For discussion on
2 December 2013

LEGISLATIVE COUNCIL PANEL ON FINANCIAL AFFAIRS

Plan for the 2016 Population By-census

Purpose

　　This paper provides an overview of and seeks Members' comments on the planned approach for conducting the 2016 Population By-census (16BC) by the Census and Statistics Department (C&SD).

Background

2.　　C&SD conducted population censuses in 10-year intervals, i.e. 1961, 1971, 1981, 1991, 2001 and 2011; and population by-censuses were conducted in the middle of the intercensal period, i.e. 1966, 1976, 1986, 1996 and 2006.　Following this practice, C&SD will conduct the next population by-census in 2016.

3.　　The aim of conducting population censuses/by-censuses is to obtain up-to-date benchmark information on the socio-economic characteristics of the population and on its geographical distribution.　They provide benchmark data for studying the direction and trend of population changes. The data are key inputs for making projections concerning population, household, labour force and employment as well as major reference for formulating various population-related policies.

4.　　Population censuses involve a complete headcount of the population, while population by-censuses enquire about the detailed characteristics of the population on the basis of a large sample.　The size and characteristics of the entire population are inferred from the sample results in accordance with statistical theories.　The sizable scale of a population by-census, as compared to other general sample household surveys, can provide statistics of high precision even for population sub-groups and small geographical areas.　Such information is vital to Government for planning and policy formulation, as well as to the private sector and academia for business and research purposes.

Consultation

5.   Planning for the 16BC is underway. Extensive consultation on various aspects of the 16BC started in mid-2013 with a view to ensuring that the 16BC will be designed and conducted in an efficient and cost-effective manner. It is an on-going process involving District Councils, relevant faculties/departments in academic institutions, prominent organisations and relevant government bureaux and departments. C&SD is studying the feedback from the various parties in detail. We will take into account the views received in planning the 16BC having regard to the usefulness of the relevant data, feasibility of their collection, impact on the efficiency and cost-effectiveness of conducting the population by-census, and other relevant constraints.

Planned Approach for the 2016 Population By-census

<u>Sampling Scheme</u>

6.   The 2011 Population Census (11C) comprised a complete enumeration of all persons on their basic characteristics such as age and sex and a sample of about one-tenth of households for their detailed characteristics. As in past population by-censuses, the 16BC will select a sample of about one-tenth of households for detailed enquiry. The design of the 16BC will basically follow that used in the detailed enquiry of the 11C so as to produce consistent results with the benchmark data of the last population census.

<u>Means of Data Collection</u>

7.   Having considered the advancement of information technology, changing lifestyle of Hong Kong people and the favourable take-up rate of the self-enumeration approach in the 11C, we plan to collect data by two phases. In the first phase, we will provide households with the option to submit e-Questionnaires via the Internet. For those households who do not respond in the first phase, enumerators will then collect the required data by conventional face-to-face interviews in the second phase. We further propose to conduct the face-to-face interviews in a paper-less mode through adopting a computer-assisted interviewing (CAI) method. Enumerators will make use of mobile devices to record the collected data instead of paper questionnaires. In addition to being more environmentally friendly, this new approach can offer more efficient and seamless support to fieldwork operations and related administrative work; and enhance the quality of

collected data by incorporating on-the-spot data validation checks to enable more timely verification and clarification with the respondents. The CAI approach has already been adopted in some economies (e.g. USA and Canada).

Data Collection Period

8. After due consideration of the various key factors (including experience of the previous rounds of population censuses/by-censuses, mode of data collection, school holidays, weather condition, project cost and workload), we plan to conduct the 16BC data collection in a 34-day period, tentatively set for the period from 30 June to 2 August 2016. The whole data collection period will be divided into two phases as explained in paragraph 7 above, namely the self-enumeration phase and the face-to-face interview phase. Exact dates will be decided upon finalisation of the population by-census plan.

Data Topics

9. C&SD reviews the population census/by-census data topics before conducting each population census/by-census to ensure that they remain relevant and meet users' needs. Consultation with users is an integral part of such review. We have conducted user consultation for the 16BC since July 2013. Some 180 policy bureaux, government departments, selected organisations/groups and relevant faculties/departments in academic institutions have been invited to rate ("Essential", "Desirable" or "Topics not Required") the usefulness of topics covered in the 11C and make suggestions on new topics.

10. Same as the past censuses/by-censuses, we have considered the following factors in deciding the topics for the 16BC:

(a) *Usefulness of data* – The data should be extensively used by Government, researchers and the public. Hence topics which are for a very special purpose will not be included;

(b) *Willingness and ability of the respondents to answer* – The topics should be of nature that respondents will be willing and able to provide adequate information. Questions which are likely to arouse fear, prejudice, or unwarranted concern as intrusion into privacy, and those which are generally too difficult for the respondents to answer accurately should be avoided;

(c)   *Ability of the enumerators to understand* – The topics should only entail questions and answers easily comprehended by an average enumerator without having undergone prolonged specialised training;

(d)   *Existence of other data source/data collection channel* – The strength of a population census/by-census lies in producing reliable statistics for small geographical areas or population sub-groups. These statistics generally cannot be tapped from other sources. To ensure efficient use of resources for such large-scale population by-census, topics for which the data can be obtained equally well or better from other sources/by other means will not be included;

(e)   *Processing efforts* – For cost efficiency and timeliness of results, answer to the questions must be amenable to data processing by simple and cost affordable procedures. Topics which call for laborious coding and editing are not favoured;

(f)   *Comparability of data with previous censuses/by-censuses* – Previous topics should be maintained as far as possible in order to study the direction and progress of changes;

(g)   *Keeping the interviewing time within reasonable length* – A population census/by-census cannot cover too many questions or questions that require detailed probing. Only relatively simple, straight-forward and fact-finding questions should be included; and

(h)   *Recommendations of the United Nations and international practices* – The recommendations of the United Nations and international standards should be followed as far as possible. For instance, data topics on geographical and internal migration characteristics (e.g. place of usual residence, duration of residence); demographic characteristics (e.g. age, sex, marital status); educational characteristics (e.g. educational attainment); and economic characteristics (e.g. occupation, industry) are recommended.

11.   During the consultation, respondents have proposed some new topics. Amongst them, some are already available/to be available in other survey vehicles (e.g. hours of work) or can be extracted from administrative records (e.g. age of building), while some are conceptually complicated and/or

sensitive (e.g. value of assets). Taking into account the latest user needs as reflected in the consultation feedback, we are now considering refining the classification of some data topics such as providing separate classifications to transgender and transsexual persons, co-habitation and same-sex relationship.

12. Having consolidated the views received so far and taking into account the factors mentioned in paragraph 10 above, a total of 41 data topics are initially proposed for the 16BC. The recommended list of data topics is at the Annex. Further desktop research and question development will be carried out with a view to extending the data coverage and enhancing data quality.

Computer Systems and Services

13. The 16BC is a large scale and complex statistical project that requires support of tailored computer system. We are conducting a feasibility study on the required computer system and web applications to ensure smooth and effective operation. The study will be completed by late 2013 / early 2014. Interim results of the feasibility study indicate that 17 out of the 18 computer sub-systems developed for the 11C can be re-used in the 16BC after enhancement, while one sub-system will have to be overhauled and one additional sub-system will have to be developed. Enhancements for the various old sub-systems will be introduced in the aspects of streamlining the distribution of workload to enumerators; supporting enumerators in using mobile technologies in the face-to-face interviews; as well as enhancing consistency check of data collected through different channels; streamlining the handling of enquiries; increasing efficiency in fieldwork support; and improving data quality.

14. It is preliminarily estimated that the information technology equipment and services for the 16BC project will incur a non-recurrent cost of some $89 million over a five-year period from 2014-15 to 2018-19. The recurrent maintenance cost beyond the project period will be absorbed by the department. The estimated cost covers provision of equipment and enhancement / development of computer sub-systems to support pre-census preparation work, by-census operation (e.g. data collection through various channels) and post-census activities (e.g. data processing, statistical analysis and data dissemination). Our plan is to seek funding approval from the Legislative Council Finance Committee in February 2014.

Advice Sought

15.   Members are invited to provide comments on the plan of the 16BC.

Financial Services and the Treasury Bureau
Census and Statistics Department
22 November 2013

Proposed data topics[1] for the 2016 Population By-census

Demographic and social characteristics
1. Year and month of birth
2. Sex[2]
3. Marital status[3]
4. Usual language
5. Ability to speak other languages/dialects
6. Nationality
7. Ethnicity
8. Place of birth

Educational characteristics
9. School attendance
10. Educational attainment (highest level attended) [4]
11. Educational attainment (highest level completed) [4]
12. Field of education
13. Place of study
14. Mode of transport to place of study

Internal migration characteristics
15. Whereabouts at reference moment
16. Duration of residence in Hong Kong
17. Place of residence 5 years ago

Economic characteristics
18. Economic activity status
19. Industry
20. Occupation
21. Whether having secondary employment
22. Earnings from main employment
23. Earnings from secondary employment
24. Other cash income (including cash income from rent)
25. Place of work
26. Mode of transport to place of work

Housing characteristics
27. Type of quarters
28. Type of accommodation
29. Occupancy of quarters
30. Number of rooms in the residence (including living / dining rooms, bedrooms, other rooms, kitchens, bathrooms / toilets)
31. No. of households in quarters
32. No. of occupants in quarters
33. Tenure of accommodation
34. Rent (including rates, government rent and management fees)
35. Mortgage payment or loan payment

Household characteristics
36. Type of household
37. Whether a member of the household
38. Relationship to other member of the household
39. Household size
40. Household composition
41. Household income

Notes: (1) Aside from the above, the 2016 Population By-census also covers data topics on the movement of all people in Hong Kong to determine whether they fall within the definition of Hong Kong Resident Population (i.e. 'Total amount of time spent in Hong Kong in the past 6 months', 'Total amount of time that will be spent in Hong Kong in the coming 6 months', 'Usual accommodation in Hong Kong at present', and 'If not usually living in Hong Kong, whether usually living in the mainland of China or in Macao; and reason for usually living outside Hong Kong').   The data topics 'Mortgage payment or loan repayment', 'Other cash income' and 'Number of rooms in the residence' include more than one data item.

(2) Refined classification to take into account transgender and transsexual persons is being considered.

(3) Refined classification to take into account "co-habitation", same-sex relationship, etc. is being considered.

(4) Refined questioning approach and classification to cover the place of obtaining the highest education attainment, whether local or non-local, is being considered.