administrative databases plays a vital role. These countries have the following common features:

- a. Individual administrative records have been given common identification

codes, and can be linked to each other.

- b. There exists a consensus among the public regarding the integration of administrative personal information.
- c. The population size is small.

The Report says that it may be feasible in Japan to obtain certain information from administrative information as the register of residents and other administrative databases are well organized, but that the Population Census should be conducted as a field enumeration because administrative information as a whole cannot be a substitute for data obtained from the field enumeration of the Census for the following reasons:

- a. Administrative information is limited (poor) in content.
- b. The common identification codes essential to link different types of administrative information do not exist. Linking individual records by name etc. would not bring about good results.
- c. It is considered difficult under current circumstances to obtain a national consensus regarding the integration of individual personal information.

## **2 Issues to be improved in the 2010 Population Census**

The committee proposed the improvements from A to H below taking into consideration the problems and the factors underlying them from four basic perspectives:

- a. The Census should obtain people's understanding and cooperation.
- b. The Census enumeration should be conducted smoothly.
- c. The Census work should be efficient, and the quality of the enumerators upgraded as a whole.
- d. The results should be accurate and reliable.

### < Modification of the field work >

- A The questionnaire forms should be delivered directly to households by the enumerators, in principle, unless it is very difficult to do so. In such exceptional cases, forms may be put into the mailbox, etc.

The practice of having the enumerator visit households one by one to deliver the questionnaire forms should be maintained for the following reasons:

- When the enumerator delivers the questionnaire forms, he/she checks the occupancy of dwellings and makes up a list of households residing in the enumeration district. This procedure minimizes omissions and

duplications, and hence the enumeration is conducted accurately.

- Visiting and distribution of the forms by enumerators may provide households with more of an incentive to fill in and submit the questionnaire forms.

B In principle the questionnaire forms should be collected by mail. Submission of forms by the Internet, to the enumerator in person, or to the municipal office may be permitted if the household wishes to do so. When the questionnaire forms are not submitted within a certain period of time, the enumerator should visit the households concerned to collect the questionnaire forms as a follow up enumeration.

The mail-back method has been chosen as the standard method so that the forms can be collected in such a way that the enumerator avoids seeing the households to the extent possible. This will eliminate privacy concerns and alleviates enumerators' workloads.

C Difficulties in census taking are anticipated in the following areas, for which intensive measures will be taken such as the appointment of experienced enumerators after grasping the particular conditions of those areas one year before the Census date when the enumeration districts are established:

- Areas where there are many apartment buildings equipped with self-locking systems at the entrance to which enumerator's access tends to be restricted.
- Areas where there are many one-room apartments or apartments with no caretaker. In these areas, it is difficult to know whether the rooms are really inhabited or not, or how they are used.
- Areas with a large number of foreign-born people who have difficulty in speaking Japanese.

< Protection of confidentiality of personal information and obtaining public confidence in the enumerators >

D In order to ensure to public the confidence in enumerators, penalty clauses need to be added to prevent people from pretending to be Census enumerators with the intention of obtaining personal information

< Recruitment of fewer but more qualified enumerators >

E While the total number of enumerators will be reduced by reviewing the enumeration methodologies and by improving the efficiency of the enumerators, more or better enumerators will be placed in areas where difficulties in census taking are anticipated.

One way of improving the efficiency of the enumerator's work will be to use administrative information as well as IT to draw up a preprinted List of Households and Detailed Map of the Enumeration District.

The communities which used to recommend their citizens as Census enumerators have weakened, especially in urban areas, and the enumerator's work has increased due to worsening of the so-called census and survey environment. These factors have led to difficulty in recruiting enumerators. At the same time, the associated increase in the number of Census enumerators may have lowered their quality as a whole, and caused various troubles with households. All this necessitates a review of the enumeration methodologies, an improvement in the efficiency of the census enumerator's work, and hence a reduction in the total number of enumerators.

F Promotion of efficiency of census work

- Using private call centers to deal with inquiries, complaints etc.
- Entrusting building management companies with the enumeration work for such areas as apartment buildings equipped with self-locking systems at the entrance.

< Obtaining public understanding of and cooperation in census taking >

- G It may be necessary to announce much more explicitly and intensively in publicity for the Census that people are obliged to comply with the Population Census. Moreover, violations of this obligation such as disrupting census taking should be punished strictly according to well-established criteria.

< Retaining even sensitive topics >

- H The topics investigated in the Population Census have been determined very carefully from such viewpoints as people's response burden, administrative demands, users' needs and international comparability, and must not be judged only from the viewpoint of household reluctance to respond to them. Therefore, topics such as "Name of the Establishment for which One Works", "Type of work" "Total Area of Floor Space of Dwelling" etc., to which households are likely to be reluctant to respond, should not be abolished, but maintained by developing better choices and methodologies for completion after analyzing the factors causing people's reluctance.

### **III Efforts toward Realization of the Strategies**

It will require examination by field observation and analysis by experts to realize the strategies shown in Section II. At the same time, it will be essential to seek overall consensus not only among Census related personnel, but also among the public at large regarding the new methodologies to be developed. The Statistics Bureau of Japan will launch the following three actions in order to develop better methodologies, and to consolidate organizational and legal affairs to support these methodologies.

#### **1 Planning by a Discussion Group**

Discussion Group in charge of implementing new methodologies and drafting a plan for the next census will be set up. The Discussion Group consisting of experts will design the pilot surveys, analyze their results, and discuss specific plans for the 2010 census from an expert viewpoint.

#### **2 Consultation Body**

In order to obtain public understanding of and cooperation in the Population Census, and to establish a system which will facilitate smooth and accurate census taking, it will be important to inform the public of the status of the review, and seek the overall consensus not only among Census-related personnel, but also among the public at large regarding the new methodologies.

In this context, a Consultation Body will be set up consisting of various members of the community such as local governments, users, academic societies, consumer associations, the media, and apartment managers.

#### **3 Pilot Surveys**

Several pilot surveys will be conducted to examine the following issues in the field:

- a. Effectiveness of the new Census methodologies;
- b. Development of a system at both central and local government levels to deal with the new methodologies;
- c. Alleviation of the enumerator's workload; and
- d. Extent to which the review of Census topics and the development of the new methodologies for completion of questionnaires may affect the results of the Census.

The time schedule for pilot surveys for 2010 Population Census is as follows;

July 2007	1st pilot survey
June 2008	2nd pilot survey
July 2009	Full dress test survey