
UNIT 5 DETERMINANTS OF GROWTH AND DEVELOPMENT

Structure

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5.0 OBJECTIVES

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

- Learn the concepts of economic growth and economic development;
- Know what is the difference between the two;
- Identify the determinants of economic development; and
- Evaluate the Indian performance in terms of growth and development.

5.1 INTRODUCTION

Rapid economic growth has been the buzzword these days. The situation in the early fifties was no different. However, from the sixties till about the mid-eighties the concept of development came into prominence. This was the time when it was increasingly being felt that majority of the population in most of the developing world did not benefit much from the growth process. Since then, however, the clock seems to have gone full circle in terms of the thrust of development strategy and the priority again is on economic growth rather than on economic development.

5.2 ECONOMIC GROWTH

In Unit 2, you were made familiar with the meaning of growth as well as development. Meaning of economic growth was also explained in that Unit. **Economic growth** occurs whenever people take resources and rearrange them in ways that are more valuable. A useful metaphor for production in an economy comes from the kitchen. To create useful final products (or dishes), we mix ingredients together according to the recipe. The cooking one can do, is limited by the supply of ingredients and by recipes available. Similarly, production of goods and services is limited by the availability of resources/materials and available technology for combining them. From here it follows that the level of production in any economy would expand (or grow) both with increase in available resources and changing technology. This *process of increase in level of production is referred to as economic growth. In brief, economic growth could be referred to as growth in national output (or income) or per capita national income in a period of time, say a year.*

5.3 ECONOMIC DEVELOPMENT

Economic development, in contrast to economic growth, is a wider concept. It is a complex term. To give it a precise definition is not easy. **Development**, as we know, is defined as economic development plus social change. Social change consists of better living standards for people, equitable distribution of income and wealth, productive employment facilities for all, adequate facilities for health and sanitation, education for everyone etc. These are reflected in social indicators like life expectancy at birth, literacy rate, birth rate and death rate per 1,000 population, hospitals per 100,000 population, schools per 100,000 population, share of labour force employed in agriculture sector etc.

Attempts to define development have led to some general definitions. Many of them differ from one another, particularly in respect of substance and the index of development. *The key element of development is that people are the major participants in the process of change in the economy as well as in the enjoyment of benefits flowing from these changes. This process of change in the economy is what is referred to as economic development. These factors enhance growth of the economy though in an indirect way. The enjoyment of benefits by all could be referred to as development.*

Basically, economic development implies the process of securing higher and higher levels of production in all sectors of the economy and this, in turn, is a function of the level of technology. For obtaining a higher level of technology, the economy is required to forge the physical apparatus in the form of machines, equipment, tools and instruments of production on the one hand (*i.e. physical capital formation*) and on the other, to train labour force of the country by providing better education, sanitation and health facilities to the population of the country (*i.e. human capital formation*) to make use of the physical apparatus thus created. In nutshell, economic development is a process of stepping up the rate of capital formation in an economy, human as well as non-human, to enhance the standard of living of its population. *The process of economic development can be seen as a process of expanding the capabilities of people as well as their access to opportunities.*

Indices of economic development attach more importance to the quality of life and give a composite yardstick based on changes in the following three indicators: life expectancy, infant mortality, and literacy. A brief discussion of each one, and an assessment of the three, should help us in understanding these issues. The next Unit discusses various indicators of social change in detail, which gives us some idea about quantifying social change. On the basis of these measures the performance of an economy could be evaluated over time as well as across countries.

Check Your Progress 1

1) Define economic growth? (Answer in three lines)

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2) What is economic development? (Answer in three lines)

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- 3) What is the difference between economic growth and economic development?
(Answer in five lines)

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5.4 THE DETERMINANTS OF ECONOMIC DEVELOPMENT

Economic growth is an essential part of the process of economic development. Providing a continuously rising level of living to population of a country crucially depends on the growth of income. The factors, which are important determinants of economic growth, are also referred to as economic factors.

The rate of growth of national income in an economy depends upon the rate of investment and the capital-output ratio:

$$\begin{aligned} \text{i.e., Rate of Growth of National Income} &= \frac{\text{Investment - Income Ratio (I/Y)}}{\text{Capital - Output Ratio (K/Y)}} \\ &= (I/Y) \cdot (Y/K) \end{aligned}$$

Where I = investment;

Y = National income or output;

K = National Stock of Capital;

In other words, to achieve faster rate of growth of national output, economy has to operate on two variables, viz.,

- a) to step up the rate of investment (*i.e. investment-income ratio*). Other things being the same a higher rate of investment (or capital formation) would ensure higher rate of growth of national income. Higher the resources out of its income (or resources) an economy is able to put aside for investment the higher would be the growth of income in future; and
- b) to generate forces which reduce the capital-output ratio (COR) through more efficient utilisation of capital resources. Higher efficiency reduces the capital-output ratio and the economy is able to produce a higher level of output with lower doses of capital;

5.4.1 Capital Formation

Capital refers to the stock of machines, tools and equipment (which produce consumer goods as well as machines) and improvements in skill formation of its work force, which has enhancing effect on the process of growth. Any additions to this stock in a time period are called Capital Formation. Investment is also another name given to this concept.

Capital formation is of crucial importance in the process of economic growth and development. It is necessary to step up the rate of capital formation so that the community accumulates a large capital stock of machines, tools and equipment, which can be geared into production. Not only that, capital formation requires the creation of skill formation so that the machines and equipment created can be utilized efficiently to achieve a rising level of production.

“The level of production and the material well-being a community can attain depends, in the main, on the stock of capital at its disposal, i.e. on the amount of land per capita and of productive equipment in the shape of machinery, buildings, tools and implements, factories, locomotives, engines, irrigation facilities, power installations and communications. The larger the stock of capital, the greater tends to be the productivity of labour and, therefore, the volume of commodities and services that can be turned out with same effort.” (Planning Commission “First Five Year Plan” p 13.)

Experience of other countries suggests that a high rate of capital formation was achieved to trigger rapid economic growth. In Japan, investment rate between 1913 and 1939 averaged 16 to 20 percent. The First Five Year Plan of the erstwhile Soviet Union had a target of net investment amounting “between a quarter and a third of national income” though in the subsequent plans the rate of investment was lowered and stabilised at about 20 percent of national income. In some of the East European countries like former Czechoslovakia and Poland, gross investment rates ranged between 20 and 25 percent. In view of the experience of other countries, which experienced a faster growth, it is essential for India also to step up the rate of investment to 20-25 percent.

5.4.2 Capital-Output Ratio

Another determinant of economic development is the capital-output ratio. The term ‘capital-output ratio’ refers to the number of units of capital that are required in order to produce one unit of output. In other words, capital-output ratio reflects the productivity of capital in the various sectors of the economy at a point of time. Also in a developing country like India where there is a shortage of capital, it becomes all the more important to conserve its use by utilizing it efficiently. The capital-output ratio for the economy as a whole is only a shorthand description of the productivity of capital.

The capital-output ratio is different for different industries and across different economies and it varies over a period of time.

“There is no unique capital-output ratio applicable to all countries at all times. Much depends on the stage of economic development reached but also on the precise form of further expansion.” (First Five-Year Plan).

For instance in the early phase of economic development, when a country is making heavy investment in economic infrastructure, i.e. on building irrigation works, hydro-electric projects, roads, railways, etc. the corresponding additions to output will be small. The problem of these industries is referred to as *the problem of indivisibilities*. This means that the size of the plant has to be of a specific size even if the need (or demand) for it to start with, is only a small fraction of the total size. Constructing a smaller plant is either costlier or not possible. But with passage of time as the power potential and transport equipment are utilized to the full, there shall be a favourable shift in the capital-output ratio.

On the other hand, basic industries like iron and steel, machine tools, engineering and metallurgy are more capital-intensive than consumer goods industries. Consequently, in the initial years of development when the economic foundations are being laid, capital-output ratio tends to be unfavourable. But as development gathers momentum, and the emphasis is shifted to the production of consumer goods, relatively smaller increases in investment bring about large increments to output. In other words, *the stage of economic development and the mix of various types of investment determine the capital-output ratio.*

Besides, in certain sectors (e.g. agriculture, small-scale industries etc.) of the economy output can be increased with comparatively small additions to capital (these are also called the *labour-intensive* industries or sectors), while in other sectors, comparatively large additions to capital are called for. For instance, in Japan, between 1885 and 1915, labour productivity in agriculture was doubled by a comparatively small quantum of investment in the form of better seeds, improvements in water supply, control of crop diseases and use of fertilizers.

In addition to this, capital-output ratio depends upon the efficiency with which the new types of capital equipment are handled and *the quality of managerial and organisational skill* available at a particular stage of economic development. Co-ordination of the programme of investment so as to develop complementary economic activity simultaneously has a favourable effect on capital-output ratio. In other words, *the capacity of the economy to more effectively use the investment at a particular time also affects the capital-output ratio.*

5.4.3 Occupational Structure

Another factor, which determines and is determined in due course by economic development is the occupational structure of the working population. Experience from all over the world suggests that in the process of development, transfer of work force from primary to secondary and then secondary to tertiary sector of the economy has invariably taken place. For instance between 1870 and 1930, the proportion of work force engaged in agriculture declined from 54 to 23 percent in U.S.A., from 43 to 25 percent in France, and from 80 to 48 percent in Japan. The process of shift in the occupational structure implies the shift of work force from low productivity primary sector to high productivity secondary and tertiary sectors. Therefore, it is essential that as economic development proceeds there is an optimum distribution of the work force in different occupations. This will not only improve the utilisation of labour but will also boost the overall level of productivity of the economy.

5.4.4 Growth of Population

Rapid growth of population is considered to be an important hindrance to rapid economic growth. This happens due to the fact that faster growth of population means less resources per capita. Since economic growth is measured in terms of an increase in per capita income, a part of the increase in national income is utilised to maintain the additional population. In other words, in terms of per capita income, on account of a rise in population, the country is left with small potential of spreading of the benefits of growth across its population. This highlights the need for a large and active programme of family planning so that the benefits of the massive developmental efforts do not get dissipated.

But it may be emphasized that it would not be proper to isolate the population factor because history has shown that birth rate only falls significantly when the standard of living rises significantly for the majority of the population. Hence economic development and population are interconnected. Whereas population hinders economic development, the latter as it gathers momentum, leads to the creation of more appropriate conditions to control population.

Check Your Progress 2

- 1) What factors affect the capital-output ratio and how? Discuss any three factors? Answer in 100 words.

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2) Mark the correct among the following:

As the economy develops the work force (or the occupational structure) moves in favour of:

- a) primary sector
 - b) secondary sector
 - c) tertiary sector
 - d) secondary and tertiary sectors
 - e) primary and secondary sectors
- 3) Which of following is a better indicator of standard of living ?
- a) National income
 - b) Capital formation
 - c) Capital-output ratio
 - d) Expectations of life at birth
 - e) None of the above

4) Indicate which of the following statement is "TRUE" or "FALSE".

- a) Higher investment rate is not good for the faster growth of an economy. TRUE/FALSE
- b) Increase in population is good for faster growth of per capita income. TRUE/FALSE
- c) Growth in national income is the best indicator of economic development. TRUE/FALSE
- d) Per capita income is calculated by dividing the National Income by Population. TRUE/FALSE

5.5 THE INDIAN EXPERIENCE

In this section we will discuss and evaluate the Indian performance so far as growth and development are concerned. One of the important targets of India's development has been to accelerate the growth in national income. Besides the growth in national income, we are also interested to examine the trend in per capita income. Let us first study the trend in India's national income since the fifties. We use the estimates of Net National Product (NNP) at factor cost. The following table depicts this:

Table 1: Trends in National Income (NNP at factor cost)
(at Current and Constant Prices)

Year	AT CURRENT PRICES	(Rs. Crore) at constant prices (1980-81 prices)
1950-51	8574	40454
1960-61	14242	58602
1970-71	36503	82211
1980-81	110685	110685
1990-91	418074	186446
1995-96	857570	267330
1999-2000	1590301	1011224*
2000-2001	1765238	1063479*

Source: National Accounts Statistics, Central Statistical Organization, 1997, Revised Revised Estimates of Gross National Income, 2000-01, National Accounts statistics, CSO
Note : * at 1993-94 prices.

From the above table it can be seen that national income (at current prices) has increased from Rs. 8574 Crore to Rs. 857570 Crore i.e., an increase of 100 times over a forty five year period and then to 1765238 crores in 2000-2001. However, the increase was not that pronounced during the First Five Year Plan period (1950-51 to 1955-56). Subsequently, substantial increases have been noticed over the successive Five Year Plans.

The increase in national income at current prices, however, does not really depict a true picture of the economic growth of the nation, because a substantial part of this increase may be the result of the rise in the prices of goods and services in the economy. In order to have a better idea of economic growth we need to consider the above at constant prices (i.e. keeping prices fixed and then looking at by how much has the income in real terms increased), which is also given, in the above table. From the above table we can infer that the increase in real national income is much less than nominal national income. While the former increased about six times, the latter increased more than 100 times during 1950-51 to 1995-96. The much greater increase in nominal income is due to the inflation (or rise in prices) over this period.

**Table 2: Trends in Per Capita National Income (NNP at Factor Cost)
(at Current and Constant Prices)**

Year	At current prices (Rs.)	At constant prices (Rs.) (at 1980-81 prices)
1950-51	238	1126
1960-61	328	1350
1970-71	674	1519
1980-81	1630	1630
1990-91	4983	2222
1995-96	9321	2573
1999-2000	16047	10204*
2000-2001	17530	1056*

Source: Same as in Table 1

Note : * at 1993-94 prices

The above table depicts the per capita income series both at current and constant prices. Just as real income series is used to eliminate the effect of price increase from the nominal income to give a true picture of the changes in total production, so also per capita income series is designed to eliminate the impact of population increase. Increase in per capita income at constant prices also indicates potential increase in the standard of living, if the total population is distributed equitably over different income slabs. Though at current prices per capita net national product increased about 38 times during the forty five year period, at constant prices it showed an increase of only 2.3 times. The much greater increase in nominal per capita income is due to the rise in prices over this period.

The pattern of growth of national income over the different five-year periods also differs when we consider real, rather than nominal income. This highlights the erratic growth in a planned economy in the fifty years of Independence (Graph 3).

The following table demonstrates this feature:

Table 3: Annual Compound Growth Rate of NNP in India (at Constant (1980-81) Prices)

Plan	NNP (percentage)	Per Capita (percentage)
First Plan (1951-56)	3.6	1.7
Second Plan (1956-61)	4.0	1.9
Third Plan (1961-66)	2.4	0.1
Three Annual Plans (1966-69)	3.7	1.4
Fourth Plan (1969-74)	3.3	0.9
Fifth Plan (1974-79)	5.0	2.6
Annual Plan (1979-80)	-6.0	-8.2
Sixth Plan (1980-85)	5.4	3.2
Seventh Plan (1985-90)	5.9	3.6
Annual Plan (1990-91)	5.1	3.0
Annual Plan (1991-92)	-0.1	-2.1
Annual Plan (1992-93)	5.1	3.1
Annual Plan (1993-94)	5.9	4.1
Annual Plan (1994-95)	6.8	4.9
Annual Plan (1995-96)	6.9	5.1
Annual Plan (1999-2000)	6.6*	4.8*
Annual Plan (2000-2001)	5.2*	3.5*

Source: Same as in Table 1
 Note : * at 1993 - 94 prices

As is clear from the above table, the growth has fluctuated a lot over the last 50 years. Seventh Plan achieved the highest growth (of NNP as well as per capita NNP). Till Fourth Plan growth has been well below 5 percent but since the Fifth Plan onwards the growth has accelerated.

Table 4: The Gross Capital Formation in the Indian Economy

Year	Investment Rate (%)	ICOR	GDP growth
1951/2-55/6	10.66	2.95	3.61
1956/7-60/1	14.52	3.40	4.27
1960/1-65/6	15.45	5.44	2.84
1966/7-70/1	15.99	3.43	4.66
1971/2-75/6	17.87	5.80	3.08
1976/7-80/1	21.47	6.63	3.24
1981/2-85/6	20.98	4.15	5.06
1986/7-89/90	22.70	3.91	5.81
1986/7-91/2	23.17	4.36	5.31
1991/2-1996/7	24.9	3.7	6.8
1999-2000	28.2	4.3	6.5

where Investment Rate = (I/Y) , GDP growth = growth rate of Y (or gross domestic product)

ICOR = $((K/Y)$ = Incremental Capital-Output ratio

Source: Eighth Plan Document: 1992-97 and Ninth Plan Document: 1997-2002

It is clear from the Table 4 that the capital formation (i.e. the investment rate) in the Indian economy has been rising continuously since Independence. It was around 10 percent in 1951/2-1955/6 and has risen to over 23 percent in 1986/7-91/2 period and then to 28 percent during 1997-2000, an increase of about 18 percent. This has been a remarkable achievement. However, the growth of the economy has not shown the corresponding rise in growth of income.

The above table shows incremental capital output ratio rather than capital-output ratio because of two reasons: i) it is very difficult to measure capital and ii) the incremental capital (or investment) is what matters for immediate increase in growth of national income. In the economic analysis also, therefore, the stress is on ICOR rather than on COR. The reason for this has been mainly the fluctuations in the incremental capital-output ratio(ICOR) over this period. This reflects the fluctuation in the level of efficiency in the use of capital stock in the economy.

From the above discussion it is clear that the growth in national income or even in the per capita income does not throw light on the development process. Ultimately the process of economic development has to be concerned with living standards of people i.e. whether they live longer, escape morbidity, be well nourished, be able to read and write and communicate with each other, take part in scientific pursuits, and so forth. The process of economic development can be seen as a process of expanding the capabilities of people and their access to opportunities along with an improvement in their quality of life.

With the above in mind, we focus on some social (or development) indicators. The following Table depicts some basic indicators of Human Development:

Table 5: Basic Indicators of Human Development

Year	Expectation of Life at Birth (years)	Literacy Rate (%)	Birth Rate (per	Death Rate (thousand)	Infant Mortality Rate
1951	32.1	18.3	39.9	27.4	146
1961	41.3	28.3	41.7	22.8	146
1971	45.6	34.5	36.9	14.9	129
1981	50.4	43.6	33.9	12.5	110
1991	59.4	52.2	29.5	9.8	80

Source: Government of India, Economic Survey 1996-97, Ministry of Finance.

As can be seen from the above table, there has been significant improvement in almost all indicators of economic development. For instance, life expectancy at birth in last 45 years period rose from 32.1 to 59.4 years, literacy rate has almost tripled from 18.3 percent to 52.2 percent over the same period, birth rate and death rate came down. Death rate has fallen at a faster pace than birth rate resulting in rapid growth of population. Infant mortality rate has also come down significantly in this period (146 to 80).

In India, in 1991 the occupational structure absorbed 65 percent of the work force in the agriculture (or primary) sector, about 15 percent in industry (or secondary) and rest (20 per cent) in the services (or tertiary) sector indicating that agriculture is still the main employer of the work force in the economy. The secondary and tertiary sector of the economy are supporting relatively a much smaller proportion of the labour force and that there is an unduly high proportion of population drawing its livelihood from agriculture. This is against the background that the share of agriculture

in the GDP has declined from more than 50 percent at the time of independence to around 33 percent in 1991.

The experience of the Indian economy in terms of occupational structure has been very depressing. This, obviously, means that the per capita income in agriculture sector in India is much lower compared to the rest of the population depending on industrial and services sector. On average income of the population in non-agriculture sector was around 2.3 times that of the ones depending on agriculture sector. This difference has risen to more than 4 times in the last fifty years of Independence. This indicates the urgent need to raise the level of productivity of agriculture sector as well as absorption of larger proportion of the work force in non-agriculture sector for faster growth and development of the Indian economy.

Check Your Progress 3

- 1) What has been the Indian experience of growth and development since Independence? Discuss in about 100 words and point-wise.

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- 2) Fill in the blanks:

- a) Share of agriculture in GNP has dropped from 50 percent in 1950 to about _____ percent in 1991.
b) Capital formation is also known as _____.
c) Faster growth in national income at current prices is due to _____.

- 3) The literacy rate in India has increased to

- a) 99.1 percent
b) 52.4 percent
c) 45.7 percent
d) 23.5 percent
e) None of the above

- 4) The expectation of life at birth in India has increased to

- a) 99.1 years
b) 23.5 years
c) 45.7 years
d) 59.4 years
e) None of the above

- 5) The infant mortality rate has fallen to

- a) 80
b) 90
c) 150
d) 108
e) None of the above

- 6) The proportion of the work force in India dependent on Agriculture sector is
 - a) one-third
 - b) two-third
 - c) one-half
 - d) three-fourth
- 7) The national income at current prices is higher than that of national income at constant prices, because of:
 - a) population growth
 - b) inflation (or rise in prices)
 - c) slowing down of growth rate
 - d) deflation (fall in prices)
- 8) The growth of national income is higher than that of per capita national income, because of
 - a) positive population growth
 - b) inflation (or rise in prices)
 - c) slowing down of growth rate
 - d) negative growth of population
- 9) Rate of capital formation has risen to
 - a) 12 percent
 - b) 15 percent
 - c) 19 percent
 - d) 23 percent
 - e) 35 percent

5.6 LET US SUM UP

Objective of this Unit was to familiarise the reader with the concept of economic growth and economic development and with the difference between the concept of economic growth and economic development. Many a time people use these two concepts interchangeably which is not appropriate. The concept of economic development is much wider than the concept of economic growth.

Later part of the Unit looked at the Indian performance in terms of growth and development in the period since Independence.

In short, it is quite possible that mere emphasis on gross national product or growth approach to development may result in increase of national income by the manipulation of capital-output ratio but in the process, the economy may be faced with the problem of massive unemployment. It is, therefore, of vital importance that the pattern of investment should be so designed that certain areas such as defence equipment, engineering and metallurgical industries, heavy industries, railways, shipping etc may be permitted to use sophisticated capital-intensive technology but bulk of the consumer goods industries and various programmes of agricultural development should emphasise on labour-absorbing technologies with lower doses of capital. Such a course is vitally necessary in the early phases of development in which population pressure is heavy on account of a fast decline in the death rate, The harmonisation of the objective of expanding production with that of securing full employment is a logical necessity in developing economies like that of India.

Over the last fifty years since independence, Indian economy has made only limited progress towards self-sustained economic growth. After five decades of effort, a substantial number of Indians, which can be counted in millions, remain desperately poor and can look forward to more abject poverty. A complete re-orientation of development policy is required to benefit the bottom half of the population from the growth process.

5.7 KEY WORDS

Economic Growth : Economic growth refers to a rise in national or per capita income (or product).

Economic Development : The process of improving the quality of life.

Income per capita : Total national income of a country divided by total population.

Morbidity : death or deathlike position.

National income : Total money value of all final goods and services produced in an economy during a year.

Primary sector : Consists of agriculture and allied activities like forestry, fishing etc.

Secondary sector : consists of industries of all types, manufacturing and construction related activities, also referred to as industrial sector.

Tertiary sector : services related activities fall in the purview of this sector. These include banking, transport, insurance, administration, trade etc.

Vicious circle: A self-reinforcing situation in which factors tend to perpetuate a certain undesirable phenomenon

5.8 SOME USEFUL BOOKS

Central Statistical Organisation (1997 and 2001). "*National Accounts Statistics*" Department of Statistics, Ministry of Planning, Government of India, New Delhi.

Eswaran, Mukesh & Kotwal, Ashok (1994). "*Why Poverty Persists in India*", Oxford University Press, New Delhi, Chapter 1 p 1-25.

Kapila, U.(1996). "*Indian Economy since Independence*", 7th Edition, Academic Foundation, Delhi, Chapters 1-3 p 25-45.

Meier, G.M.(1994). "*Leading Issues in Economic Development*", Oxford University Press, Oxford, Fourth Edition, chapters 1,2,3.

Todaro, Michael P.(1994). "*Economic Development*", Longman Group UK Limited, New York, Chapters. 1,3,4, Fifth Edition.

World Bank(1991). "*World Development Report - Challenge of Development*" Oxford University Press, New York.

5.9 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

- 1) Economic growth refers to rise in national income or per capita income. For the details see Section 5.2

- 2) Economic development is the process of economic growth and social change. For details of concept of economic growth and economic development go through section 5.3 carefully.
- 3) See Section 5.2 and 5.3

Check Your Progress 2

- 1) a) indivisibilities; b) capital-intensity; c) labour-intensity; d) quality of managerial and organisational skills; and e) complementary economic activities (Section 5.4.3 for details).

These factors affect ICOR in different ways some positively and some negatively. This is discussed in Section 5.4.3 elaborately

- 2) d).
- 3) d)
- 4) a) False; b) False; c) False; d) True;

Check Your Progress 3

- 1) For this answer you should go through the Section 5.5 and 5.6 and study all the tables and discussions about them in the Unit thoroughly. Discussion should be based on performance in terms of growth of national income and per capita income, capital formation, investment rate and the social indicators.
- 2) a) 33 b) investment c) inflation (or price rise)
- 3) b) 4) d) 5) a) 6) b) 7) b) 8) a) 9) d).

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UNIT 6 SOCIAL INDICATORS OF DEVELOPMENT

Structure

- 6.1 Objectives
- 6.2 Introduction
- 6.3 Types of Social Indicators
 - 6.3.1 The Physical Quality of Life Index (PQLI)
 - 6.3.2 The Human Development Index (HDI)
 - 6.3.3 The Capability Poverty Measure (CPM)
- 6.4 Key Words
- 6.5 Some Useful Books
- 6.6 Answers or Hints to Check Your Progress Exercises

6.1 OBJECTIVES

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

- Identify the various indicators of social development;
- Explain their historical origins and purpose for their development; and
- Attempt a comparative study of the experiences of India's vis-a-vis some other developing countries' of Africa and Asia over time.

6.2 INTRODUCTION

Being students of economics, we would like to know how to assess the economic performance of a country. Here, one of the first indicators that comes to mind is the growth rate of the country. Rapid growth somehow seems to suggest that the people of that country would benefit through improvement in the standards of living. Historical experience does not establish that this relationship holds invariably and automatically. Rapid growth implies an increase in average per capita income. There is, however, no automatic mechanism by which the actual incomes of everyone in the economy increase. In other words, there could be problems of possible increase in inequality in new distribution of income, for instance, which prevents the translation of economic growth into general improvements in the standard of living of the people. Therefore, in order to assess the performance of any country, one needs to go beyond the performance in terms of growth rates.

One of the broad concepts that evolved so as to capture changes in the economy beyond economic growth is that of 'development'. While this is a very broad concept, the key element of economic development is that people of the country being major participants in the process of changes in the economy as well as in the enjoyment of benefits flowing from the changes. For instance, Indian economy has made rapid strides in the area of industrial development in the past few decades. The production of steel ingots has increased from less than 1.5 million tons to more than 15.5 million tons between 1950-51 and 1995-96. During the same period the production of machine tools, cotton textile machinery, cotton cloth, sugar, tea, vanaspati have all shown a sharp increase. At the same time it is also known that nearly 36 per cent of the population in 1993-94 lived below even the minimum norm of income called poverty line. The benefits of economic growth thus seem to have bypassed a significant proportion of the population. In order to evaluate a country's development performance, therefore, one can use measures of the extent to which people in the country receive the benefits of the development process.

The first step in this direction is to look at indicators of poverty and inequality. These, in a sense, seek to measure/capture the access of people to the basic necessities of life, from the purchasing power side. An alternative approach is to look at the country's performance in terms of various social indicators - the main indicators usually relate to health and education sectors. The idea here is to measure the actual access to these services. Indicators such as Physical Quality of Life Index (PQLI) and Human Development Index (HDI) fall in this category.

The above characterisation of the process of development provides an alternative way of assessing the development performance. This is derived from the first part of the characterisation, which is people being the major participants in the process of change. For this to be realised, they should have minimum "capability". This is the basis for the third approach - which takes the form of Capability Poverty Index (first introduced in Human Development Report, 1996). Capability is sought to be captured in terms of three major indicators - avoidable morbidity, education, and health in the form of nourishment. The indicators here differ from the ones used in the earlier indices in that the former measure availability of or access to the service, while the latter seek to capture the proportion of the population that is actually deprived of these services. In this sense this index is an alternative way of measuring poverty, a fact that is amply captured in its name.

This unit presents a discussion of these various indicators of human development, and comparative picture of how India performs on these indicators, when compared to other developing economies.

6.3 TYPES OF SOCIAL INDICATORS

To begin with, it would be useful to get familiar with the problems associated with using per capita GNP as a measure of development. The inability of this indicator to capture the problems arising from inequality in distribution of income is not the only drawback. One of the major criticisms arises from the fact that the figures for GNP do not include non-marketed and/or non-priced activities. This includes, among other things, a significant part of the homemakers' work. This has two implications: first and more obvious implication is that this would result in the underestimation of the level of GNP. Over time, however, the activities, which were formerly not marketed, enter the market. To give an example, consider nursing. Attending to the sick was at one time an activity of the household itself. But today, this service is a part of the market. Not only does one pay for the service in hospitals and nursing homes, one can even obtain the service for an invalid at home. Such changes imply that comparison of the levels of per capita GNP over time could yield misleading information on the underlying standards of living. This problem also implies that using per capita GNP for inter-country comparisons too could be misleading if the countries have differences in the extent of marketed services and goods.

As a result, there have been numerous efforts both to remedy these defects in the use of per capita GNP as a measure of the level of development, and to create other composite indicators that could serve as compliments or alternatives to this traditional measure. Basically, such indicators fall into two groups: those that seek to measure development in terms of a "normal" or "optimal" pattern of interaction among social, economic, and political factors and those that measure development in terms of quality of life. In all of these studies, the approach has been to assess the performance of the country in some key sectors : sectors, which are considered an integral part of any analysis of standards of living. Two of the key sectors used are education and health.

One of the early studies on the first group of composite indicators was carried out by the United Nations Research Institute on Social Development (UNRISD) in 1970. The study was concerned with the selection of the most appropriate indicators of development and an analysis of the relationship between these indicators at different levels of development. The result was the construction of a composite social development index. Originally 73 indicators were examined. However, only 16 indicators (9 social indicators and 7 economic indicators) were ultimately chosen (see Table 1).

Table 1: List of Core Indicators of Socioeconomic Development United Nations Research Institute on Social Development (UNRISD)

Expectations of Life at Birth
Percentage of Population in localities of 20,000 and over
Consumption of animal protein, per capita, per day
Combined primary and secondary enrolment
Vocational enrolment ratio
Average number of persons per room
Newspaper circulation per 1,000 population
Percentage of economically active population with electricity, gas, water etc.
Agricultural production per male agricultural worker
Percentage of adult male labour in agriculture
Electricity consumption, kilowatt per capita
Steel consumption, kg per capita
Energy consumption, kg of coal equivalent per capita
Percentage GDP derived from manufacturing
Foreign trade per capita, in 1960 U.S. dollars
Percentage of salaried and wage earners to total economically active population

These indicators were selected on the basis of their high inter-correlation to form a development index using weights derived from the various degrees of correlation. The development index was found to correlate more highly with individual social and economic indicators than per capita GNP correlated with the same indicators. Rankings of some countries under the development index differed from per capita GNP rankings. It was also found that the development index was more highly correlated with per capita GNP for developed countries than for the developing countries. The study concluded that social development occurred at a more rapid pace than economic development up to a level of \$500 per capita income (1960 prices).

Another study that sought to measure development in terms of a pattern of interaction among social, economic, and political factor was conducted by Irma Adelman and Cynthia Morris, who classified 74 countries according to 40 different variables relating to these aspects. Factor analysis was used to examine the interdependence between social and political variables and the level of economic development to arrive at a measuring yardstick. The researchers found numerous correlations between key variables and economic development.

This approach of factor analysis is based on an underlying normative assumption that there is a unique path of development. The performance of the developing countries is, therefore, sought to be judged in terms of the path traced by the developed countries. There seems to be no logical or historical justification for this assumption. Furthermore, there is usually an emphasis on measuring inputs, such as the number of doctors or hospital beds per 1000 population or enrolment rates in primary schools to measure health and education, when outputs, such as life expectancy and literacy, are the actual objectives of development. This would not be a fallacy if the underlying "production function" transforms all 'inputs' into 'outputs'. But this is rarely the

case. The figures of number of doctors per 100 population, for instance, would normally be concealing the differences in the levels between rural and urban areas, or between backward and advanced pockets of the same country. In response to these criticisms, several studies have sought to develop composite indicators that measure development in terms of meeting the basic needs of the majority of the population or in terms of quality of life.

Check Your Progress 1

- 1) Why is per capita GNP an inadequate measure of standards of living, i.e., of welfare of the people of a country? (Answer in five sentences)

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6.3.1 The Physical Quality of Life Index (PQLI)

One well-known endeavour in this area was Morris D. Morris's development of the *Physical Quality of Life Index (PQLI)*. Three indicators were used to form a simple composite index:

- 1) Life expectancy at age 1;
- 2) Infant mortality rate; and
- 3) Literacy rate.

For each indicator, the performance for individual countries is rated on a scale of 1 and 100, where 1 represents the worst performance by any country and 100 the best performance. For life expectancy, the upper limit of 100 was assigned to 77 years (achieved by Sweden in 1973) and the lower limit of 1 was assigned to 28 years (the life expectancy of Guinea-Bissau in 1950). Within these limits, each country's life expectancy figure is ranked from 1 to 100. For example, a life expectancy of 52, midway between the upper and lower limits of 77 and 28, would be assigned a rating of 50. Similarly for infant mortality, the upper limit was set at 9 per 1,000 (achieved by Sweden in 1973) and the lower limit at 229 per 1,000 (Gabon, 1950). Literacy rates, measured as percentages from 1 to 100, provide their own direct scale. Once a country's performance in life expectancy, infant mortality, and literacy has been rated on the scale of 1 to 100, the composite index for the country is calculated by averaging the three ratings, giving equal weights to each.

Although the study found that countries with low per capita GNP tended to have low PQLIs and countries with high per capita GNP tended to have high PQLIs, the correlations between GNP and PQLI were not substantially close. Some countries with high per capita GNP had very low PQLIs - even below the average of the poorest countries. Other countries with very low per capita GNP had PQLIs that were higher than the average for the upper-middle-income countries.

Table 2: Per capita GNP and PQLI (1981)

Country	Per Capita GNP (\$)	PQLI
Gambia	348	20
Angola	790	21
Sudan	380	34
Tanzania	299	58
Zimbabwe	815	63
China	304	75
Pakistan	349	40
India	253	42
Sri Lanka	302	82
Singapore	5220	86
Taiwan	2503	87
Saudi Arabia	12720	40
Iraq	3020	48
Brazil	2214	72

Source : Todaro, M.P.(1994): Economic Development, 5th Edition.

Table 2 provides a sample of the Third World countries ranked both by per capita incomes and PQLIs in the early 1980s. The data seem to indicate that significant improvements in the basic quality of life can be achieved before there is any great rise in the per capita GNP or, conversely, that a higher level of per capita GNP is not a guarantee of a better quality of life. Note in particular the wide PQLI variations for countries with similar levels of per capita income such as Angola and Zimbabwe, China and India, Tanzania and Gambia, Taiwan and Iraq. Most striking contrast is that between Saudi Arabia and Sri Lanka.

Check Your Progress 2

- 1) What are the three indicators used to form a composite index for PQLI?
a) _____; b) _____; and c) _____
- 2) Best performance of a country is represented with a score of
a) 100; b) 10; c) 1; d) 20.

- 3) The GNP and PQLI are highly correlated for all the countries. Is it TRUE or FALSE ?
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- 4) Discuss in about five sentences the experience of high GNP countries and low GNP countries with regard to PQLI.
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6.3.2 The Human Development Index (HDI)

The latest and most ambitious attempt to analyse the comparative status of socioeconomic development in both developing and developed nations systematically and comprehensively undertaken by the United Nations Development Program (UNDP) in its annual series of Human Development Reports. The centre-piece of these reports, which were initiated in 1990, is the construction and refinement of a Human Development Index (HDI). Like the PQLI, the HDI attempts to rank all countries on a scale of 0 (the lowest human development) to 1 (highest human development) based on three goals or end products of development.

- 1) *longevity* is measured by life expectancy at birth;
- 2) *knowledge* as measured by a weighted average of adult literacy (two-thirds) and mean years of schooling (one-third weights); and
- 3) *income* as measured by adjusted real per capita income (i.e. adjusted for the differing purchasing power of each country's currency and for the assumption of rapidly diminishing marginal utility of income).

Using these three measures of development and applying a complex formula to 1990 data for 160 countries, the HDI ranks all countries into three groups: low human development (0.00 to 0.49), medium human development (0.50 to 0.79) and high human development (0.80 to 1.00). It should be noted that HDI measures relative, and not absolute, levels of human development and that its focus is on the ends of development (longevity, knowledge, material choice) rather than the means (as with per capita GNP alone). Further, while PQLI focuses only on the physical indicators of health and education, HDI assigns a role to income as well, by including adjusted real per capita income as one of the indicators. In this sense, HDI could be considered a refinement of PQLI as well as of per capita GNP as indicators of development.

Table-3: Comparison of HDI and CPR with the real per capita GDP (1993)

	Real GDP (PPPS) Per Capita	HDI	CPR
USA	24680	0.940	
Sweden	17900	0.933	
Japan	20660	0.938	
South Korea	9710	0.886	8.6
Sri Lanka	3030	0.698	19.3
Pakistan	2160	0.442	60.8
India	1240	0.436	61.5
Bangladesh	1290	0.365	76.5
China	2330	0.609	17.5
UK	17230	0.924	
Germany	18840	0.920	
Brazil	5500	0.796	10.0
Tanzania	630	0.364	39.4
Iraq	3413	0.599	39.9
Algeria	5570	0.746	49.5
Kuwait	21630	0.836	10.8

Source: Human Development Report, 1996.

Table 3 shows that the Human Development Index, along with the figures for real per capita GDP (PPP\$) for a sample of developed and developing nations. A comparison of these two figures is done by a comparison of the ranks of the countries by these two measures - by taking the difference. A positive number shows by how much a country's relative ranking rises when HDI is used instead of GDP per capita, and a negative number shows the opposite. Clearly, this is the critical issue for HDI as well as any other composite social indicator such as the PQLI. If country rankings did not vary much when HDI is used instead of GDP or GNP per capita, the latter would (as some economists claim) serve as a reliable proxy for socio-economic development, and there would be no need to worry about such things as health and education indicators.

We see from Table 3 that there is no direct correspondence between the ranking by the HDI measure and that by the per capita real GDP (PPP\$). It is interesting to note that even though countries with high HDI tend to have higher adjusted real per capita GDP. Within and occasionally across the three subgroups we find some countries whose HDI is considerably higher than others even though the latter have substantially lower per capita incomes. Thus, for example, we see that Tanzania's HDI is slightly higher than Guinea's (0.364 and 0.306 respectively) even though Guinea's real per capita GNP is almost 3-times higher than Tanzania's. There are many other such cases, which make it clear that complete stress on GNP growth may not be enough to solve the problem of poverty or deprivation in the under-developed countries.

Although the HDI gives us a broader perspective on progress towards development, it should be pointed out that

- 1) its creation was in part motivated by a political strategy designed to focus attention on health and education aspects of development;
- 2) the three indicators used are good but not ideal (e.g. the U.N. team wanted to use nutrition status of children under age 5 as their ideal health indicators, but the data were not available);
- 3) the national HDI may have the unfortunate effect of shifting focus away from the substantial inequality within countries;
- 4) the alternative approach of looking at GNP per capita rankings and then supplementing this with other social indicators is still a respectable one; and
- 5) one must always remember that the index is one of relative rather than absolute development, so that if all countries improve at the weighted rate, the poorest countries will not get credit for their progress.

6.3.3 The Capability Poverty Measure (CPM)

Turning to the capability side of the story, with the help from Amartya Sen, "Human Development Report (1996)" has invented a multi-dimensional measurement, calling it an index of Capability Poverty Index. The objective behind construction of this index is to focus on deprivation rather than on availability. Participation of the people in the development process would be conditional on their capability, captured in terms of the health and educational status: basic here being survival, and access to education and various public and private resources. The index, it is believed, represents a truer picture of those who are so deprived that they no longer have the chance or choice to improve their lives.

The report measures human poverty in terms of deprivations:

- a) *deprivations of life* (nearly one-third of the people in the least-developed countries are not expected to survive to 40);

- b) *deprivation of basic education* (particularly of girls); and
- c) *deprivation of access to public and private resources*, including safe water.

The corresponding indicators are percentage of children under five who are underweight, percentage of women over the age of 15 years who are illiterate and percentage of births unattended by trained health personnel. *The CPM therefore focuses on people's lack of capabilities in the country rather than on the average capabilities in the country.*

While this constitutes the basis for the construction of this new index, it also alters the focus of recommendations for governmental intervention in these sectors. The goals of governmental intervention get suitably modified. In terms of per capita GNP (U.S. dollars) India is still one of the poorest countries of the world, even many of the poorer African countries have done better in their performance. Table 2 clearly shows that countries like Sri Lanka, Pakistan, Iraq, Gambia, Angola, Tanzania, Zimbabwe, even Sudan have a higher per capita GNP than India. But in terms of PQLI, Pakistan, Gambia, Angola, Sudan have a much lower ranking than India. So, it is vividly clear *that Indian experience has been mixed in achieving growth as well as improvements in the standards of living of its population.*

The figures for CPM for the less developed countries too are presented in *Table 3*. It should be noted that the performance of the countries as per the CPM does not correspond directly with the ranking according to HDI.

Looking more closely at Table 3, it can be noticed that South Korea and Kuwait have more or less same HDI (0.886 and 0.836 respectively) but the per capita GNP of South Korea is only about 40 percent of that of Kuwait. This indicates that *higher level of per capita income is necessary but not sufficient condition for better human development.* The case is similar for the pair of China and Iraq. Both have more or less equal HDI but China's per capita income is about 35 percent lower than Iraq's. Further, whatever be the measure that is being considered, the Table 3 also indicates that India has a long way to go to achieve rapid growth and betterment of quality of life of its population in comparison to most other countries of the globe.

Check Your Progress 3

- 1) What is the difference between the indices developed by UNRISD on the one hand and HDI or PQLI on the other? Briefly describe these indices.
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- 2) What is the significance of the Capability Poverty Index? How does it differ from HDI or PQLI? (Answer in four lines)
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- 3) Consider HDI and PQLI and discuss what is the difference in the policy implications in the use of these two development indicators? (Answer in five lines)
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4) How would the policy implications of indices based on UNRISD differ from those based on HDI/PQLI?

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6.4 KEY WORDS

Human Development Index: An index measuring national socio-economic development, based on measures of life expectancy at birth, educational attainment, and adjusted real per capita income.

Income per capita: National income of a country divided by total population.

Infant mortality rate: Deaths among children between birth and 1 year of age per 1,000 live births.

Levels of living: The extent to which a person, family, or a group of people can satisfy their material and spiritual wants. If they are able to afford only a minimum quantity of food, shelter, and clothing, their levels of living are said to be very low. If they enjoy a great variety of food, shelter, clothing, and other things, such as good health, education, and leisure, they are enjoying relatively high levels of living.

Literacy: Ability to read and write.

Literacy rate: The percentage of population aged 15 and above that are able to read and write.

Malnutrition: A state of ill health resulting from an inadequate or improper diet, usually measured in terms of average daily protein consumption.

National income: Total money value of all final goods and services produced in an economy during a period of time, usually a year.

Physical Quality of Life (Index (PQLI): A composite social indicator reflecting the average of three indices: life expectancy at birth, literacy rate, and infant mortality rate.

Social indicators: Non economic factors of development, such as life expectancy at birth, literacy rate, infant mortality rate, and doctors per 1,000 population.

Vicious circle: A self-reinforcing situation in which factors tend to perpetuate a certain undesirable phenomenon.

Factor analysis: refers to the analysis in which weights is given to various variables (or indicators) according to the importance accorded to it.

6.5 SOME USEFUL BOOKS

EPW Research Foundation (1994). *"Social indicators of Development - II"*, *Economic & Political Weekly*, May 21, pp 1300-1308.

Eswaran, Mukesh & Kotwal, Ashok (1994). *"Why Poverty Persists in India"*, Oxford University Press, New Delhi, Chapter 1 pp 1-25.

Meier, G.M. (1991). *"Leading Issues in Economic Development"*, Oxford University Press, Oxford, Fourth Edition.

Todaro, Michael P. (1994). *"Economic Development"*, Longman Group UK Limited, NY, Chs. 1,3,4, Fifth Edition.

United Nations Development Programme(UNDP) (1996). "*Human Development Report 1996*", Oxford University Press , New York.

**Social Indicators of
Development**

World Bank (1991). "*World Development Report - Challenge of Development*", Oxford University Press, New York.

6.6 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

- 1) Refer to Section 6.3 to answer this question.

Check Your Progress 2

- 1) a) Life expectancy at age 1; b) Infant mortality; and c) Literacy.
- 2) a) 100
- 3) FALSE.
- 4) Read Section 6.4.1 for the experience of developed and developing countries with regard to the correlation between GNP and PQLI.

Check Your Progress 3

- 1) The former are based on a normative assumption of a unique path of development, while the latter make no such assumption. Both these kinds of indices seek to focus on the extent to which benefits of development accrue to the people. For details of these indices look up section 6.3.
- 2) Section 6.4 may be referred to for answering this question.
- 3) Since the basic difference between these two indicators is the inclusion of per capita income in HDI and its exclusion in PQLI, emphasis on HDI would suggest the need for income redistribution, while this would not figure in PQLI based analysis.
- 4) The former would advocate increases in the inputs to the basic services like doctors per 100 population, while the latter would focus on achieving goals such as increase in life expectancy at birth. The latter therefore, is more likely to explore the reasons for failure of the availability of the service to translate itself into final 'outputs' like life expectancy and address the underlying problems.

UNIT 7 PLANNING IN INDIA

Structure

- 7.0 Objectives
- 7.1 Introduction
- 7.2 Role of Planning in Economic Development
- 7.3 India on the Eve of Independence
- 7.4 Evolution of Planning in India
 - 7.4.1 Brief History of Planning
 - 7.4.2 Role of State as Visualised in the Planning Process
 - 7.4.3 Planning in Independent India
 - 7.4.4 Plans, Planning Models and their Priorities
- 7.5 Planning Experience in India
- 7.6 Achievements and Failures of Planning in India
 - 7.6.1 Achievements of Planning
 - 7.6.2 Failures of Planning
- 7.7 Changing Perspective of Planning
- 7.8 Let Us Sum Up
- 7.9 Key Words
- 7.10 Some Useful Books
- 7.11 Answers or Hints to Check Your Progress Exercises

7.0 OBJECTIVES

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

- Understand the importance of planning;
- Appreciate its need;
- Explain the limitations of planning;
- Describe achievements and failures of Indian Planning; and
- Analyse the changing perspective on planning.

7.1 INTRODUCTION

The debate between planning and the market mechanism is age-old. This Unit addresses this debate. The conflict is superficial in nature. There are plenty of ways in which the two can be combined to achieve the desired goals of social and economic development. The latter part of the Unit discusses the Indian experience of planning in the post-independence period. The limitations of the planning by direction in the light of Indian experience are discussed in the last part of the Unit.

7.2 ROLE OF PLANNING IN ECONOMIC DEVELOPMENT

A free and unimpeded market system is expected to lead to maximising the national product. This maximum is also optimum from the point of view of efficiency if certain conditions are satisfied in the functioning of an economy. These are as follows:

- 1) *Poverty and inequalities in income distribution of all kinds are tolerated:* The market system tends to create inequalities of income and wealth. It also does not provide equal opportunities to all, especially to poorer sections in an unequal

society. In the real world, therefore, there are some constraints sought to be placed on inequalities in the distribution of income and wealth.

- 2) *There are no public goods.* That is there are no goods and services produced for the community as a whole and all are only for the market. However, in real world, there are always some goods and services which do not meet these criteria. These include national defence, roads, bridges, prevention of pollution etc. If left to the market these products are unlikely to be provided for.
- 3) *There are no externalities associated in the process of production.* In other words, there are some costs and benefits in provision of certain goods and services, which cannot be taken into account by the market system. These are goods and services like primary education, basic health facilities, drinking water and sanitation etc. These services involve large positive externalities. Similarly, costs of certain harmful drugs (involving negative externalities), though profitable, are unlikely to be accounted for by a market system. So, the market system cannot be relied upon to provide for these; and
- 4) *Production is not subject to increasing returns to scale.* These are those industries in which the cost of producing a good or service keeps falling as the production is expanded due to the economies of scale of production. These industries include telecommunications, power distribution, broadcasting, railways, waterways, irrigation projects etc. Therefore, if these are left to the market then they may be provided in very small quantities or may not be provided at all as losses would be incurred in producing these goods or services at the point of efficient level of operation.

Similarly, in most developing countries, increase in food production required to stave off hunger and famines may be much more than what the farmers may desire to produce at the prevailing market prices. So we see that the possibilities of such distortions, which the market system may create, indicate that the system may not always deliver the optimum result.

This raises the need for rational, deliberate, consistent and coordinated economic policy, which is what is referred to as **Planning**. The aim of planning is to assure maximum national income through time by *optimising* the composition of national income with minimising the distributional inequalities.

The means employed may be either **indirect** (through **monetary, fiscal and commercial** policy) also sometimes referred to as indicative planning or **direct** (through public investment). In the indirect approach, government strives to achieve objectives of planning through changes in its policies and regulatory framework in economic activity. France is the best example of this. In India also Government has used this approach successfully in steering agricultural development in the desired direction. Direct approach, on the other hand, is based on direct state intervention in economic activity. This is done through state-owned public sector enterprises to achieve the desired goals of planning. This approach has been extensively used for the rapid development of the industrial sector in India.

Check Your Progress 1

- 1) What, in your view, are the three important limitations of market system?

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2) Discuss in brief the difference between direct and indirect approach to planning?

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3) Why is planning important for the developing economies?

7.3 INDIA ON THE EVE OF INDEPENDENCE

What did India look like at the time of Independence in 1947? It was poor, obviously, but more strikingly, almost completely stagnant. The average expectation of life was a mere 33 years. India also experienced a gigantic famine in 1943, shortly before Independence; this took a toll of nearly 30 lakh people. However, this devastating famine was not directly related to the decline in the amount of food availability since it took place at a time when there was a comparatively good aggregate food crop.

Indian economy at the time of independence was overwhelmingly rural in character with nearly 85 percent of the population living in villages and deriving their livelihood from agricultural and related pursuits using traditional, low productivity techniques. The backwardness of Indian economy gets reflected in its unbalanced occupational structure with 75 percent of working population engaged in agriculture. Even with this large proportion of population engaged in agriculture, the country was not self-sufficient in food and raw materials for industry. The average availability of food was not only deficient in quantity and quality but also precarious as exhibited by recurrent famines. Illiteracy was as high as 84 percent; majority of children (60 percent) in the age group 6-11 did not attend school. Mass communicable diseases were rampant and in the absence of a good public health system, mortality rates were high (27 per thousand). Thus, the economy was faced with the problem of mass poverty, ignorance and disease, which were aggravated by the unequal distribution of resources between groups and regions.

7.4 EVOLUTION OF PLANNING IN INDIA

Policy makers in India initiated the process of planning in order to attain certain objectives within a time frame. These were particularly aiming at:

- i) to speedily raise the levels of living;
- ii) to catch-up with the living standards of the industrially advanced countries;
- iii) to produce product-mix which could sustain growth over a longer period of time; and
- iv) reducing the extent of the existing inequalities and levels of poverty in the country.

To achieve these objectives, acceleration in the rate of growth in the economy was emphasised because in a rapidly growing economy it becomes easier to tackle various problems.

The role of state in the process of planning as a tool for accelerating growth and structural break was well accepted even before independence.

7.4.1 Brief History of Planning

I) *The National Planning Committee*

Jawaharlal Nehru was the architect of planning in India. Under his Chairmanship the *National Planning Committee (NPC)* was set up towards the end of 1938. The Committee considered all aspects of planning and produced a series of studies on different subjects concerned with economic development. The Committee laid down following recommendations:

- i) the state should own or control all key industries and services, mineral resources, railways, waterways, shipping and other public utilities and all those large-scale industries, which were likely to become monopolistic in character;
- ii) agriculture is crucial to draw up a scheme of national planning;
- iii) the planning should aim at doubling the standard of living of the people in 10 years.

II) *The Gandhian Plan*

Mahatma Gandhi was not a professional economist and did not develop a formal model of economic growth. But he advocated certain policies with regard to the development of Indian *agriculture, small-scale industries* etc. A Gandhian Plan incorporating these policies was prepared by Shriman Narayan and Acharya S.N. Agarwala in 1944. This model forms the basis of Gandhian planning, sometimes also referred to as '*the Gandhian model of development*'.

Besides the NPC eight industrialists conceived "A Plan of Economic Development" which was popularly known as *the Bombay Plan*. The famous revolutionary M.N. Roy also formulated a plan generally referred to as the *People's Plan*.

All these plans were of historical importance as there was no opportunity to implement them. Therefore, they remained on paper only. However, all these plans do indicate broad consensus about the importance of the role of state in the development process of the Indian economy.

7.4.2 Role of State as Visualised in the Planning Process

In the early 1950s it was believed that the state could play a significant role in a developing economy both in raising the domestic rate of savings and in putting it to more productive use. Indian economy was predominantly rural in character. It had land tenure system in which a substantial part of the surplus over subsistence needs of the cultivators and farm labourers got appropriated by a small class of non-cultivating land owners and intermediaries (especially under zamindari system and other feudal forms of tenure) and used for non-essential consumption. Abolition of such exploitative and socially wasteful land tenure systems could release surplus for productive investment through *land reforms* (*Land reforms* also refers to redistribution of land from the big farmers to the landless agricultural labourers). This increases land productivity as well as improves the economic conditions of rural poor as they are mainly landless labourers. Land reforms combined with taxation of agriculture are means of exploiting this potential. Both require strong State intervention.

The state has to take the primary responsibility for providing elementary education, basic health care, safe drinking water and other facilities. These are the basic needs in any civilised society and in the Indian economy all these things were at very low level as discussed above. These also have substantial beneficial effects on the general level of productivity. Direct state intervention is necessary and justified due to the strong positive *external economies* (or externalities) associated with these basic services for the community as a whole (point 3 in Section 7.2).

Projects such as road networks, major irrigation works, steel plants, railways etc. call for investments on a scale far beyond the capacity of individual investors. They are in the nature of natural monopolies (also known as the public utilities) and form a category where direct involvement of the State is deemed justifiable (point 2, Section 7.2). In most cases even if the private sector is allowed to operate, the need for effective mechanism to define and enforce standards, norms of efficiency, “fair” rate of return on investment and the like is universally accepted. All of this call for state regulation, though not necessarily direct ownership and operation.

The government can also help development by creating conditions, which induce people to invest more. Low rates of savings are a reflection of low levels of income. A relatively stagnant, slow growing economy implies that profitable opportunities for investments are limited. State intervention can help expand such opportunities in several ways by creating environment conducive for faster growth. *State did this job very effectively in the Indian economy till about mid-sixties but in the later period it got into whole lot of economic activities and at the cost of ignoring its essential roles like education, health and sanitation etc.*

Public mobilisation of idle or underemployed labour for creating productive assets especially roads, irrigation canals, land improvement, schools, rural hospitals etc. increase the potential productivity of private resources and thereby creating profitable private investment opportunities. Under certain conditions, increased public expenditure can enlarge the scope for profitable investment by creating additional demand for goods and services. Both these effects are likely to be considerably strengthened if there is a coordinated programme of investments for ‘balanced development’ ensuring that supplies of key inputs and services grow in step with the demand for them. This aspect is particularly important in the case of activities, which are closely inter-related. With a coordinated programme, the risks of shortages or excesses of particular goods or services will substantially reduce. Reduced risks induce business to invest more.

Check Your Progress 2

1) What is the role of state in the planning process? Give two examples.

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7.4.3 Planning in Independent India

The Planning process formally started in India after the attainment of Independence when Government of India set up the Planning Commission in March, 1950. The responsibility for overall planning was vested with the Planning Commission. The Commission’s mandate was quite wide:

- a) to assess the country’s need of material capital and human resources and to formulate plan for their more balanced and effective utilisation;

- b) to review all important programmes and projects before they are approved for implementation;
- c) to determine the pool of resources to be devoted to development and the allocation of this pool between various uses and users; and
- d) the monitoring and evaluation of their progress.

Though formally an advisory body, it was expected that the Commission would be consulted on all major matters of development policy. Its composition was such that expert professional opinion could be brought to bear on all important matters and at the same time ensure that its counsel will carry sufficient weight in the councils of Government.

Successive Five Year Plans have sought to concretise the development strategy, programme and priorities to realise the general vision of 'growth with social justice' within the framework of a democratic polity and mixed economy. The shape and content of successive plans show a certain evolutionary process reflecting changing ideas and perceptions on the potentials and constraints on development, the relative emphasis on different objectives, and the compulsions of political and economic exigencies at various points in time.

The basic objectives and issues of economic development in India have been **growth, modernisation of the economy, self-reliance and social justice (mainly reduction in economic inequalities and removal of poverty).**

7.4.4 Plans, Planning Models and their priorities

The launching of the First Five Year Plan in April 1951 initiated a process of development aimed not merely at raising the standards of living of the people but also opening out to them new opportunities for a richer and more varied life. This was sought to be achieved by planning for growth and social justice.

The First Five Year Plan contains one of the clearest early formulations of the need for planning and of the state's role in it. Planning, it pointed out, involves "acceptance of a clearly defined set of objectives in terms of which to frame overall policies..., formulation of a strategy for promoting the realisation of the ends defined..., and working out a rational solution to problems - an attempt to coordinate means and ends". According to A. Vaidyanathan (1995), three features of this formulation are noteworthy:

- 1) It viewed planning as a means of utilising available resources more effectively to initiate the development process;
- 2) It emphasised that elimination of poverty cannot be achieved exclusively through redistribution of existing wealth or through raising output. "Purposive intervention would be required to channel economic activity within the existing social and economic order and so remodel the framework as to accommodate progressively the fundamental urges reflected in the demand for right to work, education and adequate income, protection of the aged, the sick and the disabled and ensuring that society's natural resources are used to sub serve the common good" and do not result in concentration of wealth and power in the hands of a few; and
- 3) It recognised that planners are not omniscient; that there are vast gaps in our knowledge of facts and that considerable amount of judgement is inevitable in making policy. The implication is that one has to keep learning from experience.

The First Five Year Plan commenced with the financial year 1950-51. It was followed by a series of Five Year Plans.

Planning process in India has had strong theoretical foundations. All the Five Year Plans have been based on different planning models. The First Plan (1951-56) was based on **Harrod-Domar growth model**. The result of this model can be set up in a simple equation:

$$I \times (1/\alpha) = I \times \sigma$$

where I represents level of investment

α = marginal savings rate

σ = marginal output-capital ratio

These concepts have been explained in detail in the previous Unit.

The Second Plan (1956-61) was based on a modified Soviet model. It was developed by **P.C.Mahalanobis**. This model was a two sector model - consumer goods and capital goods were the two sectors. This model stressed on capital goods sector. The Mahalanobis model of Second Plan stands as the centre of India's planning frame.

The *Third Plan (1961-66)* was based on the work of **Pant and Little** in **Perspective Planning Division (PPD)** of **Planning Commission**. **Manne and Rudra (1965)** prepared a consistency model for India's Fourth Five Year Plan. Unlike all the previously presented models, The Fifth Plan model incorporated a novel feature, which was ignored in earlier models. The implication of redistribution of consumption from the richer to poorer sections of the community were explicitly introduced into the planning model. The model structure behind the Sixth Plan was an extension of the model behind the Fifth Plan. The Sixth Plan attempted to integrate both the Harrod-Domar and input-output approaches of the earlier plans in a demand-supply frame. In order to impart to planning a futuristic outlook and then to make the vision a reality, the Seventh Plan (1985-90) was set within a 15-year perspective. The Plan was set out to stabilise the growth of the economy at an average annual rate of five percent. The model for Eighth Plan was also based on Seventh Plan though in this Plan the role of state for directly intervening in the economy has been considerably curtailed. The Ninth Plan follows the same path.

The following table shows the details of all the plans, their priorities and reasons for delays.

Plan	Period	Priorities	Reasons for delays
First Five Year Plan	1951-56	Agriculture	Plan holiday because of two Wars and two successive droughts
Second Five Year Plan	1956-61	Heavy industry	
Third Five Year Plan Annual Plans (three)	1961-66 1966-69	Agriculture and heavy industry Consolidation	
Fourth Five Year Plan	1969-74	Removal of poverty	Did not complete its period because of change in Government in 1977.
Fifth Five Year Plan	1974-79	Removal of poverty and self-reliance	
Sixth Five Year Plan was converted to Annual Plan	1979-80	Employment	
			Did not complete its period because of change in Government in 1980

Plan	Period	Priorities	Reasons for delays
Sixth Five Year Plan	1980-85	Employment, food grains production and direct attack on poverty	
Seventh Five Year Plan	1985-90	Energy, employment, food grain production and raising productivity	
Annual Plans	1990-92	Infrastructure	Reformulated as the plan could not be finalised due to changes in two Government
Eighth Five Year Plan	1992-97	Economic growth, employment and liberalisation	
Ninth Five Year Plan	1997-2002	Economic Growth, Infrastructure, Agriculture, rural development, environment sustainability	

Check Your Progress 3

- 1) What was the period of First Five Year Plan ?
 - a) 1947-52
 - b) 1951-56
 - c) 1950-51
 - d) 1948-53
- 2) What was the period of Eighth Five Year Plan ?
 - a) 1980-85
 - b) 1985-90
 - c) 1992-97
 - d) 1970-83
- 3) How many five year plans have been completed in India?
 - a) 5
 - b) 7
 - c) 8
 - d) 10
- 4) When was Planning Commission set up?
 - a) 1938
 - b) 1947
 - c) 1950
 - d) 1951
- 5) What are the broad objectives of planning in India? Describe them in brief?

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7.5 PLANNING EXPERIENCE IN INDIA

While India adopted planning under a strong interventionist State its approach to planning differed in several crucial respects from that of the socialist (former as well as present ones) economies. The latter, as is well known, had virtually abolished

private property; all means of production were nationalised; the production and exchange activities of individual enterprises were supposed to conform to targets set by the planning authority. In India, much of the means of production have been and continue to be privately owned. Despite the significant expansion of the public sector, the private sector owns more than half of the stock of capital and accounts for nearly three-fourths of the annual output. The market mechanism is active over most of the economy, even if it is imperfect and distorted.

Private property rights in India are protected by legal rights against State take-over without compensation. Except for a modest programme of land reforms and the State control over some sectors like railways, coal mines and financial institutions, the State has, as a matter of policy, avoided nationalisation of property on any large scale. Instead it has relied on a mixture of direct and indirect controls to regulate the private sector activity. Attempts to promote equitable distribution of income and removal of poverty have operated largely through fiscal policy - especially public expenditure and pricing of goods and services provided by the public sector besides some direct programmes especially designed to eliminate poverty amongst target groups.

Planning in India has brought about major structural breaks, although not to the extent desired by planners. Planning was viewed as a way of avoiding the unnecessary rigours of an industrial transition in so far as it affected the masses. During the fifties, India's development prospects were rated rather high, domestically as well as internationally. It had a stable Government, an educated elite of sizeable dimensions, a commitment to planned development, and very low defence spending. Indeed, Nehru's vision of a mixed economy moving towards a socialistic pattern of society appeared to theorists of reformed capitalism as an answer to the challenge posed by the model of growth presented by Mao's Communist China.

During the sixties the atmosphere changed drastically. Two successive droughts, wars with China and Pakistan, followed by the declaration of 'plan holidays' for three years and large scale imports of food grains brought about a great change in the international perception. Internally also there was initially great uncertainty. The savings rate dropped. Excess capacity emerged in basic sectors such as steel and capital goods. Above all there was fear that maintaining food availability per capita was going to be a great problem in years to come.

But the system did not break down. With some adjustments in policy, production revived in agriculture, especially for food grains. Within ten years of droughts, all economic indicators pointed upwards. This happened when the world was passing through the Great Recession, and many of the success cases of sixties and seventies were experiencing negative growth or only mildly positive growth. However, in the nineties with the collapse of USSR and many of the East European socialist economies the centralised planning as a tool of economic development has come under severe attack. There is a move towards decentralised and indicative planning world over. The spectacular development experience of the East Asian economies (South Korea, Hong Kong, Taiwan, Singapore, Thailand, Malaysia) also point to the strong role of indirect state intervention through manipulating market mechanism in the development process (another example of indicative planning).

The role of planning is, as a result, undergoing changes where the private sector is being encouraged much more to achieve the socially desirable outcome. France is another successful example of this kind of planning strategy.

7.6 ACHIEVEMENTS AND FAILURES OF PLANNING IN INDIA

India has completed five decades of planning. It is, therefore, important to review this entire period so as to understand the accomplishment and deficiencies of the planning experience in India in achieving various objectives of social and economic development.

7.6.1 Achievements of Planning

Reviewing the performance of five decades of planning it can be said that it is a cause of legitimate national pride that over this period a stagnant and dependent economy has been modernised and made self-reliant. Moderate rate of growth of per capita income has been maintained despite the growth of population.

The following could be included in the list of achievements of planning in India (Table 2 for details):

Table 2 : Selected Indicators of Development

	1950-51	1960-61	1970-71	1980-81	1990-91	1995-96	1999-2000
Economic Indicators							
Index of Industrial production (1993-94)	7.9	15.6	28.1	43.1	91.6	123.3	154.7
Index of Agricultural Production (1980-81 base)	46.2	68.8	85.9	102.1	148.4	160.7	178.6(P*)
Food grains (million tons)	50.8	82.0	108.4	129.6	176.4	180.4	208.9
Finished Steel (million tons)	1.0	2.4	4.6	6.8	13.5	21.4	27.2
Cement (million tons)	2.7	8.0	14.3	18.6	48.3	69.5	100.2
Coal (Million tons)	32.3	55.2	76.3	119.0	225.5	292.3	322.1
Crude Oil (million tons)	0.3	0.5	6.8	10.5	33.0	35.1	31.9
Electricity generated (TWH) (Billion kilowatts)	5.1	16.9	55.8	110.8	264.3	379.9	480.7(P*)
Wholesale Price Index 1993-94 base	6.8	7.9	14.3	36.8	73.7	121.6	145.3
Consumer Price Index (1982 base)	17	21	38	81	193	313	428
Social Indicators							
Population (Million)	361.1	439.2	548.2	683.3	846.3	915.9	
Birth Rate (per 1000)	39.9	41.7	41.2	37.2	29.5	28.3	
Death Rate (per 1000)	27.4	22.8	19.0	15.0	9.8	9.0	
Life Expectancy at birth	32.1	41.3	45.6	50.4	-	60.8	
Literacy Rate (Percent)	18.33	28.31	34.45	43.56	52.2	-	

* Provisional

Source: Ministry of Finance, Economic Survey, Various issues

I) Indicators of economic progress:

- a) During 1950-51 to 1999-2000, our gross domestic product at factor cost (or the GDPfc) at constant prices has experienced an average growth rate of 4.1 percent

per annum. This average increased to 5.5 percent per annum in the decade of nineties;

- b) Savings as a proportion of GDP have risen from 10.4 percent in 1950-51 to 25.6 percent in 1995-96.
- c) As a consequence of sharp decline in death rate in this period the population grew at more than 2 percent per annum, and the net consumption grew at a modest rate of 1.4 percent per annum;
- d) The process of industrialisation in India has been impressive. A major achievement has been the diversification and expansion of India's industrial capacity with the public sector playing a leading role. The country is self-sufficient in consumer goods and in basic commodities like steel and cement, while the capacity of other industries like fertilizers, telecommunications etc., is rapidly expanding. The growth of capital goods production has been particularly impressive, and India is in a position to sustain the growth of most of its industries, whether textiles, food processing, or chemical or sugar, power or transport through domestic production.

Index of Industrial Production (1993-94 = 100) increased from 7.9 in 1950-51 to 154.7 in 1999-2000 indicating a growth of more than 6 percent per annum. The production of finished steel increased from 1.04 million tonnes in 1950-51 to 27.2 million tonnes in 1999-00. Similarly during 1950-51 and 1999-2000 the production of cement increased from 2.7 million tonnes to 100.2 million tonnes. Likewise, the production of coal rose from 32.3 million tonnes to 322 million tonnes in the same period. There was a tremendous increase in electricity generation from 5.1 to 480.7 billion kilowatts. In 1999-00, the crude oil production increased to 31.9 million tonnes from a mere 0.26 million tonnes in 1950-51;

The per capita cereal consumption increased from 334.2 grams in 1951 to 468.5 grams in 1995, but availability of pulses declined from 61 grams to 38.1 grams per day. However, the overall availability of food grains has improved from 395 to 498 during the same period;

- 1) The per capita availability of edible oils and vanaspati increased from 3.2 kilograms in 1950-51 to 9.2 kilograms in 1999-00. The per capita consumption of cloth increased from 11 metres in 1951 to 30.6 metres in 1999-00. Availability of other amenities of life has also increased significantly. There has been increased use of bicycles, scooters, cars, trucks, telephones, computers, televisions, refrigerators etc., which are pointers to the progress of the society.
- 2) Development of economic infrastructure, energy, transport, and irrigation: Another achievement of significance is the creation of economic infrastructure, which provides the base for the programme of industrialisation. The expansion of roads, road transport, railway network and telecommunications network has made it possible to connect people and transfer goods from one part to the other part of the country and linking India with the whole world. It has considerably enlarged the market size. Irrigation and hydro-electric projects have given a big boost to agriculture and also provided energy for industries. The infrastructure has helped in modernising semi-urban and rural areas.
- 3) Diversification of export and import substitution: As a consequence of the policy of industrialisation and the policy of import substitution, India's dependence on foreign countries for the import of capital goods has declined. Similarly, quite a good number of consumer goods imported earlier are now being produced

indigenously. Also, the commodity composition of its exports has changed in favour of manufactures, mineral ores and engineering goods.

II Indicators of Social Progress:

- 1) **Rise in the life expectancy of the Indian people:** Whereas the life expectancy of an average Indian was 33 years in 1951 it has risen to 61 years in 1995. This is largely due to the virtual elimination of dreaded diseases like small-pox, plague, reduction of incidence of the malaria and cholera. Besides this, better health facilities have also led to a marked fall in infant mortality. Although under-nourishment accounts for poor health of a large proportion of the population, even then an increase in life expectancy is a creditable achievement.

The other social indicators also points towards significant progress. Birth rate in India, which was 39.9 per thousand in 1950-51, declined to 28.3 in 1995-96. As against it, the death rate dropped sharply from 27.4 per thousand to 9.0 in 1995-96. Infant mortality fell from 146 to 74 per thousand in the same period.

- 2) **Development of a good educational system contributing to significant advances in science and technology** One of the greatest achievements of planning has been the development of the third largest pool of trained manpower with high educational qualifications. This has been crucial in the significant growth of science and technology in the country. This has considerably reduced our dependence on the foreign technology and experts. Being relatively more advanced than many other developing countries in this respect, India has started extending technical expertise to many of the Middle-East, Asian and African countries. This is a matter of legitimate pride.

7.6.2 Failures of Planning

From the credit side of the planning, now we turn to the debit side of the account and focus attention on the deficiencies of planning in India.

For over four-and-a-half decades of planning, the Government has been constantly impressing upon the people of India that development planning in India aims to build up a *socialistic pattern of society*. *The crucial question, therefore, is: Whether the lot of the underdog, the weak and the under-privileged has improved?* In other words, have benefits of the development percolated down to the lower layers of the Indian society? This has happened only to limited extent and evidence of that is the following:

- 1) **Failure to provide a basic minimum level of living to the whole population:** The basic objective of planning has been the provision of a basic needs minimum to all. But little has been achieved on this front by India.
- 2) **Failure to reduce inequalities of income and wealth:** There is no evidence that during the last 50 years of planned economic development, any redistribution of income in favour of the less privileged classes has taken place. Between 1950-51 and 1995-96 the per capita income has risen by 1.7 percent per annum. But even this small increase is unequally distributed. Studies indicate that the small gains of development over the years have not been equally distributed among all sections of the society. The condition of the bottom 20 percent of the population had definitely deteriorated and for another 20 percent of the population, it remained more or less stagnant. Thus, while the character of rural poverty has deepened further, there is evidence of increased concentration of income and wealth in the hands of propertied class.

- 3) *Failure to provide productive employment to all able-bodied persons:* With the progress of planning, the problem of unemployment as well as underemployment is also on the increase. Backlog of unemployed persons has been rising since the end of the First Plan. Development Plans in India were unable to absorb even the natural increase in labour force during each plan period, not to speak of alleviating the huge backlog of unemployed.
- 4) *Inadequate infrastructure availability:* Another failure of the Planning process has been the prevalence of large scale inefficiencies in construction, running and maintenance of the infrastructure projects in the public sector constraining the growth of the economy from its maximum potential. Situation has reached alarming proportions since the mid-eighties especially in case of power, railways and roads. Most of the power plants operate much below capacity (around 50%), transport infrastructure are heavily congested. The failure of the planners has been that they have been unable to foresee these bottlenecks and as a result the economy has not been able to grow at its full possible potential.
- 5) *Neglect of small and marginal farmers and redistribution of land:* One of the basic policy decisions to transfer ownership of land to the peasantry (i.e. the land reforms) has not been properly implemented. Though, there have been some efforts made in some states like West Bengal, Karnataka, Tamilnadu etc. It has been now admitted by the Government that progress of land reforms has been rather slow and that the state governments were not eager to implement them with a speed sufficient for quicker transition to progressive agriculture and equitable distribution of resources.
- 6) *The relative neglect of regionally balanced agriculture sector* has been another major failure of the planning process in India. The average land productivity of India is very low compared to most of the fast growing developing economies of East Asia and China. The average land productivity in China, for example, is more than 4 times that of India. This is due to the policy of encouraging agriculture in selected regions of the country only and leaving rest of the country-side dependent on rains for irrigation.

In conclusion, it may be pointed out that so far there has been great divergence between plan targets and their implementation. The philosophical and academic quality of the plan documents may have been fine but there has been a major crisis of implementation due to the existence of wide gap between theory and practice. It is this aspect of economic planning, which provides the Achilles' heel to our social set-up.

7.7 CHANGING PERSPECTIVE OF PLANNING

Complete planning by direction is just as much ruled out as is complete laissez-faire due to:

- i) the central planner, who issues the direction, cannot hope to see and provide all the consequences of his actions. The economic system is exceedingly complex. It is because of this complexity that fulfillment of *plans by direction* is so unsatisfactory. In planning by direction the result is always a shortage of certain things, and a surplus of others. Planning by market handles all this better because, in any sphere that is affected by the decision to have more of anything, the flow of money and the adjustment of prices acts as a 'governor', turning on and off automatically.

- ii) for the same reason, **planning by direction is inflexible**. The plan once made must be adhered to simply because you cannot alter any part of it without altering the whole, and altering the whole is too elaborate a job to be done frequently. The price mechanism can adjust itself from day to day, and demand and production respond; but the economy planned by direction is inflexible.
- iii) the follows from these two. As the plan proceeds fulfillment is bound to be imperfect - even if the plan was perfect when it was made, conditions change. There could be a strike, an accident in a sector, which will affect the production of other sectors of the economy as well.
- iv) Central planners tend to excessive standardization, not because it is good for public, but because it simplifies their job. It kills competition among the companies and discourages them to improve the quality of the product in question. So, the process of technological change also gets stifled.
- v) the more one tries to overcome the difficulties of planning by direction, the more costly planning becomes in terms of resources. We cannot plan without knowledge, for which elaborate censuses, numerous forms and array of clerks are needed. The better we try to plan, the more planners are needed. The market mechanism does the same job without an array of planners who are thus released for useful work in the economy.

On account of complexity, planning by direction does not increase, but on the contrary diminishes democratic control. A plan cannot be made 'by people' or by parliament; it has to be made by officials, because it consists of thousands of details fitted together. The more we direct from the centre the less the control that is possible. When government is doing only a few things we can keep an eye on it, but when it is doing everything it cannot even keep an eye on itself.

The obvious moral of this is that the aim should be to preserve free markets wherever feasible. For the state can achieve most of its planning goals by controlling in its turn the market which controls the entrepreneur. The state can achieve plan targets in an effective manner not by direction but by manipulating the market. An appropriate policy of tax and subsidy can be used more effectively to encourage or discourage the production or consumption of any good and service.

The central issue in the discussion of planning in India has been not whether there shall be planning but what form it shall take, and in particular the state operate through the market mechanism (indicative planning) or supersession of it (centralized planning or planning by direction). Suppose for example, the government decides that, to promote industrial growth in a sustained manner, the production decisions need to be regulated. Now state could do this in various ways:

for example,

- i) it could decide to set up government corporations, call public sector enterprises to directly control the production decisions;
- ii) it could regulate production by making laws which ensure that anyone wanting to produce any industrial product has to take a license from the government; and
- iii) it could also use the fiscal, monetary and tax-policies to encourage or discourage the production of various industry groups by adopting appropriate policies.

In the Indian context, the state used first two options more often than the last one. The system of industrial licensing and large scale investment in publicly owned

industries created a strong industrial base for the Indian economy. But around mid-sixties the inflexibilities and unnecessary bureaucratic interference started creating problems. This resulted in slow-down in the industrial growth in the 1965-1980 period. In the eighties and nineties, planners started loosening the grip of direct approach and started stressing more on the fiscal and monetary planning to achieve plan targets.

Agricultural sector, on the other hand, is an example of indicative planning. The state used pricing policy, credit policy and institutional mechanisms to promote agricultural growth and achieved the plan targets quite successfully.

Since the late seventies the planning process has been undergoing drastic changes world over due mainly to the above mentioned reasons. This is further reinforced by the collapsing centrally planned economies of former USSR and the East European economies on the one hand and the spectacular performance of the East and South East Asian economies on the other which stressed on planning by manipulating the market.

In India also, since July 1991 there is move in the same direction. The role of state in the economy is being reformulated and the private sector is being given more and more freedom to operate in almost all areas of economic activity. The **industrial licensing** has almost been completely done away with. The list of sectors reserved exclusively for the public sector has been substantially pruned. The state is withdrawing from many sectors of the economy where it had no business to be there in the first place. The only problem seems to be that it is also withdrawing from those activities like primary education, basic health etc. which require strong state intervention. This is a disturbing trend being observed of late in India.

Check Your Progress 4

- 1) What, in your view, have been the three major failures of the planning process in the Indian economy?
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- 2) What have been the three major successes, in your opinion, of the planning process in the Indian economy?
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- 3) Why is there a need to shift the focus of planning process in India? Do you think since the last few years the shift has been in the right direction?
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.....
- 4) In India, direct and indirect approach to planning has been used for different sectors at the same time. Which sector was largely guided by direct and which by indirect approach? Discuss in brief.
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7.8 LET US SUM UP

A critical review of the Indian development plans takes us to the following conclusions:

First of all, India's macro-economic performance has been only moderately good in terms of GDP growth rates. Allowing for the fact that for the better part of the entire plan period, population has increased by more than 2 percent per annum, the growth of per capita income on an annual basis has been somewhat less than 2 per cent per annum.

Secondly, while India has had to reckon with a fair measure of inflation from time to time (1965-67, 1972-74, 1979-80 and 1991-94), the average rate of inflation has been a very modest one by international standards. There have been two major reasons for this success. One is the ability to maintain a rate of growth of food grains of around 3 percent per annum over the period as a whole. The other is the financial deepening that was experienced by the country over the last 25 years, which allowed domestic saving to go up in a monetized form. The rise in domestic saving rate from around 10% of GDP in the fifties to around 24% currently is generally judged as impressive.

Thirdly, there has been considerable capital formation in human terms. India today has a very wide base of skilled workers to draw upon, even if the level of efficiency varies a great deal across sectors.

Therefore, it would be as rash to draw a conclusion as to dismiss Indian development planning as an 'essay in failure', as to describe it on the whole as a 'great success'.

Among the major weaknesses, the following can be listed:

First, there are many areas of production where inefficiency is fairly widespread, as in generation of power, transport, steel, fertilizers let alone high-cost of consumer durables. There is no inherent reason why plant load factor (or capacity utilization level) in thermal power stations have to be around 50%. There is much greater scope for improving the efficiency of the integrated steel plants, as well as the thermal power plants.

Second, Indian planning has left a large number of people below the poverty line and poverty figures "indicate that gross poverty exists in the country, as the norm used for these purpose is based principally on calorie intake." Chakravarty, S.(1987), p 85.

Thirdly, India has not been able to employ proportionately larger population in the industry. The occupational structure has remained more or less unchanged. This has mainly been the result of higher population growth and also the industrialisation strategy followed which has been heavily biased in favour of capital-intensive industrialisation.

Lastly, the failure of the Mahalanobis strategy to the lack of comprehension on the part of the planners regarding the full set of logical implications of the accelerated growth in the context of a mixed economy. "This showed that the process of industrialization had ignored certain important issues relating to the phasing of

investment outlay. But probably more importantly, the ability to carry out effective land reforms in the early fifties when conditions had been reasonably opportune, along with maintenance of largely unchanged input base of traditional agriculture, meant that the agrarian transition was left largely incomplete." Chakravarty, S. (1987) p 8.

Hence, whereas the planning process has been able to *create social and economic infrastructure, provide an industrial base by fostering the development of heavy and basic industries, it failed employment to every able-bodied person, eliminate poverty and bring about institutional reform leading to reduction of concentration of income and wealth.* Moreover, the benefits from the economic infrastructure have largely confined to the relatively affluent and those in urban areas. These fundamental failures of the Indian planning process emphasize the need for a re-appraisal of the overall development strategy of planning. We must face the facts that the most important objective of planning has not been achieved, the most cherished goals seem to be almost as distant today as when the planning process was initiated in the country. These aims of planning - implicit in all our plans more explicitly stated in the formulation of our development strategy - are universally accepted by the Indian people; they are the removal of poverty, enough opportunities of productive employment for all, and creation of more egalitarian society.

7.9 KEY WORDS

Balanced Development: Strategy of development in which effort is made to develop all the sectors of the economy simultaneously so that the growth of the economy does not get constrained due to inadequate development of a particular sector/s.

Capital-intensive: Refers to the technique of production, which requires higher input of capital per unit of output relative to labour input.

Fiscal Year: Fiscal year refers to the year beginning April 1 to March 31 of the next year.

Fiscal Policy: Policy relating to control of government expenditure or taxation according to the requirements of the economy whereby in the periods of slowdown government expenditure is raised and economy is boosted up. Reverse is done in case of overheating case.

Increasing Returns to Scale: This is the situation when if you double all inputs for producing some product its output expands more than twice. That is cost per unit of output keeps falling as output is expanded. The Decreasing Returns to scale is just the reverse of this.

Laissez Faire: Refers to the policy of no state intervention in the economic activity in an economy.

Monetary Policy: Policy relating to control of money supply according to the needs of the economy whereby in the periods of recession extra money is injected into the system to tackle slowdown in the economy. Reverse is done in case of inflation (or overheating) case.

Public Utility: An enterprise, which is the sole supplier of some essential good or services and is, in consequence, subject to some form of government control

Public Goods: The common characteristic of public goods is non-excludability and non-rival consumption. That is it is not feasible to exclude other consumer from

consuming it and consumption by one person does not reduce its availability to others, e.g. national defence, clean air, TV or radio broadcast.

7.10 SOME USEFUL BOOKS

Chakravarty, Sukhamoy(1987). *“Development Planning: The Indian Experience”* Oxford University Press, New Delhi.

Dutt, R. and Sundaram, K.P.M.(2000). *“Indian Economy”*, S.Chand & Company Ltd., New Delhi, Chapters 8,9,16.

Eswaran, Mukesh & Kotwal, Ashok (1994). *“Why Poverty Persists in India”* Oxford University Press, New Delhi, Chapter 1, pp 1-25.

Kapila, U.(1996). *“Indian Economy since Independence”*, 7th Edition, edited, Academic Foundation - TRP, Delhi, Chapter 1-3 p 25-45.

Vaidyanathan, A.(1995). *“The Indian Economy, Crisis, Response and Prospects”*, Orient Longman, New Delhi.

7.11 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) Limitations of the market system:

- a) equity considerations
- b) public goods
- c) externalities
- d) natural monopoly

for further details look at the Section 7.2.

2) Direct approach refers to ownership of economic activity through public sector whereas the indirect approach is based on manipulating the market system. For details see the Section 7.2.

3) Refer to Section 7.2.

Check Your Progress 2

1) Role of state derives its importance from failures of the market and achieving of some crucial social objectives like primary education, basic health facilities etc. Refer to Section 7.4 and 7.2 for details.

Check Your Progress 3

- 1) b)
- 2) c)
- 3) c)
- 4) c)

5) The basic objectives and self-reliance of economic development in India have been growth, modernisation of the economy, and social justice (mainly reduction in economic inequalities and removal of poverty). You should also have a serious look at the Section 7.4 and its subsections.

Check Your Progress 4

- 1) Refer to the Section 7.6.2, which discusses the failures of planning in India in detail.
- 2) Refer to the Section 7.6.1, which discusses the successes of Indian planning in detail.
- 3) It has amply been demonstrated that there are severe limitations to centralised planning, which stress the need for decentralised and indicative planning. The Indian planners also have made an attempt in that direction. For limitations of planning by direction see the Section 7.7 on Changing Perspective of Planning.
- 4) As discussed in this Section, agriculture sector in India was guided by indirect approach and industrial sector was guided by direct approach to planning. For elaborate details read Section 7.3 and 7.7.



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