



## SOURCES OF POPULATION DATA

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### INTRODUCTION

Population is described as the entire collection of the people living in our town, state, region or in a country and the respective characteristics such as age, sex, marital status and gender. Population is an entire group regarding whom we are interested in drawing the conclusions. Basically the population data tell us about the number of people that are living or planned to be living in an area and it is also about the all the number of people belonging to different religions and races living in a specified area.

### SOURCES OF POPULATION DATA

The most important problem that the social scientists are facing now days is the collection of the accurate, reliable and relevant data. Basically, the subject matter of the population geography is so vast so that's why the population geographers require large variety and amount of data which pertains to all the attributes of the population. Although, the particular data which is being requires by the population geographers is also dependent upon the issue he is working upon. At the micro level the population geographers collect the primary data whereas on the macro level it is far more beyond the level of any individual to collect the data on all the attributes of the population. So is should say that it is very difficult for an individual to collect data for large area that's why a population geographer always prefer to look for other official sources for the collection of the data. The primary sources of the population data on the population size, characteristics and demographic structure are the census, projections, the registrations, migration reports and the surveys. Whereas, some of the statistics regarding the population can be produced in the form of secondary sources such as statistical abstracts indeed. In the regard of secondary sources for the collection of population data the United Nation Organization itself is the biggest producer of the Population data.

## POPULATION CENSUS

The population census which is regarded as the most important source of basic data for the population data and it is conducted either decennially or quinquennially. A census count offers us a spectrum of the population at a specific point in time covering a vast range of the economic demographic and social attributes of the very population. Once we have the process of census in our country then it became a continuous process and repeated in the country after every 5 to 10 years. In modern terms the census is defined as a process of collecting, compiling and publishing the economic, social and demographic data pertaining to all the individuals living in a country at any specific point in time. The first ever complete census of population of data has been conducted in 1881 on a uniform basis throughout the India. So that's why the census of 1881 has provided complete population data and demographic record for any comparable population. Even now days the modern census also faced a series of limitations according to population geographer Zelinsky countries that have low level of technological achievement faced the problems such as ignorance, suspicion and dishonesty have made the task of census very difficult to perform. Even though, these countries also faced the administrative problem of getting funds for conducting the census. Another most important limitation to the census is the frequent boundary modification both at the international as well as at the regional level. As we all know that the censuses always have a specific reference point in time so if we introduce any boundary modifications then it will strict the utility of census data. In those states where the census take place after every 10 year so in that gap of Ten years a remarkable change occurred in the population. So it is suggested that a sample surveys should be conducted in such countries in order to fill the gaps between the two censuses.

## THE SURVEYS

It is very difficult to distinguish between a census and the survey as there is no clear cut differentiation between both of them. Census is described as the complete national canvass of the whole population of the country whereas the canvass of the selected households with an idea of collecting information regarding demographic attributes and socio economic conditions is regarded as survey indeed. In fact, surveys are conducted for supplementing the census data. In the recent tears the surveys has been conducted in order to collect the information regarding the fertility, mortality, mobility, morbidity, under employment, welfare, health, education and unemployment. Such kind of surveys often include attitudinal question regarding the problems of the population. So we could say that the role of surveys is just to provide explanatory information to the population analysis. Both the private organizations and governments are very much engaged in conducting the surveys. The National Sample Surveys are conducted in the form of rounds and the each round covers several subjects but the emphasis is made on only one of the subject during a specific period.

## THE REGISTRATION

The practice of the population registration has been very common even before the emergence of the process of regular census. The Far East has a great demographic tradition of the population registration and its major function is to control the population. In this registration process the family is considered as the basic social unit for keeping record of the population. However, such a record keeping phenomena should have yielded a continuous population register but in reality the compilation has been never made or if made then in inaccessible

secret archives. Presently, in the modern world many countries have adopted the registration systems in order to keep the record of deaths, births, marriages, adoptions, divorces etc. In some states it is known as population registers for record keeping.

### **ADMINISTRATIVE RECORDS**

Basically, these are the statistics that are acquired from the different administrative process. These administrative records not only include the vital events that have been recorded in the civil registration system but it also includes the data on employment, deaths, births, education and health etc. well, the reliability of the data obtained from administrative records is dependent upon the completeness with the classifications and concepts that have been used in the census in order to collect population data. These administrative records are regarded as the by-products of the administrative records. The administrative data is collected due to the day to day operations of the organizations and there administrative files can be used as a substitute for census and surveys.

### **MISCELLANEOUS SOURCES**

Other than the sources mentioned above the population geographers also make use of migration reports, projections, estimates and linguistic reports. It has been observed that the United Nations is fulfilling the responsibility of collecting vital population data from the member countries. The Estimates are produced in a variety of ways means the estimates are produced from the continuous population registers under the systems of registration. Secondly, these estimates can also be gathered with the help of the sample surveys. Thirdly, we can also compute the estimates by carrying population from the previously made population census. Projections are basically related to the estimates of the population for the future. These projections can be made for the total population of the country or they can be made with respect to marital status, sex and age. Basically, the compilation of the projections at the international level is not as common as we have the compilation of the estimates. I should say that the estimates can also be calculated by taking the population from the previous census by the mathematical extrapolation of the past trends. Basically, the quality of the estimates is dependent on the type of the method used such as the estimates are mostly published in the national reports such as in the national statistical yearbooks. While, the population projections are related to the estimates of the population for the future.

### **ERRORS IN POPULATION DATA**

Actually, we are dealt with two common types of errors in the statistical data the Non Sampling & the Sampling error. It is very important for a researcher to be fully aware of these errors mentioned earlier most importantly the non sampling errors so these errors can be minimized or even eliminated from the population data collected. Basically, the non sampling errors are the errors that arose while the collection of the data. These kinds of errors exist in both censuses as well as in the sample surveys and they are very difficult to measure. These non sampling errors arose due to the defects in the sampling frame, the failure in identifying the target population the responses given by the respondents and data processing and reporting. If we talk about the defects in the sampling error which means that coverage error has been occurred. Although, there are two very common types of errors that is found in the census are coverage and content errors. These converge errors occur when there is wrong addition of

the units in the sampling frame. These errors are mainly caused by the reasons such as inaccuracy, duplication and old or out of date sampling frames. Then, the failure to identify the target population occurs when the target population is not defined clearly because of the use of the vague concepts. Response may occur from the data that have been recorded, requested and collected in an incorrect way. That data is the result of the inefficiencies in the questioners, the surveys, the respondent and the survey process itself. Now if we talk about the non responsive results in that case the data is not collected from the respondents. The proportion of these non respondents in the very sample is called the non response rate and it can be total or partial indeed. Processing occurs at different stages of the data processing such as the editing, capturing and cleaning of the data. Another error is Time period bias and this error is occurred when the survey or census in order to get the population data is performed at inappropriate time so that's why the correct and appropriate timing of survey is very important. We can minimize these non sampling errors if

- We tend to use the accurate and up to date sampling frame
- By selecting an appropriate time for conducting the survey
- Proper planning for follow up of the non respondents
- The questioner should be carefully designed
- Most importantly we need to device such good systems In order to capture the errors that occur during the collection of the population data and that system is regarded as data quality assurance systems.

Whereas, on the other hand the Sampling error is about the difference arose between the estimate which has been derived from the sample survey and the original true value that would come as a result of the census of the whole population. These sampling errors arose because the data that have been collected if from some part of it not from the whole population and these sampling errors are only restricted up to the sample surveys. These sampling errors can be measured from the sample data in the form of the probability sampling. The factors that affect most sampling errors are sample size, sampling fraction and the sample design. Biasness is also one of the reasons of the sampling error and such kinds of errors are considered as the systematic errors. We can minimize by applying the sampling techniques within the constraints of the available resources.

Most of the time the demographers use the population data in order to analyze and describe the evolution and the structure of the population. Basically, there is two type of data which is most used by the geographers. Basically, the population data comes in many forms and shapes but we classify it two main groups

- Type of data that provide information on stocks
- Type of data that provide information on the flows

The population data on the on the stocks give us a count of individual members of the population at a specific point in time. Basically, it stocks provide us with snapshot of the population size and its composition. The composition of the population includes age, gender and race. The data available on flows provide us with information on the exits and entries of population between the two specific points in time and such kind of information comes from the vital registration system which is one of the most important sources of the population data.

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