

*Demographic Note:*

## THE USES AND ANALYSIS OF CENSUS DATA IN THE PHILIPPINES

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The huge expenditures spent in collecting census data can only be justified by the utility which these data provide for the understanding of the economic and social conditions and cultural characteristics of the people which, in turn, are the bases for the formulation of plans and programs to improve their conditions.

This paper discusses the Philippine experience on the use of census data. These uses may be broadly classified into political and legislative, administrative, and academic or research purposes. It also discusses some considerations given to the planning for the next round of population and housing censuses to enhance the usefulness of the data that will be collected.

### *Political Uses*

The Philippines has a bicameral system of government. Its Constitution provides that the House of Representatives shall be composed of not more than 250 members (unless otherwise fixed by law) who shall be elected from legislative districts in accordance with the number of their respective inhabitants. It provides that for every 250,000 population, one representative will be elected to represent them. The count of the population will be as determined through a census of population. The Constitution further provides that within 3 years after every census undertaking, Congress shall make a reapportionment of legislative districts.

In formulating their political strategies, politicians use census data to determine the number of electorate in their areas. On the other hand, election registrars use the results of the census to validate the number of voters that register in various electoral precincts.

Clearly, whether for official or other purposes, census data on the count and the age structure of the population of administrative geographic areas

are being used in the political arena.

### *Legislative Uses*

In the creation of administrative areas, namely, barangays, cities, municipalities or provinces, the size of the population that will be encompassed by such creation is a primary consideration. Thus, according to the local government code, barangays, municipalities and provinces, can only be created if they would cover a minimum of 1,000, 10,000 and 500,000 persons, respectively. A prerequisite to the passage of any legislation creating a new administrative unit is a certification from the National Statistical Office as to the size of the population of the areas under consideration. Such certification is based on the official count of population as obtained in censuses. Even the reclassification of cities from component to highly urbanized cities is contingent on proof of attainment of a minimum number of inhabitants, which proof is derived from the results of the census.

A number of other legislative requirements is based on the size of the population to which these apply. In the matter of disposition and allotment of national revenue, the share of local governments is computed on the basis of a formula that gives a weight of 70 per cent to size of population, 20 per cent to land area and the remaining 10 per cent is allocated on an equal sharing basis. The allocation of the number of police and firefighters and other administrative services has also been made contingent on the distribution and location of population. So are permits to open up hospitals and cockpits. Once again, we point to the legal backing on the usage of census data.

### *Administrative Uses*

The types of demographic information that have been requested from the statistical office and the types of agencies or individuals that made these requests indicate the extent and the nature of usage of census data.

Data from censuses have been requested and used by planners, policy makers, managers and administrators, both in the government and private sectors. The government uses these data to improve or expand the delivery of social services and to determine where certain types of social services may have to be provided. For example, the information on the number of school-going population has served to indicate the number of school houses, number of teachers, textbooks, and other educational facilities that will be required to provide adequate education to the population.

In the immunization program of the Department of Health, information on the number of infants and young children is used to provide the basis for determining the extent of immunization services needed and thus also help to determine the amount to be spent in the program. This applies as well in the area of maternal care and family planning services and other health programs wherein the target population is identified by its demographic characteristics.

The design of the transportation and communication systems has utilized information on the distribution of the population across geographic areas. Migration data from the censuses indicate the patterns and volume of population movement; these are major considerations that enter into the planning and provision of public transport services.

Employment statistics derived from censuses provide information about the characteristics of the labor force which are far more comprehensive than those obtained through sample surveys. In addition to information on the number of employed persons, census data provide information on the number of persons employed in relatively specific occupation and industry groups. This type of information has been used not only by government planners in the labor sector but also by private professional organizations, small entrepreneurs and big establishments.

Housing census data have likewise provided valuable inputs in the assessment of the living conditions of the people and in the formulation of housing programs. The identification of blighted and slum areas has been made possible through an analysis of the housing data derived from the cen-

suses. The census also provides data on the existence of population concentrations not serviced by electricity and safe water system. These data have been used as basis for expanded delivery of these facilities.

Even the private sector makes extensive use of housing data. Real estate developers, for example, depend on census data for their business. So do manufacturers of household appliances like television sets, radios, cooking ranges, and the like.

### ACADEMIC AND RESEARCH

In the academic field, census data are used to demonstrate the impact of population growth on the environment and other aspects of life. They are used to demonstrate the relationship between population and other disciplines of study.

Graduate students and other private researchers use census data for their research on the social characteristics and behavior of the population. Such data are particularly useful in studies that focus on small areas since censuses are about the only source of statistics on small geographic units.

### THE 1990 CENSUS OF POPULATION

In planning the 1990 Census of Population and Housing, enhancement of the utility of the census data was behind almost every decision made. It was felt that users will be more appreciative of the results of the census if these could address their needs for specific types of data at a certain level of quality and within an optimum time frame.

Through a more active topic solicitation process, the needs of data users have become more apparent. A careful evaluation of each topic suggested for inclusion in the census was made taking into consideration the total resources that the government can reasonably put up for the census operations and the practicality of asking such topic in a census operation. As a result of the evaluation, decisions were made to include some new topics and to modify operational procedures in ways that were deemed appropriate towards making the census data more useful.

One new topic that was decided for inclusion is the question on disability. The first and only time that this topic was included in Philippine census was in 1948. The need for some measures of the physical well-being of the population has been felt more intensely in recent times. In order to address properly the issue of providing for the needs of those suffering from permanent handicaps and of making them more useful citizens, policy makers and planners must be aware of their numbers, who and where they are, and what they do. The question on disability, to some extent, may also provide some indicators of the morbidity status of the population and of the broader concept called quality of life.

Another topic that was introduced into the 1990 census questionnaire pertains to migration. Although previous censuses collected migration questions, by asking each person their residence as of a fixed period in the past (i.e., 5 years prior to the census), they were considered limited in the sense that they could not provide indicators of patterns of population redistribution in the more recent years. Hence, in addition to the usual question on residence 5 years ago, the 1990 census of population seeks to ask each person's last place of residence and timing of his move to the present residence. It is hoped that with these questions, we will be able to generate statistics on migration that pertain to the more recent period. This is considered especially relevant in this period of great economic adjustment when people are thought to be more mobile as they try to seek the places of economic opportunity.

With the government policy of decentralized planning, the demand for small area statistics has increased. The 1990 census of population has, as one of its major objectives, sought to make possible the disaggregation of data to more micro levels while still maintaining the practical consideration of collecting some questions on a sample basis. A more rational survey design has therefore been conceived. Questions which were thought needed at the most disaggregated level, which is the barangay, were placed on the long questionnaire which will be administered to everyone. Those required at the next higher level of disaggregation were placed in the short questionnaire; these are items that will be collected on a sample basis. In the design of the sample, however, particular attention

was paid to the fact that there were domains (municipalities) which were very small and for which the national sampling fraction was insufficient to provide reliable estimates. Thus, a variable sampling fraction was to be applied.

Improving the accuracy of the coverage of the census is a step towards enhancing the usefulness of census data. Several measures are in place to ensure a more complete coverage. As in the past, the preparation of accurate maps has been accorded special attention in planning the conduct of the census.

A new operational procedure has been introduced to improve coverage. This is the use of self-administered questionnaires. While the interview method remains to be the most ideal approach to enumeration given the level of literacy of the population and the geographical terrain of the country, it is nevertheless recognized that a segment of the population can be more completely and accurately enumerated if a self-administered questionnaire is provided. The use of this approach will be concentrated in the places of residence of those in the upper strata of society who are generally more literate than the rest of the population and whose living quarters are more distinct and more identifiable through the house address system. This approach entails a pre-cavass of addresses prior to the actual distribution of the questionnaires.

Another modification in operations that has been decided for the 1990 census is the decentralized data processing and the use of micro-computers for doing some aspects of data processing. This bold approach towards data processing was decided upon with the view that it will reduce the period of processing while at the same time solve logistics problems that would otherwise be encountered if the questionnaires were brought to and processed in one central place.

The preparation of regional processing centers actually begun a couple of years back when the regional offices of the National Statistics Office were provided with a few micro-computers and made to process the questionnaires of some of the sample surveys undertaken by the office. These activities have built up the capability of these regional offices for machine processing so that the

● 1990 census will not be actually their first attempt at processing the data which they themselves have collected. The experiences so far have indicated that decentralized data processing is possible and practical and in fact contributory to a more timely release of data, even on a preliminary basis. With more hardware support and staff development, we

are optimistic that the decision to decentralize part of the data processing of the 1990 census will turn out to be the right one. For, in the final analysis, the utility of census data will be greatly enhanced as data become available and accessible to local users in less time than ever possible.