

Problems and Issues Population and Housing Censuses in Sri Lanka

By

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Introduction

The United Nations in its principles and recommendations for the 2000 round of Population Census defines the Population Census as the total process of collecting, compiling, evaluating, analyzing and publishing demographic, economic and social data pertaining, at a specified time, in a country or in a well delimited part of a country. A modern census is a complex operation compared to earlier censuses which were directed towards collecting data to meet a specific need. The Census Ordinance of Sri Lanka defines the purpose of a census as being “to ascertaining the social, civil or economic conditions of the inhabitants”.

Sri Lanka has a long history of census taking. The first scientific census has been conducted in 1871. Since then censuses have been conducted, once in ten years with certain exceptions. The last census was conducted in 17th of July 2001 and it is the 13th of the series. In Sri Lanka censuses, the method of enumeration has traditionally been “de facto” basis i.e. persons were enumerated at the place they were actually found on the census night.

Census of Population and Housing 2001

The 2001 census has special significance as it was the first census to be taken in the new millennium after a lapse of 20 years from previous census, which is the largest time gap recorded for an intercensal period in the history of censuses in Sri Lanka. The 2001 census enumeration was able to carry out completely in 18 out of 25 districts due to the disturbed conditions in Northern and Eastern provinces of Sri Lanka.

Census Questionnaire

In 2001 census, only two types of schedules were used. The **Population and Housing Schedule** and **Disabled Schedule**. In 2001, information on migration, fertility and housing were collected on a complete enumeration basis, whereas these were collected from a sample of census blocks in 1981 and 1971 censuses.

I Population and Housing Schedule: This schedule was used to collect 24 items from individuals pertaining to demographic and economic characteristics

- General information (name, relationship, sex, date of birth, religion and ethnicity)

- Migration patterns (district of birth, district of usual residence, duration of residence and district of previous residence)
- Educational characteristics (education during last 30 days, educational attainment and literacy)
- Economic characteristics (type of activity, occupation, industry, employment sector & status and non economic activities)
- Nuptiality and Fertility (marital status, total live births, number of living children and date of birth of last live birth)

In addition 9 items on housing characteristics (occupancy status, number of households in the unit, number of occupants in the unit, construction material of wall, floor, roof, type of structure, year of construction, unit usage, availability of rooms, number of rooms) and 7 items of household information pertaining to each and every household were collected. (number of occupants in the household, availability of toilet, type of toilet, source of drinking water, type of lighting, type of cooking fuel, tenure)

II Disabled Schedule: This schedule was used to collect information pertaining to 6 types of disabilities (seeing, hearing/speaking, disabilities in hands, disabilities in legs, other physical disabilities and mental disabilities).

Training

The training of census staff was a three tiered programs. In the first tier, the Master Trainers were trained. They were the senior officers of the department in the ranks from Statisticians and Deputy Directors. The second tier was the training of trainers by the Master Trainers. The trainers were the Statistical Officers of the department who were entrusted with the task of training all supervisors and enumerators. The third tier was the training of supervisors and about 110,000 strong army of enumerators.

Conducting the Census

The census was carried out in 4 stages,

- 1) Mapping Operation (From January to December 2000)
- 2) Listing Operation (From February and March 2001)
- 3) Preliminary Census (From 25th June to 5th July 2001)
- 4) The Final Census (17th July 2001, 6.00 p.m. to 12.00 mid night)

Mapping and Listing Operations

Grama Niladhari (GN) divisions are the lowest administrative units in the country. To avoid omissions or duplications of building unit or any individuals, GN division maps were drawn with clear identifiable boundaries. As the GN divisions are too large to handle in a census operation they were subdivided into smaller area units called the 'census blocks'. A census block will comprise of around 60 houses units and/or other building units in the rural sector and around 80 housing units and/or other

building units in the urban sector. The census block boundaries are also marked on the GN division maps in the mapping operation.

Based on the maps prepared, building unit or a part of a building unit is identified as one of the following categories.

- (i) Housing unit
- (ii) Collective living quarter
- (iii) Institution
- (iv) Non housing unit

All housing units, collective living quarters, institutions and non-housing units were listed in a convenient and suitable order during this listing operation.

Enumeration Procedure

In the stage of preliminary census, the enumerators were collected information pertaining to every individual who usually live in the household and housing information using a **Population and Housing Schedule** for each housing unit and collective living quarter.

On the final census night of 17th July 2001, between 6.00 p.m. and 12 mid night the enumerators visited all units and verified the entries made in the census schedules filled in during the preliminary census. Special arrangements were made to enumerate people staying outdoors on the final census night.

Data Processing

Data processing consisted of two major phases. (1) Manual editing and coding, and (2) Computer processing. Manual editing was confined to the following simple checks.

- (i) Ensuring that area identification codes were inserted correctly
- (ii) Ensuring that pre-coded question of basis of enumeration were coded
- (iii) Ensuring that date of birth was recorded
- (iv) Ensuring that district of birth, district of usual residence and district of previous residence have been coded

Coding was required only in respect of three questions, namely educational attainment, occupation and industry. A series of edit checks were carried out on the computer and records containing errors were printed out for manual corrections. Finally limited number of imputations was done for the error free data file before the tabulating the data. Processing was done on IBM S390 integrated server 3006 model B01 and several personal computers. Key to disk data entry was used for data capture. The software Integrated Micro Computer Processing System (IMPS) developed by U.S. Bureau of Census was used to data processing activities including data entry.

Dissemination of Census Data

Printed publications continued to be the main media of dissemination of census results. List of publications released so far,

- (a) Within a week after the taking of the census on 17th July 2001, the total population (provisional) enumerated at the census by districts.
- (b) The first preliminary report which was entitled “**Population by sex, age, religion, ethnicity according to the district and D.S. division (Provisional)**” was released in October 2001
- (c) Another preliminary report on “**Information on Building units by district and D.S. division**” was released in January 2002.
- (d) “**Information on Disability Population**”. This report was released in January 2003.
- (e) **Results on Sample Tabulations.** As the release of final information is a time consuming process, questionnaires pertaining to 5 percent sample of census blocks were processed in order to meet the urgent data requirements. Reports at the district level were published giving basic population and housing information at the end of 2002.

Preliminary census results down to the level of DS division were also released in the form of Geographic Information System (GIS) and all the results released so far were included in the departmental web-site (www.statistics.gov.lk).

“**GN Level Data (Population and Housing)**” for 18 districts; CD was released in early 2004 based on supervisors summaries.

- (f) **Final Reports.** As end of October 2004, 11 district reports based on 100 percent tabulation covering all census topics were prepared to publish. CD’s are also being prepared for each district giving all information contained in the final reports as well as the information at Grama Niladhari division level.

Problems and Issues

- **Enumeration Procedure “de facto” or “de jure”**

Population had been enumerated on a ‘de facto’ basis, i.e. persons are enumerated whether they happened to be at the place of final count of the census, irrespective of whether the place is their usual residence or not. In this process;

- More difficult to carry out out-door enumeration. i.e. persons who are on the move on the final census night.

- Moreover, the tabulation, too show the population according to the place of enumeration, and not by place of usual residence.

It is necessary to reconsider the method of enumeration in the next census.

- **Manual coding and editing**

Currently manual editing and coding in carried out centrally and it is very time consuming process. This procedure involves;

- Checking ID codes
- Basic consistency checks
- Coding of educational attainment
- Coding of occupation and industry classification

In order to expedite the manual editing and coding activities it is important to consider;

- Decentralization of manual editing and coding
- To use computer assisted coding (CAC) for occupation and industry.

- **Data entry**

The current procedure of data entry is key-to-disk system with sufficient verification procedure. This invariably take a long time period. In order to overcome the delays in data entry it is necessary to consider;

- Revision of data capture: Application of scanning (OCR/OMR) and imaging techniques.
- Sharing the experience of OCR/OMR and imaging techniques in the processing of census data among developing countries.

As the costs involved is very high it is absolutely necessary to get foreign assistance in this process.

- **Computer editing and tabulation**

The usual practice of data cleaning is to run edits and get error printouts to correct the necessary entries. This will lead to heavy delays as the process is time consuming. New methodologies are needed to carry out on-line editing as far as possible. In this aspect training of staff, technical advisors and international assistance are required for the next census.