

UTILIZING CENSUS RESULTS IN THE MALAYSIAN DEVELOPMENT PLAN 2001 – 2005

DR. RABIEYAH MAT
SITI ASIAH AHMAD
DEPARTMENT OF STATISTICS
MALAYSIA

1. INTRODUCTION

- 1.1 Results of the population census are traditionally used for policy making and development planning in Malaysia as well as for administrative and research purposes. Malaysia has long recognised that reliable and detailed data on the size, distribution and composition of the population as well as information on the housing situation in the country is essential for planning and implementation of economic and social development policies.

- 1.2 A population and housing census represents the principal means of data collection aimed at providing a comprehensive set of statistical information on population and housing. In this respect, the Population and Housing Census of Malaysia provides a wealth of information on the number of persons and households together with a wide range of their demographic, social and economic characteristics. In addition, information on the total number of living quarters by type, structural characteristics and the availability of amenities are also available. Data from the population and housing censuses have long been a vital source of information in the preparation and formulation of Malaysia Development Plans.

2. BACKGROUND

- 2.1 Malaysia with a population of about 23 million in the year 2000 is a multi-racial country covering 13 states and 2 federal territories. It has achieved remarkable progress in its economic and social development through a series of five year development plans since independence (1957). Concurrent with the economy developing fast, there has been a significant increase in the demand for a wide range of statistical data. One of the main sources of data as the population and housing census conducted by the Department Of Statistics. The Population and Housing Censuses are undertaken as part of the government effort to monitor changes in the population structure and to provide a statistical base for development planning, policy formulation and implementation.
- 2.2 The Department of Statistics (DOS) has had a long experience in undertaking national population and housing censuses, apart from its responsibility of collecting, interpreting and disseminating statistics in other fields. The Department had undertaken the Censuses in the years 1911, 1921, 1931, 1947, and 1957. Since the introduction of Census Act 1960 (Revised - 1969), the Department of Statistics has conducted the Population and Housing Censuses of Malaysia for the years 1970, 1980 and 1991. The 1991 Population and Housing Census represents the 3rd and latest national census to be undertaken since the formation of Malaysia in 1963. The next Population and Housing Census of Malaysia will be conducted in the year 2000.
- 2.3 The details provided below indicate the timing of census takings with that of the development plan periods :-

Development Plans	Plan Period	Year Of Population and Housing Census
1. The First Malaya Plan	1956 - 1960	1957
2. The Second Malaya Plan	1961 - 1965	1957
3. The First Malaysia Plan	1966 - 1970	1957
Mid Term Review of The First Malaysia Plan		1957
4. The Second Malaysia Plan	1971 – 1975	1970
Mid Term Review of The Second Malaysia Plan		1970
5. The Third Malaysia Plan	1976 – 1980	1970
Mid Term Review of The Third Malaysia Plan		1970
6. The Fourth Malaysia Plan	1981 – 1985	1980
Mid Term Review of The Fourth Malaysia Plan		1980
7. The fifth Malaysia Plan	1986 – 1990	1980
Mid Term Review of The Fifth Malaysia Plan		1980
8. The Sixth Malaysia Plan	1991 – 1995	1991
Mid Term Review of The Sixth Malaysia Plan		1991
9. The Seventh Malaysia Plan	1996 – 2000	1991
Mid Term Review of The Seventh Malaysia Plan		1991
10. The Eighth Malaysia Plan	2001 - 2005	2000

2.4 While for some of the main plans, the census results could not be fully utilized due to timeliness problem, they were extensively used for the Mid Term Review of the plans. Preliminary statistical findings from the censuses were made available for the formulation of the plans. In the Mid Term Review of the Plans, census results were used to assess the progress of the nation's economic and social development during the last three years of the plans.

3. UTILIZATION OF CENSUS DATA IN EARLIER DEVELOPMENT PLANS

3.1 The country's first five-year plan, 1956-1960, which was implemented on the eve of independence focused on the economic expansion required to absorb the growing labour force and on the provision of basic needs and facilities such as education, health, sanitation, water supply and electricity. The second five-year Plan, 1961-1965, saw the formation of Malaysia with the incorporation of Sabah and Sarawak. Improvement in the rural areas, provision of greater employment opportunities, diversification of agriculture, expansion of industrial activities and the expansion of social facilities were the main objectives of the plan. The country's rapid population growth of 3.1% per annum was a major concern of the government. The First Malaysia Plan, 1966 – 1970, was also concerned with population issues and focused on providing education and health facilities as well as more employment opportunities. To measure the achievement of these objectives, the 1957 Population Census results were utilized to a great extent, especially data on population distribution, size and characteristics. Data on housing could not be obtained because housing census was not carried out prior to 1970.

3.2 The Second Malaysia Plan, 1971-1975, saw the formulation of the New Economic Policy (NEP) which for the next 20 years focused on the socio-economic planning of the country . The NEP was a socio-economic policy designed to achieve national unity through the two-pronged objectives of eradicating poverty, irrespective of race and restructuring of society to eliminate the identification of race with economic functions. The 1970 Population and Housing Census was the first census undertaken in Malaysia and covers both population and housing. Results from the 1970 census were largely used as vital inputs to the plan.

- 3.3 The Third, Fourth and Fifth Malaysia Plan which spread over the 1976 – 1990 period advanced the implementation of the NEP. Both the 1970 and the 1980 Population and Housing Census results were heavily utilized. Of importance was the determination of urban areas using the results of the 1980 census.
- 3.4 The Sixth Malaysia Plan (1991 –1995) marked the launching of the National Development Policy (NDP) as the successor to the New Economic Policy (NEP) in achieving the ultimate goal of national unity. The NDP retained the major features of the NEP and incorporated new strategies to increase the effectiveness in bringing about balanced development. Full utilization of the 1980 Population and Housing Census results were evident in the Sixth Malaysia Plan.
- 3.5 The Seventh Malaysia Plan, 1996 – 2000, presents an important phase for charting new course and strategies to face future challenges. Amongst the major challenges were to provide sufficient skilled workers and create a more technology-oriented culture to effect the structural transformation towards productivity driven economy. The plan aims to accelerate the attainment of the objectives of balanced development as envisaged under the National Development Policy (NDP) with the overriding objective of creating a more united and just society. Results from the 1991 Population and Housing Census were heavily used in providing the statistical base to indicate the balanced growth between the urban and rural area and improved housing standard and quality of life of the people.

4. CENSUS RESULTS FOR THE EIGHTH MALAYSIA PLAN, 2001 –2005

4.1 The Malaysian government has directed the next population and housing census to be conducted in the year 2000. This will be the fourth census after the previous censuses undertaken in 1991, 1980 and 1970. A Population and Housing Census represents the principal means of data collection aimed at providing a comprehensive set of statistical information on population and housing. Similarly, the year 2000 census will provide an up-to-date information on the number of persons and households together with a wide range of demographic, social and economic characteristics of the Malaysian population and household. As was the case with previous censuses, data collected for census 2000 will be used extensively in the preparation and monitoring of Malaysia's next five year plan – The Eighth Malaysia Plan. The socio-economic data that will be collected will provide a comprehensive set of statistical information for the planning, formulation and implementation of government policies and programmes for the new millennium.

4.2 The Plan will continue to implement programmes and projects which will encourage and activate economic activities and to improve the quality of life of the Malaysians. Topics for the 2000 Population and Housing Census (see Appendix 1) were selected specifically to meet the plan requirements. Principal uses of the 2000 Census results which provide the main statistical inputs to the preparation of the Eighth Plan are as follows :

4.2.1 Population Size and Distribution

Population data by age, sex and geographical level are fundamental to development planning. These basic

information are used virtually in all planning processes and in formulating policies as well as monitoring programmes at all geographical levels. Age data are required to prepare estimates and projections for the total population, school aged group, voting population, elderly and the working age population

4.2.2 Urbanization

It is imperative for the government to have a sound statistical base to support its urbanization and regional programmes. The identification of urban areas relies heavily on the census results. This would be made available before the launching of the Eighth Plan.

In the 1980, census urban areas were defined as gazetted areas which had a population of 10,000 or more persons. However, there was a change in the urban definition for the 1991 census whereby urban areas were defined as gazetted areas with their adjoining built-up areas which had a combined population of 10,000 or more persons at the time of the 1991 census. Built-up areas were defined as areas contiguous to a gazetted area and had at least 60 per cent of their population (aged 10 years or more) engaged in non-agricultural activities and at least 30 per cent of their housing units having modern toilet facilities. The 2000 census will adopt the same definition of urban areas.

4.2.3 Population Estimates and Projections

Data on fertility, mortality and migration constitute an indispensable basis for the preparation of yearly population estimates, which are essential for planning purposes. Though Malaysia has a good vital statistics system, the collection of data on fertility and mortality in the 2000 Population Census is carried out for some parts of Malaysia namely Sabah and Sarawak. The inclusion of these topics for Sabah and Sarawak is because of the relatively weak civil registration in these two regions. It is essential to provide a good set of fertility and mortality data for the country on the whole and to provide a sound statistical information for the population estimate and projection for the development plan. Questions on migration will be asked for the whole country.

4.2.4 Ethnicity

The 2000 census will provide detailed breakdown of the ethnic composition of the population. Data on ethnicity will be obtained through self-identification in the census. About 80 ethnic groups will be identified and reclassified into 4 major groups [Bumiputera (Malays and other indigenous group), Chinese, Indians and others] for purposes of analysis and use in the plan.

4.2.5 Education and Training

Education and skill training continue to be accorded high priority in Malaysia in order to provide a sufficient pool of educated, highly skilled and strongly motivated labour force. As such, benchmark data on the stock of educated and

skilled manpower from the 2000 census is essential for educational and skill training planning. Levels of education attainment by field of study will be made available from census 2000. This is important in order to study the match between the supply and demand for qualified manpower with specific skill in the labour market.

4.2.6 Economic Characteristic

The thrust of human resource development in the Development Plan is the creation of more productive employment and the enhancement of the skill level especially in the scientific and technological field of the workforce in order to meet the requirements of the changing Malaysia economy. Information on the composition distribution and growth of the economically active population is fundamental for the formulation of policy and the implementation of progress for the Eighth Malaysia Plan. Eventhough the economic characteristic of the population can be obtained through the labour force sample survey conducted annually in Malaysia, results from the census is particularly necessary to provide the benchmark statistics covering the whole population.

4.2.7 Target Groups

The development plan will continue with ongoing efforts to address the various group's concerns and to provide appropriate enabling environment for greater participation in the economy and labour market as well as improved access to education and health. The women, children, the aged and disabled received continued attention from the government.

Identification and information on the socio-economic characteristics of these groups can be obtained from the 2000 census. While the information on the women, children and the aged has been traditionally obtained from the past censuses, information on the disabled makes its debut in the 2000 census.

4.2.8 Use of Information Technology (IT)

Information and Communications Technology (ICT) will be the driving force of change, which will have impact on social, cultural, administrative and business practices. Malaysia is preparing to be part of the information age in the new millennium by transforming itself towards the knowledge-based economy (k-economy). Information technology and multimedia will be the future enabling tool to increase the efficiency, productivity and competitiveness of the economy. Recognising this phenomenon, efforts will focus on strengthening the foundation to build an information-intensive and a k-economy with a technologically literate and innovative workforce, able to integrate into the global electronic environment.

The government has provided training programme on IT and enhanced its publicity campaigns. There is little reliable data, which can reveal how far and how many Malaysians are involved in the use of IT. The 2000 census will be able to provide data on the availability of personal computer and internet usage at household level. The Malaysian Government's encouragement in the form of provision of loans or withdrawal of Employee's Provident

Fund for the purchase of PCs will enable the population to be more IT literate.

The related census data that will show the awareness of citizens about IT can be gathered from the question on the household accessibility to the PC and internet. This can provide the basic foundation to evaluate the capabilities of the nation towards meeting the challenges in the IT world. Moreover, the data can be used in education planning and IT development in many other sectors in Malaysia.

4.2.9 Gender Statistics

Recognition of the differing roles of men and women in the economic and social activities is gaining increasing emphasis in the development plan. As such gender statistics will be given consideration in the production of many cross tabulations of the census data.

4.2.10 Housing

Results from the Housing Census have been used extensively since the 1970 census. Both the 1980 and 1991 censuses included question on housing. In the 2000 census, data on housing will be collected covering the usual basic information and some new variables for purposes of the Eighth Malaysia Plan. Some of the informations are as follows:

- **Adequacy of Housing Stock**

The number of housing units will provide benchmark data. Cross-tab by type of houses will indicate the

housing needs of the population through the identification of marginal living quarters and substandard housing

– **Assessment of Basic Facilities and Amenities**

Adequate piped water supply, modern toilet facilities and electricity supply indicate healthy living and high level of standard of living. Information on these basic facilities and amenities will provide the basic statistical input for planning by local authorities.

– **Assessment of Living Condition**

Number of bedrooms per living quarters will indicate the degree of overcrowding and privacy of the population. This information will provide the basis for planning of housing programmes and evaluation of housing policy of providing at least 3 bedrooms per housing unit

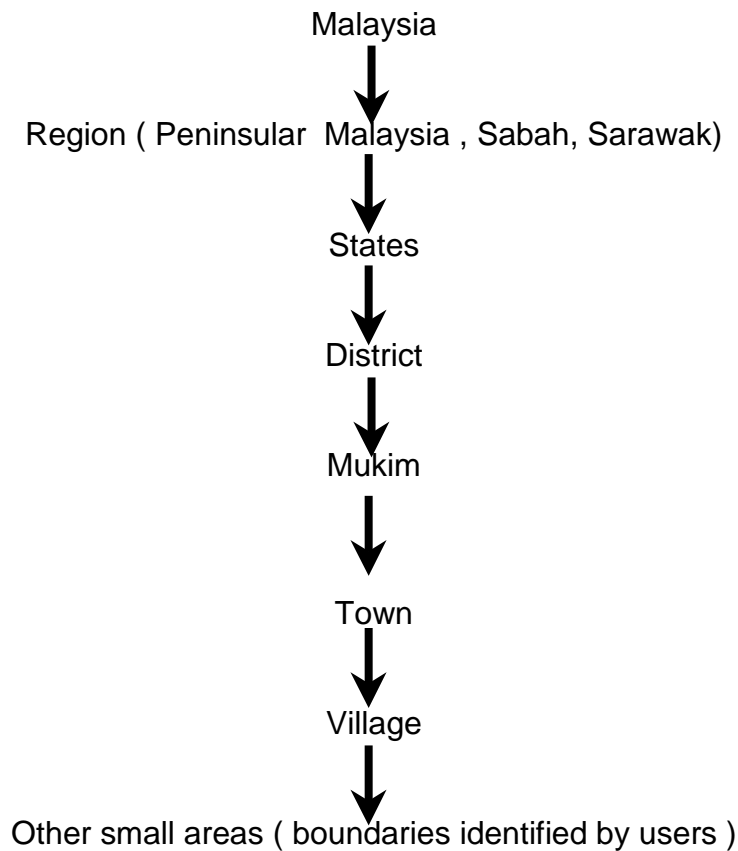
– **Environment**

Information on environment pollution or cleanliness can be obtained through question on provision of rubbish collection services. This is a new set of data collected for the first time.

4.3 Small Area Statistics

4.3.1 Results of Population and Housing Census are useful and essential for planning and monitoring development at the local and small area levels. It is only through census that small area statistics can be obtained. Census data have

been traditionally aggregated by various types of administrative units and other small areas identified by users. The various geographical levels are as follows:



4.3.2 The census provides a wide variety of information at both the national and sub-national levels. At the national level, census data serve useful inputs for the planning, formulation and implementation of policies and programmes. This data at the sub-national level (eg. states, districts, mukims, local authority areas, towns, localities etc.) are extremely important in arriving at decisions with regards to location of new hospitals, schools and other public facilities as well as to institutions of higher learning and market research firms or organizations

4.3.3 The availability of advance technology will greatly increase the utilization of census results for analysing the information for areas needed by planners and other users. Data for small areas such as the Enumeration Block (EB) which comprises about 500 population will be stored in the data base. All the EBs will be digitized. The digital census boundary data will be coded and linked to the area master file. The ARC/INFO software will be used to process and construct the different levels of census geographical unit.

4.3.4 As the census involves a large data set, the ability of GIS system to capture, store, retrieve, analyze and display spatial information would greatly enhance the usage of census data. In this respect there is a tremendous potential in terms of the thematic maps and spatial search that can be generated for purposes of illustration or analysis at various geographical levels hitherto not available. In particular, the understanding of census data, which relates basically to the distribution of population, households and housing units and their associated characteristics, can be more effectively presented in map form. The value-added effect is not only immense but would also provide options to serve a wider spectrum of users as well as to provide linkages to external data files with common geographical identifiers.

4.3.5 Retrieval of census informaton based on spatial or non – spatial criteria can also be performed. Thus, in cases where data is required to cover certain ad hoc areas by radiating from a point or specified distance away from selected feature various options are available from the software to perform the task to retrieve the areas covered. In this way the time

taken to retrieve the data will be reduced and the areas required can be exported to other census databases for performing other statistical tabulation. Quick locational pattern can be derived through the use of ARCVIEW to select areas through certain conditions in the census database. For example labour force characteristics can be used as criteria to locate the industry requiring a segment of the population. As such, census data pertaining to population characteristics at census geographic level can provide useful information for planing purposes.

5. CONCLUSION

- 5.1 Development planning is a complex process involving many different organizations and individuals interacting in the attempt to formulate the country's economic and social policies. In this respect, census results are fundamental to provide the basic information for the development plans.
- 5.2 The history of the utilization of census results in the development plans of Malaysia shows the importance of census in the government machinery. As far back as the 1950s, census has played a prominent role in providing the statistical inputs for planning and formulation of the development plans. The increasing demand for census data is evident following the implementation of the New Economic Policy and the New Development Policy.
- 5.3 With the preparation and formulation of the Eighth Malaysia Plan (2001 – 2005) especially in the new millennium, there is increasing demand for the coming 2000 census results. The inclusion of new topics such as the availability of personal computers and usage of

internet could meet some of the data requirements to measure the success of the government's effort in creating a computer literate population. Data on field of study, which will be collected for the first time, provide valuable input for manpower planning and assessment of skills in the country.

- 5.4 It is evident that national census data are considered as an important component in planning, development, policy formulation and decision making. Towards this end, GIS represents an essential information technology component in census undertakings. GIS capability in dealing with collection, managing and analysing of large spatially referenced data sets is especially useful to provide information for the development plans.

**TOPICS COVERED IN THE POPULATION AND HOUSING
CENSUSES OF 1970, 1980, 1991 AND 2000, MALAYSIA**

CENSUS TOPICS	1970	1980	1991	2000
(A) POPULATION				
GEOGRAPHIC CHARACTERISTICS				
<i>Place where person was found on Census Day</i>	✓	✓	✓	✓
<i>Place of usual residence at time of Census</i>	X	X	✓	✓
DEMOGRAPHIC AND SOCIAL CHARACTERISTICS				
<i>Sex</i>	✓	✓	✓	✓
<i>Age</i>	✓	✓	✓	✓
<i>Date of Birth</i>	✓	✓	✓	✓
<i>Marital Status</i>	✓	✓	✓	✓
<i>Ethnicity</i>	✓	✓	✓	✓
<i>Religion</i>	✓	✓	✓	✓
<i>Citizenship</i>	✓	✓	✓	✓
<i>Identity Card (Colour)</i>	✓	✓	X	✓
<i>Language Spoken</i>	✓	✓	X	X
<i>Disability</i>	X	✓	X	✓
FERTILITY AND MORTALITY				
<i>Number of children born alive</i>	✓	✓	X	✓ *
<i>Number of children living</i>	✓	✓	X	✓ *
<i>Age at first marriage</i>	X	✓	X	X
<i>Number of times married</i>	✓	✓	X	X
<i>Number of years married</i>	✓	X	X	X
MIGRATION CHARACTERISTICS				
<i>Birthplace</i>	✓	✓	✓	✓
<i>Period of residence in Malaysia</i>	✓	✓	X	✓
<i>Period residence in present locality</i>	✓	✓	X	✓
<i>Place of last previous residence</i>	✓	✓	X	✓
<i>Reason for migration</i>	X	✓	X	X
<i>Place of residence five years ago</i>	X	X	✓	✓

* These topic was only canvassed for Sabah and Sarawak for ever married women.

**TOPICS COVERED IN THE POPULATION AND HOUSING
CENSUSES OF 1970, 1980, 1991 AND 2000, MALAYSIA**

CENSUS TOPICS	1970	1980	1991	2000
EDUCATION CHARACTERISTICS				
<i>Literacy</i>	✓	✓	X	✓
<i>School attendance</i>	✓	✓	✓	✓
<i>Highest educational certificate obtained</i>	✓	✓	✓	✓
<i>Highest educational certificate obtained</i>	✓	✓	✓	✓
<i>Vocational training</i>	X	✓	X	X
<i>Field of study</i>	X	X	X	✓
ECONOMIC CHARATERISTICS				
<i>Type of economic activity (during previous week)</i>	✓	✓	✓	✓
<i>Number of hours worked (during previous week)</i>	X	X	✓	X
<i>Type of economic activity (during last twelve months)</i>	✓	✓	X	X
<i>Occupation</i>	✓	✓	✓	✓
<i>Industry</i>	✓	✓	✓	✓
<i>Employment status</i>	✓	✓	✓	✓
(B) HOUSEHOLD				
HOUSEHOLD CHARACTERISTICS				
<i>Relationship to head of household</i>	✓	✓	✓	✓
<i>Number of persons in household</i>	✓	✓	✓	✓
<i>Type of occupancy</i>	✓	X	X	✓
<i>Rent (furnished / unfurnished)</i>	✓	X	X	✓
<i>Main cooking fuel</i>	✓	X	X	X
<i>Household items</i>	✓	✓	✓	✓
<i>Household income</i>	✓	✓	X	X
(C) LIVING QUARTERS				
<i>Location of living quarters</i>	✓	✓	✓	✓
<i>Type of living quarters</i>	✓	✓	✓	✓
<i>Type of foundation</i>	✓	X	X	X

**TOPICS COVERED IN THE POPULATION AND HOUSING
CENSUSES OF 1970, 1980, 1991 AND 2000, MALAYSIA**

CENSUS TOPICS	1970	1980	1991	2000
<i>Construction material of outer walls</i>	✓	✓	✓	✓
<i>Construction material of roof</i>	✓	✓	X	✓
<i>Condition</i>	✓	✓	X	X
<i>Occupancy status</i>	✓	✓	✓	✓
<i>Year (period) of construction</i>	✓	✓	✓	X
<i>Type of ownership (tenure)</i>	✓	✓	✓	✓
<i>Rent (furnished / unfurnished)</i>	✓	X	X	X
<i>Typed of water supply</i>	✓	✓	✓	✓
<i>Type of lighting</i>	✓	✓	✓	✓
<i>Type of toilet facility</i>	✓	✓	✓	✓
<i>Bathing facility</i>	✓	✓	X	X
<i>Cooking facility</i>	✓	✓	X	X
<i>Main cooking fuel</i>	✓	X	X	X
<i>Number of bedrooms</i>	X	X	X	✓
<i>Garbage collection service</i>	X	X	X	✓
