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*Promoting Wider Use of Population and Household Statistics –
The Experience of Hong Kong*

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Abstract

With a population of about 7 million, Hong Kong is a vibrant metropolis having rapid social, economic, political and technological developments. At the same time, there has been growing and diversified demand for population and household statistics, among others, from different parties in order to keep track of the latest social changes and to devise appropriate planning strategies. This paper discusses the strategies of promoting wider use of population and household statistics to meet the increasing demands through an integrated population data system. Specifically, emphasis will be placed on engaging the public sector to balance the competing needs of statistics for policy formulation; providing more in-depth thematic studies on attention-seeking issues to address public concerns; leveraging on the strengths of technology to facilitate information delivery and collaborating with the business sector to promote more innovative use of statistics in the business context.

Introduction

Hong Kong is known for its vitality, cosmopolitan lifestyle and fast-paced way of life. As the society becomes more advanced and sophisticated, the demand for different types of population and household statistics to keep track of the latest social change is manifestly high.

2. Undoubtedly, population and household statistics are important for planning by the Government, researches by the academia and business strategies formulation by the business community. Yet, there are often different needs from different users, with some requiring very refined level of statistics while others demanding timely statistics at a broader level. As the government statistical agency of the Hong Kong Special Administrative Region Government, the Census and Statistics Department (C&SD) has to strike a balance in providing timely statistics on one hand but without sacrificing quality on the other. With a comprehensive population data system in place, the C&SD produces various quality population and household statistics depicting the current state of the Hong Kong society.

3. This paper presents the framework of the population data system in Hong Kong with emphasis on the strategies of promoting wider use of population and household statistics to meet the increasing demands from different parties in the community.

A framework of population data system in Hong Kong

4. The compilation of population estimates is supported by a comprehensive population data system. The main component of the system is population censuses which are conducted at ten-year intervals and by-censuses in between each inter-censal period which provide benchmark information on the socio-economic characteristics of the population and on its geographic distribution while also serving as the prime sources of data for small areas and population sub-groups.

5. Given the geographic proximity and increasingly close social and economic ties of Hong Kong with the mainland of China, many Hong Kong people choose to work in the mainland of China while still maintaining a regular residence in Hong Kong and utilising facilities and services in Hong Kong on a regular basis. In view of the increasing mobility of Hong Kong people in the past decade, the “resident population” approach has been adopted since 2000 to define the population so as to better represent the situation. The “Hong Kong Resident Population” comprises “Usual Residents” and “Mobile Residents”. “Usual Residents” includes two categories of people: (i) Hong Kong Permanent Residents

who have stayed in Hong Kong for at least three months during the six months before or for at least three months during the six months after the reference time-point, regardless of whether they are in Hong Kong or not at the reference time-point; and (ii) Hong Kong Non-permanent Residents who are in Hong Kong at the reference time-point.

6. As for “Mobile Residents”, they are Hong Kong Permanent Residents who have stayed in Hong Kong for at least one month but less than three months during the six months before or for at least one month but less than three months during the six months after the reference time-point, regardless of whether they are in Hong Kong or not at the reference time-point. The amount of time staying in Hong Kong for “Mobile Residents” is less than that for “Usual Residents”. Nevertheless, Mobile Residents have a close link with Hong Kong and most probably they have a regular residence in Hong Kong and utilise much of Hong Kong’s facilities and services. In this regard, they should be considered as part of the Hong Kong Population. Mobile Residents constitute about 3% of the total population of Hong Kong.

7. Apart from population censuses and by-censuses, the population data system also covers statistical data generated from administrative systems such as births, deaths and passenger movement records. Territory-wide mid-year and end-year population estimates are derived by updating the population census/by-census results with data from administrative records on births, deaths and movements. These population estimates are rolled forward using the component method, on a half-yearly basis, until the next population census/by-census.

8. Hong Kong benefits from having a vast reservoir of administrative data to facilitate the compilation of demographic and vital statistics. Since every birth, death and marriage need to be registered with the Immigration Department, the related data provide a ready source of information essential to the compilation and analysis of vital statistics for understanding the underlying social phenomenon. Moreover, records of passengers crossing the boundary provide crucial data for estimating the current size of the population and studying the mobility of the population. The arrival and departure records for each Hong Kong Permanent Resident are linked in anonymised form using a unique identifier. The duration of stay in Hong Kong is calculated for each Hong Kong Permanent Resident

registered in the system. The number of Mobile Residents and the net flow of Usual Residents among Hong Kong Permanent Residents are then compiled from this rich source of movement records. On average each month there are some 13 million passenger movement records.

9. Sample household surveys of smaller scale are also conducted continuously. Unemployment rate and other labour force data are collected from the General Household Survey and released on a monthly basis. Apart from these, the General Household Survey also serves as an importance source of data on various demographic, social and economic characteristics of the population. Various ad hoc surveys on social topics (e.g. IT usage and penetration, pattern of using health supplement, pattern of smoking) are also conducted to provide useful statistics for policy formulation.

10. Integration of household survey data and administrative data can achieve internal and external consistency as well as providing a more accurate and reliable estimate. For example, the data collected from the General Household Survey are calibrated using the population estimates as the control total based on ratio estimation instead of using the design based weights.

11. In combination, the population data system in Hong Kong is complex and requires data from a wide variety of sources. With the availability of more administrative data in recent years and coupled with the vigorous use of statistical techniques, the quality and timeliness of population and household statistics have been further enhanced. The population data system has thus become an important statistical infrastructure underpinning the formulation of population policy. The data are also important to the private sector for devising business strategies and to researchers for carrying out social and economic studies.

Promoting wider use of population and household statistics

13. Population and household statistics are playing an increasingly significant role in many of our endeavours. They are commonly used in public debate on many community affairs. The C&SD has been making continuous effort in promoting the use of statistics in the community in a targeted manner. Some examples illustrating the strategy adopted by C&SD to promote wider use of

population and household statistics so as to address the specific needs of different groups of users are elaborated in the ensuing paragraphs.

More thematic studies on topics of public interest

14. Undoubtedly, the datasets available from social surveys in particular those from the Population Censuses/By-censuses are very rich and they can be applied to various studies on topic of public interest. Comparing to the “survey” specific analysis report, in-depth thematic studies on specific social topics of interest can provide better information to the society. Every year, the C&SD releases a report on gender statistics to give an overview about the situation of women and men from statistical perspective. The C&SD also renders support to the compilation of the annual poverty indicators by the government. Besides, the C&SD publishes a series of thematic reports on various population subgroups including the youth, the elderly, ethnic minorities, single parents and new arrivals from the mainland of China based on the results of each round of Population Census and By-census.

15. With the significant changes in the social and economic structure of Hong Kong in recent years, there was much discussion in the community in early 2007 on the issue of income dispersion. As the study of income distribution, and in particular, the assessment of the income re-distribution effect through taxation and social benefits is conceptually complicated and statistically demanding, the C&SD adopted a two-pronged approach to address this important and sensitive subject. On one hand, the C&SD conducted an in-depth study by referencing to relevant literature and the practices of other economies having conducted similar studies before coming up with an appropriate statistical framework. On the other hand, the views of academia were consulted and suitably incorporated in the statistical framework. Through all these ground work and buying in the views of major stakeholders, a thematic report providing comprehensive analysis of household income and covering a compendium of statistics with reference to data from Population Censuses and By-censuses conducted between 1996 and 2006 was released in mid-2007. The report has attracted much public attention and received a lot of positive feedback in respect of its methodological soundness and analytical richness.

Leverage on strengths of the Internet

16. With the advent of information and communication technologies, the Internet has already become a convenient and efficient channel for information delivery. The C&SD has implemented a free download policy since June 2006, under which statistics users can download C&SD publications and detailed statistical tables free of charge via the C&SD Website. The implementation of the free download policy represents an important milestone of the department in data dissemination, contributing to the promotion of statistical literacy and informed decision making in the community. The result of the initiative has been encouraging. The number of downloads of publications and statistical tables increased drastically from a few hundreds per month before the policy to currently at more than 60 000 downloads per month.

17. Managing the variety of data users and their different needs and preferences for data and statistical service is yet another challenge in e-service delivery. Nowadays, in the statistical community, there have been increasing calls for a more dynamic mode of data dissemination. It is therefore an international trend for central statistical offices to implement dynamic data retrieval systems on the Internet rather than to make available statistical information only in a static manner.

18. Instead of a “one design for all” website, the C&SD has set up dedicated corners for specific user groups with customised contents towards the needs of users (such as students, traders, media workers and survey respondents). For instance, a thematic website encompassing various products of the 2006 Population By-census (06BC) can be easily accessed by data users at their fingertips.

19. To cope with the demand from data users and better align with the latest international trends in data dissemination, two new interactive applications have also been launched in disseminating the 06BC results. One of them is the “Statistics on Map” dashboards launched on the C&SD website in February 2008. It offers users a better visualisation through presenting the statistical data in a vivid manner. The other application is the flagship project known as Interactive Data

Dissemination Service (IDDS) which was officially launched on the C&SD website in August 2008.

20. The IDDS enables data users to build statistical tables, charts and maps to their own specific requirements through a simple and user friendly step-by-step process, based on the 06BC detailed macro-data files. Compared to the more traditional method of selecting and viewing from a list of static statistical tables, graphs and maps, the IDDS allows more sophisticated data users to specify statistical and classification variables to build their own tables. Besides offering a tabular view of the data, the IDDS provides integrated data visualisation tools such as charting and thematic map presentation. The IDDS greatly enhances the electronic data dissemination service of C&SD and brings about significant benefits to data users. More importantly, like the statistical reports published by the C&SD and other statistics presented in the C&SD website, the IDDS service (including all the statistical tables which users may generate from it) is also free of charge. Further increase of access to the C&SD website for statistics through the IDDS is expected. This is conducive to the promotion of greater use of official statistics for informed decision making by the public.

Public sector engagement

21. In the public policy arena, population and household statistics furnish essential statistical information for government administrators in formulating and administering government policies in various areas such as education, housing, transport, health and social welfare services. Because of the scope of policies and thus coverage of the population to be affected, data requirements from these government internal users are diversified and sometimes they are competing to each other. For example, attracted by the well developed local medical and education systems, a fast increasing number of parents who are Chinese nationals but not Hong Kong residents have chosen to give births to their babies in Hong Kong in recent years. While some of these babies born locally may stay in Hong Kong, some are projected to be brought back to the Mainland for living and back to Hong Kong later at older ages. Whether these babies will stay or return later will have substantial implications on various policy areas including education, housing, social welfare and territory-wide manpower planning. This gives rise to

new data requirements in understanding their parents' intention as well as tracking the movements of these babies.

22. To address and balance the competing needs of different government policy bureaux for population data, the C&SD has set up an Inter-department Coordinating Committee on Population and Related Statistics (ICC) in early 2007. The ICC is chaired by the Commissioner for Census and Statistics himself, with senior officials from different policy bureaux and departments as members. On one hand, being a channel for users to express their data requirements, the ICC aims at coordinating user demands and sharing data collection efforts. On the other hand, with greater user involvement in the process, the ICC also increases data ownership among these prominent users and promotes proper usage through better understanding. The ICC is proved to be an effective forum for putting heads together to steer, prioritise and synergise the development of relevant population statistics to meet the dynamic and diversifying data needs

Partnership with business

23. The market works best naturally when people are well-informed. Reliable and timely statistics are crucial to the business sector in making investment decision and exploring new business opportunities. The C&SD has adopted a multi-pronged approach in data dissemination to make users' access to official statistics as easy as possible. Re-disseminating official statistics through business partnership with the business community is another strategic move to promote the wider use of statistics in the community.

24. With better understanding of the data needs in the private sector, the business community can cultivate many innovative ideas on the use of official statistics. As the business organisations do not need to go through government rules and standards, they have greater freedom and more flexibility in product development. Leveraged on the strengths of the others, business partnership in data re-dissemination not only overcomes the resource constraint problem but also enriches the client base through the business network maintained by data agencies.

25. Over the past few years, the C&SD has entered into agreement with several international and local business organisations. There are many successful

data applications in respect of population and household statistics. A more notable application in the area of GIS application on census data was the collaboration with a commercial firm (Centamap) where statistics from population census/by-census compiled at building group and large street block group levels were disseminated freely to the public (<http://www.centamap.com>). Deploying the census data, another marketing firm (MOSAIC) uses advanced cluster analysis techniques to classify local neighbourhoods into different consumer segments such as “upper echelons” (wealthy families with an upscale privileged lifestyle), “emerging middle class” (stable and educated families of moderate affluence), “grass roots living” (average families in affordable public blocks), “grey perspectives” (modest seniors and retirees in very old public blocks and communities). Besides, small area statistics are disseminated on the website of an online business directory (Yellow Page) through a partnership.

Assistance to researches of external parties

26. The C&SD also renders professional assistance to researches conducted by the academic community or external parties. They can acquire statistics more detailed than those contained in standard tabulations unless the level of analysis is considered not permissible having regard to considerations of statistical precision and data confidentiality. These tailor-made tables are commonly required by academics, non-government organisations and social groups for different types of social studies (e.g. analysis on low income households). For in-depth academic studies, researchers can approach the C&SD to apply for access to the sample datasets of the Population Census/By-censuses. All records in the sample datasets have been thoroughly screened to ensure that particulars of individual households and persons cannot be identified. Specifically, all record identifiers (such as name and address of individual respondents) have been removed and other information has been suitably coded. In case researchers wish to have access to the full dataset of the Population Census/By-censuses, they can apply for self-help tabulation service at the premises of C&SD or they can provide the computer programmes they have developed and request C&SD to apply them to the full dataset of the Population Census/By-Censuses.

Concluding remarks

27. With the enhanced statistical literacy of the general population and the increased ease in gaining access to the census data, the society has become more knowledgeable in using statistics generally. User groups will become more varied and make more frequent reference to available population and household data. All these actions would echo and interact, propelling the level of data utilisation to higher heights.

28. On the tactical front, to stay ahead of the game, the C&SD adopts a multi-channel strategy for information delivery. Through partnership and collaboration with major data users like government policy bureaux and departments as well as the business and academic community, leverage on the strengths of others can be achieved. The C&SD also creates an enabling environment to promote proper use of statistics through the inter-governmental communication mechanism (e.g. ICC) and the provision of micro-data to facilitate academic researches.

29. On the methodological front, the C&SD will explore more advanced techniques to further integrate/reconcile the population and household survey statistical systems with a view to enhancing the usability of the statistics in terms of breadth and depth.

30. On the technical front, the C&SD will continue to explore new ICT opportunities that are “user centric, business driven and ICT enabled”. In the coming years, we will continue to pursue the business transformation that could facilitate deeper insight to the data and inspire innovative usages.