

21/4/22

(1) Demography and development

Demography is the statistical study of human population. Demography examines the size, structure and movement of population over space and time. In recent years, increasing attention is being paid on the relationship between population and economic development.

Population influences economic development through a variety of ways of which following are important

(i) Size of population — According to the

Optimum theory of Population, there is a limit of population a country can support, keeping in view its resources and state of technological development. If the population exceeds the limit, the country is said to be overpopulated. On the other hand, if the population is less than the optimum size then it is called underpopulated.

The size of population is an important determinant of development. If the population is very large, in relation to

national resources, it will act as an obstacle to economic growth. If the rate of growth of population is greater than the growth rate of the economy, the standard of living of the population will not improve. But if the growth rate of the population is less than the growth rate of national output, the increase in population helps the process of development.

(ii) Quality of population — The quality of population is judged from their level of literacy, level of technical training, health and nutrition. The rate of production depends upon the efficiency or quality of population. If they are well-educated, well-fed, well-sheltered and socially responsible it will help in accelerating the rate of economic growth and vice-versa. The quality of population in under developed countries is generally very poor and to a large extent, responsible for the slow economic growth of these countries.

(iii) Composition of population — The composition of population refers to the age composition,

^{Age} sex-ratio and life expectancy of the people. These determine the proportion of labour force in the total population. Labour force consist of the part of the population which is available for employment for productive purpose. If the labour force constitutes a major proportion of the total population, the possibilities for development will be large. On the other hand, if majority of the people comprises the children, the females and aged, the dependency burden will be too high and it will act as a drag on economic development.

(iv) Distribution of population — The distribution of population refers to the occupational distribution of population and also the proportion of population living in urban and rural area. There is a very close relationship between occupational distribution of a country and economic development. Occupational distribution refers to the distribution of the population among various occupations. For example, analytical purposes, economic activities are divided into 3 types - primary, secondary and tertiary. For speeding of the process of economic growth it is necessary that occupational distribution of the country conforms to the optimum occupation pattern.

Again economic development is closely associated with the growth of urbanisation.

According to various writers shift of population from villages to cities lead to economic development.

Urbanisation provides anything like better education, medical facilities, employment opportunities which have positive impact on development.

(V) Rural-urban migration — Since the

rural sector is dominated by agricultural activities and urban sector is dominated by industrialization.

Therefore, the process of migration from rural to urban center is regarded economically beneficial as human resources are being

shifted from places where their marginal social product is zero or negative to places

where their marginal product is positive and rapidly increasing.

(VI) Women empowerment — Empowerment of

women implies giving women power over their economic, social and reproductive choices to raise their status, promote economic development

and reduce population growth. Women constitute a major proportion of world's poor, they are malnourished, don't received proper medical

facilities, sanitation and other benefits. Besides, women have less access to education, employment and social security.

Since women constitute's half of the population, therefore their development and essential for achieving sustainable development.

20/11/20

(1) Basic demographic concepts

(i) Birth rate — Birth rate is the simplest method of measuring fertility. It acts as an index of the relative speed at which the population of a particular place increases. Birth rate is defined as the total number of live births in a particular area during a specific period divided by the total population of that particular area multiplied by thousand.

Therefore,

$$\text{Birth rate} = \frac{\text{Total number of live births in a particular area in a specific period}}{\text{Total population of that area}} \times 1000$$

Birth rate generally lies between 20 and 35 per 1000. The level of birth rate is determined by the age and sex composition of the population and fertility rate of the population.

(ii) Death rate — Death rate is a measure of the number of deaths in a particular population in a particular period of time. It is defined as the number of deaths to the total population of a particular area in a period of time usually calculated as the number of deaths per 1000 population per

Therefore, $\text{Death rate} = \frac{\text{Total number of deaths in a particular area in a year}}{\text{Total population of that area}} \times 1000$

Age structure and health status of population are the main determining factors of death rate.

(iii) Fertility rate — There are 2 concepts related to fertility rate which are mentioned below —

(a) Specific fertility rate — When fertility rate is calculated on the basis of age distribution, it is called specific fertility rate. While calculating a specific fertility rate, women of different ages in the child bearing age are placed in small age groups.

$$\text{ASFR} = \frac{\text{Number of live births which occurred to female of a specific age group of the population of a given geographic area during a given year}}{\text{Mid-year female population of the specified age group in the given geographic area during the same year}} \times 1000$$

(ii) General fertility rate — The general fertility rate refers to the proportion of the number of children born per 1000 of females the reproductive or child bearing age.

Number of live births which occurred among the population of a given geographic area during a given year $\times 1000$

GFR = $\frac{\text{during a given year}}{\text{mid-year female population of ages 15 to 49 in the given geographic area during the same year}}$

(iv) Total fertility rate — In order to measure correctly the population growth we calculate the number of children born per 1000 females in the child bearing age divided into different age group. This leads to the total fertility rates which is calculated by adding up the age specific fertility rate.

Therefore,

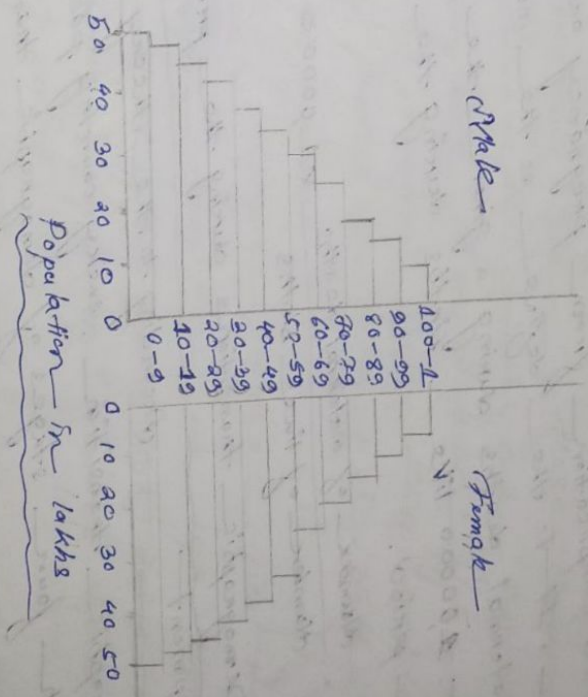
$$\text{Total fertility rate} = \sum \text{ASFR} \times 2$$

ASFR = age specific fertility rate

t = the magnitude of the age class

26/11/20

(1) Age structure — The age structure of population is the distribution of people of various ages. It is a useful tool for social scientist, public health and health care experts and policy makers because it elaborates population trends like rates of births and deaths. We can display the age structure of population by the following population pyramid



(2) Infant mortality rate — Infant mortality rate is the death of an infant before his or her first birthday. The infant mortality rate is the number of infant deaths for every 1000 live births.

IMR = $\frac{\text{Number of infant deaths in a year}}{\text{Number of live births occurs in that year}} \times 1000$

The main causes of high IMR are the poor sanitation, poor water quality, malnutrition of the mother of the infant, inadequate medical care etc.

(3) Maternal mortality rate — Maternal mortality rate refers to deaths of a woman due to complication from pregnancy or child birth. It is the same as the number of maternal deaths during a given period per 1,00,000 live births during the same time period.

$$\text{MMR} = \frac{\text{Number of maternal deaths}}{\text{Number of live births}} \times 1,00,000$$

(4) Demographic transition during the process of development — According to the theory of demographic transition, every country passes through four stages of demographic transition.

In the first stage, both birth and death rates are high. Hence, the population remains more or less stable. Even if there is slight increase in the population, it doesn't create any problem.

Generally, in backward or under developed economies, where agriculture is the main occupation of the people, per capita incomes are very low. These results in low level of standard of living. Most of the population in these countries is deprived of even the basic necessities of life. Their housing conditions are very poor and in the absence of opportunities for education their outlook towards life becomes unscientific and irrational. Under these circumstances when the medical facilities are limited, the mortality rate is bound to be high. Again lack of education, superstitions and lack of family planning result in high birth rates in this countries.

Hence, in the first stage of demographic transition the high birth rate is matched by an equally high death rate, and times, population remains stable over a long period.

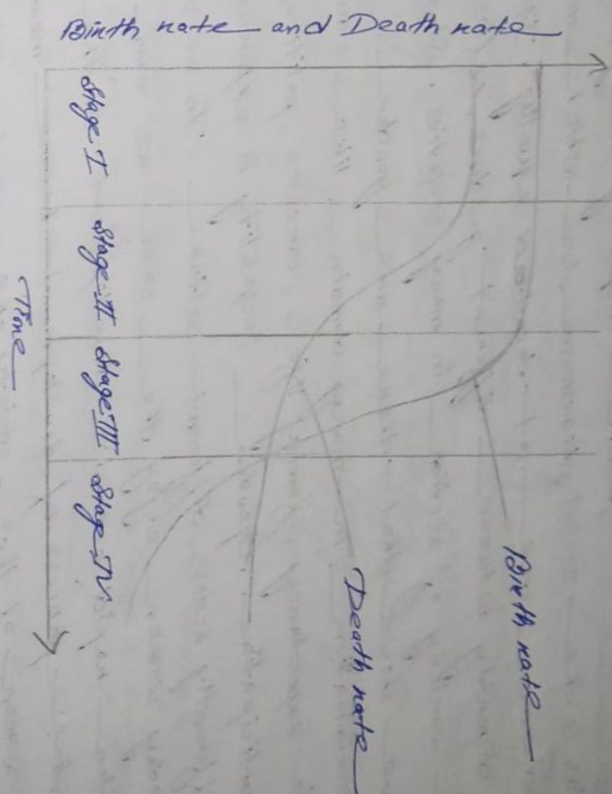
The second stage of demographic transition is characterise by rapid growth of population. With the beginning of the process of development, there is some improvement in the standard of living, education, medical and health facilities etc. These developments

generally bring down the death rate. But as soon as the society remains agate and education remains confined to a narrow section of the society, the birth rate remains high. As a result population grows rapidly for the last 5 decades, India experiences the second stage of demographic transition.

The third stage of demographic transition occurs when the process of industrialization accompanied by modernization and urbanisation gains strength and education becomes wide spread. In this situation, birth rate falls along with death rate. As a result, population either become stable or grows very slowly. In industrialization results in more crowding in cities and the housing problem forces people to have smaller family. When the process of economic development accelerated, women seek employment to increase family earnings. For working women upbringing of many children becomes impossible leading to decline in birth rate.

The last stage of demographic transition is the fourth stage, characterized by low death rate and lower birth rate, leading to gradually decline in population. Many developed countries have experienced the

fourth stage of demographic transition in recent times. The demographic transition can be shown in below figure.



(ii) Education — It has been observed that there is huge gender gap in schooling in different regions of the world. The drop out rate is also high among females. Though it is generally rising the female literacy rate in countries like India is lower than the male literacy rate.

(iii) Political inequality — This measure of gender inequality considers the gap between men and women in political decision making in height level and political participation. It has been observed all the under developed and developing countries the female participation in political decision making and political activities are very low in comparison.

(iv) Low labour force participation — The huge gap in labour force participation rate is another outcome of gender bias. There are evidences that the female workers force participation rate is very low in comparison to the male work force participation rate in different part of the world.

(v) Property rights — Women have equal right under the law to own

18/11/21
property and receive equal inheritance rights but in practice women are at a disadvantage. This is evidence in the fact that 70% of rural land is own by that.

(vi) Gender based violence — Over the years violence against women like rape, sexual harassment, acid throwing, dowry death and birth burning, domestic violence are increasing in different parts of the world indicating a serious increase in gender bias.

(i) Evidence on unequal treatment within the household

Many of the people of developing countries like India looked to the government to solve many of the issues they face. The government can frame policies and laws which are important but many of the issues which are related to common like economic participation, educational attainment, health and survival etc need to be addressed at individual or household level. These are various evidences of gender bias or inequality within the household which are summarised below

(i) Birth — It is observed that would keeping producing children until sons are born.

It is common to see families with many children and a mix of boys and girls. Where the older children are girls and youngsters are boys, there are many evidences of even female foeticide. The only day a married

women gets valued when she becomes a mother, however, this empowerment only comes when she becomes the mother of a son. But bringing a son to the world

world she could have assured economic security, food security as well as power to the family for a long time. In Indian wedding the groom's family is socially more powerful than the bride's family.

(ii) Educational and growing up — The sons would often get more or higher quality education. This includes sons being sent to better private school, girls have had better chances of quality education when they have no male siblings.

The daughters being expected to take a greater load in household work than the sons.

The daughters get university education, there is pressure to study or work in the same city, while sons have more choice to travel to another city for education.

(iii) Marriage and property — The daughters having to leave their place of home and moving with the husband's family is an integral part of our culture and major sources of inequality. Daughters are seen as an investment that doesn't pay off leading to issues such as foeticide and no education

or lower quality education.

A daughter is given less than 5% of her parents' property in the form of wedding cost. Even in that a major part is spent in shopping of gold ornaments that a daughter gets from her parents and in-laws is often the only security she has. Thus, if a daughter faces abuse in her in-laws house, she has nowhere to go.

(A) Relationship between income and fertility

Income and fertility is the association between money gain on the one hand, and tendency to produce offspring on the other hand. There is generally an inverse relationship between income and total fertility rate within and between nations. The higher the degree of education and per capita income population of the country, the fewer children are born in that country and vice-versa. The decision to have a child can be a very costly decision. So, economic consideration play a role in deciding to have children. The association between fertility choices and income can be understood by the following points —

- (i) Time is relatively cheap for poor people. So, spending time away from work to take care of a child isn't as costly as for the rich.
- (ii) Higher income parents value quality and quantity and so spend their resources on fewer children.
- (iii) Women can economically sustain themselves and are less incentive to become married.
- (iv) People earning more have higher opportunity cost if they focus on child birth and parenting rather than their continued careers.

20/11/20

① Relationship between income and mortality

The relationship between income and mortality is that it is a reflection of bad health related behaviour of the poor people. Health related behaviour of such as use of tobacco, smoking, consumption of alcohol etc, is generally found to be higher among the socio-economically backward sections of the population in many countries. The poor people are denied health care due to lack of purchasing power or they are able to access only poor quality services. The evidence of significant quantitative association between income and mortality measures is abundant from the different countries of the world, whether developed or developing countries. Relative importance of income in determining the health status of the people, particularly in developing countries. High level of income leads to lower mortality rate and vice-versa. With the diffusion of medical technologies in developing countries, the mortality rate is increasingly being disassociated from economic factors.

20/11/20

① Human capital formation and economic development

The term human capital formation means the process of acquiring and increasing the number of persons who have the skill, education and experience which are critical for the economic and the political development of a country. Thus, it is associated with investment in human and their development as a productive resource.

Schultz observe that there are 5 ways of developing human resources.

- (a) Health facilities and services which include all the expenditures that affects the overall health status of a human being.
 - (b) Providing job training to increase the skill of the employees.
 - (c) Provision of proper education at the elementary, secondary and higher levels.
 - (d) Study programmes for adults which include extension programmes.
 - (e) Migration of individuals to adjust to changing job opportunities.
- Human formation includes development for education improvement of health and training of the workers in specialist skill.

Human capital plays important role in the economic development of a country. Recent studies made by different economist point out that a large part of the growth of the output in developed countries like USA can be attributed to increase productivity which has mainly being the result of human capital formation.

It is the lack of investment in human capital which is responsible for slow growth in under developed and developing countries are facing generally to main problems. They lack the critical skills needed for the industrial sector development and have surplus level force which are considered unemployed. The existence of surplus labour is due to the shortage of critical skills. Thus, human capital formation aims at solving these problems by creating necessities skill in human being and make them productive enough to achieve gainful employment. The under developed countries are not economically backward but the quality of people of this countries are negligible.