

# POPULATION OF INDIA

## STRUCTURE, PROBLEMS AND MEASURES

### 32.1 INTRODUCTION

You have studied in the previous lesson that population of a country constitutes its human resource. It is important to know the various characteristics of human resource of a country such as its size, its growth rate, its sex composition, age composition, its level of literacy etc. In this lesson you will study the characteristics of India's population and various problems that are faced because of these characteristics and the measures that have been taken to overcome these problems.

### 32.2 OBJECTIVES

After going through this lesson, you will be able to :

- state the size of India's population and its growth over the last few decades;
- state the rate of growth of India's population since 1921;
- explain the structure of India's population;
- explain the problems caused by high rate of growth of population in India;
- suggest measures to overcome these problems.

### 32.3 SIZE AND GROWTH OF POPULATION

#### (a) Size of Population

Population of a country means the number of people living in that country at a particular point of time. The number of people are actually counted after every ten years, This process of counting is called the **census of population**. In India the last census was conducted in 1991 and the next census will be conducted in 2001. The census of population in India gives

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the number of people as at the sun rise of 1<sup>st</sup> March. For example the 1991 census gives India's population as 84.63 crores. It means that at the sun rise of 1<sup>st</sup> March, 1991 India's population was 84.63 crores. The census of population provides information not only about the size of population but also about its various features such as sex composition, age composition, growth rate, level of literacy, density etc., Table 32.1 gives the total population of India since 1901 as given by the various census of population.

**Table 32.1**  
**Total Population in India**

(Crores)			
Year	Population	Year	Population
1901	23.8	1951	36.10
1911	25.2	1961	43.92
1921	25.1	1971	54.81
1931	27.9	1981	68.33
1941	31.87	1991	84.43

On the basis of this information it is possible to estimate the population in the years other than the census years with the help of statistical methods. It is estimated that in 1996 India's population was about 93.4 crores. Thus it is heading towards the 100 crore mark. The population has multiplied four times since 1901 and almost tripled since 1941. In 90 years since 1901 there has been almost 70 per cent increase after 1951.

Is the present size of India's population large? Let us answer this question.

India is the second largest populated country in the world, next to China. Its population is about 16 per cent of the world population i.e. almost every sixth person in the world is an Indian. You may be surprised to know that only four countries of the world (China, U.S.A. Brazil and Indonesia) have population larger than the population of Uttar Pradesh. But the area of India is just 2.42 per cent of the world area. It can, thus, be said that the size of India's population is large.

#### (b) Growth of Population

It is not only the size of India's population that is large but the growth has also been fast. If you again look at Table 32.1 you will notice that the total increase in population in each subsequent decade has been larger and larger. In the decade 1951-61 the total increase in population was about 7.8 crores which is about one and a half times the population of U.K. In the decade 1971-81 this increase was about 13.5 crores which is two and a half times the population of U.K. The increase of about 10.8 crores during 1961-71 is equal to three fourth of Japan's population. And the increase during 1981-91 (about 16.3 crores) is greater than the population of Japan.

About 34 people are added to India's population every minute whereas Indonesia adds only about 5 people to its population and Japan only 1. World population increases by about 173

people every minute. India's contribution to the increase in world population is the largest. All this shows that the total increase in India's population has been very large and it has been increasing. When we show the increase in population in terms of rates of growth of population, the figures are more revealing. Table 32.2 shows the rate of growth of India's population.

**Table 32.2**  
**Rate of growth of population in India**

Census year	Population (in crores)	Percentage increase or decrease during the decade	Exponential (compound, Growth rate %
	(1)	(2)	(3)
1901	23.8	-	-
1911	25.2	5.75	0.56
1921	25.1	(-)0.31	(-)0.03
1931	27.9	11.00	1.04
1941	31.87	14.22	1.33
1951	36.10	13.31	1.25
1961	43.92	21.51	1.96
1971	54.81	24.80	2.20
1981	68.33	24.66	2.22
1991	84.63	23.50	2.11

There has been a rapid increase in India's population. Population growth till 1921 was very small. From 1901 to 1921 the population increased by about only 0.27 per cent annually. From 1921 the population has been increasing continuously and rapidly. The year 1921 is described as the year of the "Great Divide". Column (3) of table 32.2 shows the percentage annual rate of growth of population. From 1951 there has been an acceleration in the rate of growth of population. Coupled with the very large size of India's population the growth rate of population of over 2.0 per annum is alarming. During the period 1981-91 India's population increased at 2.11 per cent while China's population increased at 1.5 per cent. At the present rate of growth of population India will overtake China and become the most populous country of the world in a decade.

We will now explain the causes for the fast rate of increase in India's population. India is a developing economy. As explained in the previous lesson, there are three stages through which the growth rate of population of a country passes. India is in the second stage during which the death rate falls rapidly but the birth rate falls slowly. So the gap between birth rate and death rate increases and this gap is nothing but the rate of growth of population. Table 32.2 gives the birth rate and death rate since 1901. Column (3) of the table shows the natural increase in population during a decade.

Table 32.3

Period	Annual rate per 1000 population		
	Birth rate (1)	Death rate (2)	Natural increase (3)
1901-1911	49.2	42.6	6.6
1911-1921	48.1	48.6	(-) 0.5
1921-1931	46.4	36.3	10.1
1931-1941	45.2	31.2	14.0
1941-1951	39.9	27.4	12.5
1951-1961	41.7	22.8	18.9
1961-1971	41.2	19.0	22.2
1971-1981	37.2	15.0	22.2
1981-1991	32.5	11.4	21.1

India, a developing country, is in the second stage of demographic transition. It is clear from Table 32.3. The rate of decline in death rate had been more than the rate of decline in the birth rate.

As a result of the fast and increasing rate of growth of population in India, the size of population is very large. On such a large size of population even a smaller rate of increase will result in a very large addition to the population every year.

### POINTS TO REMEMBER

- Size of population of a country means the number of people living in that country at a particular point of time. The process of counting of the people is called census of population.
- In India census of population is conducted after every ten years. The last census of population was conducted in 1991.
- Size of India's population is very large. Its population is 16 % of the world population whereas its area is only 2.4 % of the world area. The rate of growth of population in India is also very high.
- The main reason for the high rate of growth of population is the faster decline in death rate and comparatively a slower decline in birth rate.

### INTEXT QUESTIONS 32.1

- I. State whether the following statements are true or false:
  - (i) Census of population gives information only about the size of population.
  - (ii) India's population has been increasing at a fast rate since 1901.
  - (iii) The reasons for the high rate of growth of population in India are fast declining death rate and slowly declining birth rate.

2. Fill in blanks with appropriate words given in the brackets.

- (i) India's population in 1991 was \_\_\_\_\_ crores (84.63, 87.43).  
 (ii) During the period 1981-1991 birth rate and death in India were \_\_\_\_\_ and \_\_\_\_\_ per thousand respectively (25.10, 32.5, 11.4).  
 (iii) The annual percentage growth rate of India's population during 1981-91 was \_\_\_\_\_ per cent (2.22, 2.11).  
 (iv) In India census of population is conducted after every \_\_\_\_\_ years (5, 10).  
 (v) The next census of population in India will be conducted in \_\_\_\_\_ (2001, 2005).

### 32.4 STRUCTURE OF POPULATION

In this section we will learn about some other important features of India's population such as its age composition, sex composition, urban-rural composition, the literacy level and density of population. We shall discuss these features one by one.

#### (i) Sex Composition

Sex composition means the distribution of population into male and female population. It is generally expressed in the form of a ratio called the sex-ratio. Sex ratio is the number of females per 1000 males. It is calculated by the following formula:

$$\text{Sex Ratio} = \frac{\text{Total female population}}{\text{Total male population}} \times 1000$$

Table 32.4 shows the sex ratio in India since 1901.

Table 32.4

Year	Sex Ratio	Year	Sex Ratio
1901	972	1951	946
1911	964	1961	941
1921	955	1971	930
1931	950	1981	934
1941	945	1991	929

This table shows that in India there has been a higher ratio of males in the total population and it has been almost continuously increasing. In other words the number of females per 1000 males has always been less and has been steadily falling. This number has fallen from 972 in 1901 to 946 in 1951 and 929 in 1991. No developed country of the world had at any time in their history less females than males.

The figures given in Table 32.4 are for the country as a whole. There are wide disparities in

sex ratios of different states. For example, Kerala has a sex ratio of 1036 whereas Uttar Pradesh has a sex ratio of only 879. The main reasons of low sex ratio in India are: under enumeration of females in the population census, lower status of woman in Indian society, malnutrition and early marriage resulting in higher mortality rate, low literacy level etc.

### (ii) Age Composition

Age composition means the proportion of population in different age groups. The population is divided into three age groups: (1) Below 15 years (2) 15-59 years (3) 60 years and above.

15-59 years is considered the working age. Children who fall in the age group below 15 years and old people (60 years and above) together constitute the dependent population.

In India, the proportion of children below 15 years of age was 40 per cent in 1980 and in 1992 it was about 35.5 per cent. The proportion of population of age 60 plus has varied from about 6.5 per cent to 6.65 percent. These two age groups together account for about 42 per cent of the population. This category is termed as unproductive consumers. So the burden of dependent population on population of working age is very large. It also indicates that the proportion of population in working age group would increase. This means there would more job seekers.

The ratio of the dependents to the people in the working age group is called dependency ratio.

$$\text{Dependency Ratio} = \frac{\text{Percentage of dependent population}}{\text{Percentage of working population}} \times 100$$

### (iii) Rural-urban Distribution

In India the proportion of rural population is much more than the proportion of urban population. Table 32.5 shows the rural-urban distribution of India's population since 1901.

Table 32.5

Year	Percentage of total population		Year	Percentage of total population	
	Rural	Urban		Rural	Urban
1901	89.2	10.8	1951	82.7	17.3
1911	89.7	10.3	1961	82.0	18.0
1921	88.8	11.2	1971	80.1	19.9
1931	88.0	12.0	1981	76.7	23.3
1941	86.1	13.9	1991	74.3	25.7

About 3/4th of India's population lives in rural areas. So the Indian economy is rightly described as a rural economy. This also shows that agriculture remains the main occupation in our

country. Though the proportion of rural population has declined from 89.2 per cent in 1901 to 74.3 in 1991, this decline is not significant.

**(iv) Density of Population**

Density of population means the average number of people per square kilometer. It is arrived at by dividing the population of a country by its total land area. In order words :

$$\text{Density of population} = \frac{\text{Total population}}{\text{Total land area}}$$

The total land area of the country remaining the same, a fast increase in population is bound to increase the density of population as is shown by the figures in Table 32.6.

**Table 32.6**

Year	Density of population	Year	Density of population
1901	77	1951	117
1911	82	1961	142
1921	81	1971	177
1931	90	1981	216
1941	103	1991	274

Just as in case of population of the country, there has been a rapid increase in the density of population since 1951. India being an agricultural economy, the high and increasing density of population puts increasing pressure on land.

**(v) Literacy Rate**

A person who can read and write with understanding in any language is called a literate person. In 1991 census literacy rate is calculated for the population aged 7 years and above. In 1951 the literacy rate was only 16.7 per cent, for male it was 25% and for female it was about 8%. In 1991 the overall literacy rate was 52.2 per cent, 64.1% for male and 39.3% for female. The literacy rate is much higher in urban areas than in rural areas. In 1981 the overall literacy rate was 36.2 per cent, 46.9 per cent for male and 24.8 per cent for female. Though the literacy rate has increased, the total number of illiterates has also increased. The total number of illiterates in India in 1981 was 30.19 crores and in 1991 this number was 32.4 crores. This is due to the rapid increase in population.

**(vi) Life Expectancy**

The average life span of a child born is called life expectancy. At the time of Independence life expectancy in India was only 32 years. It increased to 58 years in 1991 and was 61.2 years during 1991-1996. The life expectancy is higher for females than for males. It was

60.6 years for male and 61.7 years for females during 1991-1996. However, life expectancy for urban population is much higher than the life expectancy for rural population. In 1990 it was 57.4 years for rural population and 64.1 years for urban population.

#### (vii) Inter-state variations

There are wide inter-state variations in almost all aspects of India's population. Birth rate in Kerala in 1994 was 17.3 and 19 in Tamil Nadu whereas it was 35.4 in U.P., 33.7 in Rajasthan and 32.5 in Bihar. Death rate in 1994 was 6.0 in Kerala, 11.5 in Madhya Pradesh. In 1991 eight Indian states had rate of growth of population lower than the national average. These states are Gujrat, Karnataka, Punjab, Orissa, Himachal Pradesh, Goa, Tamil Nadu and Kerala. The rate of growth of population in U.P., Bihar, M.P., Maharastra has been much higher. Kerala is the only state which has a sex ratio of more than 1000. It is 1036 according to 1991 census of population. Haryana, U.P., Punjab had a sex ratio of less than 900.

There are wide variations in level of literacy among the Indian states. Literacy rate among males is as high as 95% in Kerala and as low as 55% in Bihar, U.P., Rajasthan. The range is even wider for females. It is about 21% in Rajasthan and about 65% in Kerala.

Inter-state variations in density of population are also very striking. Delhi has the highest density of population, 6319 whereas it is only 10 in Arunachal Pradesh. Kerala also enjoys the highest life expectancy of 70 years whereas in M.P. it is lowest at 52.2 years.

#### POINTS TO REMEMBER

The main features of India's population besides large size and fast growth rate are:

- A declining sex ratio: The proportion of male in total population is more than the proportion of female population.
- The proportion of population in the age groups less than 15 years and more than 60 years is high. So the dependency ratio is high.
- About 3/4th of India's population lives in villages.
- Density of population has been increasing at a fast rate. This is because of fast growth of population.
- Literacy rate has increased but due to fast growth of population total number of illiterates has also increased. Literacy rate among males is higher than literacy rate among females. Similarly literacy rate in urban population is higher than in rural population.
- There are wide inter-state variations in respect of almost all the characteristic features of population. For example, Kerala has the highest sex ratio, lowest birth rate and growth rate of population, highest literacy rate and life expectancy. The variations among the states on all these counts are very wide.



**INTEXT QUESTION 32.2**

1. Fill in the blanks with appropriate word given in the brackets.
  - (i) Sex ratio in India in 1991 was ..... (949, 929).
  - (ii) In India there are more .....than .....(males, females).
  - (iii) In India dependency ratio is .....(high, low).
  - (iv) About .....per cent of India's population live in rural areas (50,75,90).
  - (v) Fast increase in population .....the density of population (increases, decreases).
  - (vi) The total number of illiterates in India since 1981 has.... .... (decreased, increased).
  - (vii) Literacy rate in India is calculated for the population aged .....years and above (5,7,15).
  - (viii) Life expectancy for rural population is.....than for urban population (higher, lower).
  - (ix) Life expectancy is .....for females than for males (more, less).
  
2. State whether the following statements are true or false.
  - (i) Among Indian states Kerala has the highest sex ratio and highest birth rate.
  - (ii) Punjab has the highest sex ratio in India.
  - (iii) Sex ratio is the number of females per 1000 males.
  - (iv) About one-third of India's population is in the age group of less than 15 years.
  - (v) Density of population is the ratio of population and total area of the country.
  - (vi) Life expectancy in India has not increased since 1981.
  - (vii) Life expectancy is lowest in Madhya Pradesh .

**32.5 POPULATION PROBLEM**

In this section we will discuss the nature of population problem in India and its consequences.

India has a very large population and its rate of growth is also fast. As a result every year the addition made to the population is very large. This population growth is undesirable. It obstructs faster economic growth and the economic growth that takes place is not fully reflected in the rising income level. Per capita income has been rising at a rate lower than the rate of increase in national income.

Fast growth rate of population has also adversely affected the saving rate. This has happened because the fast growing number has resulted in larger resources being used for meeting increasing consumption needs like food, clothing, shelter, education, health facilities . It has also aggravated the problem of unemployment and poverty which in turn has created many social and political tension. The existing shortage of infrastructural facilities such as electricity, transport etc. become more acute. And above all the quality of human life remains poor which is reflected in low literacy rate, low life expectancy, non-availability of drinking water to vast population, poor housing, malnutrition and high infant mortality rate.

One good feature of India's population is that death rate has declined fast. But the most damaging feature is the slow decline in birth rate. In fact a high and slowly declining birth rate is the root cause of the population explosion. So the population problem can be solved only by reducing the birth rate fast.

However, it is not easy because the factors that influence birth rate are very complex in nature. These factors are social and religious attitudes and beliefs and low level of income and high infant mortality rate.

As was explained in the previous lesson, as economic growth gains momentum it will reduce the birth rate. But such reduction takes a long time whereas the need to reduce birth rate is most immediate. So the vigorous efforts will have to be made to reduce the birth rate.

### POINTS TO REMEMBER

- The population problem in India has two dimensions : (i) Its number (ii) Its rate of increase.
- It obstructs faster economic growth. Whatever economic growth takes place is indicated by increase in national income . But the per capita income rises at a much lower rate than national income because of high rate of growth of population.
- Large size and high rate of growth of population adversely affect saving rate. It aggravates the problems of unemployment, poverty, illiteracy etc.

### INTEXT QUESTIONS 32.3

State whether the following statements are true or false.

- (i) Fast growth of population in India is a source of large labour power, so it helps in economic growth.
- (ii) The rise in per capita income in India is less than the rise in national income due to high rate of growth of population.
- (iii) The fast rate of increase in population can be checked by reducing the birth rate at a fast rate.
- (iv) Large size of population and its high rate of growth increase the saving rate in India.

### 32.6 MEASURES TO SOLVE THE POPULATION PROBLEM

It is clear that India's large population base and its high growth rate create serious problems. It is also clear that the only way to reduce the high growth rate is to rapidly reduce the birth rate.

India is the first developing economy where the Government adopted a population policy in

1951-52 to check the high growth rate of population. Since then various steps have been taken. Some of the important measures taken by the Government are as follows :

- (i) Motivating the people through persuasion. The most important element in population policy has been persuasion and not coercion. People are persuaded to accept small family norms. This is done by propagating the need and programmes of birth control. Population education has also been included in school curriculum.
- (ii) Family planning and health centres were set up in urban, semi-urban and rural areas. These centres besides educating the people about family planning also provide facilities like immunisation and other health services. These centres also provide various devices for birth control.
- (iii) The age at marriage for male and female has been raised to 21 years and 18 years respectively.
- (iv) Various kinds of methods have been adopted for reducing births. These include condom, loop, sterilization, pills etc.
- (v) In motivating people to practise birth control methods, various types of incentives such as cash, additional increment in salary etc. are provided.
- (vi) Training institutions have been set up to train family planning workers. Various research centres have also been set up.
- (vii) Various steps have been taken to promote female education and provide more employment opportunities to women. Female education and employment of women have a direct bearing on birth rate. It has been observed that educated and employed women have smaller number of children.
- (viii) Involving people, private agencies and other institutions like panchayats in family welfare programmes has been one of the new strategies of family planning.

The various measures of family planning are implemented by the State Governments though the programmes are sponsored and fully financed by the Central Government. Due to wide inter-state variations in birth rates what is needed is a separate set of measures for different states or group of states in accordance with their problems.

### POINTS TO REMEMBER

- The various measures taken by government to control fast population growth are:
  - (i) Motivating people through persuasion and incentive to adopt small family norm.
  - (ii) Propagating the various family planning programmes and setting up of health centres.
  - (iii) Raising age of marriage for both males and females.
  - (iv) Making available various methods of birth control and setting up training institutions.
  - (v) Emphasis on women education and employment.
  - (vi) Involving people, institutions and voluntary organisations in family planning programmes.

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**INTEXT QUESTIONS 32.4**

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State whether the following statements are true or false:

- (i) Various family planning measures are financed by state governments.
  - (ii) The age at marriage for female and male has been legally fixed at 18 years and 21 years respectively.
  - (iii) People are motivated to adopt small family norms through persuasion and incentive.
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**TERMINAL EXERCISE**

1. State the age and sex composition of India's population. What are its implications?
  2. Explain the problems caused by high growth rate of population in India.
  3. Suggest measures to overcome the problem caused by high growth rate of population in India.
  4. Describe the trend of birth rate in India since 1951.
  5. 'High birth rate is the root cause of high growth rate of population'. Give reasons to explain the above statement. Support your answers with examples.
  6. What is the literacy rate in India? What changes have taken place in the total number of literates and illiterates?
  7. What do you understand by dependency ratio?
  8. Explain the need for controlling the rapid rate of growth of population in India.
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**ANSWERS****Intext Questions 32.1**

1. (i) False (ii) False (iii) True
2. (i) 84.63 (ii) 32.5, 11.4 (iii) 2.11 (iv) 10 (v) 2001

**Intext Questions 32.2**

1. (i) 929 (ii) males, females (iii) high (iv) 75 (v) increases (vi) increased (vii) 7 (viii) lower (ix) more
2. (i) False (ii) False (iii) True (iv) True (v) True (vi) False (vii) True.

**Intext Questions 32.3**

- (i) False (ii) True (iii) True (iv) False.

**Intext Questions 32.4**

- (i) False (ii) True (iii) True

**Terminal Exercise**

1. Read section 32.4 (i) and (ii)
2. Read section 32.5
3. Read section 32.6
4. Read section 32.3
5. Read section 32.3
6. Read section 33.4 (v)
7. Read section 32.4 (ii)
8. Read section 32.5