

2000 Population and Housing Census: The Malaysian Experience

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1. History of Census

The 2000 Population and Housing Census of Malaysia was the fourth decennial census to be conducted since the formation of Malaysia in 1963. The 2000 Census collected data on the characteristics of the living quarters, households and population in Malaysia. The three earlier censuses were conducted in 1970, 1980 and 1991.

2. Legal Basis

Under the Constitution of Malaysia, census taking is a federal responsibility and the legal basis for the census is provided by the Census Act of 1960, which empowers the government to conduct a census from time to time. The responsibility for conducting the 2000 Population and Housing Census was vested in the Department of Statistics, which implemented the project in collaboration with the state governments of Malaysia.

3. Census Organisation

The entire Population and Housing Census Malaysia 2000 project was under the direct purview of the Census Steering Committee (CSC) chaired by the Chief Secretary to the Government. Members of the committee were drawn from key ministries, departments and central agencies. The CSC was responsible, among other things, for providing policy guidelines in relation to finance and manpower requirements as well as towards the planning and implementation of the project.

In addition, technical support was also provided by the Census Technical Committee chaired by the Director-General of the Economic Planning Unit. The committee consists of officials from various relevant ministries, government departments and agencies which are the main users of census data.

The Chief Statistician of Malaysia was appointed the Commissioner of Census and the entire 2000 Census planning and operation were under his responsibility. The Commissioner of Census was assisted by two teams of Census officials, that is, a team from the Department of Statistics and another team comprising officers from the state/district administration. The team from the Department of Statistics was responsible for planning, preparation of census maps and documents, financial and administrative matters, training, data processing, analysis, report writing as well as dissemination of census data. Meanwhile, the team comprising the state/district officers were primarily responsible for coordinating, supervising and implementing enumeration work on the ground. Each of the 15 states (including 2 federal territories) was headed by a Deputy Commissioner. A separate deputy commissioner was appointed for the enumeration of the aboriginal population as well as another deputy commissioner for the enumeration of specific areas inhabited mainly by foreigners in Sabah and the Federal Territory of Labuan. Furthermore a total of 200 assistant commissioners and 617 district superintendents were appointed at the district level.

Altogether 54,086 enumerators and 7,864 supervisors were recruited for the census project. The supervisors were principally drawn from serving government officers. The majority of enumerators, on the other hand, were recruited from the open market.

4. Census Reference Date

In selecting the census reference day, due consideration was given to a variety of factors. The census reference date should fall on a day whereby population movement is at its minimal. The selected date should not fall on public holidays, school holidays, festive seasons or on any major event taking place such as the performance of the Haj where sizable number of persons would be performing the pilgrimage. The monsoon period should also be avoided for field operational reasons.

The Census reference dates for the three Censuses of 1980, 1991 and 2000 were on 10th June, 14th August and 5th July respectively.

5. Enumeration Procedure

The '*de jure*' approach was adopted for the first time in the 2000 Census whereby all persons on Census Day (5th July 2000) were enumerated according to their place of usual residence.

This differed from the 'de facto' approach used in the previous censuses whereby all persons were enumerated at the place where they physically were on Census Night.

As was traditionally done in the previous censuses, the canvasser or enumerator method was employed in the 2000 Census whereby the enumerator visited each house in the enumeration block and interviewed respondents to collect information. Based on the results of the census, enumerators managed to complete an average of 5 to 6 households per day. If no one was at home, the enumerator was to leave a callback letter indicating the date and time when he would call back. If the enumerator was not successful in getting a respondent after three callbacks, the enumerator was to obtain as much information as possible from the neighbours. There were very few outright refusals and these were referred to the supervisors and district superintendents, who in most cases resolved these problems.

6. Survey Period

In the 2000 Census the enumeration was carried out over a period of sixteen days beginning from 5th July until 20th July 2000. Consistent with usual practice, mopping-up activities were also undertaken after the enumeration period, that is, from 21st July until 30th July.

7. Area Covered

The whole of Malaysia was divided into small census geographic units known as enumeration blocks (EB). Each EB was assigned an enumerator and a combination of 7 EBs formed a census circle (CC) which was the responsibility of a supervisor. A District Superintendent was responsible for each census district (CD) comprising about 15 CCs. All District Superintendents in one administrative district (AD) came under the responsibility of the Assistant Commissioner of Census who was in most cases the District Officer in the administrative district concerned. All Assistant Commissioners of each state came under the control of the Deputy Commissioner for that state. The Deputy Commissioner of each state was in turn responsible directly to the Commissioner of Census.

8. Persons Covered

All persons including foreigners who stayed or intended to stay in Malaysia for six months or more in the year 2000 were included in the Census. They were counted at their place of usual residence in line with the de jure approach adopted in Census 2000. Apart from Malaysians who were usually residing in the country, the following categories were also **included** provided they had stayed or intended to stay for 6 months or more in Malaysia in the year 2000:

- (i) Persons commuting across the Malaysian border for work or studies but maintaining usual residence within Malaysia;
- (ii) Malaysians who were temporarily away overseas as tourists, on short-term study or attending conferences/seminars or on business;
- (iii) Expatriates and other foreign workers (including housemaids) as well as their family members;
- (iv) Foreign long-term visitors and students;
- (v) Foreign military, naval and diplomatic personnel and their families staying in the country except for those who had diplomatic immunity and wished to be excluded; and
- (vi) Persons without permanent homes and were found along footways, etc.

Those persons who were **excluded** from the Census count on the basis that they were staying in the country for less than six months in the year 2000 were as follows:

- (i) Malaysian citizens and permanent residents who were away or intended to be away from the country for six months or more in the year because of work, studies etc.;
- (ii) Military, naval and diplomatic personnel and their families who were staying outside Malaysia ; and
- (iii) Foreigners such as tourists, businessmen and the like who were in Malaysia for less than six months.

9. Topics Enumerated

The list of topics canvassed in the 2000 Census are arranged under three broad headings namely Population, Household and Housing and comparisons are made with those canvassed in the three previous Malaysian censuses in 1970, 1980 and 1991 as encapsulated in Appendix 1.

10. Trial Census

The trial census, a dress rehearsal of the actual census, was conducted a year earlier on 7th July 1999. The coverage period for the Trial Census was 7th July until 22nd July. A total of 245 Enumeration Blocks (EBs) were selected for the Trial Census, to represent a cross-section of the country as well as reflect the characteristics unique to a particular state. Therefore the EBs selected covered a whole plethora of characteristics ranging from agricultural areas (oil palm and cocoa plantations, padi growing areas), fishing villages, new villages, logging areas, former mining areas, squatter areas, areas inhabited by the aboriginal population as well as foreign workers, industrial areas, condominiums, flats, urban housing estates, areas bordering neighbouring countries (Singapore and Thailand) as well as institutional living quarter (e.g. university hostels, army (camps, hospital and the like). The Trial Census covered 20,634 households and 89,378 persons. A total of 35 supervisors and 263 enumerators were recruited to undertake the enumeration phase of the Trial Census.

The results of the Trial Census provided invaluable feedback on the organisational and logistic aspects of the census operation, namely design and content of census forms and instruction manuals, recruitment, enumeration procedures, processing, tabulation and other problems that might have remained unresolved. The Trial Census also provided information on the average time taken for training, field enumeration and data capture, all of which were important in terms of estimating manpower required as well as the costs involved.

11. Data Processing

The collection of data was the first major step towards providing information. The next phase which is of equal importance involves data processing and tabulating which requires careful planning and implementation to ensure that the final results are accurate as possible and errors are minimized. The aim was to make data available to users in the shortest time possible. In the 2000 Census, the strategy for the processing activity was decentralized, similar to that of 1991 where a total of 13 processing centres were set up. The total number of personnel recruited were about 2,800 persons and 403 units of Personal Computers (PCs) were used in the processing activity.

At each of the 13 centres, the main processing activity was divided into two phases, that is, manual processing and computer processing. Phase one started in August 2000 where the questionnaires underwent checks for completeness for non-coded questions such as birthplace. In phase two, the questionnaires underwent coding of questions relating to education, migration, occupation and industry.

Training of the processing staff was also carried out in two phases, that is phase one for manual processing activity and phase two for quality control and computer processing activity. All these various phases were carried out to ensure that the data is of high quality as well as being released in the shortest time possible. Statistical quality control checks were imposed on the processes involving preliminary check, editing and coding of information on the four variables (migration, education, occupation and industry). In these quality control checks, if the errors in the sample examined exceeded the acceptance level than a complete check of questionnaires was involved.

The computer package used in the processing activity was IMPS, where the data entry module CENTRY was loaded in all 13 processing centres. The CONCOR module was designed to take care of consistency and correction of data during the process of validation and imputation. During phase one, imputation was done on four variables namely age, race, sex and citizenship at the processing centres.

During the census processing stages, CENTRACK a module of IMPS was used as a management information system. It enabled the progress of work at various processing stages to be monitored both by the management in the processing centre as well as in headquarters. Information from CENTRACK was the basis by which the management assessed the stages of completion of the various processing activities and was able to identify bottlenecks in any of the processes with a view of redeployment of resources to create a smooth and efficient flow of work.

12. Tabulations

The tabulation strategy employed in the 2000 Census took into account the demand for the speedy release of census data for use by governmental agencies as well as businesses and industry.

The preparation and implementation of the tabulation program involved several phases of work. These included:

- (i) Initial preparation of classifications and codes for tabulation of variables canvassed in the census.
- (ii) A comprehensive tabulation list meeting the requirements for publication, specialized reports and general users was prepared.
- (iii) Officers were assigned topics and the specification and table formats were prepared.
- (iv) Computer programs were prepared by the computer division and systems test checking by the subject matter division to confirm and verify the tabulation programs.
- (v) Checking and confirming of final tables.

Checking and analysis for data quality was undertaken using CROSSTAB, at the country, state, and administrative district levels. Some basic tables were produced which served as input in the preparation of the Eight Malaysia Plan document.

13. Release Schedule of Census Data

A Census is not complete until the information collected from the census is made available to various groups of users.

To provide timely data, two publications based on preliminary counts have been produced to-date. Beginning July 2001 until December 2002 census reports by topics will be produced. While the above-mentioned publications will satisfy the needs of most users, more detailed data from unpublished tabulations will also be made available upon request. It is also planned that a 2% sample data from the 2000 Census in the form of CD-ROM be produced for use by specialized planning agencies and research institutions engaged in special studies which go beyond the planned data dissemination programme.