
UNIT 2 POPULATION AND HUMAN RESOURCES: POLICY ISSUES

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2.0 OBJECTIVES

After reading this unit, you will be able to:

- establish the relationship between rich human resources and rate of growth of an economy;
- understand that any expenditure incurred in an economy to bring about an improvement in the quality of human resources constitutes investment expenditure;
- show how human capital formation facilitates faster growth of the economy;
- make out a brief demographic profile of India;
- discuss how quality of population, rather than its size, is the major policy issue confronting the economy presently; and
- explain how India's population policy is designed to answer the needs of the economy.

2.1 INTRODUCTION

We have learnt in Unit 1 that with economic growth the structure of an economy, in its various dimensions, undergoes a change. Along with the structural changes, the determinants of growth themselves change. For example, a large population may not be perceived in itself as a burden; given proper direction and a stimulating policy framework, it may as well be seen as an effective determinant having a positive impact on economic growth. The quality of education, and as to how to raise its standard, become critical issues in a country's drive to achieve higher levels of productivity and to raise the country's competitiveness in the global area. However, if the policy-makers fail to achieve any substantial success in this area, a large and growing population may become a permanent burden on the economy.

2.2 HUMAN RESOURCES AND ECONOMIC DEVELOPMENT

We can look upon human resources in two roles, viz. (A) as factor services, and (B) as units of consumption.

2.2.1 Human Resources as Factor Services

Human resources, as factor services, provide labour and entrepreneurship. More people mean more resources.

As such, population growth does contribute to economic growth, and not insignificantly. Some of the important points to be considered from this point of view are as follows:

- Minimum Scales:** Some infrastructure is only profitable with minimum density levels. Examples are roads, dams, ports, and irrigation systems. Industrial output in many areas is subject to strong economy-of-scale effects. Where division of labour and scale economies are limited by small populations, an increase in the number of people can have a positive scale effect that raises productivity and investment.
- Demographic Transition and Savings:** UDCs have populations with a high proportion of young dependents. When the child dependency ratio is high, the population consists of a relatively large number of dependants as a result

consumption will be high relative to earnings and saving activity will be low. During the demographic transition, the number of workers rises relative to consumers, income rises relative to consumption and savings increase.

- iii) **Capital Formation in Agriculture:** In agriculture the saver, investor, and producer of capital are often the same unit — the family farm. In the off-season, the family clears new land, irrigates, builds fences and barns, constructs roads, dykes and wells. With higher population growth, the farmer and his family will put in more hours on this type of capital formation increasing the agricultural capital stock.
- iv) **Labour Force Participation:** Higher dependency ratios go along with rising rates of population growth. This may affect labour force participation in terms of hours worked, entry and retirement age, and women's employment outside house.
- v) **Trade Specialisation:** In the Heckscher-Ohlin model of trade, where a country specialises and exports goods that embody relatively large amounts of its abundant factors, a high growth rate in one factor (labour) would enable the country to specialise in goods using that factor intensively. (e.g., the average cost of employing labour in Europe, including social and welfare costs, is \$ 20 an hour, \$ 19 in the United States and \$ 18 in Japan — and a rough average of \$ 1.65 in most of Asia.) Assuming the nation is already exporting labour-intensive goods, it would simply specialise more and trade more. The growing labour supply enables the country to participate more in trade, and the gains it receives help to offset diminishing returns.
- vi) **Technological Changes:** The pace of technological change may pick up if there is a larger talent pool from which to draw people for work on various frontiers of science.

In short, as factor services, human resources have to play a unique and significant role in the process of economic growth. However, it is not simply the large size of population that matters, what is equally, if not more, important is the quality of population. As accumulators of skills, knowledge, innovations, inventions, discoveries and technical know-how, there are no substitutes to this factor resource.

2.2.2 Human Resources as Units of Consumption

In their role as units of consumption, human beings make a demand on the national product of the economy. In this capacity their number matters. If the size of population is more than what can be absorbed by the national product, i.e., if there is over-population, it leads to a number of problems, among which the more important are as follows:

- i) A rising population makes demands on food stocks of the country; not infrequently a wide gap emerges between requirements and available supplies. This causes acute scarcities and shortages.
- ii) A rising population also implies that a large part of the nation's output is used up in meeting the current consumption requirements, only a small balance is left towards meeting the investment needs. This slows down the process of capital formation and hence of development.
- iii) A large population also adversely affects the balance of trade of a UDC. Such a country needs imports of industrial raw materials and capital goods to meet the needs of economic growth. But when its requirements for food are higher than the available domestic supplies, it has to divert its scarce

foreign exchange resources to food imports. The choice may quite often be a hard one, so that it chooses to carry the burden of trade deficit.

- iv) A direct consequence of over-population is the problem of unemployment with all its attendant evil effects, both economic and social.
- v) The social overhead capital requirements of a country keep increasing with additions to the population. This means that again its investment resources get diverted from physical capital to investment in manpower resources.

In a nutshell, rapid population growth is a handicap, like extra weight carried by a race-horse. It presents an obstacle to growth of living standards, in as much as it acts as barrier to capital accumulation and capital deepening, retards the rate of productivity growth and, in general, adds more to the numbers to be supported than to the level of output.

To sum up the discussion so far, it is generally agreed that a large population may not necessarily either be an asset or a liability. It depends more on the quality of population. The quality of population is a dynamic concept. The quality of population can always be improved by formulating and implementing quality — improvement programmes. Expenditure on such programmes constitutes investment to build up human capital, in contrast to physical capital.

Check Your Progress 1

- 1) “More people mean more resources.” Comment.
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.....
- 2) How does demographic transition of an economy affect the level and rate of savings in an economy?
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- 3) Explain in brief the relation between population and technological change.
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2.3 SIGNIFICANCE OF HUMAN RESOURCE DEVELOPMENT

Human capital can be defined as the body of knowledge possessed by the population and the capacity of the population to use the knowledge effectively.

Until the late 1950s, no economist and any other social scientist did pay much attention to the role of investment in human beings as an important determinant of economic development. The birth of this idea can be dated from the presidential address of Prof. Theodore W. Schultze to the American Economic Association in December, 1960. As a result, the concept of human capital formation came to limelight.

A circular relationship between human development and economic growth has come to be established. Economic growth creates conditions for better health and education facilities; which in turn spur economic growth.

2.3.1 Human Capital Formation

In the present-day emerging economies like India, HRD is to perform among

others the following functions.

- i) 21st century will promote people who respond to technology @ the Speed of Thought, as Bill Gates has said through the title of his recent book. It will reject those who refuse to move fast enough.
- ii) There is a technological shift to knowledge based brainpower industries. Brainpower industries do not have a natural home and can be located anywhere. The smart countries are those who attempt to make themselves attractive to the brainpower industry by educating their people and creating the brainpower through educational institutions.
- iii) In the knowledge economy, the value of intangible assets is increasing and value of tangible assets is decreasing. In order to have a cutting edge in this area, the right kind of technology is not sufficient — rather a proper organisational climate and the right people competencies become more critical.
- iv) In the recent period, the global rate of knowledge creation and dissemination has increased significantly. This, in turn, has led to the rapid spread of modern and efficient production techniques which has resulted in the world economy becoming more competitive. International trade increases the number of consumers and producers participating in the market and hence increases the level of competition. Thus, the knowledge revolution, together with increased globalisation, presents significant opportunities for promoting economic and social development.
- v) Modern physical technology, which is becoming more and more complex, requires the backup of an advanced social technology. Social technology covers all advances in skills acquired by people individually and collectively.
- vi) All the well-known breakthroughs in physical technology would probably have not even taken place if they were not preceded by relevant social innovations. The latter fostered the birth of future advances in physical technologies, and nursed them to maturity.
- vii) Higher education is believed to promote independence and initiative, both of which are valuable intellectual resources for the generation and dissemination of knowledge in society.
- viii) The available empirical evidences in almost all the countries, including India, established
 - positive association between proportion of people below the poverty line and the proportion of illiterate persons,
 - negative correlation between female literacy and birth rate,
 - positive correlation between years of schooling and net increase in farm production.
- ix) Poverty is both a cause and a consequence of deficiencies in human development. With poverty alleviation at the top of the development agenda, a serious assault on poverty will no doubt bring human beings into focus as the major beneficiaries of development. Increased public spending on aspects of human development is more likely to have a greater impact on poverty reduction and, at the same time, in improving human development.
- x) HRD is required to modernise attitudes. A backward social system and primitive attitudes and beliefs cannot go along with economic development.

In short, HRD is an important condition for improving productivity and raising the

level of production which hold the key to economic development. Indeed, the available empirical evidence testifies that poverty ceases to be a handicap and becomes an advantage when a poor country builds up human capital and then uses this cheap, skilled labour in conjunction with cheap global capital to produce a world-beating combination. The Davids (UDCs) have already beaten the Goliaths (developed countries) in many fields and have taken over entire sectors of labour-intensive production.

2.3.2 Indicators of Human Resource Development

Although Human Resource Development and Human Development are distinct concepts in their approaches and philosophies, yet due to availability of data on HDI at global level. We are using Human Development Index (HDI) as approximation and indicator of Human Resource Development.

The UNDP has developed a composite index of human development known as the Human Development Index (HDI). The HDI is based on three indicators:

- longevity, as measured by life expectancy at birth;
- educational attainment, as measured by a combination of adult literacy (two-thirds weight) and combined primary, secondary and tertiary enrolment ratios (one-third weight);
- standard of living, as measured by real GDP per capita (PPP \$). (The HDI discounted or adjusted downwards for gender inequality is called Gender Development Index — GDI)

For the construction of the index¹ fixed minimum and maximum values have been

¹ The index is defined as

$$HDI_j = 1 - \frac{1}{3} \sum_{i=1}^3 I_{ij}$$

where $i = 1, 2, 3$ are the three indicator indices and $j =$ the country, and

$$I_{ij} = \frac{\max. x_{ij} - x_{ij}}{\max. x_{ij} - \min. x_{ij}}$$

Thus the index values I_{ij} are measures of the extent to which country j falls below the maximum value for that indicator expressed as proportion of the largest shortfall recorded by any country.

The actual construction of the HDI is illustrated with the help of the following data relating to India:

Life expectancy (years)	63.4
Adult literacy (%)	66.0
Combined enrolment ratio (%)	61.0
Adjusted Real GDP per capita (PPP \$)	2,753

$$(i) \quad \text{Life expectancy index} = \frac{64.4 - 25}{85 - 25} = \frac{39.4}{60} = 0.656$$

$$\text{Adult literacy index} = \frac{66.0 - 0}{100 - 0} = \frac{66.0}{100} = 0.66$$

Combined primary, secondary and tertiary enrolment ratio index =

$$\frac{61.0 - 0}{100 - 0} = \frac{61.0}{100} = 0.610$$

$$(ii) \quad \text{Educational attainment index} = [2(0.66) + 1(0.61)] \div 3 = 0.643$$

Adjusted real GDP per capita (PPP \$) index =

$$\frac{\log 2753 - 100}{\log 40,000 - 100} = \frac{\log 2653}{\log 39900} = 0.553$$

HDI is the simple average of (i), (ii) and (iii), i.e.,

$$HDI = \frac{0.641 + 0.61 + 0.553}{3} = 0.612$$

established for each of these indicators:

- i) Life expectancy at birth: 25 years and 85 years
- ii) Adult literacy: 0 per cent and 100 per cent
- iii) Combined enrolment ratio: 0 per cent and 100 per cent
- iv) Real GDP per capita (PPP \$) PPP \$ 100 and PPP \$ 40,000

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

$$\text{Index} = \frac{\text{Actual } x_i \text{ value} - \text{minimum } x_i \text{ value}}{\text{maximum } x_i \text{ value} - \text{minimum } x_i \text{ value}}$$

Of the 169 countries for which the HDI was calculated in HDR 2010, 42 are in very high human development with HDI more than 0.90. 43 are in the high human development category with HDI more than 0.8, 42 in the medium category with HDI between 0.5 and 0.8, and 42 in the low category.

2.4 DEMOGRAPHIC TRANSITION AND WINDOW OF DEMOGRAPHIC OPPORTUNITY

The theory of demographic transition as discussed in Unit 1 postulates a three stage sequence of birth rate and death rate as related to economic development. According to this theory, death rates are high in first stage of an agrarian economy on account of poor diets, primitive sanitation and absence of effective medical aid. Birth rates are also high in this stage as a consequence of widespread prevalence of illiteracy, absence of knowledge about family planning techniques, early age of marriage and social attitude. In second stage due to economic development, basic health condition improves and thus there is low death rate along with the high birth rate. This accelerates the growth of population. Eventually, in the third stage, economic development changes the character of the economy from an agrarian to a partially industrialised one. Shift from rural economy to urban economy changes the mindset of people towards family size and thus this stage is characterised by low birth rate, low death rate and low growth rate of population.

2.4.1 Window of Demographic Opportunity

An interesting and rapid shift in dependency burden occurs during demographic transition from high to low mortality and fertility. In the first phase of the transition, populations are very young and the size of the under 15 population (young dependents) is very large compared to the working population (15-59). In the second phase, the share of the old dependents in the population gradually rises. What is of interest is the transition from the second stage to the third stage. The large generation of infants in the second stage is fairly large compared to the initial generation of infants in the third stage. When the former grows up it results in a population structure in which the share of the working age population is relatively high in comparison to both the young and old dependents. Many UDCs which have experienced rapid fertility declines in recent years, are currently passing through this phase of demographic transition in which the labour force grows more rapidly than total population.

Countries passing through this phase of demographic transition, therefore, have a “demographic dividend” or a “window” of “demographic opportunity”. It can

create an atmosphere conducive to economic growth mainly due to following reasons, among others.

First and foremost is the increased saving expected during the age structure transition. The increase in saving rate happens primarily due to the low dependency rate and increased life expectancy.

Secondly, with the decline in fertility women are more likely to enter into the labour market during this stage. This will result in increased economic activity and would lead to a spurt in economic growth.

Thirdly, it is also pointed out that people invest more on their own health when children are fewer in number, leading to better productivity and economic benefits to the household.

Finally, the government also will be in a position to spend and invest in more productive activities with the decline in the number of children as public spending on education and health can be diverted to more productive activities.

However, the demographic dividend cannot guarantee economic growth automatically. To capitalise on the demographic dividend, countries must implement favourable policies and invest in key areas such as education, health, gender equality and employment generation. This should be coupled with good government institutions and functioning markets. If governments fail to implement such programmes, countries may struggle with social unrest of unemployed youths and end up in a position when demographic dividend will turn into a demographic disaster.

The demographic dividend does not last forever because the window of opportunity opens only once and closes within a generation. Over time, the age distribution changes again, as the large working population moves into old dependent age groups and is followed by smaller working populations born during fertility decline. When this occurs, the dependency ratio rises again. This time the elderly outnumber children, while the middle generation has to look after both. This seems to be the experience of both Europe and Japan.

As brought out by a recent WHO initiative called SAGE (Study on Global Ageing and Adult Health) the nations that are truly challenged by ageing may be those where the cognitive performance among seniors is poor, as is the case with several developed countries with an ageing population. In other words, the better cognitive performance of some countries implied that even though their citizens were older, they could be better workers than their peers and thus more useful to their national economies. In view of this, serious effort need be put to make the best use of the demographic opportunity available to us presently.

2.5 DEMOGRAPHIC PROFILE OF INDIA

2.5.1 Size of Population in India

Some of the important features of India's demography can be briefly stated as follows. The population of India at the turn of twentieth century was only around

238.4 million. This has increased by more than four times in a period of one hundred ten years to reach 1210 million in 2011.

Table 2.1: Where does India stand today globally?

S. No.	Category	Global Ranking
1.	Area	7th
2.	Population	2nd
3.	Labour force	2nd
4.	GDP (nominal)	10th
5.	GDP (PPP)	4th
6.	GDP (nominal) per capita	138th
7.	GDP (PPP) per capita	127th
8.	GDP (real) growth rate	5th
9.	Human Development Index	134th

Source: Demographics of India, Wikipedia, online encyclopaedia.

As brought out in Table 2.1, India ranks 7th in terms of area but 2nd in terms of population indicating high pressure on land. Although India ranks high in terms of GDP (nominal, PPP and growth rate), its rank in terms of per capita GDP (nominal and PPP) is very low. Low per capita income indicates high poverty in the country. India also ranks poorly in human development index reflecting poor quality of human resources.

2.5.2 Growth Rate of Population

Table 2.2: Compound annual growth rate of population.

1891-1921	0.19
1921-1951	1.22
1951-1981	2.15
1981-1991	2.11
1991-2001	1.93
2001-2011	1.64

As would be seen from Table 2.2, growth rate of population began to accelerate from 1951 onwards, and continued to rise for the next three decades. Post 1981, the rate of growth of population began to slow down.

2.5.3 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 community. 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.

Life expectancy stood at 63.4 years in 2007. It is higher among females than males. Life expectancy among females for years 2011-2015 is projected at 69.6 years as against 67.3 years for males.

2.5.4 Infant Mortality Rate

The Infant Mortality rate in India was 204 at the beginning of the twentieth century; during the last ten decades, there has been a marked fall in the rate. Presently, it is being estimated at 64 per thousand - 44 in urban areas and 70 in rural. The under five mortality rate has come down from 236 in 1960 to 85 presently.

2.5.5 Density of Population

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 the growth.

The density of population is calculated as a ratio of number of persons per sq. km of land area. According to 2011 census, the density of population in the country is 324 (projected to go up to 426 in 2026). 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 burden on land.

2.5.6 Age Composition

The age and sex composition of population at any time is the result of past trends in fertility and mortality. With the fall in the birth rate, the age structure of population is likely to change. Firstly, the dependency ratio is likely to decrease (there will be two active people for one dependent). Secondly, the proportion of working population is likely to increase. The growth rate of the labour force is projected to be faster than that of the population.

2.5.7 Sex Composition

Sex ratio is a powerful indicator of the social health of any society. It gives the ratio of women to men in the population and reflects the relative chances of survival of women vis-à-vis men.

Sex ratio in India has been historically negative or, in other words, unfavourable to females. It stood at 940 in 2011.

There are six possible explanations given for decline in sex ratio.

- a) A progressive undercount of women compared to men in different censuses,
- b) An increased discrimination of females (including infanticides) in providing the minimum nutrition, access to health and other amenities;
- c) Increase in the proportion of male selective migrants from other countries;
- d) Reduction in foetal wastage resulting in decline in female-male ratio at birth;
- e) Female selective termination of pregnancy
- f) Lagged effect of small sex differences in mortality at young ages persisting over a long period of time.

2.5.8 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, because of the better job opportunities in urban areas, people from rural areas are moving to

urban areas. The percentage of urban population in total population has gone up from 17.1 per cent in 1951 to 32 per cent in 2011.

2.5.9 State of Literacy

Literacy level and educational attainment are vital indicators of development in a society. Attainment of universal primary education is one of the Millennium development goals of the United Nations to be achieved by 2015.

Literacy rate has gone up to 74.04 per cent in 2011. The literacy rates for males and females work out to be 82.14 per cent and 65.46 per cent respectively.

2.6 NATURE OF 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:

- India has a large population base. It is already densely populated; the population is projected to increase further in future.
- The growth rate of population in India since the fifties of the last century has been consistently high and has been caused by (a) persistence of high fertility, and (b) declining mortality.
- Of late, death rate has reached its plateau; birth rate in over a dozen states has reached the replacement level. Therefore, currently, population growth can be attributed to birth-death rate differential in remaining states.
- Persistence of high birth rate and death rate for a fairly long time has resulted in a bottom-heavy age pyramid; the dependency ratio in the economy has been very high.
- Of late, the age composition has been becoming more favourable for growth as the proportion of population in the working age group is on the rise.
- The country shows a rising masculinity with the proportion of women in the total population gradually falling.
- The rural sector dominates the economy. It is indicative of the overall low productivity.
- About one-third of the total population is illiterate which speaks of the very poor quality of human capital in the country.

2.6.1 Causes of Growth of Population

The major causes responsible for the fast growth of population during the last five decades can be classified into two groups: (A) those responsible for the persistence of high fertility as indicated by the high birth rates, and (B) those responsible for declining mortality as indicated by the falling death rates.

High Birth Rate: A high birth rate is a function both of social and economic factors.

Marriage a Universal Phenomenon in India: Historically, the Indian women have married relatively early and only a very small proportion have remained spinsters

beyond the end of the reproductive period, i.e., age 50. Three factors are important in this connection and deserve our attention:

- The proportion of women in the child bearing age, 15 – 49, has been hovering around 47 per cent of total female population.
- 84.53 per cent of the total female population in the reproductive age group, 15 – 49, was married in 1961; the proportion, presently stands at about 81 per cent.
- The average age at marriage among females was 15.6 years in 1951 and 1961. It has gone up marginally to 18.3 years in 2008. Although, the age at marriage has been going up and the once widespread child marriage has become relatively infrequent, the rise in mean age at marriage has been slow.

In short:

- the number of women in the reproductive age is large;
- the number of married women in the reproductive age is large; and
- the average age of marriage among females is very low.

All these factors contribute to high fertility rate – defined as the average number of children a woman bears in her lifetime – and the prevailing high birth rate in the economy.

Rise in Natural Fertility: A number of studies within India have revealed that the marital fertility rate among young married women below age 30, who did not use contraceptives, rose steadily during the period 1951-91 in among younger women has been associated with three major factors.

- Improved biological fecundity of couples because of better nutrition and health;
- Relaxation of traditional cultural checks on fertility that prevailed earlier such as through sexual abstinence by couples on a number of days in a month because of religious and social reasons;
- Reduction in the duration of breast feeding of infants by mothers due to assimilation of urban values that promote bottle feeding.

All these changes are necessary consequences of early stages of modernisation and every country with a strong cultural heritage goes through it. However, this early phase of modernisation, when natural fertility tends to rise, has to be passed over quickly wherein widespread use of modern methods of contraception do quickly and effectively replace the traditional checks on fertility.

It is only in the 2001 census that a reversal of trend is seen when the total fertility rate is estimated to have come down to 3.2. Presently, it is being estimated at 2.8. It gives a clear indication that India is passing through the last phase of fertility transition, moving towards moderate to low fertility.

Declining Death Rate: As far as death rate is concerned, India has almost approached the rate that obtains in the developed world (World average death rate in 2000: 9 per 1000).

- The technology of disease control and death control has so much advanced during the last few years that many dreadful and chronic diseases no longer hold a threat. Among these plague, smallpox, typhoid which used to take a

toll of full villages together are no longer dreaded. Antibiotics and other life-saving medicines are now freely available that casualties resulting from these diseases have been drastically reduced.

- The growing awareness and facilities for sanitation and cleanliness, help to reduce the incidence of mortality. The provision of better maternity and post-natal care as also spread of education have helped to bring down the infant mortality rate.
- Food shortages and scarcities which used to cause dreaded famines in the past are themselves a phenomenon of the past. These things do not happen now, partly because of responsible administrative arrangements and primarily due to the availability of the vast network of transport and communication facilities.

In brief, it is an accepted fact that any improvement in material well-being meets with a reduction in mortality.

2.6.2 Effects of Growth of Population

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.

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: (i) savings effect, and (ii) composition of investment effect.

- The savings effect argues that savings are reduced by population growth because of the increase of the 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 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.
- 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.

Coale and Hoover's Argument: Coale and Hoover mentioned three demographic forces adversely affecting development:

- i) the size of population,
- ii) growth rate, and
- iii) age structure.

These three forces have three different types of impact on the economy. *Firstly*, there will be a capital shallowing effect as rapid population growth leads to a fall

in the ratio of capital to labour. *Secondly*, the age-dependency effect creates a worsening dependency ratio due to a rise in the young population which will ultimately erode the savings in the household. *Finally*, the investment diversion effect leads to a large amount of money being spent by the government on the social sector rather than for productive, growth-oriented investment. The Coale and Hoover argument suggests that declines in fertility promote growth through decreases in the dependency ratios.

2.6.3 Adverse Effect on Quality of Population

The rapidly rising population also adversely affects the quality of population. It works in two ways.

On an individual level, the available empirical evidence shows an inverse relation between numbers of children and ‘resource intensity per child’, suggestive of a trade-off between the number of children and their average quality desired by parents.

On an aggregative level, such health technologies as have been invoked so far are, largely, what may be called death-control strategies, which have served to reduce death rates and ensure better survival. But between the point of ‘survival’ or escape from death on the one hand, and the point of optimal health and nutrition on the other, there is a distance to be covered. Unfortunately, investments in HRD have not been adequate to cover fast this crucial distance.

The country is, therefore, now caught up in a dangerous twilight phase of development wherein large numbers of the poor who might have otherwise died without the benefits of modern health technology are now being ‘saved’, but these survivors continue to live in a state of substandard health, poor nutrition and poor educational attainment. It is this ever-expanding pool of substandard survivors that is eroding the quality of human resources. It is also this large pool of substandard survivors, because of its poverty, illiteracy and under development, that is most resistant to family-planning programmes.

In the social sphere, unchecked growth in population causes a vicious circle. There is a large-scale exodus of rural causes unplanned urbanisation. The rising population of unemployed young people is prone to adopt anti-social activities. Such people tend to perpetuate the cycle by having more children themselves. Paul Ehrlich was probably right when he remarked in his best-selling book, ‘Population Bomb’: ‘You are poor because you are too many.’

Check Your Progress 2

- 1) Mention in brief the major demographic features of India.

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- 2) List the causes of rapid population growth in India.

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3) How does rapid population growth affect economic growth?

2.7 POPULATION POLICY IN INDIA

An overview of the population problem in India, given above, underline the necessity for a direct attack on the problem that should aim at a rapid reduction in the birth rate. In the North, this result was achieved gradually and spontaneously, after a slow process of change in sociological and cultural patterns resulting from economic development and industrialisation. Based on experience of the North, economic development and industrialisation are quite often stressed as the best contraceptives.

An important argument in support of the inter-linkage between economic development and fertility reduction has been provided by the demand theory developed initially by Becker and carried forward by other economists of the household economics, as it is popularly called. The demand theory has heavily emphasised various socio-economic indicators of development as factors responsible for bringing changes in fertility behaviour at the micro level. The major socio-economic variables identified in the demand theory are the level of family income and the opportunity cost of the mother's time.

- An increase in the level of family income, the demand theory postulates, reduces fertility demand, as parents with increasing income aspire to improve the quality of investment on each existing child. (See Figure 2.1)

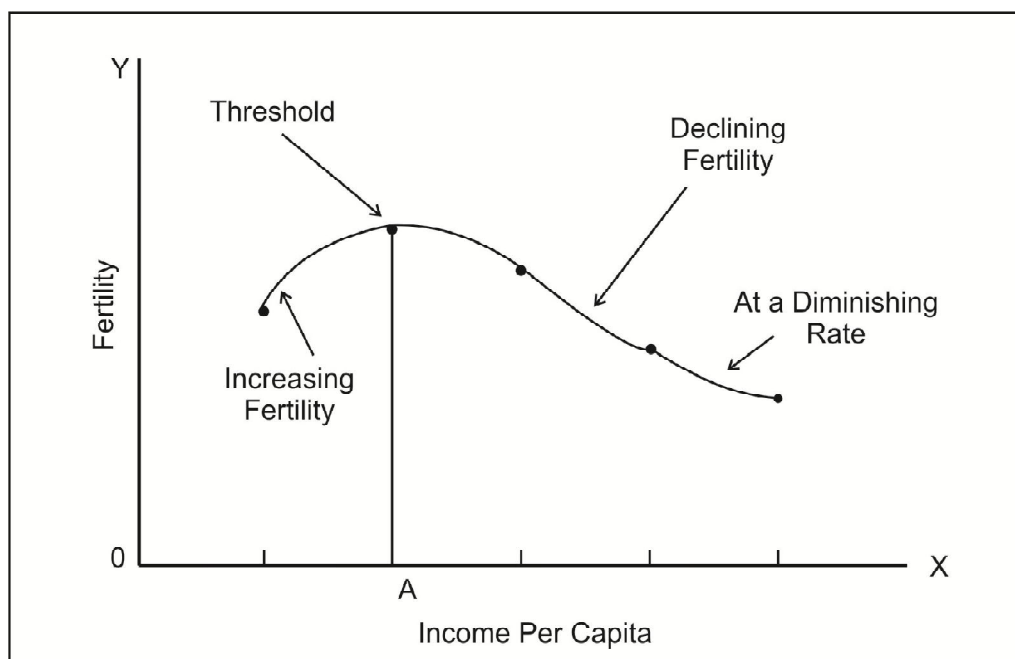


Figure 2.1

- An increase in the opportunity cost of the mother's time say by increase in the labour force participation by married women raises the cost of a child care as the mothers have to forego a larger sum to bring up each additional child. This in turn reduces the demand for a large number of children. Extending this argument the demand theorists have explained the fertility transition in the North as result of the falling demand for children².

Therefore, a case has been sought to be made in favour of the thesis, known as the 're-distribution position' that states that "population problem is basically a problem of economic development and social transformation and not just of controlling numbers." This is to be contrasted with the neo-Malthusian 'Incrementalist Theory' that stated that rapid population rise hinders economic growth.

However, this type of reasoning fails to take note of the fundamental differences that exist between India at present and the Northern countries when they were at the comparable level of development towards the end of the last century. Some of these differences have already been provided in the introduction of this unit.

None of the Northern countries was as densely populated as India is now;

In none of the Northern countries, mortality decline was as sharp and rapid as has been witnessed in India;

Most of the Northern countries had outlets in the form of emigration, India does not have;

Most of the Northern countries had free access to large markets and easy availability of agricultural and mineral raw materials during the initial stages of their development, India does not have.

Once these fundamental differences are understood, the fallacy of equating India with other Northern countries becomes very clear. In India a similar process of slow adjustment appears impossible. In any case, it would not meet the urgent need for a drastic change. In short, we need not place ourselves in a egg-first-or-chicken-first syndrome, should development precede population control, or should population control precede development. From our point of view, population control is a necessary condition for accelerating the pace of economic development, and hence the population policies appear to be a legitimate object of government intervention.

2.7.1 Components of Population Policy

The population policy should emphasis the following:

- 1) Increase the rate of employment by such figure as will do away with unemployment among the population of working age.
- 2) Controlling the growth of population.

Objective of Full Employment: Full employment is accepted by the Indian Government as the desired goal of economic planning. The difficulties in the way of securing full employment in India are too well known to merit specific mention, but we could take up some of the major constraints.

² A 2010 study has suggested that China's one-child policy has led to a surplus of men and thus a very competitive marriage market that has driven up the savings rate in that country.

For securing full employment in India, not only is there a need for more capital and an increase in domestic purchasing power, but also labour-intensive technology for bringing about the desired increase in employment.

It will also mean creating additional employment to the workers living in villages so that migration to urban areas will be lessened through rural industrialisation and thus save the country from the enormous cost of financing the needs of additional urban centers.

There is a huge mismatch in terms of skills. These will throw up challenges of education; training and retraining that cannot be under-mined.

In any case, it will take some time, may be a couple of decades, before we can achieve full employment of people in working age.

Remedies for Population Growth: Population growth can be contained only by fertility reduction, popularly known as adoption of family planning. Family planning implies two things:

- limiting the number of children to be born to a couple to one or two;
- determining the spacing of children.

In other words, family planning means bearing of a child by choice and not by chance. Modern developments in health science have made it possible for couples to exercise this type of choice. The availability of contraceptives and other such facilities has made it easy to popularise family planning. India is the first country in the world that has adopted family planning as an official policy.

2.8 POPULATION CONTROL AND POLICY

The population policy of the Government of India has passed through the following five phases:

- The period of indifference;
- The period of neutrality (1947-51);
- The period of experimentation (1951-61);
- The beginning of the policy of control (from 1961 onwards³); and
- Paradigm shift (since mid-1990s).

The National Family Planning Programme was launched in 1952 with the objective of “reducing birth rate to the extent necessary to stabilise the population at a level consistent with requirements of national economy.” It was started on an experimental basis with a clinical approach to provide services to those who were so motivated. The infrastructure for family planning was created in 1961-62 by adopting an extensive approach for motivating couples and making family planning services available near the homes of the people. The family planning programme consists of the following:

- using various means of communication to persuade people to adopt the small family norm of one or two-children;

³ The symbol used to popularise family planning, inverted Red Triangle, was designed by Frank Wilder. cf. Review of P.K. Nijhawan: Soul to Soul—An Explosive East-West Encounter, in Indian Book Chronicle, Vol. XX, No.4, April 1995.

- making available family planning methods through different outlets in urban, semi-urban and rural areas;
- setting up of family planning centers to make available the various services related to family planning;
- financial assistance to acceptors and motivators of family planning methods like sterilisation;
- making health services available to lower mortality among infants;
- provision of nutrition, immunisation and other protective and preventive measures against diseases, etc.;
- promoting female education and employment;
- arrangements for education in health and biology of reproduction;
- promotion of delayed marriages;
- creating greater awareness of the opportunities for legal termination of pregnancies; and
- more intensive research in family planning methods and practices.

In short, family planning is an instrument of social transformation: it aims at creating better parents, healthier children, better homes; seeks to inject social responsibility into married life. The family planning programme, therefore, has been redesigned as the family welfare planning programme.

The programme, it came to be perceived, got entrenched in what has come to be called the HITTS model, i.e., Health department-operated, Incentive-based, Target-oriented, Time-bound and Sterilisation-focussed programme. This made it imperative to bring about a change in the approach and policy.

In response, the government launched the Reproductive and Child Health (RCH) programme on October 15, 1997. The programme was the centerpiece of the Tenth Five Year Plan. It is designed to implement a different approach to address the population problem — one that locates family planning services within the larger context of reproductive health.

2.8.1 National Population Policy, 2000

The policy was announced on February 15, 2000.

- The immediate objective of the policy has been described as meeting the “Unmet” needs for contraception, health care infrastructure, health personnel and integrated service delivery.
- The medium-term objectives are outlined as bringing the total fertility to replacement levels – two children per couple – by a vigorous implementation of intersectoral strategies.
- The long-term objective is stabilisation of population by 2045.

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

- Reward Panchayats and Zila Parishads for promoting small family norm;

- Strict enforcement of Child Marriage Restraint Act and Pre-natal Diagnostics Techniques Act;
- Health insurance cover of Rs. 5,000 for couples below poverty line, with two living children, who undergo sterilisation;
- 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;
- Funds and soft loans for providing ambulance services in rural areas;
- Strengthening abortion facilities scheme;
- A National Commission on Population, headed by the Prime Minister, has also been set up. The commission will monitor implementation of the new policy.
- A National Population Stabilisation Fund, renamed as the Janasankhya Sthirata Kosh (JSK), has been set up. The Fund will support projects, schemes, initiatives and innovative ideas designed to help population stabilisation, and provide a window for canalising monies through voluntary contributions.

Achievements and Limitations: It has been estimated that 320 million births have been averted during the period 1956-2011 through the family welfare programme. The number of acceptors of family planning methods peaked at 62.9 million as at the beginning of 2011. The couple protection rate has gone up to 48.0 per cent (against the world average of 61 per cent).

A recent study on the comparative performance between States and districts has clearly brought out that in many parts of the country the programme performance has been extremely good and in several other parts quite satisfactory. Double Income Single Child or DISC model is already in the thing in urban families. The resulting differential impact on fertility level and, therefore, on population growth rate, is clearly reflected in the results of 2011 census.

It brings out that demographic transition has already set in India and is moving swiftly to its final stage. India will reach the threshold of the Net Reproduction Rate of 1 within a decade from now. The desired family size is already close to replacement level⁴ in 10 states. In other states it is much lower than the actual number of children born.

All this suggest that the efforts mounted in the country in the last five decades at various levels have not gone waste; that the various determinants of demand for children are moving in the 'right direction' and that there are unprecedented opportunities that we can exploit it on a war footing.

2.8.2 Suggestions to Popularise Family Planning

The success of the family planning programme depends ultimately on both demand for smaller families and supply of family planning services.

- 'Demand' represents the basic determinants of fertility.

Broadly, there are five categories of variables that ultimately determine the

⁴ Replacement level is reached when the total fertility rate (i.e., the number of children per women) is 2.1.

level of demand for smaller families: education, economic status, health, urbanisation and status of women. As the values of these variables increase, a larger proportion of women want fewer children and, therefore, the demand for family planning information and services and use of contraception services.

- ‘Supply’ represents the necessary mechanism through which demand gets expressed in actual reproductive behaviour.

Some of the important suggestions that can be made to popularise family planning are as follows:

Provision of Credible Security: The first and foremost essential condition for propagating the small family norm is the provision of a credible security system, or what economics call ‘subsistence security’. Once the state steps in to provide such a safety net, it helps break new ground where children are not viewed as indispensable for survival.

Expanding Basic Education: Expanding the education opportunities, especially for females, results in lowered fertility. (A recent World Bank study reaches the conclusion: Husband’s schooling exerts a smaller effect than does the wife’s schooling on contraceptive use and fertility.) It has both direct and indirect effects. Directly, education is supposed to affect family size by influencing a broad spectrum of psychological attributes, including freedom from tradition, heightened aspirations, firm views concerning ideal family size, contraceptions, and other modern values.

Indirectly, it works through the following ways:

- Schooling tends to delay the age of marriage for girls, and thus reduces their total number or child-bearing years (Studies indicate that if the average age at marriage of girls in India is pushed up by two years, it may result in lowering the birth rate by about 25 per cent.)
- Schooling enhances a girl’s prospects of finding employment outside the home that may compete with raising a large family.
- Parents with an education themselves desire an even better education for their children and realise that if these aspirations are to be achieved, family size will have to be limited.
- Similarly, fertility regulation is increasingly seen as a route to achieving illiterate parents’ rising educational aspirations for their children.
- Education leads to lowered fertility too, by reducing infant and child mortality. Parents who had some schooling are likely to be more careful about basic sanitation and the value of inoculations and antibiotics. Such a mother is more confident that her own children will survive, and is less likely to want additional children merely as insurance against some dying.
- Education makes possible for both men and women the acquisition of information on family planning. It increases their exposure to mass media and printed material, and enables, them to learn about modern contraceptives and their use. Past experience has shown that the birth rate is lower in those States where female literacy is high. Undoubtedly, “education is the best contraceptive”. It is, as one recent study describes it, ‘the key of keys’.
- Educated members of a community pass on their knowledge and preferences about fertility to the uneducated.

Indeed, summers rightly concludes that investing in the education of girls could be the one investment with the highest return. We find ourselves in agreement with another observer who comments: “Put all the girls in school, India’s problems are off.”

It needs to be mentioned that a package consisting of improvements in preventive and curative health care, education, women’s status and access to the labour market, together with family planning, produce a far bigger impact on family size (and hence population growth) than any element working alone.

Indeed, instead of asserting that “Contraception is the best way for development” it has already begun to be said that “Development of women is the best contraceptive”.

Check Your Progress 3

- 1) State in brief the principal components of population policy in India.

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- 2) List the main features of the National Population Policy, 2000.

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- 3) Suggest in brief the measures to bring about stability in population growth in India.

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2.9 LET US SUM UP

For planners and policy makers human resources present both a challenge and an opportunity, in as much as human resources are both the means and ends of any economic activity aiming at ‘inclusive growth’. The policymakers, right since the early stages of growth during 1950s, have demonstrated their anxiety to convert human resources into a critical driver of growth, and hence growing emphasis on human capital formation. The changing demographic profile of the economy offers a demographic window of opportunity in the form of growing size of labour force in the economy. The expected response of the policymakers has been in direction of putting brakes on fast rise in population and bringing out qualitative improvement by means of human resource development. The ultimate test of the success of the government would be: how for the human resource become the crucial asset contributing to rapid growth.

2.10 EXERCISES

- 1) “There is automatic link between economic growth and human development.” Do you agree with the statement?
- 2) “The relation between population and economic development is a two-sided relationship.” Explain this statement in the light of Indian experience since 1951.
- 3) “At the present stage of economic development, India’s work force holds the key to launch a sustained attack on poverty.” Explain.
- 4) What do you understand by ‘human resource development’? Examine the government policy with regard to Human Resource Development in India.

2.11 KEY WORDS

Demography	: A study of the different aspects of population.
Demographic Dividend	: A situation in which the present structure of population provides an opportunity in which rising labour force can make a positive material difference to the growth process of an economy.
Total Fertility Rate	: It is defined as the average number of children a woman will have if she experiences the current fertility pattern throughout the reproductive span.
Dependency Ratio	: It is estimated as follows – $\frac{\text{Population in working Age Group}}{\text{Total Population}} \times 100$

2.12 SOME USEFUL BOOKS

Dhingra Ishwar C. (2012): *The Indian Economy, Environment and Policy*, Sultan Chand, New Delhi.

Bhattacharya Sutanu (2007): *Economics of Education and Human Capital*, World View, Kolkata.

Chaurasia A.R. and Gulati S.C. (Oct. 2008): *The State of Population*, New Delhi.

Iyson Tim, Cassen Robert and Visaria Leela (eds.) (Oct. 2005): *Twenty-First Century India*, New Delhi.

2.13 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

- 1) See Section 2.2
- 2) See Sub-section 2.2.1
- 3) See Sub-section 2.2.1

Check Your Progress 2

- 1) See Section 2.5
- 2) See Sub-section 2.6.1
- 3) See Sub-section 2.6.2

Check Your Progress 3

- 1) See Sub-section 2.7.1
- 2) See Sub-section 2.8.1
- 3) See Sub-section 2.8.2