UNIT 3 DEMOGRAPHIC FEATURES AND INDICATORS OF DEVELOPMENT

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3.0 OBJECTIVES

After reading this unit, you will be able to:

- state the role of human resources in the process of economic development;
- identify the long-term trends in the growth of India’s population;
- know that there are great variations in the size of population of different states in India;
- analyse the causes responsible for fast growth of population and recent slowing down of its growth;
- establish relationship between economic development and different other demographic features;
- appreciate the problems that arise out of a large population;
- make out the outlines for a proper national population policy; and
- make it clear that there are other alternative measures of economic development.
3.1 INTRODUCTION

We have learned in the previous unit that human resources play a significant role in generating aggregate flow of goods and services. The difference in the growth of national income and the per capita income is explained by the growth in population. Hence, in this unit, we will discuss demographic features and indicators of development.

Human resources have a two-pronged relationship with economic growth. As a resource, people are available as factors of production to work in combination with other factors of production like land, capital and enterprise. As consumers, human beings make demand on the national product of the economy. The size of population, therefore, is a crucial determinant of economic growth. A large population may not necessarily contribute to economic growth; in fact, a large fast-rising population may find itself in a situation described by economists as ‘over-population’.

A related question is: Does economic growth alone constitute economic development? The answer is simple ‘No’. Then, What is economic development? What are the indicators of economic development?

After reviewing the demographic profile of the Indian economy, we, in this unit, will also address the related question of indicators of development.

3.2 DEMOGRAPHIC PROFILE OF INDIA

A demographic profile of India can be prepared out of the data collected by the office of the Registrar General of India who is the responsible authority for conducting an all-India census of population every ten years. The census of India unleashes a vast store of official data relating to the demographic scene in the country. It is with the help of this that a concise demographic profile of the country can be prepared.

The country’s first all-India census was completed in 1872. Thereafter, decennial censuses have been organised in the years ending in ‘1’, i.e., 1881, 1891, 1901, 1911, 1921, etc. The last such census, i.e., 14th census was completed in March, 2001. The data in the census has been collected on the reference date namely March 1, 2001. The census in India is conducted under the Census Act, 1948, which makes it obligatory for the public to provide all answers correctly and fully.

3.3 TRENDS IN POPULATION GROWTH

India is the second largest country in the world with the total population enumerated in the 2001 census at 102.7 crores. This forms about 16 per cent of the total population of the world. In other words, every sixth person on the earth is an Indian. India, on the other hand, has got only 2.4 per cent of the total land area of the world. China with about 21 per cent of the world’s population has about 7 per cent of the land area, the USA maintains only 5 per cent of the total world population on about 7 per cent of the total world area; Russia has 2.43 per cent of the population and 12 per cent of the land area (see Chart-1).
It would, thus, be seen that India has been seriously handicapped in that a large proportion of the world population is found jam-packed in a small area.

India’s population has grown over the years as can be seen from Table 3.1 below.

**Table 3.1: Trends in Population in India**

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1901</td>
<td>23.8</td>
</tr>
<tr>
<td>1911</td>
<td>25.2</td>
</tr>
<tr>
<td>1921</td>
<td>25.1</td>
</tr>
<tr>
<td>1931</td>
<td>27.9</td>
</tr>
<tr>
<td>1941</td>
<td>31.87</td>
</tr>
<tr>
<td>1951</td>
<td>36.10</td>
</tr>
<tr>
<td>1961</td>
<td>43.92</td>
</tr>
<tr>
<td>1971</td>
<td>54.81</td>
</tr>
<tr>
<td>1981</td>
<td>64.33</td>
</tr>
<tr>
<td>1991</td>
<td>84.63</td>
</tr>
<tr>
<td>2001</td>
<td>102.70</td>
</tr>
<tr>
<td>2011*</td>
<td>117.89</td>
</tr>
<tr>
<td>2016*</td>
<td>126.35</td>
</tr>
</tbody>
</table>

* Projections.

As brought out in Table 3.1, the history of population growth in India divides itself into four natural phases:

**Phase I**
1901-1921: Stagnant Population

**Phase II**
1921-1951: Steady Growth

**Phase III**
1951-1981: Rapid High Growth

**Phase IV**
1981-2001: High Growth with definite signs of slowing down
1) Before 1921, the growth of population was very slow; as a matter of fact, India’s population had declined during the decade 1911-21. The decline was caused by famines and epidemics. The year 1921, therefore, is also known as the ‘Year of Great Divide’.

2) The census of 1931 and the following census of 1941 recorded an increase of the magnitude of about 2.76 crore and 3.97 crore respectively. The increase after the country’s independence was more rapid. Thus, whereas during the first fifty years of the present century, i.e., during 1901-51, India’s population had increased by about 12 crores, it increased by about 32.5 crore during the three-decade period of 1951 to 1981.

3) The upward trend in population growth rate maintained since 1951 got reversed during the decades 1981-2001. It means that although India’s population continues to grow in size, its pace of net addition is on the decrease.

3.3.1 Distribution of Population by States

An interesting feature of India’s population is the different size of different states in terms of the number of people. This can be seen from Chart-2.

At one extreme Uttar Pradesh has a population as large as 16.60 crore (roughly one-sixth of India’s population); at the other extreme Sikkim has barely 5.40 lakh people. Among the other relatively large states which have a population of more than 5 crores we have Bihar, Maharashtra, West Bengal, Andhra Pradesh, Madhya Pradesh, Tamil Nadu, Gujarat, Karnataka and Rajasthan.

**Chart-2**

**Other States & U.T.s:** Tripura (0.31%), Mainpuri (0.23%), Meghalaya (0.22%), Nagaland (0.19%), Goa (0.13%), Arunchal Pradesh (0.11%), Pondicherry (0.09%), Chandigarh (0.09%), Mizoram (0.09%), Sikkim (0.05%), Anadman & Nicobar Islands (0.03%), Dadra & Nagar Haveli (0.02%) and Lakastweep (0.01%).
The growth rate of population is a function of migration, birth rate and death rate in a country. The change in population caused by net migration as a proportion of total population of the country is almost insignificant and, therefore, can be easily ignored. That leaves us with birth rate and death rate. The difference between the birth rate and the death rate measures the growth rate of population.

The birth and death rates in India have followed the general trends indicated in the theory of demographic transition, as would be seen from Table 3.2 below.

Table 3.2: Birth Rate, Death Rate and Natural Growth Rate of Population in India
(Rate per annum per thousand population)

<table>
<thead>
<tr>
<th>Period</th>
<th>Crude Birth Rate</th>
<th>Crude Death Rate</th>
<th>Natural Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1891-1901</td>
<td>45.80</td>
<td>44.40</td>
<td>1.40</td>
</tr>
<tr>
<td>1901-1911</td>
<td>49.20</td>
<td>42.60</td>
<td>6.60</td>
</tr>
<tr>
<td>1911-1921</td>
<td>48.10</td>
<td>48.60</td>
<td>-0.50</td>
</tr>
<tr>
<td>1921-1931</td>
<td>46.40</td>
<td>36.30</td>
<td>10.10</td>
</tr>
<tr>
<td>1931-1941</td>
<td>45.20</td>
<td>31.20</td>
<td>14.00</td>
</tr>
<tr>
<td>1941-1951</td>
<td>39.90</td>
<td>27.40</td>
<td>12.50</td>
</tr>
<tr>
<td>1951-1961</td>
<td>41.70</td>
<td>22.80</td>
<td>18.90</td>
</tr>
<tr>
<td>1961-1971</td>
<td>41.20</td>
<td>19.00</td>
<td>22.20</td>
</tr>
<tr>
<td>1971-1981</td>
<td>37.20</td>
<td>15.00</td>
<td>22.20</td>
</tr>
<tr>
<td>1981-1991</td>
<td>32.50</td>
<td>11.40</td>
<td>21.10</td>
</tr>
<tr>
<td>2001</td>
<td>25.80</td>
<td>8.50</td>
<td>17.30</td>
</tr>
<tr>
<td>2004</td>
<td>25.00</td>
<td>8.10</td>
<td>16.90</td>
</tr>
<tr>
<td>2011*</td>
<td>22.70</td>
<td>8.10</td>
<td>14.60</td>
</tr>
</tbody>
</table>

* Projections.

It would be seen as follows from Table 3.2:

1) The crude death rate registered a marked decline in the decade 1921-31 and ever since has been continuously declining. On the other hand, during this period lasting till the mid-1970s, there was hardly any fall in the birth rate. As a result, the natural growth rate of population picked up to reach the maximum at 22.20 per thousand or about 2.22 per cent per annum during 1971-1981 (and 21.1 per cent during 1981-91). In consequence of this growth rate, India has been adding about 17 to 18 million every year to its population.

2) Beginning with the 1970s, a stage is set for transition to the third phase. During this period, the birth rate has registered a fall, but this has been neutralised by declining mortality. In future, as the death rate reaches the plateau (natural deaths cannot be prevented irrespective of progress in death control technology), any fall in birth rate would get reflected in slower growth of population. Growth rate of population during 1981-91 and 1991-2001 has been less than that in the period 1971-81.
1) Examine the major trends in India’s population since 1951.

2) Why has the population growth slowed down in the recent years?

3) What are the projections about the growth rate of population in near future?

3.5 DENSITY OF POPULATION

The density of population is calculated as a ratio of the number of persons per sq. km. of land area. According to the 2001 census, the density of population in the country is 324. No doubt, India is one of the densely populated countries in the world.

However, on the basis of the available evidence, it is not possible to establish any indisputable relationship between the density of population and the level of economic development. A country like Myanmar with a density of population of only 75 has a per capita income of only $200 as against $530 in India. On the contrary, Japan with a density of 349 has a per capita income of $34,510. Similarly, less densely populated countries show both high and low levels of development. Canada with a density of only 3 persons per sq. km. has a per capita income of $23,930, which is among one of the highest in the world. On the other hand, Mali with a density of 10 has a per capita income of only $290.

The density of population helps to determine the magnitude of the burden that land is being called upon to carry and to determine the future potentials of growth. It is in this sense that we find that India is already a densely populated country and that more additions are likely to add only more to the burden on land.

3.5.1 Inter-State Variations

Inter-state variations in the density of population are also very informative about the demographic situation. The relevant information is presented in Chart-3 below.

The density is generally high in industrially-developed states; it is also high in those regions which have a better climate, rainfall and irrigation facilities. In
an economy where the agrarian sector dominates, it is to be expected that the above factors should exercise an influence on the density of population.

Chart-3

### 3.6 LIFE EXPECTANCY

The mean expectation of life at birth is the best statistical measure of the health conditions and of the general level of mortality of a country. If the death rate is high and/or death occurs at an early age, life expectancy will be low; on the other hand, if the death rate is low and/or death occurs at an advanced age, life expectancy will be high.

During the last few decades, the death rate in India has recorded a perceptible fall; this is reflected in the rising life expectancy in the country. Life expectancy at birth currently is being estimated 63.87 years for males and 66.91 years for females.

Rising life expectancy has some social implications as follows:

**One**, it creates pressure on the job market. As persons reaching retirement age remain fit to work, they seek extension of their jobs or fresh employment.

**Two**, as the elderly continue to live longer, the number of joint or multi-generational families tends to increase.

However, the average size of households has not increased significantly over the last five decades and the total number of households has risen sharply. This is not really surprising, because the tolerance limits for the strain arising out of joint family living have gone down.
3.6.1 Age and Sex Composition

The age and sex composition, at any time, is the result of past trends in fertility and mortality. The persistence of high birth and death rates for a fairly long time results in a bottom-heavy age pyramid.

The obtaining age-composition of India’s population is presented in Table 3.3.

**Table 3.3: Age Composition of India’s Composition**

<table>
<thead>
<tr>
<th>Age Group (Years)</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-14</td>
<td>35.3</td>
</tr>
<tr>
<td>15-59</td>
<td>56.9</td>
</tr>
<tr>
<td>60+</td>
<td>7.8</td>
</tr>
</tbody>
</table>

The age distribution indicates that every one person, on an average, has to earn for himself and for one dependent also. Thus, the dependency ratio of the population works out to about 64.07 per cent. A high dependency ratio acts as a serious drag on production and improvement of living standards. Obviously, the dependency ratio of a country greatly influences the proportion of national income going into savings, investment, pensions, welfare and education.

**Sex ratio** is a powerful indicator of the social health of an economy. It conveys a great deal about the state of gender relations.

The sex distribution of population in India shows two things: (i) a higher ratio of males in the population, and (ii) a rising tendency towards masculinity, as would be seen from Table 3.4.

**Table 3.4: Sex Composition in India**

<table>
<thead>
<tr>
<th>Census Year</th>
<th>Sex Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1901</td>
<td>972</td>
</tr>
<tr>
<td>1911</td>
<td>962</td>
</tr>
<tr>
<td>1921</td>
<td>955</td>
</tr>
<tr>
<td>1931</td>
<td>950</td>
</tr>
<tr>
<td>1941</td>
<td>945</td>
</tr>
<tr>
<td>1951</td>
<td>946</td>
</tr>
<tr>
<td>1961</td>
<td>941</td>
</tr>
<tr>
<td>1971</td>
<td>930</td>
</tr>
<tr>
<td>1981</td>
<td>934</td>
</tr>
<tr>
<td>1991</td>
<td>927</td>
</tr>
<tr>
<td>2001</td>
<td>933</td>
</tr>
</tbody>
</table>

The sex ratio differs among different states; while it is as high as 1,058 in Kerala, it is as low as 861 in Haryana. The varying position of the states is shown in Chart-4.

There are six possible explanations as follows for the decline in sex ratio:

1) A progressive undercount of women compared to men in different censuses.
2) An increased discrimination of females in providing the minimum nutrients, access to health and other amenities.
3) Increase in the proportion of male selective migrants from other countries.
4) Reduction in foetal wastage resulting in a decline in female-male ratio at birth.
5) Female selective termination of pregnancy.
6) Lagged effect of small sex differences in mortality at young ages persisting over a long period of time.

In future, as the mortality of child-birth falls and the general status of women specially in the rural society improves, there should be perceptible rise in the sex ratio – projected 943 in the year 2011.
3.6.2 Rural-Urban Distribution

While there has been a progressive increase in the number as well as the proportion of people residing in urban areas during the last few decades, India continues to be predominantly rural. The percentage of urban population in total population has gone up from 17.1 per cent in 1951 to 27.8 per cent in 2001.

Inter-state variations may also be observed. Tamil Nadu is the most urbanised state with 43.9 per cent of the population living in the urban areas. The share of urban population in total population is more than 30 per cent in states like Goa, Gujarat, Karnataka, Maharashtra and Mizoram, while it is between 20 per cent and 30 per cent in other states like Uttar Pradesh, Andhra Pradesh, Haryana, Jammu and Kashmir, Kerala, Madhya Pradesh, Manipur, Punjab, Rajasthan and West Bengal. The ratio is less than 20 per cent in other states like Assam, Bihar, Himachal Pradesh, Meghalaya, Nagaland, Orissa, Sikkim, Tripura, etc.

3.7 LITERACY

According to the census definition, a person is deemed as literate if he or she can read and write with understanding in any language. A person who can merely read but cannot write is not literate.

During the period 1951-2001, there has been a substantial progress in literacy. This is brought out in Table 3.5.

| Table 3.5: Literacy Rates in India (1951-2001) (Percentage) |
|------------------|------------------|------------------|------------------|
| **Year** | **Age** | **Persons** | **Males** | **Females** |
| 1951 | 5 years and above | 18.33 | 27.16 | 8.86 |
| 1961 | 5 years and above | 28.31 | 40.40 | 15.34 |
| 1971 | 5 years and above | 34.45 | 45.95 | 21.97 |
| 1981 | 7 years and above | 43.56 | 56.37 | 29.75 |
| 1991 | 7 years and above | 52.11 | 63.86 | 39.45 |
| 2001 | 7 years and above | 65.38 | 75.85 | 54.16 |

Another important fact that comes out clearly from the available data is that with the passage of time, sex differentials in literacy rates are narrowing down. In 1951, the female literacy rate as a percentage of male literacy rate was about 33; in 2001, it has gone up to 71.40 indicating a substantial expansion in female education during the last five decades.

3.8 NATURE OF THE POPULATION PROBLEM IN INDIA

The demographic profile of India portrayed above helps us to bring in a clear perspective the nature of the population problem being faced by us. Some of the salient features that emerge from it are as follows:

One, India has a large population base. It is already densely populated; the proportion is projected to increase further in future.

Two, the growth rate of population in India since the 1950s has been consistently high and has been caused by: (i) persistence of high fertility, and (ii) declining mortality.
Three, persistence of high birth and death rate for fairly long time has resulted in a bottom-heavy age pyramid; the dependency ratio in the economy has been very high.

Four, the country shows a rising masculinity with the proportion of women in the total population gradually falling.

Five, the rural sector dominates the economy. It is indicative of the overall low productivity.

Six, about one-third of the total population is illiterate which speaks of the very poor quality of human capital in the country.

Among these various features the one which is of utmost concern to all the students of population in India, and also to the policy-makers at large, relates to the high growth rates of population witnessed during the last five decades.

3.8.1 Effects on Economic Development

Faster population growth is a handicap, like extra weight carried by a racehorse. This would be clear from a brief discussion of the various problems that the growth of population in India has caused.

1) Cassen’s Argument: While talking about the ‘macro-economics of population’, R.H. Cassen has drawn attention to two main relationships through which population growth affects the economy. These are: (a) savings effect, and (b) composition of investment effect.

a) Savings Effect: The savings effect argues that savings are reduced by population growth because of the increase of so-called ‘burden of dependency’: with high fertility, and declining mortality in younger and older age groups, the population acquires an increasing proportion of people in the non-working age groups relative to those of the working age. Since all must consume while relatively fewer produce, consumption per head must rise and savings per head must fall – even if productivity is rising, savings are less than they would be with a smaller number of dependants per worker.

b) Composition of Investment Effect: The investment argument says that, with an increasing population, a share of investible resources has to be devoted to reproducing for additional people ‘unproductive’ facilities—particularly social overhead capital—which would be unnecessary if the population were not growing. The composition of investment is altered in an unproductive direction instead of additions to capital going to raise the productivity of the existing labour force; investment becomes merely ‘demographic investment’ instead of real investment.

2) Coale and Hoover’s Argument: Coale and Hoover compared the economy along two time paths: (i) one with higher fertility, and (ii) the other with lower fertility. They reached the conclusion that the GNP per capita would be lower under higher fertility than under lower fertility. Per capita product in India is undoubtedly lower than it would have been had population been growing more slowly, for three reasons:

- If fertility had been lower for a longer period, the labour force would have been little smaller in size but the number of people it had to support would have been much smaller.
- The amount of capital per worker would have been greater simply by reason of the smaller number of workers.
The capital itself would have been more productive—the effect of diminishing returns in agriculture was equivalent to a lower average productivity of capital.

To sum up, the pressures stemming from population growth have become progressively more intense. Steps need be taken to mitigate the effects of a fast-growing population and to bring the population under control.

### 3.9 POPULATION POLICY IN INDIA

A review of the population problem in India, as given above, would suffice to bring out the necessity of a direct attack on the problem that should aim at a rapid reduction in the birth rate.

The population policy should emphasise the following:

1) Increase the rate of employment at such a rate that it will do away with unemployment among population of working age; and

2) Controlling the growth of population, by adopting family planning. Family planning implies two things: (i) limiting the number of children to be born to a couple to one or two; and (ii) determining the spacing of children.

#### 3.9.1 National Population Policy, 2000

The National Population Policy was announced on February 15, 2000 with following objectives:

1) The **immediate objective** of the policy has been described as aimed at meeting the “unmet” needs for contraception, health care infrastructure, health personnel and integrated service delivery.

2) The **mid-term objectives** are outlined as aimed at bringing the total fertility to replacement levels—two children per couple—by a vigorous implementation of intersectoral strategies.

3) The **long-term objective** is stabilisation of population for 2045.

The policy has outlined 16 promotional and motivational measures to implement it vigorously. Among these, the more important are as follows:

1) Reward Panchayats and Zila Parishads for promoting small family norm.

2) Strict enforcement of Child Marriage Restraint Act and Pre-natal Diagnostics Techniques Act.

3) Health insurance cover of Rs. 5,000 for couples below poverty line, with two living children, who undergo sterilisation.

4) Rewards for couples below poverty line, who marry after legal age, have first child after the mother reaches 21, accept small family norm and undergo sterilisation after birth of two children.

5) Funds and soft loans for providing ambulance services in rural areas.

6) Strengthening abortion facilities scheme.

A National Commission on Population, headed by the Prime Minister, has also been set up. The Commission will monitor the new policy.
Check Your Progress 2

Note: i) Space is given below each question for your answer.

ii) Check your answer(s) with those given at the end of the unit.

1) Do you think that relationship exists between density of population and economic development? Give reasons in support of your answer.

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2) List any three dimensions of the population problem in India.

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3) Highlight the need for a suitable population policy in India.

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3.10 INDICATORS OF DEVELOPMENT

As stated earlier in Unit 1, national income estimates (and the corresponding per capita income estimates) have been used as indicators of economic growth. But economic development is a broader concept than economic growth. It is important to understand the distinction between the two.

3.10.1 Economic Growth and Economic Development

Economic growth has been defined as “an increase in real terms of the output of goods and services that is sustained over a long period of time, measured in terms of value added.”

The concept of economic development emphasises the achievement of the following three objectives:

1) To increase the availability and widen the distribution of basic life-sustaining goods such as food, shelter and protection. This, however, would be possible with a fast increase in real per capita income.

2) To raise levels of living including, in addition to higher incomes, the provision of more goods, better education and greater attention to cultural and humanistic values, all of which will serve not only to enhance material well-being but also to generate individual and national self-esteem.

3) To expand the range of economic and social choice to individuals and nations by freeing them from servitude and dependence not only in relation to other people and nation-states, but also to the forces of
ignorance and human misery. Economic development is to be assessed ultimately by the enhancement of the “positive freedom”.

In view of the above three objectives, the quality of life is regarded as an important index of development. Several factors are involved in the measurement of such ‘quality’: such as education and literacy rates, life expectancy, the level of nutrition, consumption of energy per head, etc. Some of these factors are ‘non-monetary’, while others can be measured as ‘monetary’. There is a need to set up a synthetic index of these different factors to measure economic development and the quality of life.

Some attempts, undoubtedly, have been made in this direction. We will refer, at least, to two most important among these, viz., (1) Human Development Index, and (2) Economic Development Index.

### 3.10.2 Human Development Index

Human Development Index (HDI) is being prepared annually by the United Nations Development Programme. Human development has been defined as a process of enlarging people’s choices. In principle, these choices can be infinite and change over time. But at all levels of development the three essential ones are for people to lead a long and healthy life, to acquire knowledge and to have access to resources needed for decent standard of living. If these choices are not available, many other opportunities remain inaccessible.

**Computation of HDI**

The HDI is based on three indicators: (i) longevity, as measured by life expectancy at birth; (ii) educational attainment, as measured by a combination of adult literacy (two-thirds weight) and combined primary, secondary and tertiary enrolment ratios (one-third weight); and (iii) standard of living, as measured by real GDP per capita (PPP$).

For the construction of the index, fixed minimum and maximum values have been established for each of these indicators:

- Life expectancy at birth: 25 years and 85 years
- Adult literacy: 0% and 100%
- Combined gross enrolment ratio: 0% and 100%
- Real GDP per capita (PPP$): $100 and $40,000 (PPP$)

For any component of the HDI, individual indices can be computed according to the general formula:

\[
\text{Index} = \frac{\text{Actual}_{si} \text{ value} - \text{Minimum}_{si} \text{ value}}{\text{Maximum}_{si} \text{ value} - \text{Minimum}_{si} \text{ value}}
\]

The HDI is a simple average of the life expectancy index, educational attainment index and adjusted real GDP per capita (PPP$) index, and so is derived by dividing the sum of these three indices by 3.

The Human Development Report, 2004 presented HDI values for 177 countries arranged in a descending order of the value of HDI. India ranked 127 in this group.

### 3.10.3 Economic Development Index (EDI)

New Delhi based National Council of Applied Economic Research (NCAER) has developed a new measure, called EDI.
The EDI develops further on the HDI. EDI is based on three components: (i) the health attainment index, (ii) the education attainment index, and (iii) per capita GDP.

- The health attainment index is a function of the infant mortality rate, the total fertility rate and crude birth rate.

- The education attainment index is an equal weighted index of gross enrolment in middle or upper primary schools and total university enrolment in graduate courses.

EDI has been estimated for India for different periods. The results are summarised in Table 3.5 below.

<table>
<thead>
<tr>
<th>Decade</th>
<th>Health Indicator</th>
<th>Education Indicator</th>
<th>Per Capita GDP</th>
<th>Economic Development Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970s</td>
<td>1.53</td>
<td>2.71</td>
<td>0.40</td>
<td>1.53</td>
</tr>
<tr>
<td>1980s</td>
<td>2.74</td>
<td>4.86</td>
<td>3.56</td>
<td>3.79</td>
</tr>
<tr>
<td>1990s</td>
<td>2.47</td>
<td>3.46</td>
<td>3.24</td>
<td>3.24</td>
</tr>
</tbody>
</table>

NCAER’s findings are not a one-time affair. The model can analyse policy changes in Government expenditure on health and education and changes in public investment and tax rates on macro-economic variables like output, prices and the current account balance as well as on human development.

Check Your Progress 3

**Note:**

i) Space is given below each question for your answer.

ii) Check your answer(s) with those given at the end of the unit.

1) Distinguish between economic growth and economic development.

2) What is HDI? How is it estimated?

3) What is EDI?
3.11 LET US SUM UP

Demographic features relate to the size, growth rate and other attributes of population of a country. From India’s point of view, the most important demographic feature has been the size and rate of growth of population. India’s population has been increasing right since 1921. After 1951, the rate of growth of population picked up fast. This was because of the fact that the death rate in the Indian economy had begun to fall appreciably, whereas there was a relatively slow fall in birth rate. By 1981, the death rate had reached the plateau, and the fall in birth rate accelerated a little. As a result, the growth rate of the population in India has slowed down.

Population along with the national income determines the per capita income. National income and per capita income estimates have been employed as indicators of economic growth of a country. Economists have also developed alternative indicators of economic development, like HDI and EDI.

3.12 EXERCISES

1) Examine the basic demographic features of India. Also examine their relevance for Indian economic policy for development.

2) Account for the rapid increase in India’s population. Can India sustain a large population? Discuss your answer from the perspective of economic policy for growth.

3) From the perspective of economic policy for growth, examine the nature of different indicators of economic development.

3.13 KEY WORDS

**Crude Birth Rate:** The number of children born per 1,000 population during a year.

**Crude Death Rate:** The number of deaths per 1,000 population during a year.

**Growth Rate of Population:**
\[
\frac{\text{Current Year's Population} - \text{Last Year's Population}}{\text{Last Year's Population}} \times 100
\]

**Demographic Transition:** Change in the size of population and its determinants.

**Population Explosion:** Rapid increase in population.

**Working Population:** Population in the age-group of 15-60 years.

**Urbanisation:** Trend of migration of people from rural areas to urban areas.

**Life Expectancy:** The number of years a newborn child is expected to live.

**Density of Population:** Number of people living per sq. km. of land.

**Literacy Rate:**
\[
\frac{\text{Number of Literates}}{\text{Total Population}} \times 100
\]

**Family Planning:** The practice to limit the size of families.

**Infant Mortality Rate:**
\[
\frac{\text{No. of New - Born Dying}}{\text{No. of Births}} \times 1000
\]
3.14 SOME USEFUL BOOKS


3.15 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

**Check Your Progress 1**

1) See Section 3.3
2) See Section 3.4
3) See Section 3.4

**Check Your Progress 2**

1) See Section 3.5
2) See Section 3.8
3) See Section 3.9

**Check Your Progress 3**

1) See Sub-section 3.10.1
2) See Sub-section 3.10.2
3) See Sub-section 3.10.3