

## **Quadrant II - Notes**

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**Module Name: Sources of demographic data in India: Census, Registration and Sample Surveys, Errors in demographic data**

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### **SOURCES OF DEMOGRAPHIC DATA IN INDIA**

The sources of demographic data in India are:

- (1) Census,
- (2) Civil Registration System, and
- (3) Demographic Surveys.

They are discussed as under:

#### **1. CENSUS**

The most important source of demographic data in India is Census. It provides valuable information about the country and its people at a given point of time.

The beginning of modern census in India in the year 1872 when it was conducted at different points of time in different parts of the country during 1867-72. According to Kingsley Davis, "It was just an auspicious beginning of census taking in India." It was based on "head counting" technique and was not synchronous. From 1881 onwards a complete and synchronous decennial censuses were conducted.

Till 1931, the census was conducted under the date system. Under it, a date was fixed for conducting the census. During that night every person in the house was counted whether he belonged to that family or not. Persons travelling in trains were counted by stopping trains at 6 a.m. and those present at railway platforms with tickets after 7 p.m. were also counted. This was a very defective system because the entire census was conducted throughout the night till early morning. It required a large number of trained enumerators who were not easily available.

In the 1941 census, the enumeration work was completed in one week. First, the house lists were prepared on the basis of which every person in a household present on the day of enumeration was counted. But any person not present at his residence on that day was counted where he

was available during that period. For the first time, information was collected on the number of children born with age, the age of the mother at the time of birth of the first child and literates in each family.

The 1951 Census was the first census which was conducted in independent India from February 9 to March 1, 1951. It was conducted by the Census Commissioner and his trained staff and enumerators appointed under the Census of India Act, 1948. It covered the whole of India, except Jammu and Kashmir. For the first time, it collected information relating to: (1) Married, bachelor and divorcees; (2) place of birth, age at the last date of birth; (3) mother tongue and other languages known; (4) sex of a person; (5) economically self-sufficient, partially self-sufficient and dependents; (6) employed, partially employed and self-employed, etc., (7) level of literacy and education; religion wise and tribe wise population; persons migrated from Pakistan, etc.

The 1951 Census Report discussed the growth and structure of the population, the threat posed by the alarming increase in population and the need for curbing the growth rate of population.

The 1961 Census, was conducted between February 10 to February 28, 1961 in the same manner as the 1951 census. It improved upon the previous census by collecting some additional information regarding scheduled castes/scheduled tribes and persons engaged in agriculture/industry or any other work, etc. Besides the whole of India, this census also covered Jammu and Kashmir for the first time.

The 1971 Census was conducted during March 10 to April 3, 1971. It was more comprehensive than the earlier censuses and collected additional information relating to:

- (1) A married woman regarding the place to which she belonged before marriage;
- (2) Main occupation and place of work;
- (3) Nature and period of work; educational qualifications separately for graduates and technocrats with such details as year of passing, foreign visits, research done, published work, etc.

The 1981 Census was conducted between February 9 and March 5, 1981. This census also collected some additional information as compared with the 1971 census relating to the following:

- (1) Housing and household amenities;
- (2) Availability of toilet facilities in urban houses;

(3) A child in the age group 0-4 was considered as illiterate;

(4) Introduction of concepts and definitions relating to economic questions in general and work in particular.

The 1991 Census was conducted between February 9 and February 28. The houseless people were enumerated on the night of February 28. A revisional round was carried out during March 1 to March 5, 1991.

In Jammu & Kashmir, the enumeration work was done during August-September and in snow covered and inaccessible areas in September-October, 1991. The following additional information was collected in this census:

(1) The house list was expanded to cover some more information relating to housing and household amenities.

(2) For the first time, persons were asked about the type of fuel used for cooking.

(3) The availability of toilet facility in rural areas for the household.

(4) A question was included in the Individual Slip on ex-servicemen and their status as pensioner or non-pensioner.

(5) Children in the age group of 0-6 years were counted as illiterate as against 0-4 years in the previous census.

(6) The nature of women's work was included for the first time.

The **2001 Census** was conducted between February 9 and February 28, with the reference date as 00.00 hours of 1st March, 2001 for household and institutional household. The 2001 census was conducted in two phases: (1) House listing Operations, and (2) Population Enumeration. During the House listing Operations the buildings, census houses and households were identified and systematically listed in the Household Schedule. This work also included the identification of boundaries of the enumeration block and the preparation of Layout Map by 8th February, 2001. In the second phase, Population Enumeration was done for each household.

After completing the Population Enumeration, in the remaining process of Census operations, the enumerator submitted to the Office - In charge of his respective district the Enumerator's Abstract of his Enumeration Block and Household Schedule forms for normal, institutional and houseless households separately. The District Officer sent these to the State headquarters who in turn forwarded the entire material to the Office of the Registrar General and Census Commissioner, Government of India, New Delhi. The Census commissioner, Govt. of India compiled the entire

information and published it in the form Census Tables with a summary relating to each.

The **2001 Census** was historic and epoch-making, being the first census of the 21<sup>st</sup> century and the third millennium. It reveals benchmark data on the state of abundant human resources available in the country.

## **CENSUS 2011**

In India, population census is the total process of collecting, compiling and analyzing demographic, economic and social data pertaining at a specific time, of all persons in a country. It provides a snapshot of the country's population and housing at a given point of time. The logo of Census-2011 was OUR CENSUS, OUR FUTURE. The Census-2011 is the 15<sup>th</sup> census of India since 1872. It was held in two phases:

1. House Listing and Housing Census (April to September, 2010)
2. Population Enumeration (February 9 to 28, 2011)

## **Objectives**

Census is the biggest source of comprehensive data on demography, economic activity, literacy, education, urbanization, migration, language, religion, housing and housing amenities, scheduled castes and scheduled tribes, birth rates, death rates, fertility, mortality, health factors etc. Thus, it provides a snapshot of the country's population.

The main objectives of the Census-2011 were complete coverage and accurate enumeration of the people. Key points of the objectives were:

- Who and how many?
- What do they do and how often?
- Kind of houses they live in.
- Household amenities and assets; and
- Individual level information.

## **Mapping**

The availability of accurate maps as per the latest administrative boundaries is a pre-requisite for the census. Census-2011 utilizes the latest GIS software to produce digital maps. The latest addition in Census-2011 is the preparation of satellite imagery based digital maps at the street and building level in 33 capital cities of the country.

## **Pre-census Activities**

There are some important key points as given below:

1. Draws up a frame for population enumeration.
2. Identifies each building, structure and other places to find out its usage-residential, non-residential or any other purpose.
3. Collects data on housing conditions, amenities and assets-valuable for planning.
4. e-learning modules on difficult concepts and power-point presentations.
5. List of administrative units (e.g., states, districts, sub-districts, towns and villages) finalized.

## **2. CIVIL REGISTRATION SYSTEM**

The Civil Registration System is another important source of demographic data in India. The registration of deaths was started in India by the British in the middle of the 19<sup>th</sup> century. The death rate was very high in those days due to bad sanitary and public health conditions and lack of adequate medical facilities. The Sanitary Commissioner of the Government of India in his report in 1863 recommended the collection of information of death rate and causes of diseases leading to deaths in order to undertake sanitary reforms. The system of registration of deaths and causes responsible for them was started in the Central Provinces of British India in 1866. The Bengal Births and Deaths Registration Act, 1873 was the first law to be implemented which was later extended to Bihar, Orissa and Punjab. The registration of births and deaths was efficiently done in Bengal and Punjab.

It was in 1886 that the Births, Deaths and Marriages Registration Act was enacted for the whole of British India. But this law was not effective because registration was optional under it. However, registration of births and deaths continued in towns and cities with Municipal Committees. But in rural areas, the registration was done under the Revenue Codes and Police Manuals in those cases which fell under their jurisdiction. The main aim of such registration was to collect information in order to control diseases and epidemics.

The registration of births, deaths and marriages in India began in right earnest with the establishment of the Office of Registrar General and Census Commissioner in May 1949. It has the Vital Statistical Division which collects reliable data of births and deaths and evaluates the methods of data collection by different government agencies. It also holds meetings and discussions at different levels with State organisations to make the registration method more effective and reliable.

In India at present, it is compulsory to inform and register births and deaths. The information regarding birth or still birth has to be registered within 7 days of the event and regarding death within 2 days. The registration is done by Municipal Committees, Municipal Corporation, Town Area Committees, and Notified Area Committees in towns throughout India. The same work is being done by the Village Panchayats in rural areas. These, in turn, send the data to the Vital Statistical Division

of the Office for the Registrar General and Census Commissioner for tabulation and publishing.

Conclusion, despite the compulsory registration of births and deaths in India, not all birth and deaths are reported, especially in rural areas. About 70 per cent of population still resides in villages where people are mostly illiterate. They do not understand the importance of registering these vital events. There is little need for birth and death certificates for them.

### **3. SAMPLE SURVEY**

Sample survey is an important method of collecting demographic data in India. In a sample survey, information is collected from a few members (sample) of population for the purpose of finding out fertility, mortality, growth, etc. of population which is then applied to the population as a whole. It is a cheaper method than the census covering the entire population. A sample survey can also be held at a short interval than a census of population.

The National Sample Survey (NSS) was set up in 1950 to conduct sample surveys for the collection of data relating to some social and economic aspects of the Indian economy. In the initial rounds, it collected information about fertility, mortality, population growth, family planning, etc. among other surveys. In 1970, the NSS was reorganised into National Sample Survey Organisation (NSSO) which does not carry out sample surveys relating to population in India.

Earlier in 1963-64, the Sample Registration System (SRS) was started in India under the Registrar General of India to provide estimates of birth and death rate and growth rate of population. The Sample Registration System is a large scale demographic survey which is conducted in India at the national and sub-national levels, separately for rural and urban areas.

Under this system, continuous enumeration of births and deaths is done by a resident part time enumerator who is generally a teacher and works as a field investigator, followed by an independent survey every six months by an official. The data obtained through these operations is matched. There are reverified procedures of this fieldwork for unmatched and partially matched events. After re verifying the data, unduplicated count of births and deaths are collected.

In 1964-65 on a pilot basis, the Sample Registration System was started in a few selected States by the Office of the Registrar General of India. During 1969-70 this system became fully operational which covered about 3,700 sample units. After that the sample size has been increased periodically. Recently, the frame was updated on the basis of 1991 Census data in 2007-2008. Every year sample survey results are published in June and October which indicate vital rates.

In rural areas, the sample unit is a village or a segment of it, if the village has a population of 1500 or more. The sample unit in urban areas is a census enumeration block with a population between 750 and 1000. At present the Sample Registration System covers 4,436 and 2,235 sample units in rural and urban areas respectively. Thus 6,671 sample units (1.1 million household and around 6 million population) has been covered by SRS in all the States and Union Territories of India.

The Sample Registration System is one of the reliable methods of collecting population data in India in-between two population censuses.

## **ERRORS IN DEMOGRAPHIC DATA**

Despite of tremendous efforts to improve the quality of data in different population census, it suffers from major limitations hampering extensive use of census data in micro-level planning and programme implementation.

The nature and pattern of coverage and contents errors and changing definitions of certain tangible indicators over different census restrict extensive use of these data in tracking the progress in millennium development goals set for India.

### **Common Sources of Errors**

1. Coverage
  - a. Omissions
  - b. Duplications
2. Content
  - a. Non-responses
  - b. Influenced responses : Interview effect, Respondent effect

**a. Omissions:** Very mobile populations or people who spend a very limited amount of time in their home may not be counted during the census operations. Some persons may refuse to participate in the census. Incomplete mapping and delineation of enumeration areas. Difficult-to-reach populations.

**b. Duplications:** People who commute between two different households. People on long term staying in institutions. Members of defence forces on long-term positioning away from their family. Persons who die before census reference date. People who maintain more than one residence such as migrants, persons in hospitals, students, some ethnic groups.

**c. Non-Response:** If a specific group of people do not answer to a specific question, the aggregated result is biased. Non-Response may be classified into three types:

- i. Those unable to respond
- ii. Absentees
- iii. Refusals

- i. Unable to respond /Language Difficulties:** Some potential respondents may be illiterate or cannot understand the language used in the questionnaires. Unless such problems are dealt with, by translating questionnaires and/or engaging multi-language interviewers, bias could arise because those unable to answer may be 'special' in other ways. A different linguistic group might, for instance, have completely different lifestyle and customs.
  - ii. Absentees:** If a person is absent because she or he has moved away for a short period of time (less than 12 months), specific information may not be collected.
  - iii. Refusals:** Some persons may refuse to respond to some “sensitive questions.”
- d. Influenced Response:** Respondents will sometimes tend to over- or under-estimate due to perceived advantage.

**Example 1:** farmers might inflate their land holdings, by always rounding figures upwards, because they believe that the survey results will be used to allocate state aid.

**Example 2:** the farmers might deflate, by rounding down, in the hope of minimize taxation.