

Utilization of the 2000 Population and Housing Census of Thailand

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1. Introduction

The National Statistical Office (NSO) has carried out the Population and Housing Census every ten years since 1960. It is based on international standards with the aim to collect basic data on number and characteristics of population and housing throughout the country. The 2000 Population and Housing Census is the tenth population census and the fourth housing census of Thailand. The 2000 census provides a set of population data and a series of demographic and related statistics which basically to the needs for national planning and policy making process. The purpose of this paper is to discuss the plans for utilization and analysis of the 2000 Census data.

2. The 2000 Census

Census Methodology

The methodology used in the 2000 Census was slightly different from the previous ones. At the listing stage, it covered 100% enumeration for both persons and households using short form questionnaire. But at the detailed enumeration stage, 20% sample households was drawn from the total households

and detailed information was collected from all persons in the sample households using long form questionnaire (see Appendix).

Field Personnel

The period of data collection was 1-30 April 2000 with the census reference date of 1 April 2000. There were altogether around 40,000 enumerators and 5,600 supervisors. The ratio was 1 supervisor to 7 enumerators. An enumerator was responsible for one enumeration district which included 350-450 households.

The 2000 Census still applied face to face interview as the major method of data collection. However, the self-enumeration methodology was also used in some specific cases such as to collect data from households in some apartments, condominium etc., where it didn't allow the enumerators to enter the place to conduct the interview. And there has been found at more frequent than in the past because people become more concerned about their privacy.

For non-municipal areas, school teachers were used as field personnel, while school teachers and temporary employees were used in Bangkok and municipal areas. Among the temporary employees, the supervisors must have at least Bachelor degree, and the enumerators at least upper secondary level (Grade 11).

Data Processing

A more decentralized data processing and an introduction of new technology was adopted in order to improve timeliness. Arrangements for preliminary data processing are more

decentralized than in previous censuses. Each of the 76 provinces was responsible for its own preliminary processing of the census data, while in all previous censuses the questionnaires had been sent back to Bangkok immediately after they were filled out . The preliminary processing consisted of manual editing and coding, and processing preliminary estimates from the enumerators field reports.

After that, the questionnaires were sent to the central office for data capture, using an Intelligent Character Recognition (ICR) method of data capture for the first time. Other steps of data processing and data dissemination were carried out in the central office.

Evaluation of the Census Data

The post enumeration survey (PES) of the 2000 Census was carried out immediately after the field operation using permanent staff of the National Statistical Office to be the enumerators. Sample of 1,520 urban blocks and rural villages was selected base on stratified sample methodology. According to the results of PES, the net coverage error rate of households was -1.8 and the completeness rate was 83 percent.

3. Publications and Dissemination of the Census Results

Publication

A series of publications were released as follows:

- The preliminary reports were released in August 2000, three months after the field operation. They present the number of people by sex and the number

of households for municipal and non-municipal areas, districts, provinces, regions and the whole kingdom.

- An advance report based on one per cent sample households was released in December 2000. It presents major characteristics of population and housing for regions and the whole kingdom.
- A series of final reports had been released from May 2001. They present data on all topics in the questionnaire and were published for each province, 4 regions and the whole kingdom.

Data Dissemination

Data is available as follows:

- Publications
- CD-ROM, Diskettes for The 1 % sample micro data
- Meta data, including definition, concept, data dictionary etc.
- On-line data dissemination, including summary statistical information on the World Wide Web (www.nso.go.th).

4. Future Plan for Data Analysis and Utilization

The Population and Housing Census aims at the collection of statistical data on the demographic and socio-economic characteristics of population and housing for example, age and sex structure, education, employment, fertility, migration and types and characteristics of housing. Such data are vital to economic and social development planning, research on population and housing conducted by

academic institutes and other organizations locally and abroad, and are used for population projection. The population data are also used for master sampling frame of the household surveys.

There are many government and private agencies using the 2000 census such as The Bank of Thailand (BOT), The National Economic and Social Development Board (NESDB), Ministry of Public Health (MPH), Ministry of Education (MOE), Academic Institutes, and Thailand Development Research Institute (TDRI) etc.

The National Statistical Office not only collects and accumulates of population statistics but also forms a basis for research and analysis to improve understanding of the causal relationships between population and other variables. The National Statistical Office plans to analyze population statistics from the 2000 Census in order to measure and changes in demographic situations in Thailand. The topics which are planned to analyze are as follows:

Fertility

The study of fertility can be done by indirect method such as to derive the data on children ever born and children still living from the census data.

Even though the fertility in Thailand has declined to the replacement level, the declining of fertility did not occur evenly throughout the country, this kind of studies will focus more on fertility differentials at small geographical areas.

Fertility in Thailand has declined substantially and rapidly during the last three decades from the level of over six children per women in the early 1960s to about two at the start of the

1990s, and it had still declined to the replacement level by 1996. As in the 2000 Census, the reduction of fertility in term of the number of children per ever-married women aged 15-49 dropped from 2.4 in 1990 to 1.9 in 2000.

Migration

The NSO plans to compared trend and pattern of migration from the previous censuses to the 2000 Census.

Rural to urban migration is a major factor that underlies the process of urbanization which inevitably occurs as economic development progresses. The flow of people from rural areas occurs mainly for economic reasons, other factors, such as for education and family, plays minor part. Change of administrative boundaries, and the national increase of urban areas, also contribute to urban population growth.

Since urban area was treated as equivalent to municipality and rural area to non-municipality in Thailand, the reclassification of administrative boundaries would lead to change in pattern and level of urbanization.

Although the overall recent migration had decreased from 8.2 percent in 1980 to 6.2 percent in 2000, the rural to urban migration had increased from 14.3 percent in 1980 to 25.7 percent in 2000. This is due to the changing of administrative areas in Thailand in 1999, 981 sanitary districts were reclassified as tambon municipalities and the 2000 census operated during the economic crisis year. Therefore, there were more migrants move from rural to urban in the census year.

Mortality

Although there are no information on mortality in the Census data, the questions on children ever born and children still living can be used in estimating mortality by indirect method.

Among the components of population change, mortality has historically played an important role in determining population growth. The rapid decline in mortality in Thailand over the past 30 years had led to a high population growth with serious consequences.

Results from the Survey of Population Change indicated that the crude death rate in Thailand had decreased from 6.44 per 1000 population in 1985-1986 to 6.02 in 1995-1996, while the life expectancy of birth for males and females had increased from 64 years in 1985-1986 to 69 years in 1995-1996.

Ageing

In Thailand, the ageing population (60 years and over) had increased from 5.6 percent in 1980 to 9.5 percent in 2000, while the young population (below age 15 years) had decreased from 38.3 percent in 1980 to 24.4 percent in 2000. In view of such changes in the age structure, population ageing has to be considered in the context of age dependency ratio, which indicates the nature of the relationship between the dependent population and the working ages population. Owing to a rapid decline in fertility, the age dependency ratio had decreased from 78 percent in 1980 to 51 percent in 2000 while the elderly dependency ratio has increased from 10 percent in

1980 to 14 percent in 2000. The rapid increase of ageing population or increase of elderly dependency ratio has highly impact on socio-economic status of population ageing.

The topic of this study will support in formulating policy programs for ageing.

Quality of Life

The census data can also provide personal, social, economic and household indicators. These indicators can indicate change of the Thais quality of life.

Population Projections

The uses of population projections are firstly for national economic and social development planning, secondly for planning and formulation of various policies of the government and private agencies, and thirdly for population and other related issues researches.

The data used to project population are based on the base population obtained from the Population and Housing Census together with an assumption of birth, death and migration. The estimated number of persons died with AID disease by age group and sex were also included in the population projections. Many sources of data are used in projecting the population. These are the Population and Housing Census, Surveys of Population Changes, health statistics, vital statistics and surveys of fertility from various sources. At present, a working groups on population projections has been set-up in order to make a new set of population projections using the 2000 Population and Housing Census.

Minority Groups

There are some minority groups in Thailand, for instance, Chinese, Moslems and hill tribes. The population of Chinese ancestry probably constitutes the largest ethnic minority, but it is difficult to distinguish between the Thai and Chinese due to the large extent of mixed ancestry. According to the 2000 Census, approximately 5 percent of the population were Moslems who are mostly concentrated in the South, especially in four southern provinces next to the border of Malaysia (Satun, Pattani, Yala and Narathiwat). Most of the hill tribes reside in the northwestern part of the country. According to the 2000 Census, they constituted about 1.2 percent of the population in Thailand.

Analysis of Data for Small Geographical Areas

In Thailand, as in many other developing countries, the demand for local area statistics is increasing due to the shifts in government socio-economic development planning strategies from the central to the local levels, which was emphasized since the Eighth National Economic and Social Development Plan (1997-2001).

Thailand has a number of data collection systems providing population statistics. However, only the population census that is carried out every ten years can be used to produce information below the national and regional levels.

One of the project using the population census is the Poverty Mapping. The purpose of this project is to analyze the incidence of poverty at the district and sub-district levels by

combining household survey and census data to estimate consumption-based welfare indicators (Poverty Mapping Methodology).

5. Conclusion

Although the 2000 Census has been carried out under conditions of financial stringency, the Census 2000 with all the new arrangements in the preparation and processing stages have been successful. The experiences of the Census 2000 activities on the preparatory and field operations, the data processing and dissemination and evaluation of data will serve as basis for improvement in the next round of Census.

At present, the NSO try to promote the wider utilization of the 2000 Census data, since it is the best source of extensive and fruitful information about population and housing in the country. More attention has been made to facilitate the access of the census data.

Appendix

Topics to be included are as follows:

Identification of households

- region, province, district, sub-district
- type of area (municipal and non-municipal)
- enumeration district
- census block/village number
- type of household (private/special/institution)
- number of persons in the household (males/females)
- language usually spoken at home
- short form/long form

Short form (all respondents):

- relationship to household
- sex
- age and month and year of birth
- religion
- nationality (new topic)
- school attendance
- literacy
- school attainment
- marital status
- school attendance
- last year occupation

- last year industry
- last year work status

Long form (sample respondents)

- last week occupation
- looking for work and available for work (a modified concept to be similar to labour force survey concept)
- reasons for not available to work (a modified concept to be similar to labour force survey concept)
- number of living children
- birth last year (new topic)
- place of birth
- length of residence
- place of previous residence (province/district/country/municipality/non-municipality)
- reasons for migration

Long form (housing:sample households)

- type of living quarter
- characteristics of living quarter
- tenure of living quarters
- tenure of land

- fuel used for cooking
- type of toilet facility
- source of drinking water
- source of water supply
- household possessions