

## **Lessons Learnt From the 2005 One-percent Population Survey of China and Initial Plans for 2010 Round of Census**

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### **Introduction**

China has been engaged in taking large-scale population survey (also known as mini-census) during inter-census years since mid 1980s, usually 5 years after the population census. The latest of such survey was conducted in the year 2005, covering a population of 17 million, or 1.31 percent of the total population of China. The National Bureau of Statistics of China (NBS) began real preparation of the survey in June 2004 with drafting of the survey programme. Over the past two and half years, we conducted the field enumeration, post-survey quality check, data processing and evaluation. Compilation of publication and in-depth utilization of survey results will continue as planned until 2007.

This paper aims at describing the main process of the survey, demonstrating key results, analyzing major problems encountered, and discussing initial plans for the 2010 round of population census of China.

### **I. Main Operations of the Survey**

Main operations of the survey were divided into 3 stages.

**1) Preparation** From June 2004 till October 2005, preparations were made for the survey, including drafting, testing and finalizing survey programme, securing budget ((50 million RMB from the central government and another 113 million RMB from provincial governments), conducting pilot surveys, recruiting enumerators and supervisors, developing data processing programmes, and publicity.

**2) Enumeration** Enumeration was taken between 1 and 15 November, 2005. Over

200,000 enumerators and supervisors made visits to 5.43 million households in 77,000 enumeration blocks in 61,000 rural villages and urban neighborhood committees from 21,000 townships throughout China.

**3) Data Processing and Utilization** Efforts are focused, from December 2005 till June 2007, on data processing and utilization, involving coding of questionnaires, data entry, data processing and evaluation, publication and in-depth analysis and utilization of data.

## **II. New Features of the Survey**

With the rapid economic and social development in China, environment for conducting surveys has changed significantly. New attempts were made in the survey design and in the conduct of the survey to suit the changing situation in a more market oriented society in China. More specifically, the 2005 population survey demonstrated following features:

**1) Improvement in sampling method** A two-stage sampling approach was adopted under which the National Bureau of Statistics selected the townships, and provincial offices selected villages/neighborhood committees and enumeration blocks. Replacing the old three-stage sampling scheme (where at the first stage, sample counties were selected), this new approach improved the representation of samples with better geographic distribution.

**2) Modification of definition** Definition of population to be covered in the survey has direct impact on the quality of data for the total population. Given the large number of domestic migrants, definition of population was modified to cover both “current population” and “population going elsewhere”, instead of the old definition of “permanent population”, in order to obtain a better coverage of total population.

**3) New items in the questionnaire** To reflect the status and changes in the population, new items were added in the survey questionnaire, including migration, employment and living conditions of population.

## **III. Key Results of the Survey**

Data from the survey reflect the changes of the Chinese population since the last census in 2000 with respect to total population and its age composition and geographic distribution, as well as other characteristics such as education attainment, employment, migration, marriage and fertility. The quality check conducted after the survey indicates a 1.72% net undercount of total population. Key results of the survey are presented in the annex.

## **IV. Main Problems Encountered in the Survey**

Some problems and difficulties were encountered in conducting the 2005 population

survey. In particular, following two issues are of great concern which call for consideration for future surveys and censuses.

**1) Increased difficulties in conducting the survey** Respondent refusals to cooperate in the survey took place more often than before, as people are increasingly concerned with their privacy. It has become more and more difficult to get access to respondents, particularly in newly developed urban residential quarters with more sophisticated security systems. Large number of floating population in urban areas further complicated the situation because they frequently change their temporary residence. To avoid paying social security and other management fees, owners of small household business do not want to report employees staying in the household. Families with multiple births more than the family planning policy allows tend to under-report births to escape the penalty. A new phenomenon in cities in recent years is that in selected urban blocks, many apartments are vacant as a result of temporary moving of occupants to other places in the city due to schooling or employment, making it difficult to capture such population. All these have increased the difficulties for the survey.

**2) Quality of data remained to be improved** As mentioned earlier, there is a 1.72 percent of undercount for total population, mainly contributed by the under-reporting of births and number of floating population. The estimated total population, adjusted for the undercount, is 1,306.3 million, while direct (unadjusted) estimation from the survey gives a total population of only 1,284.2million. Although this undercount rate of 1.72 percent is smaller than that in the 2000 census, the resulting gap of 22.1 million people is large enough due to the large size of total population of China. It has become somewhat a dilemma on how to distribute this uncounted population across provinces.

## **V. Discussions on Initial Plans for the 2010 Population Census**

In China, decennial census is conducted in years ending with 0, so the next census will be in the year 2010. Taking into consideration of experiences and lessons from previous censuses and large population surveys, NBS initiated following activities in 2006 with respect to the preparation for the 2010 population census.

1) Seminars in various forms were organized to discuss technical topics or new issues on basis of 2000 census and 2005 population survey, such as the increase of domestic migrants, decline in cooperation from respondents, definition of population in the new socio-economic structure, mode of enumeration, measures to improve quality of enumeration, etc.

2) Efforts have been made to follow international recommendations and experience of other countries in the census taking. NBS experts participated in two expert group meetings sponsored by the UNSD to discuss UN recommendations on 2010 round of population census, as we believe UN recommendations are of great importance to countries in outlining principles, standards and operational practices for the census taking. We also plan to translate the UN recommendations into Chinese when it is finalized to facilitate adapting them to Chinese circumstances and to be used for training purpose.

3) Study is under way on the application of new technology in taking the census. We used OCR technology for the first time for data entry in the 2000 census. Strategy for data capturing for the 2010 census will be considered in line with the development of IT and with the experience of other large-scale surveys. Another important area is the use of geographic information system (GIS) in the census. Experiments were made in the 2000 census in using GIS to manage the digitized geographic frame, and this will be expanded in the 2010 census when specific local conditions permit.

4) Expert group meetings will be organized in the coming months to solicit views of experts from other government agencies and from academic institutes on important issues for the next census, such as the selection of census items, the integration of population and housing census, the development of standards and classifications, operational considerations, application of new technology, etc. Formal user demand consultation will also begin with relevant government agencies.

Initial discussions have suggested following possible new thoughts for the 2010 census:

a) More focused objectives of the census. The 2010 census will focus on obtaining information of good quality on the total population, and on its geographic distribution and major composition. Data that could be collected through other population surveys will not be covered in the census.

b) Appropriate use of short and long forms. The plan is to make the short form really short, focusing only on basic demographic characteristics of population, while information on most economic and social characteristics (economic activity, fertility, household structure, housing, etc.) will be obtained through the long form from a sample of population.

c) Improvement in coverage of resident population, including domestic migrants, births, and possible enumeration of foreigners residing in China.

d) Adaptation of international recommendations. To the extent possible, international standards and recommendations will be integrated and adapted to the specific situation of China to allow better international comparison of census data.

e) Use of advance information technology and data collection methods (management of GIS and mapping, data capture technology, etc.).

### **Annex: Key results of the One-percent Population Survey, 2005**

| <b>Item</b>                                            | <b>Value</b>  |
|--------------------------------------------------------|---------------|
| Total population (person)                              | 1,306,280,000 |
| Crude birth rate (per thousand)                        | 12.40         |
| Crude death rate (per thousand)                        | 6.51          |
| Natural growth rate of population (per thousand)       | 5.89          |
| Net increase of population from 2000 census (person)   | 40,450,000    |
| Annual increase rate of population 2000-2005 (percent) | 0.63          |
| Proportion of population by sex (percent)              |               |
| Male                                                   | 51.53         |
| Female                                                 | 48.47         |
| Sex ratio (Female=100)                                 | 106.3         |
| Proportion of population by age group (percent)        |               |
| 0-14 years                                             | 20.27         |
| 15-59 years                                            | 68.70         |
| 60 years and over                                      | 11.03         |
| Of which: 65 years and over                            | 7.69          |
| Proportion of urban population (percent)               | 42.99         |
| Proportion of rural population (percent)               | 57.01         |
| Average size of household (person)                     |               |
| Urban                                                  | 2.97          |
| Rural                                                  | 3.27          |
| Floating population (person)                           | 147,350,000   |