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DEPARTMENT OF BBA

FYBBA

SEM-I

SUBJECT – Business Demography

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Chapter3. Concept of Demography

UNIT-1

Concept of Demography

MEANING AND DEFINITION OF DEMOGRAPHY

The word 'Demography' is a combination of two Greek words, 'Demos' meaning people and 'Graphy' meaning science. Thus, demography is the science of people.

According to the UN Multilingual Demographic Dictionary,

“Demography is the scientific study of human populations, primarily with respect to their size, their structure and their development.”

IMPORTANCE AND NEED OF DEMOGRAPHY

1. For the Economy- The study of demography is of immense importance to an economy. Population studies help us to know how far the growth rate of the economy is keeping pace with the growth rate of population. If population is increasing at a faster rate, the pace of development of the economy will be slow. The government can undertake appropriate measures to control the growth of population and to accelerate the development of the economy. Rapid population growth reduces per capita income, lowers the standard of living, plunges the economy into mass unemployment and under employment, brings environmental damage and puts a burden on existing social infrastructure. Population studies highlight these problems of the economy to be solved by the government.
2. For Society- Population studies have much importance for the society. When population is increasing rapidly, the society is faced with innumerable problems. Shortages of basic services like water, electricity, transport and communications, public health, education, etc. arise.
3. For Economic Planning- Data relating to the present trend in population growth help the planners in formulating policies for the economic plan of the country. They are kept in view while fixing targets of agricultural and industrial products, of social and basic services like schools and other educational institutions, hospitals, houses, electricity, transport, etc. Population data are also used by the planners to project future trends in fertility and to formulate policy measures to control the birth rate
4. For Administrators- Population studies are also useful for administrators who run the government. In under-developed countries, almost all social and economic problems are associated with the growth of population. The administrator must tackle and find solutions to the problems arising from the growth of population. There are migration and urbanization which lead to the coming up of shanty towns, pollution, drainage, water, electricity, transport, etc. in cities.
5. For Political System- The knowledge of demography is of immense importance for a democratic political system. It is on the basis of the census figures pertaining to different areas that the demarcation of constituencies is done by the election commission of a country. The addition to the number of voters after each election helps to find out how many have migrated from other places and regions of the

country. Political parties are able to find out from the census data the number of male and female voters, their level of education, their age structure, their level of earning, etc. On this basis, political parties can raise issues and promise solutions in their election manifestos at the time of elections.

COMPONENTS OF DEMOGRAPHY

The 3 basic components of demography are:

- **Migration-** The movement by humans from one area to another is known as migration. The humans who undergo migration are called migrants. However, according to the International Organization for Migration, there isn't a universally-accepted definition for a migrant. Nevertheless, the United Nations defines migrant as an individual who has resided in a foreign country for more than a year irrespective of the causes, voluntary or involuntary. An important distinction is that people who migrate into a territory are called immigrants, while people who leave a territory are called emigrants. Under such a definition, those traveling for shorter periods of time as tourists or business persons would not be considered migrants, immigrants or emigrants.
- **Fertility-**Fertility is the number of children a woman bears during her Reproductive years and is related to social behaviors and personal decisions. A typical measurement used for fertility is the crude birth rate, which is the number of live births in a given year for every 1,000 people in a population. Demographers calculate the crude birth rate by dividing the number of live births in a year by the total population and then multiplying the result by 1,000.
- **Mortality -**The death rate is known as the mortality rate, which is measure of the number of deaths in a population. Mortality rate is typically expressed in units of deaths per 1,000 individuals per year. For example, if there is a mortality rate of 9.5 in a population of 1,000, this would mean 9.5 deaths per year in that entire population or 0.95% out of the total. The mortality rate can increase due to epidemics, childhood diseases and war. However, it can also decrease. For example, antibiotics and improvements in medical care have resulted in decreases in the mortality rate.

SCOPE OF DEMOGRAPHY

Subject Matter of Demography

- **Size and Shape of Population**

Generally, the size of population means the total number of persons usually residing in a definite area at a definite time. The size and shape of population of any region, state or nation are changeable.

- **Aspects Related to Birth Rate and Death Rate**

Birth rate and death rate are the decisive factors that influence the size and shape of the population and therefore their importance in population studies is crucial.

- **Socio-Economic Problems**

Out of the many problems relating to population growth, the effects of high density due to industrialization in the urban areas are of more importance as they affect the socio-economic life of the people. Problems like slum areas, polluted air and water, crime, addiction to liquor, juvenile delinquency, and prostitution, are also important subjects of study in demography

- Quantitative and Qualitative Aspects

Along with the quantitative problems of population, the qualitative problems also form part of population studies. Moreover, the study of demography includes the availability of physicians in the total population, number of hospitals, the number of beds in hospitals, expectation of life at birth, daily availability of minimum calories, resistance power, advertisement of family planning programme and its development, the changes brought in the attitudes of people regarding child birth and adequate medical facility for delivery, etc.

Distribution of Population

- Theoretical Model

There are vast theoretical aspects of population studies which include the various theories of population propounded by sociologists, biologists, demographers and economists, and theories of migration and urbanization.

- ❖ Practical Aspects

Practical aspects of population studies relate to the various methods of measuring population changes such as the census methods, age pyramids, population projections, etc.

- ❖ Population Policy

Population policy is an important subject of demography especially in the context of developing countries. It includes policies for population control, and family planning strategies; reproductive health, maternal nutrition and child health policies; policies for human development of different social groups, etc., and the effects of such policies on the total population of the country

Micro and Macro Study

Micro demography is the narrow view of population studies. Among others, Hauser and Duncan include the study of fertility, mortality, distribution, migration, etc. of an individual, a family or group of a particular city or area or community. A majority of writers take the macro view of population studies and include the qualitative aspects of demography. To them, demography includes the interrelationships between populations and social, economic and cultural conditions of the country and their effects on population growth.

- ❖ Demography as a Science- For any discipline to be a science:

(i) It must be a systematized body of knowledge.

- (ii) It must have its own laws or theories.
- (iii) They can be tested by observation and experimentation.
- (iv) They can make predictions.
- (v) They can be self-corrective; and
- (vi) Have universal validity.

FACTORS AFFECTING FERTILITY AND MORTALITY RATE Mortality Rate

Mortality or death is affected by a variety of factors.

They may be biological, physiological, environmental, etc. From the demographic viewpoint, mortality is related to the age and gender of an individual. There is infant mortality, mortality of woman at the time of delivery, mortality of man due to cancer of the prostate, etc. In its Manual on the International Statistical Classification of Causes of Death, the World Health Organization (WHO) places them under the

Following five categories:

1. Infectious, parasitic and respiratory diseases
2. Cancer
3. Diseases of the circulatory system
4. Violence and accidents
5. All other causes such as diseases of the digestive system.

Fertility Rate

- Biological factors- Biological factors like age and sex are very important in affecting fertility. Fecundity depends on the woman and her age. It is only the woman who can bear a child with the onset of menstruation. This process stops when menopause begins. Thus, the onset of menstruation and menopause are the biological limits to fertility in the case of a woman. The start of the first menstrual period, known as menarche, depends on climate, health, food, etc.
- Physiological factors- There are physiological factors which affect the fecundity period of women. They are in fact, the periods in the reproductive pattern of a woman when she is not able to conceive and is sterile. Sterility in a woman may be due to a number factor. In societies where a girl is married at an early age, the interval between cohabitation and the birth of the first child is longer because the girl is not developed physically to bear the child.

- Social factors- Social factors like religion, caste, race, family system, education, status of woman, etc. also influence fertility in a country.
- Economic factors- Economic factors like urbanization, occupation of the family and overall economic conditions have much effect on fertility.
 - i. Urbanization affects fertility of the people differently as compared with rural areas. Fertility declines with urbanization. This is caused by lack of accommodation and high cost of living in the case of those who migrate from rural areas.
 - ii. Occupation determines the economic condition of a family which, in turn, affects fertility. Manual workers have high fertility because to supplement the family income, they want more working hands in the form of children. But those engaged in business, trading and in white-collar jobs have low fertility.
 - iii. The economic conditions of a country influence fertility considerably. In developed countries, per capita income and standard of living being high, fertility is low. People prefer to maintain their high standard of living instead of having more children which involve high costs in bringing up and educating them. But the poor in developed countries have high fertility because they want more children to support the family.
- Family planning- One of the important factors affecting fertility is family planning. Among other factors, developed countries have been able to bring down their fertility rates by voluntarily adopting family planning devices. But in underdeveloped countries, both men and women are reluctant to use contraceptives due to social taboos and restrictions, ignorance, poverty, proper education, etc.

MEASURES TO CALCULATE FERTILITY RATE

1. Crude Birth Rate (CBR)

CBR is a ratio of total registered live births to the total population during a specific year, multiplied by 1000

$$CBR = \frac{\Sigma B}{\Sigma P} \times 1000$$

B is number of live births in a year

P is the mid-year total population

2. General Fertility Rate (GFR)

Contrary to crude birth rate this measure uses the number of women of child bearing age in a population as a base for the calculation rather than total population. It is a great improvement over CBR

because in it only the population of reproductive age group is taken into consideration. It considers only the female population of reproductive age group.

$$GRR = \frac{\Sigma B}{\Sigma F} \times 1000$$

Here, B= registered live births in the year,

F= midyear female population (15-49 yrs.)

3. Age Specific Fertility Rate (ASFR)

The ASFR is preferred over other fertility rates, since it considers the fact that women of all reproductive age groups do not have same fertility.

$$ASFR = \frac{B}{F} \times 1000$$

B= Birth in a specific age group

F= mid-year women population of that age group

4. Total Fertility Rate (TFR)

This measure is regarded as the best single cross-sectional measure of fertility. It is most sensitive and meaningful measure of fertility. If the TFR is two, it means that parents are replacing themselves and the population remains static. However, in the end the population with TFR at two will decline as all the mothers will not survive till the end of the reproductive period.

$$TFR = \Sigma ASFR \times i$$

Here, i = class- interval

5. Gross Reproductive Rate (GRR)

The total fertility includes all births, both male and female. The GRR shows how many girls' babies, potential future mothers, would be born to 1000 women passing through their child bearing years.

$$GRR = \frac{TFR}{2}$$

6. Net Reproductive Rate (NRR)

It is used to indicate generational replacement. It is quite easy to interpret. An NRR of one means that a population will replace itself but will not grow. An NRR of less than one indicates that the population is not replacing itself and if the rate continues, the population will decline. If NRR is more than one, it means that the population is not only replacing itself, but it is also growing.

$$NRR = GRR \times \text{survival factor}$$

Growing importance of modern economics and society

1. Job creation
2. Industry diversification
3. Business retention and expansion
4. Increased tax revenue
5. Improved quality of life

ESSENTIAL DISCIPLINES OF SOCIOECONOMIC CHANGE IN DEMOGRAPHY

Socioeconomic status is a combination of sociological and economic statistics. It is often measured as a combination of education, income and occupation. Some people think of socioeconomic status as someone's social standing of a person or community. From the Public Health viewpoint, there are connections between socioeconomic status and health outcomes. Lower socioeconomic status may put people at higher risk for poor nutrition, lower education, inadequate housing, higher crime, higher risk behaviors and less access to health care.

Socio-economic factors include occupation, education, income, wealth and where someone lives.

Socio-Economic

- ❖ Labor and employment
 - Labor force participation rate, both sexes
 - Unemployment rate, both sexes
- ❖ Education
 - Percentage of women/men by schooling completed
 - Functional literacy rate, both sexes
- ❖ Health and Sanitation
 - Percentage of households availing of health care services
 - Percentage of households with sanitary type of toilet facilities
 - Percentage of households with safe main source of drinking water
 - Percentage of households with owned/rented or shared house.
- ❖ Housing and Household Convenience
 - Percentage of households with house made of durable materials
 - Percentage of households with electricity connection
 - Percentage of households with household convenience.
- ❖ Family Planning
 - Percentage of households with access to family planning services
 - Contraceptive prevalence rate
- ❖ Income

Average family income

Per capita income of households