1.3 CONCEPTS/ DEFINITIONS

Demography is a joint word comprising 'demo' and 'graphy'. Literary speaking Demo means people and the word graphy is derived from the Greek word 'graphe' means writing, drawing or measuring. Thus, combine together (Demography is the scientific study of human populations, primarily with respect to their size, structure and change therein) In statistical terminology any collection of distinct elements is known as population or universe but in demographic language population means inhabitants of a particular area, though the term may on occasions be used for part of the inhabitants only, such as school going population, economically active population, married females etc. These groups are also known as sub-populations.

There are several branches of demography such as:

1. Descriptive demography
2. Formal or pure or theoretical demography or population analysis
3. Population studies
4. Economic demography
5. Social demography
6. Population genetics
7. Biometry or biometrics
8. Population theories
9. Population policy
10. Historical demography
11. Mathematical demography
12. Medical demography

Descriptive demography describes numbers, geographical distribution and general characteristics of human populations by means of population statistics. The treatment of quantitative relations among demographic phenomena in abstraction from their association with other phenomena, on the other hand, is known as **formal or pure or theoretical demography** and sometimes **population analysis** in restricted sense. When we study demographic phenomena in actual populations, the term **population studies** is often used. The study of demographic changes in relation to economic changes and vice-versa is called as **economic demography**. Like wise study of relationship between demographic phenomena and social phenomena is known as **social demography**. The study of distribution and transmission of hereditary characteristics of population is called as **population genetics**. **Biometry or biometrics** deals with the application of statistical methods to all forms of biological research. **Population theories** are designed to explain or predict the interaction between changes in population and economic, social, psychological or other factors; they include purely conceptual treatments Thus it must not be confused with theoretical demography. Population theories occasionally form the basis of **population policy** which deals with measures designed to influence population changes. **Historical demography** deals with study of the history of population changes. **Mathematical demography** deals with the applications of simple mathematical treatment to mathematical functions or models to empirical population data. The **medical demography** deals with the relationship between applied demography and fertility phenomena of human being. (Multilingual demographic dictionary).

2. MAJOR SOURCES OF POPULATION DATA

Major sources of population data in a country are:

1. Population census
2. Sample surveys
3. Vital statistics
4. Population registers

2.1 Population Census

2.1.1 Scope of census data

Census aims at complete coverage of population, this characteristic is termed as ***Universality***, although sometimes an element of sampling intrudes, with some respondents being asked broader range questions than other. Information is sought about each individual present within a defined geographic area at well defined point in time (***Simultaneity***), with some attempt perhaps also being made to obtain data on persons usually resident in the area but temporarily absent from it at that time. The questionnaire are prepared and asked to whole of population with uniformly trained enumerators under one administrative control, therefore census data is usually uniform. Complete coverage also means that detailed cross tabulation can be prepared which are not subjected to any errors. Moreover, for the events and elements that are not asked universally the size of the sample invariably so large that the estimation is subjected to very low sampling errors. Population censuses are the primary sources of denominators required for estimation of demographic rates and ratios. Countries with reliable vital registration system can optimally exploit vital events statistics without regular censuses. For many demographic indices computation of a numerator comes from a vital register with population at risk as denominator from a census. Often these indices are estimated by using survey data as the survey yielding both numerator and denominator. But during census year the ideal is that the survey data should be combined with appropriate census data. For the census year census populations may be used as denominator perhaps with small adjustment depending upon the timing of the census during the year. For other years denominator normally may have a census based adjustments with vital and other (migration) events that have modified to that base in the interim.

2.1.2 History of Census Taking

Census taking is an established institution in Pakistan and even in Indo-Pak subcontinent. The first census was conducted, in the area now comprising Pakistan, in 1855, second in 1868 and third in 1881[4]. The first two censuses of 1855 and 1868 concerned administrative divisions so different that any comparison with these was out of the question. The enumeration of the 1881 Census was carried out on a scientific basis and since then the census has been carried out regularly and systematically after every ten year. The exception was 1972 and 1998 Censuses, which were due in 1971 and 1991 respectively.

Before 1941 Census information recorded on household schedules were transcribed first on 'Individual Slips' for further processing the data. That transcription method alone sometime took nearly a year, which caused delay in releasing census results. In 1941 Mr. Yeats, the then Census Commissioner changed the method of recording census information. He introduced 'Individual Slip' for enumeration purpose rather than 'Household Schedule', which saved time of transcription and ensured possibility of sorting of the same information collected from the field. This practice continued up to the 1961 Census. Thereafter, because of replacement of hand sorting and punching with computer hardware the 'Household Schedule' once again replaced the 'Individual slip'. This permitted direct entry of all individuals from Household Schedule to computer input device by keying the information.

This conventional system of data entry has now been replaced by scanning of information from 'Household Schedule' to computer input device, which allows maintaining of very high accuracy(may be 100 percent if the questionnaire sheets meet fully the data scanning requirements) in data entry in minimum possible time. Thus, the present set-up has become more cost-effective and time saver.

Census is a total process of collecting, compiling, processing, analyzing and presenting data pertaining to all individuals living in a well-defined territory or a part thereof at one point of time with regular interval. From the above definition it is clear that census has four main features i.e. simultaneity, individuality, universality and periodicity. These will be examined here in the light of the censuses ever taken in Pakistan since its inception.