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Non-statistical use of census enumeration ^{*}

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INTRODUCTION

1. Census enumeration is arguably the most critical part of all census related operations and procedures. It consists of the collection of information from all individuals in a relatively short period of time and is conducted within the strict requirement of simultaneity and universality. As complex as it is, census enumeration usually requires a small army of trained individuals to succeed and is invariably the most labor-intensive phase of the population and housing census. Are there any circumstances that would justify using census enumeration for other, non-statistical and non-census purposes? The debate appears to be of particular importance as many countries are pulling out of the turmoil of civil wars and natural catastrophes and face the critical need for many contents, such as the statistical profile of a country and its population phenomena, voters' lists, and personal identification papers, to name a few. Should a census enumeration be combined with another government operation that would provide for more than one of these needs?

I. Census enumeration

2. Population census enumeration refers to the collection of information on each individual in regard to their characteristics; to households they are part of and to living conditions. The importance of accurate, timely and orderly enumeration for the success of the census cannot be overemphasized as enumeration errors can only be corrected with extreme efforts and at huge costs.

3. Censuses in the world at this moment apply three general concepts for enumeration. The interviewer or canvasser concept consists of door-to-door visiting of each household and filling in the questionnaire with the replies from individuals, usually one person in the household that is designated as reference person. Such enumeration can last one day in some countries, or up to several weeks in others, depending on many circumstances (size of the country, geographical profile, number of available enumerators, to name a few).

4. The second concept that is used in national census practices refers to the self-enumeration by the householder. In this method, the information about the housing unit and the members of the household are recorded on the questionnaire by one or more members of the household. The questionnaires, along with the instructions, are distributed to every household in advance of the census date and received back after the completion. A variation of this concept is the mail-out/mail-back system, whereby the census office mails the forms to all households with a reply envelope. A person in the household is requested to fill in the replies to questions and to mail back the filled questionnaires.

5. The third concept that is increasingly being applied relies on population registers for capturing data requested by the census. Census-like tabulations are generated in several countries from the existing registers; in other countries they are accompanied by a set of surveys that complement the information extracted from the population registers.

6. Within each of these three concepts, censuses in the world are developing various methods in an attempt to increase the quality of enumeration. Enumeration via the Internet, a

variation of the self-enumeration concept, is applied or planned to be applied in national censuses. Similarly, Computer Assisted Telephone Interview (CATI), a variation of the canvasser concept, is used for enumeration and there are a number of other methods of census enumeration being developed and not specifically mentioned here.

7. These three concepts and their methods are not mutually necessarily exclusive and, in fact, quite a few national censuses combine two or more variations of these concepts^{1,2}.

8. Concerns regarding the non-statistical use of census enumeration apply irrespective of the methods used. For the purpose of this paper, by “census enumeration” we refer to the interviewer concept as described above.

II. Census integrity, protecting privacy and confidentiality

9. The population and housing census is a cornerstone of each national statistical system, providing the necessary framework for a number of other statistical data collection exercises. Its importance makes it imperative that it does not fail. Since the quality of data and, consequently, the quality of the census, depend primarily on the cooperation from the enumerated population, issues of trust and integrity take center stage. In that context, concerns in regard to privacy and confidentiality apply to all the phases of the population and housing census.

10. Privacy can be interpreted in many different ways, and essentially, it refers to the interest of individuals in protecting their own ‘personal space’. Privacy is meant to shield an individual’s body, behavior (such as political and religious practices), communication (monitoring-free communication), and data. Privacy of personal data involves the relationship between the individual providing data and data collectors, and the responsibility of both parts.

11. Privacy is also often regarded as one of the most basic human rights, since without privacy, the rights of free speech and assembly would be almost impossible to exercise. In the context, Article 12 of the Universal Declaration of Human Rights reads:

“No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honor and reputation. Everyone has the right to the protection of the law against such interference or attacks”.³

¹ For example, key demographic data on the size, growth and structure of the total population in Singapore’s 2000 Census of Population were obtained from Singapore Department of Statistics’s Household Registration Database, which captures basic individual information such as sex, age, ethnic group, country of birth and type of house. Then, for the 20 per cent sample enumeration, a tri-modal enumeration was adopted, comprised of enumeration via Internet, Computer Assisted Telephone Interviewing (CATI) and face-to-face interviews. For more details, see *Census of Population 2000 Statistical Release 1: Demographic Characteristics*, Singapore Department of Statistics, Singapore, 2001.

² In any case, a number of steps has to precede the enumeration itself, such as the determination and mapping of enumeration areas, determination of content of the census and the design of the questionnaire, consulting with stakeholders and conducting pretests and pilots; depending on the approach to the census, there may be another set of phases before the actual enumeration, not elaborated here in details.

³ *Universal Declaration of Human Rights*, adopted and proclaimed by the United Nations General Assembly resolution 217 A (III) of 10 December 1948, as presented on the web: <http://www.un.org/Overview/rights.html>.

12. In the context of the population and housing census the need for privacy becomes crucial, since it has direct consequences in regard to the success or failure of the census. Indeed, if the respondents are not completely convinced that their privacy will not be compromised and intruded, they might not want to cooperate with the census takers. This, despite national practices that institute quite harsh punishments for non-cooperation with the census. For example, in the United States, the penalty for not replying to the census is \$100.00, and the fine can be as high as \$500.00 for providing false information⁴. In Turkey, the Government declares a complete curfew on the day of the Census and all persons must remain in their homes and wait for the enumerator to provide correct information, under threat of jail⁵.

13. To ensure the cooperation of individuals, therefore, the securing of the privacy is of paramount interest to census takers. As important as securing the privacy of individuals is the perception of the level of intrusion into individuals' privacy. Indeed, many national statistical and census agencies are realizing that research in public perceptions is necessary in order to increase the accuracy and relevancy of data⁶. In an environment where personal data are asked of individuals on a daily basis and on the ever-growing range of topics, whether they are related to issuing credit cards or ensuring medical benefits, or purchasing on the Internet, or traveling, applying for a job, and so forth, combined with the power of modern computers, it is not surprising that the perception of vulnerability of privacy in the public is very strong. The complexity of the census questionnaire, the simultaneity of requested replies and the number and the nature of questions in it are bound to raise further suspicion of the already possibly skeptical public.

14. When it comes to privacy, census authorities must assure respondents that their individual data will never be disseminated in any shape or form, and also the preparations should include a broad and constant campaign that will underline why these specific items of information in the census questionnaires are needed and how they will be used. Failure to achieve a sense of complete and guaranteed respect for individuals' privacy will probably result in poor census response rates, civil disobedience and, ultimately, might force the introduction of alternatives to censuses. The case in point is Germany, where the combination of registers and administrative records had to be developed to replace census data after the Population and Housing Census 1987 failed to meet the expectation and was widely boycotted by respondents suspicious about privacy issues⁷.

⁴ For details, see U.S. Code 13, § 221(a) and 221(b).

⁵ The 2000 Census has been completed in one day by declaring a national curfew on 22 October 2000, between the hours of 8:00 and 17:00. Only the members of the Census Committees and the census bureau staff, enumerators, supervisors and transportation, health, security workers, staff of other organizations and the staff of of private sector which had to provide public service were allowed on the streets. For more details see *Documentation of the 2000 Round of Population and Housing Censuses in the EU, EFTA and Candidate Countries*, Laboratory of Demographic and Social Analysis, Department of Planning and Regional Development, University of Thessaly, Greece, May 2003, as available on the web at: <http://www.european-census.com>.

⁶ *A holistic approach to confidentiality assurance in statistical data*, paper submitted by U.S. Bureau of Census, prepared by Gerald W. Gates, Joint ECE/Eurostat Work Session on Statistical Data Confidentiality, Skopje, The former Yugoslav Republic of Macedonia, 14-16 March 2001, as presented on the web: <http://www.unece.org/stats/documents/2001.03.confidentiality.htm>

⁷ *Testing a register-based Census*, by Dieter Bierau, Federal Statistical Office, Germany, November 2000, as presented on the web: http://www.insee.fr/en/av_service/colloques/pdf/bierau-r.pdf

15. Confidentiality in the census is as crucial as assuring that the privacy of the respondent will not be intruded into, and is all about the trust that the respondents have in the census-taking agency and, ultimately, the government. Nowadays, more than ever, the government is by far the biggest data collector and custodian, starting from issuing birth certificates and death certificates, and so many other actions in between (marriage certificates, identity cards, passports, tax returns, diplomas, medical papers, to name just a few). Only when the public at large is convinced that mechanisms put in place by the collecting agency to ensure the confidentiality of data at all levels (individual census questionnaires, tabulations and so forth) are robust, dependable and functional will the success of the census be attainable. In essence, confidentiality hinges on who can see the identifiable information and it must be of primary concern in designing dissemination products⁸.

16. Confidentiality, though, means different things to different audiences. For some, it means that the information provided by the respondent will never be taken advantage of, either by putting the information on the market or having it exchanged. For other, the biggest concern is that census data will be never used against them. In short, voluntary cooperation of the respondent works only as long as the respondent continues to believe that the data collector is reputable and there is no evidence to the contrary⁹.

17. If the census-taking agency is seen as just another part of the government that already collects and stores so many data on individuals, the perception of threats to confidentiality is bound to increase. The census has to make clear that the only reason to collect individual data is the production of statistics and that there would not be any dissemination of individual information or any linkage with existing records in other government databases and data collections.

18. Privacy and confidentiality are closely related and jeopardizing either of the two can have adverse effects on the quality of the census. Yet, there are differences: intrusion of privacy or perceived intrusion of privacy usually results in respondent's unwillingness to participate and this is more of an issue in the phase of data collection; even when respondents do not perceive the data collection as being overly intrusive on their privacy, they might have concerns about confidentiality of their personal data, and specifically about their possible dissemination. While they are distinct, there is a strong correlation between the two: the bigger the perception of invasion of privacy, the bigger the concern about confidentiality and dissemination.

19. National census practices devised sets of procedures to ensure respondents that the protection of privacy and confidentiality is taken into account in all the phases of data collection, including enumeration, data processing and dissemination. When it comes to census enumeration, these procedures refer to the provision that all the enumerators have to sign an oath that prevents releasing or commenting on individual information, and they must wear visible

⁸ *Principles and Recommendations for Population and Housing Census – Revision I*, United Nations Publication No. E.98.XVII.8, New York, 1998 (para 1-254).

⁹ *A holistic approach to confidentiality assurance in statistical data*, paper submitted by U.S. Bureau of Census, prepared by Gerald W. Gates, Joint ECE/Eurostat Work Session on Statistical Data Confidentiality, Skopje, The former Yugoslav Republic of Macedonia, 14-16 March 2001, as presented on the web: <http://www.unece.org/stats/documents/2001.03.confidentiality.htm>.

identification while enumerating that proves their official status. Almost without exception the breach of this rule by the enumerators is classified as criminal offence and is punishable by prison and/or fine. Also, some national censuses introduced a special reply envelope; if, after the census questionnaire has been filled by the enumerator, the reference person or any other person in the household expresses concerns in regard to the fact that the enumerator can have unrestricted and unsupervised access to the individual questionnaire once he/she leaves the household premises, they can request that the questionnaire is placed in a special envelope, sealed and mailed to the census district office, rather than collected by the enumerator.

20. Concerns regarding the integrity of official statistics are formulated in a set of Fundamental Principles of Official Statistics¹⁰ adopted by the United Nations Statistical Commission in 1994 and all of the procedures discussed above have a firm support in the Principles. More specifically, Principle 2. states: “To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistical data”, thus clearly providing statistically acceptable concepts in regard to data collection, including the census enumeration.

21. Even more specific in the requirements for purely statistical use of individual data collected by statistical operations and in protecting the confidentiality of the data, Principle 6. states: “Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.” The elaboration of this principle and its interpretation resulted in adopting special protocols and similar legal frameworks for regulating the manipulation of individual records in a number of national practices, in the phases of data collection, as well as in the phases of data dissemination.

III. Points for consideration

22. The determination and efforts of official statistics to preserve the integrity of census enumeration may be compromised by combining it with any other non-statistical operation. Yet, in some countries the issue of combining census enumeration with non-statistical, administrative operations under the justification of similarity of approaches and efficient use of resources is on-going.

23. This refers primarily to the enumeration activities of the census being used for registration of voters in countries emerging from long period of difficult circumstances, under the rationale that such a country-wide operation often supported by the international community should be taken advantage of for non-statistical purposes as well. The use of census enumeration for non-statistical purposes refers also to its use for establishing population registers under the auspices of various ministries that peruse them for different administrative purposes.

24. Countries that are exploring the applicability of different approaches to census enumeration, as well as those emerging from long periods of difficult circumstances, typically

¹⁰ *Report on the Special Session of the United Nations Statistical Commission*, E/29/1994 and also available on the web at: <http://unstats.un.org/unsd/goodprac/bpabout.asp>.

face a number of simultaneous challenges: organizing and holding elections on tight schedules, registering population for services, and providing numerical background for the decision-making process by building their statistical capacities, to name a few. However, the building blocks of the system to meet these challenges are not necessarily available, for example, a functioning civil registration system, a functioning system for identity cards, recent census data and strong and developed national statistical service, prompting the consideration of a combination of methods that would achieve more than one goal at the time.

25. Thus, this is an area of concern where a review of country practices and preparation of a set of principles and recommendations to guide national statistical services in their approach to such requests by other ministries and groups may be necessary.