

Sources of Population Data in Nepal

RUDRA PRASAD GAUTAM*

INTRODUCTION

We all have been hearing and reading in our daily life the scares of population explosion, i.e., enormous increase in numbers from one decade to the next, concentration of population in the cities and a rapid expansion of urban areas. The public, social scientists and the planners in particular are being alerted over the past three decades to the 'menace' of rapid population growth in the world and its consequences with regard to the survival of the human race. But now, some questions arise here that, how the population of a country is growing at a very fast rate or at a slow rate in a particular area? how the density of population is very high in one area and very low in another? or how the workers are distributed in different types of occupations? etc. To answer these questions, sources of population data are essential. Mainly, there are three sources of population data: a) Population Census; b) Vital Registration System and c) National Sample Surveys, which are discussed below in detail.

POPULATION CENSUS

The primary source of population data is the population census taken almost everywhere in the world at regular intervals usually of ten years. It is obtained by a direct canvass of each person or household which is a large and complicated undertaking. A census is usually best but not sufficient source of population data. Where the term census is derived from Latin word censere, it means to value or tax. Actually in ancient times population were counted for the purpose of tax, recruitment in military service etc., but in modern days the term census refers to a nationwide counting of population. The term population census is defined as the total process of collecting, compiling and publishing demographic, economic and social data pertaining at a specified time, to all persons in a country or delimited territory.

A census is primarily an official enumeration through direct visitation of all people either physically present or regularly residing in a country or in any of its divisions. The enumeration includes the collection of various data concerning the persons enumerated such as race, sex, age, marital status, etc.

History of Population Census

The history of population census in the world is very long. According to archaeologist, specific types of population census to meet specific

*Mr. Gautam is an Assistant Lecturer at the Central Department of Economics, Tribhuvan University, Kirtipur, Kathmandu, Nepal.

needs of the country were taken in Babilonia in 4000 B.C., 3000 B.C. in China and 2500 B.C. in Egypt. But modern types of population census covering the whole country was taken first in Qubec and at present almost all countries in the world are practicing census operation.

Though, no historical records are available regarding any population census of Nepal in the past, yet counting of houses was practiced prior to the Lichhavi period (250 A.D.). As reported by Guiseppe, before the conquest of Kathmandu Valley by King Prithvi Narayan Shah, the numbers of houses in the towns of Kathmandu, Lalitpur and Bhaktapur were supposed to be 22,000, 24,000 and 12,000 respectively. This shows that Lalitpur was the biggest town among these three on the basis of the number of houses. As noted by Thir Bahadur Rayamajhi, at that time the kingdom of Gorkha was known as 'Barahazar Ghar'. An enumeration covering adult males reportedly took place during the regime of Bhimsen Thapa (1806-1838), to recruit eligible males in the army. However, these censuses were conducted for limited purposes and also were confined to small areas of the country. On the basis of the information provided by the official of the Nepalese government Fraser estimated the population of Nepal.

For the first time covering the whole country population census in Nepal was taken in 1911 A.D., and this practice was being continued roughly after every one decade.

The second population census was conducted in 1920 A.D., after a lapse of nine years, which indicates absolute decline of 64,961 in the population of Nepal over 1911. The decline has been attributed to death due to influenza epidemic of 1917, death tool of the Gurkhas in the First World War, and underenumeration.

The third census conducted in 1930, further marked decline (0.07 percent per annum over 1920) in the population of the country. Underenumeration in 1930 census seems to be the main cause behind this decline and the second cause is the rumer of Nepal-Tibet was over the issue of a Nepali citizen beaten to death by Tibetan officials while in custody in Tibet. Thus large number of male population were not reported due to fear that all male population should be recruited in the army.

For the first time since 1911 the census of 1941 shows a marked increase in the population of Nepal. The rate of growth of population during 1930-41 was recorded 1.16 percent per annum, though the intercensal period was marked by the great earthquake of 1934 with a casualty figure of 8,591 persons in the country. Secondly, the Second World War was continuing and thousands of Nepalese were being recruited and sent to the war fronts. The population of Nepal in this decade increased only due to underenumeration in 1930 census.

After 1950 when the democratic form of government came into rule, it realised the need of population census, and there was also frequent request by the international organisations for the data on population of Nepal. As the census had to be undertaken immediately, and as the men and materials required were inadequate, the population census of

the Western Nepal excluding Mahottari was carried out in 1952 and the rest of the country including Mahottari in 1954. The census of 1952/54 is preceded by Population Census Act 1952, and it is regarded as the benchmark of the modern scientific census in Nepal. Because it incorporated most of the census schedules prepared and proposed by the United Nations for comparative study with other countries of the world.

In between 1941 and 1952/54 the country recorded 2.52 percent growth rate per annum, the highest rate of growth ever recorded before. The high growth rate might be related to large number of Nepalese return from Burma in 1942 when the Japanese overran Burma, and from newly created Pakistan after the partition of India in 1947. But the most important factor for high growth rate seems to be the return of large number of Nepalese exiled during the Rana regime.

The 1961 census recorded 1.32 percent annual growth rate during intercensal period 1952/54-61. The seventh census which took place exactly after one decade in 1971, recorded 2.07 percent annual growth rate and the population census of 1981 recorded 2.66 percent growth rate per annum never experienced since 1911. The increasing rate of growth of population after 1952/54 related mainly due to high and constant birth rate and declining death rate.

Methods of Population Count in Nepal

There are two methods of population count in any country, i.e., De Facto and De Jure. The population census of Nepal have been taken on a modified De Jure basis using householder method. Every person was counted on the basis of his/her usual residence (i.e., where he/she has been living at least six months continuously). The prisoners, the students, armed forces were counted as the residents of the places where they found. Similarly persons without any fixed household were enumerated where they found.

Nepalese nationals living in foreign countries for six months and above were considered as absentees. Members of foreign diplomatic missions located in Nepal were excluded and foreign nationals other than those working in diplomatic mission and who have been staying in Nepal atleast for six months were included in the enumeration. The foreign nationals visiting during the entire enumeration period were excluded.

Problems of Data Analysis

Population census of Nepal are characterised by various lackings. In this way the result of one census to another cannot be comparable.

Firstly, population census of Nepal lacks synchronisation of census year as well as census day since 1911 to 1961. Secondly, similarly since the first population census of Nepal there has been considerable changes in the census schedule in each censuses upto 1981.

Thirdly, the census reports were not published and data were not available for general use upto 1941, due to the lack of permanent department (office) to conduct population census and maintain the records of the censuses. Only since 1952/54 census reports were published and the data were available for general use with the establishment of 'Sankhya Bibhag' (Department of Statistics) in 1950 and has renamed as 'Kendriya Tathyanka Bibhag' (Central Bureau of Statistics) in 1960.

Fourthly, the methods of enumeration differs in each census upto 1981. Upto 1930 census the task of enumeration in the districts was assigned by the centre to the District Revenue Offices. The 1941 census was conducted by District Revenue Offices with the help of an employee sent from Central Office (Janasankhya Goswara). In 1952/54 and 1961 censuses trained supervisors were sent to the districts and enumerators were recruited and trained by the supervisors in their respective districts. But in 1971 census enumerators were supervised by district supervisors and district supervisors were under the zonal census officer. The recent and more scientific census of 1981, central office (CBS) has trained district census officers and supervisors in centre and assistant supervisors and enumerators were recruited and trained by district census officer and supervisor.

Fifthly, for the universal coverage in the census detailed maps with delineated boundaries of the census units and sub-units becomes essential. But there is no information regarding the types of maps used in the census prior to 1952/54. The 1952/54 census was based on maps of the survey of India and 1961 census was based on maps of Thums and Pragannas. The census of 1971 also completed without maps of panchayat level, though the country was divided into 14 zones, 75 districts, 16 town panchayats and 3915 village panchayats. For the first time in 1981 census, maps were prepared and used for all village panchayats and ward level maps for urban areas.

Sixthly, the most serious problem in the district and panchayat level analysis and intercensal comparison of population is the frequent change in the boundary of districts and panchayats. There is no such records of districts and panchayats upto 1941. In 1952/54 and 1961 censuses country was divided into 54 and 55 census districts respectively. In 1962 country was divided into 75 districts and the 1971 and 1981 population censuses were conducted using these districts as census districts. But the boundary of districts and panchayats does not tally in each census.

Finally, the Central Bureau of Statistics has adequate low level staff but high level and technical personnel are inadequate. For the effective planning and operation of censuses, the role of the experienced personnel becomes very important and the frequent transfer of such personnels hinders the smooth planning and operation of the censuses.

Due to these lackings in the population census of Nepal, the quality of census data are not fully reliable and comparable one census to another.

VITAL REGISTRATION SYSTEM

The next source of population data is vital registration system. This system deals with the registration of vital events of the people. Vital events includes live births, deaths, foetal deaths, marriages, divorces, adoptions, legitimations, recognitions, annulments and legal separations. In any society these events occur continually, so such events are continually recorded. This recording or registration of vital events is known as the vital registration system.

The registration of vital events was practiced first in France in the year 1308 A.D. and in Spain it was introduced in 1497. In England the registration of births, deaths and marriages were started in 1538. 1538 onwards the Parish Clerks at the time of plague used 'Bills of Mortality' a weekly statement showing the number of deaths and causes of death. Legally this system was introduced in Sweden in the year 1748. In 1874 penalty system for failure to register births were started in England and compulsory registration of still-births was not enforced until 1926.

Today, most of the countries of the world have introduced vital registration system legally. In Nepal the registration of vital events was introduced in 1962 for the first time through the enactment of the village panchayat law of 1962. But the system did not work. After that Central Bureau of Statistics (CBS) made an attempt to start vital registration system in 1964. But the practice was also discontinued. So the government of Nepal felt strong need to regularise the vital registration system. Under the Births, Deaths and Individual Events Registration Act 1976, a separate department named 'Panjikadhikariko Karyalaya' (Office of the Registrar General) was established. This office fell under the jurisdiction of Home Ministry.

In 1977 this system was implemented in ten districts covering registration of births, deaths, marriages, divorces and migration and aimed to cover all districts upto 1987. But it was implemented in seven districts, eight districts, nine districts and six districts in 1978, 1979, 1980, 1981 respectively and reached altogether 40 districts covered by this programme. After 1981 this system has not been implemented even in a single district.

The data recorded by this system are not systematic and complete. All the events are low reported and the data generated might not be used in statistical analysis. Recently, National Commission on Population has started a new programme 'Vital Events and Civil Registration' on a sample basis in Parsa and Bara districts.

Causes to Low Coverage in Vital Registration System

It is well accepted that huge amount investment, greater people's participation and a long time span is needed for better and successful implementation of the vital registration system. Basically there are three major reasons for the low coverage in the vital registration system.

Organisational and Administrative Problems

The organisational and administrative problems which are responsible for low coverage in the vital registration system are:

- The Central Registrar Office fall under Home Ministry and Local Registrars are under the Ministry of Panchayat and Local Development, so the Central Registrar Office has no direct control over the local registrars, which must have affected the coverage of vital registration;
- The manpower engaged in this system are inadequate and they are not trained; and
- Appropriate physical facilities are not available to the Central as well as local registrars.

Socio-economic Problems

The main socio-economic problems faced by vital registration system are:

- Without better understanding the importance of vital statistics as a source of basic population data, people are reluctant in registering vital events;
- Lack of immediate or direct economic benefits from the certificates they get in registering vital events;
- Lack of transportation and communication; and
- Low literacy and poor publicity of the programme.

Monetary Problems

Monetary problem is the main problem which is responsible to low coverage of the registration of vital events and to cover only few districts. The system was introduced with the monetary assistance of United Nations Fund for Population Activities (UNFPA). After few years the assistance was discontinued, because the government of Nepal failed to achieve the stage of basic data information on population. Then the government of Nepal was not able to operate promotional activities of the system through its own sources.

SAMPLE SURVEY

Besides the population census and vital registration system, many countries in the world have been collecting population data through nationally organised sample surveys. This method produces the same kind of information as the other two techniques. But the information often much more detail since it is based on a small sample rather than on the total population. Population data were collected through sample surveys

and some estimates were made of its size, growth, structure and characteristics in those countries where no census was conducted. Even in countries where regular census operation are conducted the need for collection of population data through small survey is felt, because census is taken in most countries only once in ten years.

The data obtained from sample surveys are more reliable than census data, because in a sample survey data were collected through well trained personnel and carefully prepared questionnaires on a specific aspects. Sample survey is essential for the study of a specific aspects of population which can never be obtained from a census or vital registration system. The data can be collected and summerised more quickly with a sample than with a complete count, and is less costly than it. Lastly, sample survey is a vital consideration when the information is urgently needed.

Some National Demographic Sample Surveys in Nepal

The government of Nepal had conducted some national level sample in the field of population to meet specific national needs of the country through its different departments, which are as follows:

1. Demographic Sample Survey (DSS) 1974/75, 1976, 1977/78 and 1986/87.
2. Nepal Fertility Survey (NFS) 1976.
3. Mid-term Population Sample Survey 1976.
4. Post-enumeration Sample (PES) Survey. 1981.
5. Nepal Contraceptive Prevalence Survey 1981.
6. Fertility and Mortality Survey 1984.
7. Nepal Fertility and Family Planning Survey 1986.

Demographic Sample Survey (DSS)

Central Bureau of Statistics (CBS) had conducted Demographic Sample Survey in 1974/75, 1976, 1977/78, 1986/87 with the financial support of United Nations Fund for Population Activities (UNFPA) and technical assistance from United Nations Department of Technical Cooperation for Development (UNDTCD). These surveys were conducted in order to estimate the population growth rate of Nepal and its components namely fertility, mortality and migration (both internal and international) in Nepal. Whereas the DSS 1986/87 is more comprehensive in terms of coverage and scope of analysis than the previous DSS of Nepal. All the DSS conducted in Nepal are longitudinal surveys used multi-round follow-up method. The sample size of the DSS 1974/78 constituted about 6 percent of the total population whereas the DSS of 1986/87 consists of altogether 8,640 households.

Nepal Fertility Survey (NFS) 1976

The Nepal Fertility Survey 1976 was the first national level survey carried out by the Family Planning and Maternal Child Health (FP/MCH) Project in cooperation with World Fertility Survey. The NFS was based on multi-stage probability sample of 5,940 ever married women. This survey produced fertility and family planning data that have utilised in programme planning and evaluation. Before the NFS 1976 there were hardly any reliable data on fertility, mortality, nuptiality and contraception. It provides baseline data on these parameters.

Mid-term Population Sample Survey 1976

The Mid-term Population Sample Survey 1976 is an intercensal population survey first of its kind. The primary objective of this survey is to provide up-to date estimates of population by age and sex, economically active population by profession, literacy, migration and other miscellaneous statistics. Its secondary objective is to establish some trends for future population sample estimation by drawing representative sample to get reliable national estimates. The sample size of this survey was 3.5 percent of the total population of Nepal. The survey covers all 75 districts of the country. The result of this survey is presented with 20 tables including 4 tables on migration.

Post-enumeration Sample (PES) Survey 1981

In order to assess the quality of data particularly the coverage error of the censuses, post-enumeration quality check survey is usually conducted soon after the census is over. Unfortunately, the population censuses of Nepal were not subject to post-enumeration quality check until 1981. Only in 1981 census post-enumeration survey was conducted but its findings were in suspect. The PES sample was drawn from 10 strata representing urban and rural area of the country.

Nepal Contraceptive Prevalence Survey (NCPS) 1981

The Nepal Contraceptive Prevalence Survey was conducted by the Nepal Family Planning and Maternal Child Health Project of the Ministry of Health. It is the second national survey conducted by the project. The NCPS was undertaken with technical and financial support from USAID and Westinghouse Health Systems. The major objective of NCPs was to collect information regarding various aspects of contraception in Nepal to help programme managers evaluate and monitor the ongoing family planning programme. In this survey about six thousand eligible currently married women in the sample were interviewed to estimate different fertility and family planning parameters at the national, regional and urban-rural levels. The response rate was 99.2 percent.

Fertility and Mortality Survey 1984

The Fertility and Mortality Survey 1984 was conducted by New Era for National Commission on Population. The purpose of the survey was

to determine and delineate the factors influencing fertility and mortality by geographic regions and socio-economic groups. The study consists of a nationally representative sample of 6,184 evermarried women in the reproductive ages (15-49 years). However, only 80 percent of eligible respondents could be successfully interviewed.

Nepal Fertility and Family Planning Survey (NFFS) 1986

The NFFS 1986 is the third and recent demographic sample survey carried out by the Nepal FP/MCH Project. This survey was conducted under the financial assistance of United Nations Fund for Population Activities (UNFPA) and technical assistance from United Nations Department of Technical Cooperation for Development (UNDTCD). A total of 5,150 eligible currently married women (15-50 years) were identified for individual interview. But among them only 98.1 percent were successfully interviewed in this survey with two percent non-response rate. The NFFS provides data to measure changes in levels, trends and patterns in Nepalese demography during the last decade (1976-86). This survey also collected detailed information on reproductive and contraceptive behaviour and has attempted to collect high quality data as far as possible through extensive training, field supervision and quality control measures. The NFFS provides data and analysis on nuptiality, fertility, infant mortality, family planning and fertility preference.

OTHER SOURCES OF POPULATION DATA

Apart from these major sources, some reliable data and information can be available from other sources. The partial official registers that are less widely used for demographic studies, registers or other records maintained by private agencies, records that apply directly to things but indirectly to the people. Again statistics from these sources are sometimes used for population estimates. These sources are:

- Records of Malaria Eradication Programme
- Records of Election Commission;
- Migration Records;
- Administrative Records;
- Records of Social Insurance Scheme; and
- Hospital Records, etc.

CONCLUSION

Today, population growth is a major concerning subject in the world. Various conferences as well as seminars on different aspects of population are being held in different parts of the world. But the growth as well as other characteristics of population differs country to country, which is known mainly from periodic population censuses, vital registra-

tion system and national sample surveys conducted by the government of all countries.

Among these three major sources of population data, the history of census is very long and known as a major and best source of data collection. Whereas vital registration system and sample surveys are the less important sources than population census.

In Nepal the history of sources of population data is not very long. Officially covering the whole country population census was started only in 1911 A.D. and after that the government is conducting population censuses approximately in every one decade. But the population census of 1952/54 is considered as the first scientific census of Nepal. The quality of data differs in each census, thus intercensal comparison is very difficult.

Vital Registration System in Nepal started in 10 districts only in 1977, and the aim of the government was to cover all district upto 1987. But the government become unsuccessful to fulfil its aim and the data collected from this system are not systematic and reliable. Similarly, the first national sample survey was Nepal Health Survey (NHS) conducted in 1965/66. After that several national sample surveys on the field of population are conducted by the different departments of the government.

SELECTED REFERENCES

- Bhande, Asha A. and Kanitkar, Tara (1985), Principles of Population Studies, Bombay: Himalaya Publishing House.
- Bourini, A.K. (1977), The Demographic Sample Survey of Nepal, Kathmandu: Central Bureau of Statistics.
- Central Bureau of Statistics (1987), Demographic Sample Survey 1986/87, First Report, Kathmandu: HMG, Central Bureau of Statistics.
- (1985), Intercensal Changes of Some Key Census Variables Nepal 1952/54-81, Kathmandu: HMG, Central Bureau of Statistics.
- (1979), Mid-term Population Sample Survey 1976, HMG, Central Bureau of Statistics.
- (1987), Population Monograph of Nepal, Kathmandu: HMG, Central Bureau of Statistics.
- (1977), The Analysis of Population Statistics of Nepal, Kathmandu: HMG, Central Bureau of Statistics.
- (1978), The Demographic Sample Survey of Nepal 1977/78, Kathmandu: HMG, Central Bureau of Statistics.
- Chandan, R.C. and Sindhu, Manjit S. (1980), Introduction to Population Geography, New Delhi: Kalyani Publishers.

- Clarke, John I. (1977), Population Geography, Oxford: Pergamon Press.
- Ghosh, B.N. (1984), A Dictionary of Demography, New Delhi: Arnold-Heinemann Publishers (India) Pvt. Ltd.
- Hans Raj (1981), Fundamentals of Demography, New Delhi: Surjeet Publications.
- Kansakar, Vidya Bir (1977), Population Censuses of Nepal and the Problems of Data Analysis, Kathmandu: Centre for Economic Development and Administration, Tribhuvan University.
- Karki, Y.B. (1989), "Vital Registration System", unpublished paper presented at the seminar conducted by Central Bureau of Statistics.
- Nepal, FP/MCH Project (1987), Nepal Fertility and Family Planning Survey 1986, Kathmandu: HMG, NFP/MCH Project.
- (1983), Nepal Contraceptive Prevalence Survey 1981, Kathmandu: HMG, NFP/MCH Project.
- Premi, M.K. et al. (1983), An Introduction to Social Demography, New Delhi: Vikas Publishing House Pvt. Ltd.
- Shryock, Henry S. Siegel, Jacob S. and Associates (1971), The Methods and Materials of Demography, Vol. 1, U.S. Department of Commerce, Bureau of the Census.
- United Nations (1967), Asian Recommendation for the 1970 Population Census, New York: Economic Commission for Asia and the Far East.
- United Nations (1980), Population of Nepal, Bangkok: Economic and Social Commission for Asia and the Pacific.