**Module : Social & Human Sciences**

**Lesson 04 : Demography**

Introduction

**Demography** is the statistical study of human populations. It can be a very general science that can be applied to any kind of dynamic living population, i.e., one that changes over time or space. It encompasses the study of the size, structure, and distribution of these populations, and spatial and/or temporal changes in them in response to birth, migration, aging and death. “Demo” means “the people” and “graphy” means “measurement”.

Demographic analysis can be applied to whole societies or to groups defined by criteria such as education, nationality, religion and ethnicity. Institutionally, demography is usually considered a field of sociology, though there are a number of independent demography departments. **Formal demography** limits its object of study to the measurement of populations processes, while the broader field of social demography population studies also analyze the relationships between economic, social, cultural and biological processes influencing a population. The term demographics refers to characteristics of a population.

**1- Data and methods :** There are two types of data collection — direct and indirect — with several different methods of each type.

**1-a- Direct methods**

Direct data come from vital statistics registries that track all births and deaths as well as certain changes in legal status such as marriage, divorce, and migration (registration of place of residence). In developed countries with good **registration systems** (such as the United States and much of Europe), registry statistics are the best method for estimating the number of births and deaths.

**A census** (poll, survey) is the other common direct method of collecting demographic data. A census is usually conducted by a national government and attempts to enumerate every person in a country. However, in contrast to vital statistics data, which are typically collected continuously and summarized on an annual basis, censuses typically occur only every 10 years or so, and thus are not usually the best source of data on births and deaths. Analyses are conducted after a census to

estimate how much over or undercounting took place. These compare the sex ratios from the census data to those estimated from natural values and mortality data.

Censuses do more than just count people. They typically collect information about families or households in addition to individual characteristics such as age, sex, marital status, literacy/education, employment status, and occupation, and geographical location. They may also collect data on migration (or place of birth or of previous residence), language, religion, nationality (or ethnicity or race), and citizenship. In countries in which the vital registration system may be incomplete, the censuses are also used as a direct source of information about fertility and mortality.

**1-b- Indirect methods**

Indirect methods of collecting data are required in countries and periods where full data are not available, such as is the case in much of the developing world, and most of historical demography. One of these techniques in contemporary demography is the sister method, where survey researchers ask women how many of their sisters have died or had children and at what age. With these surveys, researchers can then indirectly estimate birth or death rates for the entire population. Other indirect methods in contemporary demography include asking people about siblings, parents, and children. Other indirect methods are necessary in historical demography.

**2- Science of population**

Populations can change through three processes: fertility, mortality, and migration. ***Fertility*** involves the number of children that women have and is to be contrasted with fecundity (a woman's childbearing potential). ***Mortality*** is the study of the causes, consequences, and measurement of processes affecting death to members of the population. Demographers most commonly study mortality using the Life Table, a statistical device which provides information about the mortality conditions (most notably the life expectancy) in the population.

***Migration*** refers to the movement of persons from a locality of origin to a destination place across some pre-defined, political boundary. Migration researchers do not designate movements 'migrations' unless they are somewhat permanent. Thus demographers do not consider tourists and travelers to be migrating. While demographers who study migration typically do so through census

data on place of residence, indirect sources of data including tax forms and labor force surveys are also important.

Demography is today widely taught in many universities across the world, attracting students with initial training in social sciences, statistics or health studies. Being at the crossroads of several disciplines such as sociology, economics, epidemiology, geography, anthropology and history, demography offers tools to approach a large range of population issues by combining a more technical quantitative approach that represents the core of the discipline with many other methods borrowed from social or other sciences. Demographic research is conducted in universities, in research institutes as well as in statistical departments and in several international agencies