UNIT 1 ECONOMY AT THE TIME OF INDEPENDENCE*

Structure

1.0 OBJECTIVES

After reading this unit, you will be able to:

- describe the state of Indian agriculture at the time of independence;
- state the problems faced by the Indian agricultural sector at the time of independence;
- outline the state of Indian industry at the time of independence;
- indicate the state of 'currency and financial sector' at the time of independence;
- explain the state of 'infrastructure' in India at the time of independence; and
- provide an account of 'macro aggregates' at the time of independence.

1.1 INTRODUCTION

Before the British rule, India was an independent economy. It had large exports and accepted gold and precious/semi-precious stones in exchange. Its dependency on imports was minimal. The economy was largely rural but was independent and self sustained. Kings provided patronage to artists, sculptors and weavers. Modes of transportation were limited. Hence, trade too was limited but every region had its own specialisation.

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During the British rule, there was a drain of wealth from India. Most of the present day problems of Indian economy have its roots to the policies of British rule. In this unit, we will examine the features of Indian Economy as it prevailed (or as it came to exist) at the time of its independence in 1947. Such a review will help us appreciate the magnitude of effort involved to eradicate most of our present day problems like poverty, unemployment, healthcare, etc.

1.2 ECONOMY AT THE TIME OF INDEPENDENCE

On the eve of independence, Indian economy was underdeveloped. Low per capita income and low national income were the reasons behind widespread poverty. The distribution of national income was not equitable and hence the gap between the wealthy and poor was high. A handful of rich persons, who were serving in the British government or owned some industry, were enjoying relatively larger share of the national income while the majority of the poor was getting the relatively smaller share of it. Inequalities of income distribution were observed both in the rural and urban sectors of the economy. Most of the population was dependent on agriculture for occupation. Very few industries, largely producing consumer goods, were there. Basic and key industries were very less in number. Even though during World Wars I and II, India supplied different warfare and consumer goods, due to lack of real technological development and shortage of capital, Indian industry did not develop much during the post World War years. Production of machinery in the country was negligible. The only capital industry was of steel which could produce about 9 lakh tones. The country possessed abundant stock of natural resources but these resources were either underutilised or unutilised. This resulted in widespread unemployment, poverty and hunger. Frequent famine and drought were common which caused shortage of food and starvation. The vicious circle of poverty continued year after year. About 40 percent of population was living below poverty line. Such rampant poverty led to low standard of living and low human development. The growth of the Indian economy was so low that it was considered as 'stagnant'. The biggest fight for common man was of hunger and widespread diseases. Health, education and other developmental parameters were all very low. Let us examine, sector-wise, the economic features of Indian economy in more detail.

1.2.1 Agriculture

Agriculture was the main sector of Indian economy. At the time of independence, about 85 percent of population was dependent on agriculture for their livelihood. But the contribution of agriculture to national income was about 50 percent. Net sown area, estimated at about 127 million hectares, formed about 43.6 percent of the total reported land area of the country. Food crops were cultivated on three-fourth of the total cultivated land while one-fourth was used for cultivation of cash crops. Important food crops produced were wheat, rice, millets. Sugarcane, cotton and jute were three important cash crops. India accounted for about 32 percent of world's total production of groundnuts, 41 percent of jute and 27 percent of rice. India was the largest producer of groundnuts and sugarcane. It was the third largest producer of cotton next to USA and China in the world. Still the output, if calculated per hectare of cultivation, it was among one of the lowest in the world. During the British rule, due to lack of support for different occupations like artisans and craftsmen, all had to depend on agriculture for their livelihood.

The British followed different practices of land revenue system in different states of India. Farmers were supposed to provide high land revenue but the government

did nothing to maintain or improve the fertility of land or to provide irrigation facilities to increase the yield. There were three different land revenue systems viz. the Zamindari system (which covered 58 percent of the total land), Ryotwari system (which covered 38 percent of land) and Mahalwari system (which was implemented in 4 percent area). In the latter two systems of land revenue, some development was undertaken to revive the fertility of agriculture but in the zamindari system, the zamindars were only concerned with the collection of land revenue. The zamindars used to extort as much rent as they could from the cultivators leaving no surplus with them. This resulted in no incentive for the cultivator for making fresh investment in their farms. Although a canal network had been laid down by the government, it was grossly inadequate with only 17 percent of the area under cultivation getting the benefit of irrigation. In few states like Punjab, canal irrigation system was initiated but in most of the other states/areas, there was no initiative in this direction. This neglect was one of the major reasons for the backwardness of Indian agriculture. As the contribution of agriculture sector was around 50 percent to GDP, sources of irrigation were an important infrastructure to have been focused upon. Extension of cultivation could also be promoted only with increased sources of irrigation. But the sources of irrigation were only limited to some states.

On the markets front, formal/orderly markets for agricultural produce did not exist. As a result, agricultural intermediaries took most of the benefits. The road connectivity from farm to markets was totally lacking. For credit requirements, in the absence of any organised credit system, small farmers depended upon indigenous bankers. The money lenders/indigenous bankers charged heavy interest rate. Often, farmers had to lose their land for non-payment of interest and principal. The system of joint families widely prevailed. Hence, whenever anyone got unemployed, they used to join the family agriculture. This used to create disguised unemployment. Hence, on the eve of independence, Indian agriculture was characterised by problems like:

a) Low Output Per Hectare: Income of the farmers was less and land revenue was comparatively high. So, farmers were not in a position to make investment in their farms. Government did not take required measures to improve soil health, establish sources of irrigation and promote innovation in agricultural methods. Even age old techniques like slash and burn technique which were known to restore soil health were also out of practice. More land was required to increase farm income. But farmers could not lease any land even for some months.

b) Primitive Techniques of Production: The use of iron tools in agriculture replaced the primitive wooden plough and other tools. But this was the only technological up-gradation in agriculture during the British rule. Agriculture was predominately dependent on monsoon for irrigation, though during early 1940s, expansion of wells and canals had started. Four regions (Punjab, Madras, Western U.P and Sind) could start using their wasteland into agriculture due to development of irrigation. At the time of independence, irrigation facilities were missing in most parts of the country. Canal irrigated areas of Punjab and Sindh had gone to Pakistan.

c) Lack of Commercialisation of Agriculture: During the British period, the tradition to produce commercial crops like sugarcane, cotton, jute, opium, etc. had just begun. This trend in commercialisation of agriculture somewhat supported its related industries like jute and cotton textile. However, at the time of independence, due to partition, most fertile area for Jute cultivation went to Eastern Pakistan.

1.2.2 Industry

Before the British rule, there were only few industries concentrated in some areas. There was no uniformity in production. For instance, mining was there even before the British but it did not employ many workers. The major industry was cotton textiles but even this had high regional variation. Nevertheless, for the state of industry as the country inherited at the time of independence, a certain thrust to shape the Indian industry had been given. This was main visible in areas like tea, coffee plantation and sugar mills. Before the British rule, exports from India were in surplus. But during their rule, beginning with the second half of nineteenth century, though machines had been introduced to increase production, Indian goods faced strict competition with cheaper machine made imported goods. Though natural resources were present in abundance, mining under the British experienced low growth. Though railways required coal in high amount, in the initial years of railways, coal was imported from Britain. In the later years, extraction from domestic sources was begun.

Introduction of Railways (in 1853) gave new markets for expansion of Indian industries. By 1947, there were a total of 42 rail systems in India. Still, industrial development remained stagnant. Industries were confined to a limited range and concentrated in a few unevenly distributed areas. The beginning of World War I gave some impetus to Indian industry. The period upto 1905 had seen growth on modern cotton textile and jute industries. What are now Maharashtra and Gujarat had emerged as major centres for cotton textile industry in the country. Consumer goods industries like chemicals, cement, fertilisers, mineral acids, etc. also picked up during the early decades of 20th century. Later, the Second World War opened a new phase in India's industrial history. Industrial output of large scale industries expanded with some diversification. As a result, the general index of output of all large scale manufacturing rose from 100 to 161.6. Factory employment also increased from an index of 100 to 159. Yet, the process of industrialisation could not pick up due to lack of industrial base or capital industries. TISCO (Tata iron and steel company), which was established in the year 1905, was the only major capital industry of India till independence. The per-capita income of India was so low that the Indian economy did not have enough savings/investment to establish basic and capital industries. The technological backwardness of India also played its role in this. Even for the establishment of TISCO, engineers had to be called from Britain to lay down the foundation for the industry. A major setback to Indian industries resulted from partition. The cotton and jute textile industry suffered the most as they depended on agriculture for its raw material. Raw jute producing areas went to Pakistan but mills were located in India. Hence, after partition, these mills could not produce due to lack of raw material. At the time of partition, a total of 112 jute mills were operating in India. 85 percent of the total jute growing region went to eastern Pakistan (present day Bangladesh). A similar thing happened with cotton textile mills. Best cotton growing region became part of Pakistan (Sind and western Punjab). Therefore, on the eve of independence, the labour of these mills got unemployed which further increased poverty in newly independent India. In 1948-49, contribution of secondary sector was just 6.6 percent of the GDP. Employment in the industries was a mere 1.8 percent of total population (around 274 million in 1941 of which 60.2 percent were in the working age group of 15-59) of the country were working in the industry and that too consumer goods industries. This is the main reason for the high dependency of India on imports particularly for capital goods. Due to these factors, when India got freedom, its substantial trade deficit was one of the major challenges faced by the new government in India.

1.2.3 Currency and Financial sector

Before the British rule, different provinces of India had their own currencies. The concept of common currency was introduced by the British to facilitate trade and collection of land revenue. India was on a monometallic silver standard (i.e. only silver coins were in circulation) from 1835 to 1893. This means there was high demand for silver which increased the need for silver import and contributed to being one of the main reasons for India's high BOP (balance of payments) deficit. The extraordinary rise in the price of silver in February 1920 made it extremely difficult to maintain exchange stability. In the 19th century, the British introduced paper money in the subcontinent. The Paper Currency Act of 1861 gave the government the monopoly of note issued throughout the vast expanse of British India. At that time, the Indian rupee was linked to the British pound and its value was at par with the American dollar. This helped Indian domestic as well as foreign trade to develop.

The financial system consists of: (i) financial institution (non-banking and banking), (ii) financial markets (stock exchange), and (iii) instruments and services which help in mobilisation of savings and increase capital formation. Banking sector was visible with only few banks. As a result, banks were not easily accessible to the masses. Major source of lending were money lenders. Though the first bank in India was set up in 1786, the development of the sector was slow. Later on, three banks were established in three different presidencies (Bengal, Calcutta and Madras). The Companies Act (1913) contained a few sections relating to joint-stock banks but there was no special legislation for commercial banking. The amended Indian Companies Act of 1936 added many provisions relating to minimum capital, cash reserve requirements and other operating conditions. Still, there was no integrated statutory regulation of commercial banks in India till 1949. Reserve bank of India was established in the year 1935 as a private company. During World War II, the authority of the RBI (Reserve Bank of India) was extended to frame the monetary policy. But it was forced to pursue a government-initiated low interest rate policy to keep the cost of financing the war low and to expand money supply through accumulation of sterling (foreign exchange) balances. Between 1913 and 1948 there existed approximately 1100 small banks in India. For faster development of this sector, the government enacted the Banking Companies Act, 1949 which was later changed to Banking Regulation Act, 1949. Some cooperative banks were formed during early 20th century and later these too were regularised under the banking Act. Banking institutions were totally missing in the rural areas. To overcome this gap, NABARD (National Bank for Agricultural and Rural Development) was setup much later in 1982.

Stock exchanges are necessary to increase the capital formation in the country. In the pre-independence period, there were only three stock exchanges [Bombay Stock Exchange, 1877; Ahmadabad Stock Exchange, 1894; and Calcutta Stock Exchange, 1908] which were not regulated by the government. After independence, government of India took a number of measures to promote joint stock companies. There was an acute shortage of banks to serve common people. With such small banking system, mobilisation of savings was difficult which needed immediate attention for faster development of industrial sector.

Check Your Progress 1 [answer within the space given in about 50-100 words]

1) What were the main features of Indian economy at the time of independence?

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2) At the time of independence, what was the extent of dependence on agriculture and what was its share of contribution to the economy?

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3) In the production of which crops India was leading the world at the time of independence?

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4) State the three areas in which the agricultural sector was suffering from at the time of India's independence.

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5) Which events contributed for the industrialisation in India to pick up in the first half of the 20^{th} century?

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6) What was a major set back from which the Indian industry suffered around 1947?

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7) What was the extent of contribution of industry to the Indian economy at the time of independence? What was a consequence of this state on the Indian economy?

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8) What was a lacuna in the state of banking sector at the time of independence and which immediate measure was taken after independence to rectify this?

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1.3 STATE OF INFRASTRUCTURE

Though the British did develop some infrastructure, their motive was to facilitate foreign trade to England. Communication facilities were developed for better administrative reasons. During the first and second world wars, when India served Britain, air transport was developed.

The crucial basic infrastructure required for the development of domestic industries was missing. For instance, electricity is one of the basic infrastructures required for the development of any industry. But the power generation capacity in India was almost negligible. In the same way, road and port connectivity was developed but limited to the routes used for the movement of manufactured goods and raw materials from the source of their origin to the ports and from ports to major commercial centres. There were few other areas which were connected through railways for the quick movement of army. This encouraged export of raw materials and import of manufactured goods. The raw material could have been used for domestic production as well but infrastructure deficit was a major barrier for industrial development. In short, infrastructural deficit at the time of Independence became a major challenge for policy-makers in the post-independence era. Infrastructure can be divided into two groups: physical infrastructure and human infrastructure. Physical infrastructure includes roads, railways, airways, waterways, electricity generation, banking, insurance, modes of

communication, etc. It is also termed as economic infrastructure as it makes a direct contribution in income generation. Another category of infrastructure is Human infrastructure or social infrastructure. This includes training and skill development of people so that they can contribute in the process of production. Though the effect of the development of social infrastructure on GDP is visible in the long run but it is very important for economic development.

1.3.1 Social Infrastructure

Social Infrastructure includes assets that aid social/human development. It includes schools, universities, hospitals, housing and others. Social infrastructure is required for human development. During the British rule, human development was not given priority. State of healthcare sector was bad with hospitals limited to big cities. Ancient health care system was also on decline. As a result, infant mortality, maternal mortality and death rate were all high. Life expectancy was just 32 years. Education sector was a little better but it was not accessible to all. Though the British started formal schools, it was limited to few cities. English education became one of the sources to get job in British administration. For higher education, only sixteen universities were serving the entire population which was 274 million in 1941. This means that for 17+ million people, there was just one university. This shows that education which is an important medium for human development was not sufficiently accessible to all. As a result, at the time of independence, literacy rate was as low as 16 percent among males and 7 percent among females.

1.3.2 Economic Infrastructure

Economic infrastructure supports production process and has a direct impact on GDP growth. It is also known as demand-inducing service. Examples of economic infrastructure include roads, airports, railways, communication networks, water supply, irrigation systems and electric power.

Until the mid-nineteenth century, the most popular mode of long-distance transportation of cargo was through navigable rivers. For short-distance trade and travel, the common means of transportation were bullock carts and small river craft. Such systems of transport for long-distance trade used much labour and time. With the introduction of railways, the shorter time taken in long distance travel attracted people towards railways. Railway construction began on a large scale in the 1850s. It continued, almost exclusively by the private sector (entrepreneurs of England) until 1870. In 1870, when government found the construction of railways a profitable business, Calcutta, Bombay, Madras and Delhi were interconnected by the ‘broad-gauge’ system. By 1920s, all railways in India were brought under government management. By then, the Indian railway system was one of the largest networks in the world. Railway construction stimulated the engineering industry in India. It also stimulated financial and labour markets. People could migrate to faraway places for jobs. These effects were weak till the time of world war-I. Railways were used to develop industries during both the world wars. The government had built railway workshops in India for repair and production of parts but they were not intensively used. Coal mining was started in India to fulfil the need of railways. The role of the railways as a major source of demand for the basic metal industries in India was thus significant.

Roads are the basic infrastructure required for the movement of raw-material and finished goods. Without proper roads, it is difficult to mobilise anything. Roads were a low priority area of colonial government investment as horses were used

for army movement. Only such routes which were required for the movement of raw material to railways and ports were given importance. Road length grew at a much slower pace than the railways. By the year 1931, the length of 'metalled' roads per 1,000 persons was just 0.4 kms. This ratio was above 1.5 in other colonies of British (Ceylon and Malaya). The benefit to the government from road construction was relatively low. India has a long coast line which was used for trade and commerce during British rule. There was decline of traditional ports like Mauslipatnam and Cambay. The major ports that carried the bulk of foreign trade were new sites where railways and modern harbours converged (e.g. Bombay, Madras, Calcutta, Karachi and Rangoon). Each of these ports served as an export outlet for the products of a vast hinterland. At the time of independence, rapid industrial development was hindered due to lack of economic infrastructure.

Postal services were started during British rule in 1858 but it became a widely used utility only in the late nineteenth century. This expansion was demand driven because in the absence of banks, post offices worked as the agency for sending internal remittances. Post offices were present in almost all populated villages. This infrastructure of post offices was later useful for the first Indian government for mobilising savings in rural India.

The process of infrastructure development had inherent inequalities. Irrigation systems remained primitive and undeveloped in large parts. The railways de-prioritised roads and electricity generation was limited to important cities. Communication and local transportation thus had high regional variation.

1.3.3 Administrative Infrastructure

Administrative infrastructure is required to run many other institutions and to deliver important services. It is a combination of physical and human infrastructure which helps in running a successful administration for any government. Before independence, each province of India had its own administrative set up. This became a compelling reason to develop administrative infrastructure to rule such a vast area. Land revenue department had been setup in each province. There were frequent revolts and rebellions from masses. Local police stations were, therefore, required to be setup to control any rebellions. Postal and telegraph departments were set up for faster movement of information. The process of elections too began during the British rule only and hence necessary infrastructure was setup to conduct elections. Though this infrastructure was not sufficient to serve entire population, even after independence, the same administrative infrastructure had to be used for different administrative function of the Indian government.

1.4 MACROECONOMIC AGGREGATES

Performance of any economy can be evaluated on the basis of the quantity of goods and services produced in a financial year. When we calculate this total production in monetary terms, it is termed as the Gross Domestic Product (GDP). Beside this aggregate, there are other macroeconomic indicators to measure the strength of an economy. For instance, capital needed to produce goods and services is measured through capital formation and savings. Likewise, for judging the performance of the economy from equity angle, the rate of growth of per-capita income (PCI) is considered. The PCI is arrived at by dividing the national income by the total population.

During 1900-1947, national income increased at a mere 0.4 percent per annum. Per capita income increased by just 0.1 percent per annum. There was thus very little increase in per-capita income during the roughly 50 year period from 1900-1947 (Table 1.1). Growth of national income and per capita income was thus very low. The growth rate in real income across different states in India was unequal. The maximum share of National Income was from agriculture (Table 1.2). Despite this, the growth of the agriculture sector was lowest among all three contributing sectors to the national income.

Table 1.1: National Income and PCI (1900-1947) (in 1948 Prices)

Year	National Income (in Billions)	Per Capita Income (PCI) (in Rupees)
1900	43.4	228
1947	51.5	239

Source: Tirthankar Roy, The Economic History of India: 1857-1947, Oxford University Press; 3 Edition.

Note: Growth rate in NI over the 47 year period is 0.36 percent and that in PCI 0.1 percent. The growth rates can be verified in Excel by using the formula: =(rate,,-43.4, 51.5)*100. It can be verified for PCI in similar manner.

Table 1.2: Sectoral Share (%) in National Income

Year	Primary	Secondary	Tertiary	Net income from Abroad
1900-1904	66	12	23.5	-1.5
1942-1946	53.3	14.5	32.3	-0.2
Growth Rate Per Annum	**0.4**	**1.4**	**1.7**	

Source: Tapan Raychaudhuri, et.al., Economic History of India: Volume 2, Cambridge University Press

Secondary sector consisted of mining, large scale industries and small scale industries. Large scale industry grew at a rate of over 4 percent per annum. But the much larger segment viz. the small scale industries grew at less than 1 percent per annum. Within the tertiary sector the contribution of government undertaking grew at 2 percent per annum while transport and real estate grew at 1.5 percent per annum. As stated above, the overall average rate of growth of Indian economy was 0.4 percent per annum over the period 1900 to 1947. An estimate by Cambridge University historian Angus Maddison reveals that India's share of the world income fell from 22.6 percent in the year 1700 (comparable to Europe's share of 23.3 percent) to a low of 3.8 percent in 1952. This gradual decrease in India's share of world income explains the reasons for poverty in India at the time of its independence.

Check Your Progress 2 [answer within the space given in about 50-100 words]

1) Is the view that the British did not pay adequate attention to developing India's infrastructure justified despite the fact that India had the largest railway network and in some products like Jute it was also one of the leading producers of the world?

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2) Which social indicators speak of the gross neglect by British policy in terms of the level of social infrastructure that existed around 1947?

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3) Do you agree with the proposition that inadequate attention to developing infrastructure by the British contributed to economic inequalities in India?

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4) At what rates did India's National Income and the Per Capita Income grew over the 47 year period of 1900-1947? How would you characterise the performance of Indian economy in the light of these growth rates?

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1.5 LET US SUM UP

Indian economy was a stagnant and dependent economy at the time of its independence. Per-capita income was low. Foreign trade was motivated to fulfil the needs of industries of England. Agriculture was over burdened with low per hectare productivity. The sector contributed more than 65 percent to GDP but its growth rate was lowest at 0.4 percent among all the three leading sectors of the economy viz. the primary, the secondary and the tertiary sectors. There was thus high dependency of people on agriculture and much disguised unemployment. Literacy rate was low, there was high birth rate and high death rate, health parameters were severally low and epidemics were frequent. As a result, there was hunger and starvation in the economy and unemployment in India was widespread.

1.6 SOME USEFUL BOOKS

1) Tirthankar Roy, The Economic History of India: 1857-1947, Oxford University Press; 3 Edition.

2) Tapan Raychaudhuri, Dharma Kumar, Meghnad Desai and Irfan Habib, The Cambridge Economic History of India: Volume 2, C.1751-c.1970: Cambridge University Press.

3) Dharma Kumar (ed.) (1982). Cambridge Economic History of India Vol. 11, Orient Longmans, Hyderabad.

4) Kapila, Uma (ed.), (2006-07). Indian Economy Since Independence, 18th Edition, Academic Foundation, Delhi.

1.7 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) (i) Widespread unemployment, poverty and hunger; (ii) frequent famines and droughts; (iii) inequitable distribution of national income; (iv) high dependency on agriculture; (v) low level of industrialisation; (vi) low health, education and other developmental parameters etc.

2) 85 percent of population and 50 percent respectively.

3) India was the largest producer of ground nuts (32 percent of world production), 41 percent of Jute and 27 percent of rice. It was the third largest producer of cotton next only to US and China in the world.

4) Low per hectare yield, primitive techniques of production and lack of commercialisation of agriculture.

5) The two World Wars contributed to development of industries like cotton, jute, textiles, chemicals, cement, fertilizers, etc.

6) Partition resulted in a major set back for cotton and jute industries, particularly jute industry, as many jute growing region went to East Pakistan.

7) 1.8 percent of population was employed by industry with a contribution of 6.6 percent to GDP. On account of this, India had to cope with a high trade deficit at the time of its independence.

8) Banking services were grossly inadequate in rural areas. To rectify this, NABARD was formed.

Check Your Progress 2

1) Yes it is justified. The rationale for developing railways and roads on a selective basis to facilitate movement of goods with their own interest in view. Crucial infrastructure development like power, roads to facilitate domestic production, etc. was grossly left deficient. Further, development of social infrastructure or human development, crucially required for economic development, was not given priority.

2) Male literacy was low at 16 percent and female literacy at 7 percent. With infant mortality, maternal mortality and overall death rate being high, life expectancy was as low as 32 years.

3) Yes, because focus on railways de-prioritised roads and electricity generation was limited to important cities. Communication and local transportation thus had high regional variation. Irrigation systems too remained primitive and undeveloped in large parts.

4) 0.4 percent and 0.1 percent (compound annual growth rates) respectively. The growth rates indicate that the Indian economy was nearly stagnant during the first half of 20^{th} century.

UNIT 2 DEVELOPMENT PARADIGMS*

Structure

2.0 OBJECTIVES

After reading this unit, you will be able to:

- distinguish between the terms 'growth' and 'development';
- discuss the different approaches to development;
- distinguish between the two economic systems of capitalism and socialism;
- define the concept of 'mixed economy';
- analyse the two major phases of development paths pursued in India; and
- explain the trends in integration of the Indian economy with the global economy.

2.1 INTRODUCTION

Economic growth and economic development are fundamentally different. Economic growth generally refers to rise in the national income or per capita

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income. In addition to growth, economic development involves improvements in health, education and other aspects of human welfare and also major structural changes like industrialisation and urbanisation. Specific indicators (like HDI) or goals (MDG) are used for measuring development. Human Development Index (HDI) is a composite measure reflecting the goals of leading a long life, acquiring knowledge and material well-being. The millennium development goals (MDGs) rely on a multiplicity of goals and targets for advancing human well-being within a specified time.

2.2 APPROACHES TO DEVELOPMENT

Historically, there has been a number of schools/thoughts on the economic analysis of development [e.g. Adam Smith and Classical Political Economy (1776), Marxist Economics of Marx and Engels (1848), Neoclassical Economics of Jevons, Menger and Marshall (1890s), Keynesian macroeconomics (1930s), Neoclassical growth theory by Solow (1950s), Dependency theories (1960s), etc.]. The classical and neoclassical economists believed that the major cause of underdevelopment is shortage of factors of production like capital and labour and the lack of technological progress. Keynesian school recommended that the problems of underdevelopment can be solved by extension of government activities. Marx explained the problems of underdevelopment in terms of Asiatic mode of production and lack of class struggle. Neo-Marxists writers like Paul Baran and Andre Frank explained the problems of underdevelopment in terms of external factors like global capitalism and exploitation.

For achieving the goals of economic development, there are several approaches. They require specific institutional framework within which economic activities are carried out. Broadly, market and state are two such broad institutions which are expected to facilitate the economic activities.

2.2.1 Market Based Approach

This approach assumes that, under conditions of well developed perfectly competitive markets, resources are used optimally by minimising the costs and maximising profits. Price signals, including the profits, serve as incentive to investment for achieving faster growth. Ideally, therefore, perfectly functioning markets without any intervention are seen as a strategy for faster accumulation and growth. However, in the post-World War II era, when most of the former colonies became independent and embarked upon the process of development, these countries faced serious gaps in markets as these were underdeveloped in many of the economies. The absence of markets was particularly noticeable in the 'subsistence segments'. These segments were related to several areas of development of public goods for which there was no market but there was an immense public need. Many of these underdeveloped markets had to be developed by the state as an essential requirement for giving a push to the development process.

2.2.2 State Led Approach

In underdeveloped countries with the existence of: (i) subsistence agriculture, (ii) weak industrialisation, (iii) vast underemployment, low income, savings and investment, (iv) poor infrastructure, etc. there was a need for a big push in investment. The supporters for state intervention viewed that desired economic change in key sectors could be achieved through planned mobilisation and allocation of resources to the public sector. However, in many economies which

initially favoured this approach, public sector led growth strategy has since fallen out of policy favour on the grounds of generating red-tapism, corruption (rent seeking), inefficiency and losses. Based on these arguments, there has been a tendency towards reducing the role of the state to specific sectors of social importance and establishing the infrastructural base in the economy. There are still those who argue that state's role should not be minimal particularly in the areas of health, education and infrastructure thereby providing the right environment for entrepreneurial activity to thrive.

2.2.3 Inclusive Growth Approach

This approach views growth and equity as complements. In India, the term 'inclusive growth' appeared as an official development strategy in the Eleventh Five Year Plan (2007-12). However, the concept of 'growth with justice' or 'growth with equity' has been part of the planning strategy right from the beginning of the First Plan in India. The basic premise for 'growth with justice' (i.e. distributional justice) has been that in an economy with gross disparities in wealth and assets, growth of national income without intervention would result in perpetuation of inequalities. In other words, besides growth, as reduction in inequalities is one of the objectives of development, it is considered necessary that the growth strategy should involve appropriate institutional arrangements to ensure equitable distribution of the gains of growth. An institutional framework for growth with equitable distribution envisages a substantial role for state as much in the productive sectors as in the regulation of its distribution.

2.2.4 Sustainable Development Approach

The sustainable development argues that global focus on growth should be replaced by the goal of sustainable development to avoid the 'tragedy of commons', a situation in which common resources are overexploited since the individual actors lack the motivation to use them sustainably. Brundtland Commission Report (1987) stated that: *SD is that development which meets the needs of the present without compromising the ability of future generations to meet their own needs*. It, therefore, underlined the two key essentials as: (i) the need to protect the interests of the world's poor; and (ii) the limitations of technology and social organisations in preventing the exploitation of environmental resources (so as not to affect the needs of future generations) adversely should be duly accounted for. The Commission emphasised the overriding priority of attending to the needs of the poor within any society in particular and the world as a whole in general. The rationale for SD is, therefore, to raise the standard of living, especially the standard of living of the most disadvantaged segments in society, taking due care to avoid or minimise 'uncompensated' future costs. The Sustainable Development Goals (SDGs) cover 17 goals: (i) no poverty, (ii) zero hunger, (iii) good health and well-being, (iv) quality education, (v) gender equality, (vi) clean water and sanitation, (vii) affordable and clean energy, (viii) decent work and economic growth, (ix) industry, innovation and infrastructure, (x) reduced inequality, (xi) sustainable cities and communities, (xii) responsible consumption and production, (xiii) climate action, (xiv) life below water, (xv) life on land, (xvi) peace, justice and strong institutions and (xvii) partnerships to achieve the goals.

2.3 ECONOMIC SYSTEMS: CAPITALISM AND SOCIALISM

Capitalism is a societal structure in which the capitalist class thrive by virtue of their ownership and control of the society's means of production. It is thus an economic system based on private ownership of property and means of production in which free market that allows competition for exchanging goods and services operates. Thus, in principle, it is the individuals who decide on 'how, what and for whom to produce'. Under capitalism, individuals are thus encouraged to follow their own self interest while market forces of demand and supply are relied upon to coordinate the economic activity. Different countries have been endowed with different forms of capitalism (found in modern times) such as state-guided capitalism, big-firm capitalism and entrepreneurial capitalism. Socialism, on the other hand, is a system that emphasises the collective ownership of the means of production. It ascribes a large role to the State in the running of the economy with widespread public ownership of key industries. Although socialism allows limited scope to market forces, Marx regarded socialism as a transitional stage between 'end of a private enterprise system and the beginnings of communism'. In the process of its historical evolution, we find different forms of socialism: (i) socialism with the entire economy associated with a centrally planned economic system (as in earlier Soviet-type economies); (ii) market socialism i.e. economies with a modified type of central planning with a role for market mechanisms (e.g. Hungary and Yugoslavia) a kind of planned economy which attempts to improve allocation using markets; etc.

In theory, therefore, unlike capitalism, socialism is a system based on individual's goodwill to others rather than their own self-interest. However, in practice, socialism has become an economic system based on government ownership of the means of production with centralised planning. Since socialism is based on a system which originated in the former-Soviet union, it has often come to be referred as 'soviet-style socialism'. In the 1980s, a number of countries had Soviet-style socialism but in the late 1980s and early 1990s, many of these economies/countries were in turmoil and ultimately veered towards market oriented systems. The example of China shows another form of centralistic socialism, which accords priority to markets ensuring high growth rates but not social freedom. We can, therefore, conclude that within the two broad systems of capitalism and socialism, the paths to development pursued in terms of ISI or ELG varies depending on the domestic socio and economic compulsions of a country. As you must be aware by now, India was forced to adopt policies of economic reforms due to conditions of economic distress faced on account of critical BoP crisis in 1991. Nevertheless, we can say that the Indian stand, taken as early as in 1950s, to adopt the mixed economy path with social freedoms enshrined in the constitution of the country reflected wisdom in which the choice between ISI strategy made in the beginning and the shift to ELG strategy made later stands out as a model of balanced perspectives.

2.4 TWO PHASES OF DEVELOPMENT: MIXED ECONOMY

Mixed-economy combines the state and the market, in a mutually reinforcing framework, in its approach to development. It involves the co-existence of private sector enterprises alongside the public enterprise. It combines the salient features of capitalism and socialism. This means the capitalist enterprises with self-interest

and profit motive operate in a number of activities alongside many public sector production units. The latter operate both in production as well as social sectors but more in the sectors like primary education and primary healthcare with a larger societal interest. India is regarded as a good example of mixed economy which followed this model right from the time of its independence. While both the public and private sectors coexisted, a central role was assigned to the state's planning machinery for resource allocation across sectors. The stated primary objectives of the planning process were economic growth with social justice and self-reliance. The early Five-Year Plans of India provided the basic framework for the economic development with a mixed economy strategy. The apparent logic behind this policy was to place the commanding heights of the economy in the hands of the State, through state ownership of basic heavy industries and infrastructure sectors and to allow the private sector to operate where scale economies were not important. The basic idea behind the approach was that through a judicious mixture of plan stimulus and market efficiency, the objectives of both growth and equity could be promoted. In the agricultural sector, production decisions were by and large taken by private producers with government's role limited to infrastructure development by way of irrigation facilities, extension services and trade in some major commodities. In the manufacturing and service sectors, state played a commanding role by owning and operating many industries and by regulating private investment through the instrument of licensing.

Since the introduction of economic reforms in 1991, there has been a substantial expansion of economic space of private sector with its corresponding contraction for the public sector. Thus, the mixed-economy approach in India can be said to have moved from the state of commanding heights to the public sector in the initial four decades of its planning to a state where the majority space was accorded to the private sector and the market. Let us now take a somewhat detailed look at these two phases of the Indian economy in its transition.

2.4.1 Public Sector at Commanding Height (Phase I)

In any economic system state can play at least three major roles viz. (i) as a producer of goods and services, (ii) as a regulator of the overall system, and (iii) as a supplier of 'public goods' or 'social goods' like primary education and health. The first role as a producer of goods and services finds expression in the system of planning with public enterprises engaged in major productive activities, at least in the critical areas of the economy (e.g. power generation and distribution). The second role of 'regulator' conveys the authority wielded by the state in setting the rules of the game. In fact, the quality of the economic performance of markets depends critically on the quality of public intervention through regulation by way of a complementary role. The third role of state is that of a 'welfare provider' i.e. this role prompts the state to support private initiatives through the provision of required infrastructure and by efforts directed at human development so as to enhance the capability of the masses. This can therefore be regarded as the role of a 'facilitator' where the state intervenes in areas where the markets cannot perform effectively.

In the initial years of planning, as India was capital constrained, and given that the markets were not well formed, the system devised was a combination of involvement of the state in production in some industries and regulate the private sector in others. The role of regulation was carried out by the grant of licenses required for investment, production and imports. In particular, availability of foreign exchange, credit allocation and in some cases even prices (e.g. price of the essential commodities, agricultural commodities) were controlled by the

government. Also, the government reserved the right to enter even those industries which were not explicitly reserved for the public sector. Public sector was thus seen as an active agent of resource mobilisation for undertaking large, coordinated investments (considered the 'Big Push' necessary to jumpstart the economy). As a result, between 1950 and 1965, public sector capital formation, as a percentage of GDP, more than doubled from 3.1 to 7.5. However, in the later years, not only did planning lose its bite, but also the public sector's capacity for resource mobilisation severely declined. Declining public investment from the mid-1960s was instrumental in a growth slowdown that lasted till the late-1970s. Thus, from a position occupying the commanding heights of the economy, the public sector degenerated into an employment-granting welfarist role agency.

2.4.2 Increasing Role of Market (Phase II)

India has since come a long way in terms of shredding traces of its short term vision by accepting the principle of the primacy of market for its economic management. This can be seen by comparing the key features of reforms adopted initially in the 1980s and pursued vigorously during the 1990s.

The key features of reforms initiated in the 1980s are : (i) liberalisation of imports (especially of capital goods and intermediate inputs); (ii) extension of export incentives through the tax system and liberal access to credit and foreign exchange; (iii) significant relaxation of industrial licensing requirements through direct 'de-licensing' of some industries and through 'broad banding' (i.e. permitting firms in some industries to switch production between similar product lines); and (iv) decontrol of administered prices for key intermediate inputs. In light of these important changes, the reforms of the 1980s, came to be characterised as 'pro-market' in orientation.

The reforms of the 1990s, which are distinguished from the reforms of the 1980s, include: (i) abolition of industrial licensing and narrowing the scope of public sector monopolies to a much smaller number of industries; (ii) liberalisation of inward foreign direct and foreign portfolio investment; (iii) sweeping liberalisation of trade with the elimination of import licensing and progressive reduction of non-tariff barriers; (iv) financial sector liberalisation including the removal of controls on capital issues (e.g. allowing foreign private banks to operate in the economy, opening up of insurance sector); (v) liberalisation of investment policies in import of services such as telecommunications; etc.

Countries in general are moving away from the role of state as a producer of goods and services. A major reason for the emergence of skepticism regarding the benefits of state intervention has been the growing perception that government failures on account of political interference and bureaucratisation may, in many cases, exceed market failures. Given the importance of incentive reward system in achieving consistent improvement in efficiency, on balance, it is well acknowledged that markets provide a better incentive for many economic activities to be run on a corporate style by the private sector. Closely related to these institutional factors is also the belief that a competitive environment creates a better climate conducive to enhancing efficiency.

The decreasing role of state as a producer of goods and services and the increasing primacy accorded to market forces enhances the role of state from being a 'regulator' to that of a 'facilitator'. As a general rule, markets must be allowed to function freely wherever price signals clearly work in achieving efficiency. State investment becomes necessary only in areas where markets do not exist or where they cannot perform efficiently.

Check Your Progress 1 [answer within the space given in about 50-100 words]

1) How is development distinct from growth?

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2) What is the basic assumption requiring to be met for the success of market based approach to development?

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3) What is the rationale behind the state led development strategy?

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4) What is meant by 'inclusive growth' strategy?

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5) What is the essence of the 'sustainable development' (SD) approach?

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6) Define the term 'mixed economy'.

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7) What empirical indicator can you cite to demonstrate the leading role assumed by the public sector in the initial years of planning in India? What trend did this indicate in the later years?

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8) What are the major reforms introduced in the 1990s to characterise the change in developmental approach as one of 'pro-market'?

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2.5 INTEGRATION WITH THE GLOBAL ECONOMY

To what extent has India integrated itself with the rest of world? Has the pace of integration quickened since the beginning of economic reforms in the early 1990s? Integration can be measured by quantifiable variables such as trade to GDP ratio, mean tariff rate, diversification of exports, FDI inflow as percentage of GDP, etc. We take a brief look at the trends in these variables below.

2.5.1 Trade GDP Ratio

Countries that are highly integrated in the world economy tend to exhibit a high trade to GDP ratio. An indicator of extent of integration is provided by the two 'trade orientation ratios' (TOR) viz. (i) share of exports in total GDP; and (ii) combined share of exports and imports to GDP. Economic reforms over the years have made India a much more open economy. The share of Indian exports of goods and services in its total GDP has increased from 6.5 percent in 1991-92 to 19.1 percent in 2013-14. The combined share of exports and imports of goods as a percentage of GDP at market prices has increased from 13.6 percent in 1991-92 to about 46.5 percent in 2013-14. Despite these significant increases, India's share in global merchandise exports has increased slightly from around 0.6 percent in 1993 to 1.7 percent in 2014. Likewise, India's share in global imports has also modestly increased from around 0.6 percent in 1993 to 2.4 percent in 2014 (Table 2.1).

Table 2.1: Exports and Imports (%) by Countries/Regions in Merchandise

Country	Export Share		Import Share	
	1993	2014	1993	2014
Asia	26	32	23.5	31.5
China	2.5	12.7	2.7	10.5
Japan	9.8	3.7	6.4	4.4
India	0.6	1.7	0.6	2.5
Six East Asian traders	9.6	9.6	10.2	9.4

Source: WTO, International Trade Statistics, 2015

2.5.2 Mean Tariff Rate

Another indicator for measuring a country's integration with the rest of the world is through estimation of a country's mean tariff rate. The mean tariff rate for all products in India has declined from 80 percent in 1990 to 6.3 percent in 2012.

2.5.3 Diversification of Exports

Countries that are more integrated into the world economy experience not only rapid export growth but also export diversification. During the initial years of liberalisation, India's exports were less diversified with top 20 countries accounting for more than 80 percent of India's total exports. Today (2017), the corresponding percentage with the top 20 export destinations account for 67 percent of total exports reflecting greater diversification.

2.5.4 Product Composition of Exports

Another indicator of integration is how much a country is moving away in its exports from traditional and primary products into high-value-added exports. This is reflected in the share of technologically-advanced goods in manufactured exports. There is a major shift in India's exports, away from primary products like textiles towards more value added items like engineering goods, refinery products, pharmaceuticals, etc. Thus, India's export basket is now more diversified with non-traditional items which include: engineering goods accounting for 23 percent in India's total exports in 2014-15.

2.5.5 Direction of Exports

A significant change in India's exports during post-liberalisation era has been the increasing share of developing countries compared to the share of developed economies. Between 1990-91 and 2014-15, the share of Asia has increased from 34 to 49 percent and that of Africa from 3 percent to 11 percent. On the other hand, share of Europe has come down from 41 percent to 19 percent during this period.

2.5.6 Financial Integration

The level and pace at which the inflow of FDI increases serve as an important indicator of financial integration. The net inflow of FDI as a percentage of GDP has increased from 0.03 percent in 1991 to 1.96 percent in 2016.

Check Your Progress 2 [answer within the space given in about 50-100 words]

1) In terms of two TORs (trade orientation ratios), how does the integration of Indian economy with the rest of the economy figure?

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2) In terms of what other specific respects, can the integration of Indian economy with the rest of the world be specified?

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3) How is financial integration of an economy measured? What has been the position in this respect for India?

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2.6 LET US SUM UP

The approach to development has steadily shifted from state led approach to market based approach. In the initial stages of development, due to poor infrastructural base and high degree of concentration in the production of primary products, a developing economy will be required the assistance of state for its investment. In other words, the development of markets would be inadequate to rely on the price signals for achieving the developmental goals. This feature has commonly influenced all major economies to pursue in their initial stages of development a policy of state led growth. India too embarked on this approach experimenting with the same for close to four decades from 1950 to 1990. However, the ability of public sector to mobilise resources required for expansion of economy declined sharply right after the late 1960s. Concerns of sustainable development also became critical in policy planning in India as was the goal for aiming 'inclusive development'. The result was a change in approach to development from a controlled public sector led regime to a market based approach in the 1990s. The polices implemented in the last two decades have seen an appreciable increase in the ratio of 'exports plus imports to GDP' from 14 percent in 1992 to 47 percent in 2014. Despite this steep increase, in terms of overall share of total global exports, India's share has marginally moved up to reach 1.7 percent in 2014 (from 0.6 percent in early 1990s). Thus, in spite of improvements in geographic and product composition diversification, lowering of 'mean tariff rate', etc., in terms of financial integration measured by 'percentage inflow of FDI to GDP' India's level is low at below 2 percent in 2016.

2.7 SOME USEFUL BOOKS

1) Chakravarty, Sukhamoy (1987). 'Development Strategies in the Asian Countries' In Louis Emmerij (ed.), *Development Policies and the Crisis of the 1980s*. OECD.

2) FICCI (2016). Economy Insights – Trends in India's Foreign Trends, May, 2016.

3) Balakrishnan, P (2010). Economic Growth in India: History and Prospect, Oxford University Press.

4) Basu K. (Ed.) (2008). *The Oxford Companion to Economics in India,* Oxford University Press, USA.

5) Bhattacharya D (1993). *The Political Economy of Development,* Academic Publishers.

6) Perkins D. H., Radelet S., Lindauer D. L., & Steven A (2013). Economics of Development, W.W. Norton and Company, New York.

2.9 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) Growth relates to increase in only income like NI or per capita income. Development takes into account the distributional dimension of growth in income relating the spread to how far the benefits of growth have reached the marginalised sections in terms of their education and health needs. It also includes aspects like industrialisation and urbanisation.

2) The approach assumes conditions of well developed competitive markets with signals of price and profits to be available for their efficient functioning i.e. optimum production with minimum resource inputs leading to faster growth.

3) The rationale is one of 'big push' required under conditions of underdevelopment like subsistence agriculture, weak industrialisation, etc. In such situations, state led heavy investment in key sectors of economy through planned mobilisation and allocation of resources to public sector institutions/enterprises was held as the key.

4) The inclusive growth strategy implies that the benefits of growth realised in terms of increase in national income should percolate downwards to the lowest rungs of society reaching or in a way as to 'not exclude' the marginalised sections of society. This requires institutional arrangements to ensure the equitable distribution of the gains of growth which needs to ensured only by the state.

5) The SD approach underlines two essentials of: (i) protecting the interest of the world's poor from the exploitation of natural resources which impinges on the livelihood statuses of the poorer sections to be duly accounted and compensated; and (ii) limitations of technology and social organisations in abetting the exploitation of natural resources to be duly accounted for.

6) The term refers to the coexistence of both the public and the private sectors combining the state with the market in a mutually reinforcing manner.

7) The public sector investment as a percentage of GDP rose from 3.1 percent to 7.5 percent over the years 1950-65. In the later years, the ability of the public sector to mobilise resources declined so sharply that its role came to be described as 'employment granting and welfarist'.

8) The measures are: (i) abolition of industrial licensing; (ii) liberalisation in the inward flow of foreign direct and portfolio investment; (iii) trade liberalisation with elimination of import license and progressive reduction of non-tariff barriers; (iv) financial sector liberalisation like allowing the opening of foreign private sector banks and the insurance sector; and (v) liberalisation of investment policies in import of services like telecom.

Check Your Progress 2

1) In terms of only total exports to total GDP, the percentage ratio has increased from 6.5 percent in 1991-92 to 19.1 percent in 2013-14 (i.e. an increase of close to 3 times). In terms of combined share of 'exports plus imports' to total GDP, it has increased from 14 percent to 47 percent over the corresponding period (i.e. an increase of 3.4 times). Despite this increase, India's share in global exports has increased from 0.6 percent to 1.7 percent only (i.e. although the increase is once again close to 3 times, the ratio is still very meagre).

2) In terms of mean tariff rate, there is a drastic decrease from 80 percent in 1990 to 6.3 percent in 2012. In terms of product diversification defined as the percentage of exports to top 20 countries, the ratio has fallen from 80 percent to 67 percent. The share of engineering exports, in the total exports has risen to 23 percent in 2014-15.

3) Financial integration is measured in terms of the percentage increase in FDI inflow to GDP. For India, this has increased from 0.03 percent in 1991 to 1.96 percent in 2016.

UNIT 3 STRUCTURAL CHANGES*

Structure

3.0 OBJECTIVES

After reading this unit, you will be able to:

- define the term 'structural change';
- analyse the growth in the National Income of India;
- discuss the trends in the structural composition of GDP among the three principal sectors of the economy;
- indicate the changing trends in savings and investment;
- describe the trends in the sectoral distribution of employment;
- state the extent of urbanisation as a result of structural changes in India;
- explain the magnitude and causes of Regional disparities in India; and
- outline the concept of 'incremental capital output ratio'.

3.1 INTRODUCTION

Economic development has historically been associated with 'structural changes' in the national economies. The structural change has often been defined as a process by which transfer of economic benefits is evidenced in terms of major changes in the relative sectoral distributions of income and employment in the economy. The most common structural change that is

* Dr. Karmakar, Jadavpur University; Prof. B.S. Prakash, IGNOU

observed historically is in terms of income and employment shares in the three principal sectors of the economy viz. the agriculture, industry and the services sectors. In the light of this, an economy which is characterised by a predominant share of agriculture in income and employment is characterised as 'under-developed'. However, exceptions to this can be found when an economy diversifies its primary sector activities from agriculture to 'allied agriculture' (which includes rearing of animal husbandry) where upon such economies have been able to attain a developed status (e.g. New Zealand, Argentina, etc.). Their share of agriculture in GDP has, however, shrunk over time to indicate their operations are modernised to become industries. The important feature therefore is industrialisation i.e. an organised way of carrying out activities, moving away from traditional farming to modern farming practices in agriculture, and diversifying further to non-farm industries (beginning first with agro-based industries and then on to non-agro industries). With such development (i.e. when the transition from the traditional agricultural base to the modern industrial base sets-in), over time, the share of industry in these economies has increased and that of agriculture has declined. After reaching a further reasonably high level of development, the services sector attains a point of eminence in the economy. With such a transition, a resultant economic structural change is one in which the earlier rural to urban ratio gets transformed to a larger urban to rural economic landscape – a phenomenon referred to as 'urbanisation'. This pattern is generally observed to hold across many countries with differing levels of development. In general, structural shifts with changing sectoral shares are found both in the national product (i.e. GDP or income) and the work-force (i.e. employment). A resulting outcome is an increased formalisation of the economy from a large informal base to that of a formal base.

In India, since the initiation of economic reforms and acceleration in the rate of growth since the 1990s, the economy has followed a somewhat different growth pattern in which the share of industry in itself has not increased much but that of services has expanded vastly. This, on the face of it, appears to be different from the one observed in the development process of both the earlier and the more recently developed countries. Such a growth pattern needs to be analysed carefully.

3.2 GROWTH IN NATIONAL INCOME OF INDIA

In India, after independence, the very first report on National Income estimates was published in 1951. The report was prepared by a committee of national income (NI) under the Chairmanship of Prof. P.C. Mahalanobis with Prof. D.R. Gadgil and Dr. V.K.R.V. Rao as its two members. The estimated total national income for the year 1948-49 was placed at Rs. 8,830 crore. Subsequent to this, estimates of NI have been compiled and published annually. It is important to note that the NI estimates are first compiled in 'current prices' but when temporal comparisons need to be made, it is necessary to convert them to a 'constant base'. Such a conversion procedure is required to eliminate the effect of change in price levels during the period of comparison. The estimates of NI are nowadays presented both in current and constant price series in the annual publication called the National Accounts Statistics. The base year used for presenting the NI estimates under the constant price series is frequently updated i.e. shifted to a base year of a later year so as to be in tune with the recent changes in composition of production basket and prices. Growth rate in NI calculated to a constant base

makes an assessment of the performance of the economy both possible and realistic.

3.2.1 The Period of 1951-1980

It has been a practice under the planned development programmes followed in India to set a target of achievement and then assess the actual achievement against the target set. The results on this score are presented in Table 3.1. During the three decade period of 1951 to 1979, only in two plan periods (viz. in the first and the fifth plan periods) we could meet the target set. This period can therefore be described as one in which India achieved a modest growth rate. Two main reasons for the lack of achievement against the target set are: (i) the three wars with neighbouring countries fought in the years 1962, 1965 and 1971; and (ii) the three **major** droughts during the years 1966, 1972 and 1979. Of these three, the first two affected an estimated 50 million population while the third affected an estimated 200 million. Such catastrophic events which have caused a major dent in the economic performance of the country have rendered the long term average growth in India's NI to hover around 3.5 percent which has been described as the Hindu rate of growth in some economic literature. In the light of this, breaking this barrier to touch the 5 percent annual growth rate in the fifth plan period is indeed a milestone in India's economic performance which is despite the fact that the year 1979-80 registered a negative growth. In fact, in addition to the three years identified as major droughts, the years of 1969 and 1970 are also recorded as drought years with an estimated 15+ million persons affected in each.

Table 3.1: Growth (%) in India's NI over the different Plan Periods

Plan	Period	Target	Achievement
First Plan	1951-56	2.1	4.6
Second Plan	1956-61	4.5	4.1
Third Plan	1961-66	5.6	3.3
Fourth Plan	1969-74	5.7	3.0
Fifth Plan	1974-79	4.4	5.0
Sixth Plan	1980-85	5.2	5.3
Seventh Plan	1985-90	5.0	5.8
Eighth Plan	1992-97	5.6	6.5
Ninth Plan	1997-2002	6.5	5.4
Tenth Plan	2002-07	8.0	7.6
Eleventh Plan	2007-12	9.0	7.5
Twelfth Plan	2012-17	-	6.7*

Source: Planning Commission and Economic Survey , 2015-16. The growth rates (GRs) are calculated to 2004-05 (i.e. base year) prices. * Figures for 12th Plan are at 2011-12 prices.

3.2.2 The Period of 1980s Onwards

In the decade of 1980s, India witnessed acceleration of national income growth as compared to the low growth rate during the 1960s and 1970s. During both the sixth and the seventh plan periods of 1980s, as also in the subsequent Eighth plan period, the growth rates in NI achieved was higher than the targeted growth rates. However, during the successive three plan periods viz. Ninth, Tenth and Eleventh plan periods, there was once again a decline in the growth rates of NI registered with reference to the targeted growth rates. Two major reasons are identified for this performance decline viz. (i) a global slow down following the East Asian crisis of 1997; and (ii) poor monsoon and the lack of thrust in the pace of reforms initiated. However, while it is not absolutely clear how far the integration of Indian economy with the global world was responsible for India's slowdown (since India had opened up its economy only in 1991 and was following a policy of moderated opening up), one cannot ignore pointing out the domestic factors contributing to policy instability. In so far as a stable government is necessary to provide the right policy signals required for a favourable investment climate, the years of late 1990s witnessed a succession of coalition governments many remaining in power for short drifts of no more than a few months. It is only towards the end of 1999, that a somewhat stable government came to power and during its tenure (1999-2004) succeeded in instilling a renewed rigour to continued reforms. As some of its results started becoming visible with the known time lag for policy decisions to show, a second spell of instability in political atmosphere came to prevail (over 2009-2014) after a 5-year period of relative stability during 2004-09. The latter period i.e. 2009-14 was marked for many scams pointing out to significant amounts of money going into unproductive channels. It is thus fair to say periods of political instability or uncertainty also contributed to the lack of achievement in the growth of NI during the later years of 1990s stretching through the years of 2000s in no insignificant measure.

Data from 2011-12 onwards are available from the new series with base year 2011-12. Taking the Twelfth Plan figures also into account, the average long term growth rates in India's NI, split into three major phases, is notable as follows: Phase I, 1951-1979, 4 percent; Phase II, 1980-1997, 6 percent; and 1997-2017, 7 percent. This has rendered India to be regarded as one of the fastest growing emerging market economies of the world although this trend was in evidence even by the end of 1990s.

Check Your Progress 1 [answer within the space given in about 50-100 words]

1) What would you identify as the necessary components of 'structural change'?

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2) Do you agree that an economy that is predominantly agricultural is necessarily an under-developed economy? Give reasons for your answer.

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3) Why is it necessary to convert the estimates of NI measured in current prices to that in constant prices?

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4) Why did India largely fail to achieve the targeted growth rates in NI during the period 1951-80?

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5) What are the two major factors identified for the decline and the less than the targeted growth rates in the NI of India during the later years of 1990s?

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6) Do you agree that the period of economic slowdown during the late 1990s was entirely due to the two factors identified in 5 above?

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7) Do you agree that India has managed to emerge as a fast growing emerging economy? Justify your answer.

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3.3 SECTORAL GROWTH/CHANGES

Simon Kuznets (1966) first demonstrated that the real effects of growth are evidenced by changes in sectoral compositions i.e. over the agriculture, industry and the services sectors for reasons of both demand and supply. Fisher (1939) and Clerk (1940) had advanced the same line of thought. The changing inter-sectoral profile of NI/GDP for India is presented below (Table 3.2). Important trends that flow from the data are as follows.

Table 3.2: Inter-Sectoral Composition of GDP (%)

Year	Agriculture	Industry	Services
1950-51	53.1	16.6	30.3
1960-61	48.7	20.5	30.8
1970-71	42.3	24.0	33.8
1980-81	36.1	25.9	38.0
1990-91	29.6	27.7	42.7
2000-01	22.3	27.3	50.4
2010-11	14.5	27.8	57.7
2011-12	13.9	27.0	59.0

Source: Economic Survey (base 2004-05)

Share of Agriculture in GDP: The share of agriculture in GDP has declined from 53 percent in 1950-51 to only 14 percent in 2012. The net decline over the 60+ year time period is thus to a tune of 39 percent. The declining share of agricultural sector is consistent with the development trajectory of a growing economy. However, in view of the continued dominance of relatively high employment share in agriculture and allied activities (48.9 percent in 2011-12), agricultural growth by itself continues to remain vital for jobs, income and food security. Moreover, for all agro-food industries, agricultural sector remains the main source of raw material supply.

Share of Industry in GDP: The share of industry in GDP has increased from 17 percent in 1950-51 to 27 percent in 2012. The increased share of industry is thus only by 10 percent over the 60+ year period. This means that the gain by industry, on account of the decline in agricultural share in NI, is less than one-third (since $10 \times 3 = 30$ which is much less than the total agricultural sector's decline i.e. 39 percent)

Pre-eminence of Services Sector: The most striking feature of the structural change in the Indian economy over the six decade period has been the pre-eminence of services sector (from 30 percent of its share in GDP in 1951 to 59 percent in 2012). This pace of expansion is mainly due to the growth of services sector constituents like communications, banking and insurance. The factors responsible for the rapid growth of the services sector are further identified as: (i) with the economic growth and industrial development, demand for services like transport, communication, electricity, storage, finance, etc. has increased tremendously leading to the expansion of the services or the tertiary sector; (ii) rapid development of Information Technology services has proved to be a great source of expansion for the communications sector; (iii) defence, civil administration, economic and social services like health and education have also made a huge contribution for the growth of service sector; and (iv) due to increase in the disposable income of the large middle class section, demand for services like hotels and restaurants, tourism and transport, communication, etc. has increased.

Thus, manufacturing which has been observed historically to be the main contributor of growth, at least in the initial period of economic development, has played only a minor role in India. The share of industries in GDP has remained stagnant at around 27 percent (in 2004-05 prices) since 1991. In other words, unlike other developed countries, India has become a post-industrial 'service economy', bypassing industrial development. Two reasons indicated for such a trend are: (i) development of communication technologies which has generated demand for skilled jobs causing the movement of people across countries; and (ii) demonstration effect by developed countries leading to change in demand pattern for services in India. More recently, in 2018-19, the share of industry in GDP has slightly increased to around 30 percent [29.6%: Table 3.2(a)].

Table 3.2 (a): Sectoral Share (%) of GDP: 2013-19 (base 2011-12)

Year	Agriculture	Industry	Services
2013-14	20.7	28.3	51.1
2016-17	18.2	28.4	53.3
2018-19	16.1	29.6	54.3

Source: Economic Survey: 2019-20, Vol. 2, Table 1.3 B, A7, p-33

3.3.1 Savings

Generation of employment depends on investment – both public and private. For this savings is important. The Ministry of Statistics and Programme Implementation (MSPI), through its Central Statistics Office (CSO), publishes data on savings by three principal sectors of the economy viz. household sector, private corporate sector and public sector. Trends in savings over the recent years, indicate a steady decline in 'gross domestic savings' (Table 3.3).

Table 3.3: Domestic savings as percentage of GDP (2011-12 Series)

Sector	2011-12	2014-15	2017-18
Household	23.6	19.6	17.2
Private Corporate	9.5	11.7	11.6
Public Sector	1.5	1.0	1.7
Total	**34.6**	**32.2**	**30.5**

Source: Economic Survey 2019-20, Vol. 2, Statistical Appendix, A 26, Table 1.9, p-30.

3.3.2 Investment

There are three institutional sectors that save and invest. These are: households, private corporate sector and public sector. The public sector consists of the government and the public corporations. The combined rate of investment (i.e. investment to GDP ratio) was an average 24.5 percent over the period 1991-2004. This touched 30 percent in 2004-05 and over the next eight years i.e. 2005-2013, it averaged 35.4 percent. The difference between the domestic savings and the total investment is bridged from other sources like FDI, foreign remittances, etc. Since the trend in domestic savings is one of decline and that in investment is increasing, it follows that in more recent years the inflow of capital from outside is on the increase. Between the three constituents of domestic savings, there has been a steady decline in the public sector savings. For instance, the share of public sector savings was around 4-5 percent in the early 1980s but it had dropped to just above 1 percent in 2015. The bulk of the savings and investment has therefore been from the household and the private corporate sectors in which the foreign remittances and the FDI part has come to occupy an important place. Leaving aside this part, between the three constituents, with some variations over the years, the household sector accounts for about 45 percent and the corporate sector around 35 percent. The balance of 20 percent is from the government/public sector.

3.3.3 Employment

As stated in the beginning, structural change refers to a major shift in the relative shares of employment and income, transferring the benefits of growth to the people in the lower rungs of society. It also refers to occupational shift from agriculture to industry. Such a shift would result over long term time horizons for which we should ideally take the longest available time series. Notwithstanding this, for the purpose of current section, it is illustrative to first take a look at the post-1991 employment scenario and then contrast it with that in the period before (i.e. 1951-2000). This would not only give us the post-reform scenario but also aggregate for the various efforts made in the pre-liberalisation decades stretching over the nearly eight plan periods.

Table 3.4: Share of major sectors in total employment (percent)

Sector	1999-2000	2004-05	2011-12	Shift (2000-12)	2018-19
Agriculture & allied	59.9	58.5	48.9	- 11	43.2
Industry	16.4	18.2	24.3	+ 8	24.9
Services	23.7	23.3	26.9	+ 3	31.9

Source: Rangarajan, et. al. 2014

Table 3.5: Composition of Rural Employment (percent)

Sector	1993-94	1999-2000	2004-05	2009-10	Shift (1994-2010)
Agriculture & allied	78.4	76.2	72.6	67.9	- 10.5
Non-agriculture	21.6	23.8	27.4	32.1	+ 10.5

Source: Papola & Sahu, 2012.

The changing composition of agricultural employment in general and that of rural non-farm employment in particular, shows a significant 11 percent shift over the years 2000-2012 (Table 3.4). The distribution of this shift between the industrial and services sector is 8 percent and 3 percent respectively. This shows that contrary to the expectation, the absorption of labour by the industry has been higher than in the services sector in the post-2000 years. Note that we are taking here an all India picture (i.e. a mixture of skilled and unskilled workforce) whereas were we to take a look at the specific picture of 'educated workforce only' the picture could have been different. Given that in 1951, out of a total of 143 million workers, 100 million were engaged in agriculture, and therefore the percentage of people employed in agriculture was close to 70 percent, over the 5-decade period of 1951-2000, it is significant to note that the percentage of workers engaged in agriculture had decreased by a mere 10 percent over this 50 year period. Thus, the 11 percent decline in this respect, during the 12 post-2000 years supports the conclusion that there has been a strident pace picked up in the extent of this structural shift in the non-agricultural sector in the post-2000 years. Likewise, the corresponding shift towards non-farm employment in rural areas has also evidenced a similar shift of 10.5 percent decline over 1993-2010 (Table 3.5). However, we should note two important points here: (i) the 10 percent decline in agricultural employment achieved during 1951-2000 was through much more difficult times than that during 2000-12; and (ii) the denominator to the percentages in Tables 3.4 and 3.5 are different (i.e. in 3.4 it is the rural + urban workforce whereas in 3.5 it is only the rural workforce). Notwithstanding these differences, taken together, the structural change in the shift of workforce over the combined period of 1951-2012, from 70 percent to 49 percent (i.e. a 21 percent decline) is significant. The share of workforce in agriculture has further declined to around 43 percent in 2019. The percentage decline in the agricultural workforce during the post-2000 years is close to 17 (- 16.7 percent).

3.3.4 Urbanisation

In the introduction to the unit, we made a reference to the expected change in the rural to urban share of the economy by the process of accelerated urbanisation expected to result over time. As a result of the transformation over the decades, the distribution of rural to urban population has changed by 13 percentage points over the 5 decade period of 1961-2011 (Table 3.6). The percentage of rural population has decreased from 82 to 69 percent i.e. by 13 percentage points. The increase of 13 percentage points in the corresponding urban population is distributed between the pre-reforms (1961-1991) and the post-reforms (1991-2011) periods by 7.5 and 5.7 percentage points. The ratio of 7.5 : 5.7 indicates a per-decade-average of 2.5 for the three pre-reform decades of 1961-91 and 2.85 for the two post-reform decades of 1991-2011. This suggests that the pace of urbanisation has been faster in the post-reform years. In other words, the pace of reforms has accelerated during the post-liberalisation period supporting the hypothesis that structural transformation of the economy will become more fast-tracked once the process establishes itself in the economy.

Table 3.6 : Change in Rural-Urban distribution of population (percent)

Year	Rural	Urban
1961	82.0	18.0
1971	80.1	19.9
1981	76.9	23.1
1991	74.5	25.5
2001	72.2	27.8
2011	68.8	31.2

Source: Decadal Census, 2011.

3.4 REGIONAL DISPARITIES IN INDIA

Since its inception Indian planning has been concerned with the idea of balanced growth. But despite this, unbalanced growth and regional disparities have remained, since many factors like the initiatives of the state governments in initiating progressive policies, the social context in which the people in a state are not able to take advantage of policies and schemes, etc. operated at the grassroots level. As a result, the gains of the rapid growth have not reached all parts of the country and all sections of the people in an equitable manner. While differences in Gross State Domestic Product (GSDP) growth rates and absolute level of per capita GSDP are only summary economic indicators of disparities, there are wide variations between the States of India on health, education and infrastructural indicators. In such a scenario, while high growth rates have led to a spiral of commercial and service sector activities in the already developed regions of the country, the backward areas have continued to lack even in basic amenities like education, health, housing, rural roads, drinking water and electricity. Livelihood options are also limited as agriculture does not give adequate returns and industry and services have been able to absorb limited

surplus labour from agriculture. As a result, people seeking employment in low skill, low paying jobs is a common manifestation of such constraints in many rural areas. Redressing regional imbalances and disparities has, therefore, not only been a goal in itself but is essential for maintaining the integrated social and economic fabric of the country.

3.4.1 Magnitude and Causes of Regional Disparities

The major factors on which particular attention for minimising the regional disparities is required are the following.

Population Below Poverty Line: The percentage of population living below the poverty line in different states needs to be taken into account for minimising the regional disparities. For instance, in 2011-12, only three states (viz. Bihar, UP, and MP) together accounted for 44 percent of the total population in the country. The percentage of population below poverty line was also much above the all India level (27.5 percent) in this regard [e.g. Bihar 41.9 percent, Chhattisgarh 40.9 percent, Jharkhand 40.3 percent, Uttarakhand 39.6 percent, MP 38.3 percent]. This implies that there is extreme concentration of poverty in the economically backward states and more efforts to improve their condition are needed to be focussed in these states.

Disparities in Human Development: In terms of human development indicators, there are considerable variations across states in India. For instance, Kerala is the best performer (with a literacy rate of 93.9 percent, female literacy rate of 92 percent and infant mortality rate of 12), but at the other end of the position are the worst performers like Bihar, Rajasthan, Haryana, MP and Assam.

Inter-State Disparities in Agricultural Development: Another important indicator of regional disparity is the differences in the levels of development of agriculture among the different states of the country. States like Punjab, Haryana and part of Uttar Pradesh have a high rate of agricultural productivity. This is to say the adoption of High Yielding Varieties (HYVs) of seeds in agriculture has aggravated regional disparities.

Disparities in Industrial Development: There has been substantial regional concentration of industries in the four industrially advanced states of Maharashtra, Gujarat, Karnataka and Tamil Nadu. The uneven pattern of distribution of industries needs to be bridged by special initiatives like resource transfer, specific area development programmes, concessional finance, etc.

Disparity in Growth Performance: The different states in India are classified into three groups viz. high income states, middle income states and low income states. The relative positions of the states are determined by averaging their per capita real SGDP over the period 1981-2008.

With the removal of controls and the opening up of the economy, the pressure of market forces has exacerbated the inter- and intra-state disparities. The role of the centre in promoting equity among states and regions has, therefore, assumed added importance in the post-liberalisation period. The

policies of the government have been reoriented with the aim of achieving faster and more inclusive growth. Towards this end, endeavours to channelise funds into sectors and areas which need special attention under different programmes and schemes are being made.

3.5 INCREMENTAL CAPITAL OUTPUT RATIO (ICOR)

Allocation of resources is one of the central problems faced by all economies. Establishing efficient criteria for investment of a nation's resources is crucially important in this regard. One of the most traditional investment criteria is the use of the capital-output ratio. A variant of this is the incremental capital-output ratio (ICOR). ICOR indicates the additional unit of capital or investment required to produce an additional unit of output. The rate of savings is taken as the investment made to work out ICOR. Thus, ICOR = (investment share in GDP) ÷ (rate of growth of GDP). That is: ICOR = S / G, where S is the savings rate and G is the growth rate.

The Harrod-Domar model focuses on ICOR as one of the two central parameters in determining the rate of economic growth. More specifically, G = S/ICOR. The lower the ICOR, higher is G. Conversely, the higher the *ICOR*, lower is the rate of growth or the lower is the productivity of *capital. Savings (S) is taken as equal to Investment (I).*

In the Indian case, analysis of data for the period beyond 2012-13 reveals two trends. First, there has been a decline in investment rate. Second, the decline in growth rate is greater than the decline in investment rate indicating a rise in the incremental capital-output ratio (ICOR). The rise in ICOR can be attributed to the delay in completion of projects or the lack of complementary investments. In some cases, it can also be due to non-availability of critical inputs. The delay in completion of projects can be due to internal reasons as well as policy constraints.

Check Your Progress 2 [answer within the space given in about 50-100 words]

1) To what extent the income (NI) from agriculture has declined over the period 1951-2011? What are the shares of gain by the industrial and services sectors out of this decline?

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2) What factors have contributed to the significant expansion of services sector during the period 1951-2011?

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3) To what reasons the stagnancy in the industrial expansion of India during the post-1991 years is attributed?

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4) What has been the trend in 'savings' in recent years in India? What has been the corresponding trend in 'investment'? Is there a significant gap between the two and if so how it possibly is bridged?

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5) What has been the rate of expansion in the industrial sector in the post-2000 years in respect of employment?

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6) Do you consider the structural shift in the decline of agricultural employment by 21 percent over the period 1951-2011 significant? Why?

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7) What is the increase in the proportion of urbanisation over the period 1961 to 2011? What is its distribution over the pre-reforms and the post-reforms decades?

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8) State two reasons as to why disparities between regional development have remained.

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9) What are the factors that merits to be focused upon while striving to reduce regional disparities in growth and development?

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10) How is ICOR defined? In what way it is important in economic developmental planning?

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11) If the savings-investment rate is given as 36 percent and the targeted economic growth rate is fixed at 6 percent, what is ICOR? Next, if the ICOR is lowered by 2 percent, then what would be the expected growth rate for the economy?

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3.6 LET US SUM UP

Structural change refers to major shifts in the relative shares of employment and income between sectors of an economy. Such structural changes are expected to result over a long term horizon. In particular, the share of agricultural sector, which will be high at low levels of development, is transferred to the other two sectors viz. the industrial and the tertiary or services sectors. However, the transformation can sometimes take place without the industrial sector expanding as much as the services sector. Although this has not happened in many of the developed economies, it had been pointed out to be the case for India. This perception is not really the case as noticed by the data for the post-2000 years in which out of a total of 11 percentage points yielded by the agricultural sector in respect of its employment share, a major part of 8 percentage is accounted for by the increased employment share in industries with the remaining 3 percent accounted for by the services. Significantly, in the entire 5 decade period before the year 2000 i.e. from 1951-2000 also there had been a shift in agricultural employment by the same 10 percent (i.e. from a high of 70 percent in 1951 to 60 percent in 2000). Also, notably, considering only the employment in the rural sector, there has been a corresponding 10.5 percent decline in the share of agriculture sector employment. The trend supports the hypothesis of labour transfer through non-agricultural or non-farm sector growth in rural areas. The change in income profile shows a drastic decrease in the contribution of agriculture to GDP (from 53 percent in 1951 to 14.5 percent in 2011). The corresponding increase for the industrial sector is from 17 to 28 percent (i.e. 11 percentage points) and for the services sector from 30 percent to 58 percent (i.e. 28 percentage points). A consequence of structural change is the increased share of urban population in relation to the rural population. This change is seen to be a modest 13.2 percent increase i.e. from 18 percent in 1961 to 31.2 percent in 2011.

3.7 SOME USEFUL BOOKS

1) Athukorala P & Sen K (2002). *Saving, Investment, and Growth in India*, Oxford University Press, New Delhi.

2) Bhattacharya, B. B. & Sakthivel S. (2004). 'Regional Growth and Disparity in India: Comparison of Pre and Post-Reform Decades', *Economic and Political Weekly* 29(10), 6 March.

3) Cairncross, A.K. (1970). The Capital – Output Ratio in Stephen Spiegelglas and Charles (Ed.), Economic Development: Challenge and Promise.

4) Joshi, Vijay and I.M.D. Little (2005). *India, Macro Economics and Political Economy I964 to 1991*, Oxford University Press, New Delhi.

5) Papola & Sahu (2012). *Growth and Structure of Employment in India: Long Term and Post-Reform Performance and the Emerging Challenge*, ISID, New Delhi.

6) Rangarajan C, Seema and E. M. Vibeesh (2014). 'Developments in the Workforce between 2009-10 and 2011-12', *Economic and Political Weekly*, vol. XLIX (23).

3.8 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) Structural change refers to transfer of benefits of economic growth to the lower sections of the population in terms of increase in their income and employment levels. Changes in the relative shares of urban to rural (or increased urbanisation) is a consequence of structural change in the economy.

2) No. An economy can diversify its agricultural sector to 'agriculture and allied' activities inclusive of animal husbandry to attain a developed status.

3) For affording temporal comparison of growth profiles. In its absence, the changing levels of prices during the period remains unaccounted for.

4) The failures are attributed to the wars fought and droughts experienced.

5) The global slowdown and the poor monsoon coupled with slow pace of reforms.

6) No. The period was also marked for intermittent political instability in the country.

7) Yes. The long term growth rate in India's NI has steadily grown consistently from 4 percent during 1951-1979 to 6 percent during 1980-97 and to 7 percent during 1997-2017.

Check Your Progress 2

1) Decline in agricultural sector's share is to a tune of 39 percent. Corresponding share of industry has increased by 11 percent and 28 percent by the services sector.

2) Demand for many constituents of services sector, developments in IT sector, etc.

3) Migration of workers and change in demand patterns for services.

4) Domestic savings has declined in recent year to touch 19 percent in 2015. Investment, however, have appreciated to 35 percent average over 2008-13. FDI and foreign remittances have contributed to bridge the gap.

5) There has been a decline of 11 percent in agricultural employment in the 2000+ years. Out of this, 8 percent share is the increase in industries and 3 percent in services.

6) Yes. Although it was 10 percent only during the 50 year period up to 2000, the period was marked for turbulence in terms of initial planning period, wars, droughts, etc. The post-2000 years, was relatively a much better period.

7) 13 percentage points. 7.5 and 5.7 percents respectively.

8) Difference in adoption of progressive policies and capacity of state to take benefit from policies implemented.

9) Population below BPL, HD indicators, state of agricultural progress/ development, disparities in industrial development and growth performance.

10) ICOR is defined as the ratio of 'investment to targeted growth rate'. It is important to adopt policies to achieve the targeted growth rates for which ICOR can be focused upon particularly for deciding the desired labour and capital mix.

11) G = 36/6 = 6. G = 36/4 = 9 percent.

UNIT 4 RESOURCES AND CONSTRAINTS*

Structure

4.0 OBJECTIVES

After reading this unit, you will be able to:

- distinguish between natural resources and manmade resources;
- explain how resources serve to build infrastructure critical for economic growth and development;
- categorise the various factors of production playing a crucial role in building a strong infrastructural base;
- differentiate between physical infrastructure and social infrastructure;
- discuss the role of infrastructure in economic development;
- describe the state of infrastructure development in India; and
- outline the challenges/constraints for infrastructure development in India in terms of 'institutions and governance'.

4.1 INTRODUCTION

Natural resources, include all those objects and products which, combined with human labour, capital and enterprise, are used to produce goods and services. Natural resources are not static but dynamic in their nature i.e. they keep on changing with economic development. Resources are important for infrastructure development which in turn determines the potential for all

* Prof. Sebak Jana, Vidyasagar University.

round development i.e. growth and development of all the three primary sectors of the economy. Transport, communications and energy are the most important constituents of economic infrastructure. The different modes of transport that have evolved with a premium on greater speed, point out to how the world is positioned on the fast changing time-space-speed vectors. Distances are measured on the basis of speed and not in spatial terms. In all these, consumption of energy is the single most important parameter that distinguishes a developed economy from that of a developing economy. In this unit, we shall discuss the constituents of resources and infrastructure in the context of Indian Economy. The constraints to development, by a lack of infrastructure owing to inefficiencies in 'institutions and governance', would also be focused upon in the unit.

4.2 TYPES OF RESOURCES

A resource is a source or supply from which a beneficial good is produced. Typically resources are materials, energy, services, labour, knowledge and other physical assets. These are used in a mix to produce a beneficial good. In that process, some of the resources (called non-renewable or exhaustive resources) may be so consumed that, over time, they may become unavailable for future use. Resource are thus basically of two types – natural and manmade. Let us begin by distinguishing between these two.

4.2.1 Natural Resources

Natural resources are derived from the environment. Some of the resources are essential for survival, while others satisfy societal wants. Every man-made product in an economy is composed of natural resources to some degree. Natural resources are material provided by the nature using which man makes many other complex products called manmade products. Some examples of natural resources and the way in which we use them are given in Table 4.1.

Table 4.1: Types of Natural Resources

Natural Resource	Examples of Products or Services
Air	Wind energy
Coal	Electricity
Minerals	Coins, wire, steel, aluminium cans, jewellery
Natural gas	Electricity, heating
Oil	Electricity, fuel for cars
Sunlight	Solar power, photosynthesis
Water	Hydroelectric energy, drinking, cleaning

Source: http://study.com/academy/lesson/what-are-natural-resources-definition-lesson-quiz.html

Water Resource: Water is the most critical limiting factor for many aspects of life like: (i) economic growth, (ii) environmental stability, (iii) biodiversity conservation, (iv) food security and (v) healthcare. Humans at present are

estimated to use about 54 percent of all accessible freshwater supplies in the world. By 2025, this share is expected to increase to 70 percent. This will have serious implications for all other forms of life including plants. The demand for fresh water is increasing to unprecedented levels because of: (i) population growth, (ii) increasing irrigation needs, (iii) rapid urbanisation, (iv) industrialisation and (v) increase in production and consumption. India is counted as one of the water hotspots in the world primarily because of the large population that has to be provided with food and drinking water. Per capita availability of water has gone down from 5000 M^3 (cubic meters) in 1951 to 1588 M^3 in 2010 in India.

Energy Resource: Energy resources are of two types: non-renewable and renewable. The most important non-renewable energy resources are fossil fuels such as coal, oil and natural gas. Energy is used in the industrial sector, transportation sector (which is the world's fastest growing form of energy use largely due to the rise in private cars) and residential and commercial sector (i.e. energy use in buildings, commerce, public services, agriculture and fishing). India is the fourth largest energy consumer in the world after China, US, and Russia. However, India's per capita energy consumption is 615 units compared as 6800 units in the US and 2030 units in China.

India is the third largest global consumer of coal and has the fifth largest coal reserves in the world. India does not have sufficient oil and hence imports 83 percent of her crude oil needs. India is the world's fourth largest oil importer after China, Japan, and the US. The government is forced to subsidise the price of energy products but of late it is trying to reduce such subsidies. About 25 percent of the population lack basic access to electricity while electrified areas suffer from intermitent electricity blackouts. The government is presently promoting renewable energy sources like wind farms, solar energy, hydropower and waste-to-energy projects.

Forest Resource: The economic benefits that mankind receives from forests are of two types: (i) direct use values like timber, fuel wood, edible plants, etc. and medicinal plants; and (ii) indirect use values such as the carbon absorption, provision of habitat to protect biodiversity, ecosystem protection services such as the ability to reduce soil erosion and the siltation of rivers. Some findings of the 'state of energy report' 2013 for India are: (i) forest and tree cover of the country is about 70 million ha or about 21 percent of the total geographical area; (ii) there is an increase of 5800 ha in the forest cover since the 2011 assessment; and (iii) the seven north-eastern states of India have nearly one-fourth of the country's forest cover.

Land: Though the global land area is less than a third of the earth's surface, it is vital for our existence because of its many resources and functions provided to mankind like: (i) biodiversity, (ii) water, (iii) carbon cycles, etc. The world's land surface is degrading continuously with increasing 'desertification' estimated at 23 percent of all usable land having become degraded. The main causes of degradation are: (i) deforestation, (ii) overgrazing, (iii) mismanaged agriculture, (iv) unplanned industrialisation and urbanisation, etc. The total land area in a country is set in its definite limits within which the process of economic development needs to be

organised. With increasing world population, there will be intense pressure on land. The pattern of land utilisation in India is indicated in Table 4.2. The available land, on the basis of its use, is classified into two types viz. (i) agricultural land and (ii) non-agricultural land.

Table 4.2: Land Utilisation in India

(in sq. kms.)

Items of Classification on Utilisation	1950-51	Percent	2014-15	Percent
Geographical Area	328726	-	328726	-
Reporting area for land utilisation statistics	284315	100	307818	100
Forest	40482	14	71794	23
Barren Land	47517	17	43880	14
Other uncultivated land excluding fallow land	49446	17	25832	8
Fallow Land (uncultivated land in-between cultivated land)	28124	10	26182	9
Net Area Sown	118746	42	140130	46

Agricultural land includes net sown area and current fallows. Agricultural land in India (in 2014-15) is thus about 55 percent of the total geographical area. Because of the large population of the country, the per capita arable land (i.e. land suitable for agriculture) is low at 0.16 hectares against the world average of 0.24 hectares. Non-agricultural land includes: (i) land under forests, (ii) land under non-agricultural use (e.g. towns, villages, roads, railway, etc.) and (iii) land classified as non-cultivable waste, barren land and uncultivated land in mountains and deserts.

4.2.2 Man-made Resources

Man-made resources are goods and services produced by using the resources gifted by nature. Sometimes, resources become useful to man only when their original form is changed. Such goods do not occur naturally but have to be produced for consumption by mankind (i.e. humanity). Some man-made resources like medicines are very essential to modern human life as without medicines like vaccines people would become sick and die. However, some manmade resources like pesticides could harm natural environment if not scientifically used.

Some man-made resources are like natural resources. For instance, lakes and ponds are man-made resources. While the water and fish in them are natural resources, the impoundment is by human effort. Such resources generate food, income and recreation opportunities for many people. Likewise, farms are also man-made resource using plants and soil available from nature. Some other man-made resources like paper are often combined to form other resources like books and plates. High-tech products like wires and semiconductors are other goods made for mankind's use. Examples of other

man-made resources, are hospitals, research centers, educational institutions, etc. These serve as resources for community development. Taken together, they become infrastructure which forms the backbone for economic growth and development.

4.3 INFRASRUCURE

Infrastructure covers those supporting services that help the growth of productive activities like agriculture and industry. Though the concept of infrastructure has been extensively used in the literature on economic development, a precise and generally acceptable definition of the term infrastructure is still elusive. The provision of quality and efficient infrastructure services is indispensable to realise the full potential of the growth impulses surging through the economy. Professor V.K.R.V Rao made an exhaustive categorisation of factors of production that constitute infrastructure, and the activities/sectors that are integral in their making, as follows.

Transport: roads, railways, shipping ports and harbours, airports, transport equipments.

a) **Communications:** posts, telegraphs, telephones, radio, TV, cinema.

b) **Energy:** coal, electricity (hydro, thermal, nuclear), wind, solar, oil, gas, biogas.

c) **Intermediate Goods Output:** minerals, steel, basic chemicals, fertilisers and pesticides, machinery and machine tools.

d) **Productivity of Natural Resources:** reclamation of lands, irrigation (major, medium, minor) drainage, contour bunding and land reshaping, consolidation of holdings, high yielding bovine varieties, fishing boats, fishing equipments and refrigeration, afforestation and development of commercial forests.

e) **Science and Technology:** teaching, basic and applied research, national laboratories, liaison with production units.

f) **Information System:** mass media, libraries and museums, fairs and exhibitions, books and journals.

g) **Finance and Banking:** savings institutions (in public, private and cooperative sectors), credit and lending institutions (in public, private and co-operative sectors), capital market.

h) **Human Resource Development:** drinking water, disease eradication, public hygiene, family planning, medical facilities; education – literacy, schools, colleges and universities, professional education, technical and industrial schools, development disciplines.

Economic development of a country depends very much upon the availability of its infrastructural facilities particularly the development of sectors such as agriculture, industry and services Sectors. An economy's infrastructure is broadly divided into two types – physical infrastructure and social

infrastructure. Infrastructure are also classified based on the purpose of uses viz. (i) 'hard' and 'soft' infrastructure, (ii) rural and urban infrastructure and (iii) institutional and non-institutional infrastructure. **Hard infrastructure** is defined as the physical infrastructure like roads, bridges etc. while the soft infrastructure refers to human capital and the institutions that are required to maintain the economic, cultural and social standards of a population.

4.3.1 Physical Infrastructure

Physical infrastructure is directly related with the production sectors like agriculture, industry and trade. It includes services like power, irrigation, transport and telecommunication. Performance of physical infrastructure in Indian economy has been mixed and uneven. Over the years, India's 'soft infrastructure' has grown faster. In contrast, the expansion and performance of the 'hard infrastructure' have been modest considering the country's population density.

4.3.2 Social Infrastructure

Social infrastructure comprise of education, health and medical care, nutrition, housing and water supply which are instrumental in contributing to improvements in human development, which in turn, accelerates economic development. Human Development is the process of widening people's choices and their level of well-being. The choices change over time and differ among societies according to their stage of development. The three essential choices for people are – to lead a long and healthy life, to acquire knowledge and to have access to the resources needed for a decent standard of living.

The term 'social infrastructure' is used to refer to the 'overhead facilities' (i.e. not linked to production) which contributes to improving the quality of labour productivity in production. It includes education, health, housing, etc. Social infrastructure is vital in human capital formation while physical infrastructure builds up the material capital. Given that human capital plays a very important role in the process of economic development, expenditure on social infrastructure is regarded as investment rather than consumption. Both the economic and social infrastructure are equally important for carrying out economic activities efficiently. The distinction is merely on the difference in their content and not on their role or importance.

Endogenous growth theory argues that both poor physical infrastructure and human capital constrains economic growth. For instance, Hall and Jones (1999) argue that international differences in levels of output per worker are determined by differences in human capital and in physical and social infrastructure. Wagstaff (2002) notes that up to 1.7 percent of annual economic growth in East Asia between 1965 and 1990 could be attributed to improved investment in social infrastructure i.e. public education and health.

Check Your Progress 1 [answer within the space given in about 50-100 words]

1) State the different types of natural resources with illustration of each one to produce a manmade resource.

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2) State the five most important aspects of life which critically depend on water. To which factor is the continued increase in the use of available water on the planet attributed?

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3) How is the 'infrastructure' defined? Give examples of its constituents?

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4) State the nine constituents of infrastructure as categorised by Prof. V. K. R. V. Rao.

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5) Distinguish between physical and social infrastructures.

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6) What does the endogeneous growth theory recognise as the basic constraints for economic development? What do the individual contributors say in this regard?

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4.4 ROLE OF INFRASRUCTURE IN DEVELOPMENT

The primary objective of every nation is to strive for the fulfilment of the basic needs of its population. For this, it can raise the required resources only by achieving higher GDP growth rates. This will help the country to invest in its infrastructure development which in turn attracts other countries to invest by way of FDI. Infrastructure thus contributes greatly in fulfilling the basic objective of achieving higher growth. Physical infrastructure directly supports economic growth while social infrastructure does it indirectly by improving the quality of living standards of the community. More specifically, the role and contribution of infrastructure to development can be identified as follows.

- First, physical infrastructure not only contributes to enhance productivity but also assists in the realisation of the potential ability of human capital i.e. it creates situations in which the potential can fully unfold. It also directly and indirectly contributes towards improving the quality and safety of people's lives.
- Second, the nature and rate of growth of infrastructure determines the course of development of a country in terms of: (i) diversification of production and expansion of trade; (ii) control of population growth; (iii) alleviation of poverty; and (iv) protection as well as improvement of conditions of environment. It is estimated that a 1 percent increase in the stock of infrastructure is associated with a 1 percent increase in GDP of a country (WDR, 1994). An important ingredient in China's success with rural enterprise has been a package of transport, telecommunications and power at the village level. The elements of 'physical infrastructure' provide a series of externalities. For instance, use of electricity helps in the dynamic transformation of all types of production units, growth of transport and communications paves the way for commercialisation of agriculture and trading activities besides helping increase the mobility of labour across sectors within a country.
- Third, education and health – which are the main constituents of social infrastructure – contribute to economic development by human capital formation. Effective education of the masses (i.e. universal elementary

and middle level education) is crucial for reducing poverty and sustaining higher rates of economic growth over long periods of time by establishing a skilled labour force base.

- Fourth, the elements of 'financial infrastructure' consisting of money and capital markets supply short, medium and long term credit to different sectors of the economy. In particular, while the commercial banks mobilise savings and provide short term credit, the development banks do the same by providing long term credit to agriculture and industry.
- Fifth, infrastructure services that help the poor also contribute to environmental sustainability. For instance, clean water and sanitation, non-polluting sources of energy, safe disposal of solid waste, better management of traffic in urban areas, etc. provide environmental benefits for all sections of the people. The urban poor often directly benefit from good infrastructure services because they are concentrated in settlements with unsanitary conditions, hazardous emissions, and accident risks.
- Sixth, infrastructure is very much important in development of tourism. However, in areas which attract tourists for natural scenery (such as hilly areas, sea-costs, forests, etc.), development of physical infrastructure needs to be done in a way that environmental concerns are duly protected.

The technological revolution achieved in the fields of telecommunication and use of satellites has radically improved the system of information in all spheres of life. We should properly use it as an important element of infrastructure. Further, development of suitable institutional arrangements for the maintenance of infrastructure like the basic needs of civic life with proper systems of water supply, sewerage, roads, conservancy services, etc. also needs to be focused upon so as to duly benefit from infrastructure development.

4.5 INFRASTRUCTURAL DEVELOPMENT IN INDIA

The transport system is dependent on complementary supporting services. The different modes and services on which the broad transport system depends are: railways, roads, ports, inland water transport, coastal shipping, airports and airlines. Railways and roads are the dominant means of transport in India carrying more than 95 percent of total traffic. Although other modes such as coastal shipping and inland water transport also play a crucial role, railways and roads dominate the transport landscape in the country. It is important to foster the development of various transport modes so that they together lead to an efficient, sustainable, safe, and regionally balanced transportation system in an integrated manner. The liberalisation of the economy has instilled the urgency of recognising the necessity of an efficient transport system for increasing productivity and, in the process, enable the country to compete effectively in the world market. Adequate and reliable transport infrastructure (and services) are important in contributing to enhance the ability of the country to increase its international trade and attract foreign direct investment.

Road Network: India's road network consist of: (i) national highways (NH), (ii) state highways (SH), (iii) major district roads (MDRs), and (iv) rural roads (RR) including other district roads and village roads. The NHs (with a total length of about 66,600 km) comprise about 20 percent of the road network and carry 40 percent of the road traffic. SHs (with a length of about 1.37 lakh km) and MDRs (with a length of 3 lakh km) together constitute the secondary system of road transportation contributing significantly to the development of the rural economy and industrial growth of the country. The secondary system also carries about 40 percent of the total road traffic. Rural Roads (comprising the large residual of 28 lakh km length), hold the potential to provide the vitally needed rural connectivity for generating higher agricultural incomes and productive employment opportunities besides promoting access to economic and social services. In order to improve the road network, besides speedy implementation of projects like the Golden Quadrilateral (GQ) and the North-South and East-West (NS-EW) corridors, addressing the deterioration in large stretches of NHs, SHs, etc. needs to be accorded high priority.

Ports: Ports constitute the inter-modal interface between maritime and land (road and rail combined) transport. India has a coastline of around 7,500 km with 12 major ports and 187 non-major ports (i.e. notified minor/intermediate) along its coastline and sea islands. Almost 95 percent by volume and 70 percent by value of India's global merchandise trade is carried through the sea route. Overseas cargo accounts for about 77 percent of the total cargo handled at Indian ports.

Air Transport: India's relatively decent performance in roads and railways by international comparisons is partly because other countries (such as in East Asia, BRCS, and, especially, developed countries) make much greater use of air transportation. This is evident from the data on air transport in India where only 58 persons per 1,000 people travelled (in 2012) by air compared to 201 in China, 333 in BRCS countries, 490 in East Asia and a huge 1480 in the developed countries. In terms of air freight transportation, India's volume (in terms of 1,000 ton-km per 1,000 people) was only 1.4 (in 2012) compared to 13 for China, 18 for BRCS countries, 80 for East Asia and a huge 111 in developed countries.

Electricity: Electricity is a very important form of energy used in homes, offices and industry for enhancing production, efficiency and productivity. Lack of access to electricity seriously affects output and productivity. In India, only 75 percent of people have access to the electricity network. This compares to 86 percent for the East Asian countries, 94 percent for the BRCS countries and almost 100 percent for China and the developed countries. Compared to India's level, the per capita consumption of electricity is about 5 times higher in China, 6 times higher in East Asia, 7.5 times higher in BRCS countries and 15 times higher in the developed countries.

Banking System: The banking system comprise of different kinds of banks of which the scheduled commercial banks (SCBs) are the most important in terms of reach and scale of activities. The SCBs are further categorised as public-sector banks, foreign banks, private banks and regional rural banks.

Private banks like the ICICI Bank and HDFC Bank have private ownership and management. Foreign banks operate either through a fully-owned subsidiary or branches of the parent bank registered outside India. Their operations are generally restricted to tier-1 cities.

Information and Communication Technology (ICT): Access to ICT is crucial for productivity enhancement where the younger generation's exposure to ICT help them to prepare for more productive jobs. Access to ICT is measured in terms of number of telephone and internet subscribers per 1,000 persons, number of computers per 1,000 persons, and per capita expenditure on telephone, Internet, etc. Latest available data for comparison purposes (for 2012) shows that per 1,000 inhabitants, there were 690 cellular phones in India. This was 810 in China, 1,186 in East Asian economies, 1,312 in BRCS countries and 1,153 in developed countries.

Social Infrastructure: The two major components of social infrastructure are education and health. The different levels of education are primary, upper primary, secondary and higher education. Their parallel in the health infrastructure comprise of Community Health Centres (CHCs), Primary Health Centres (PHCs) and Sub centres (SCs) at the grass roots level.

In April 2010, the Right to Education (RTE) Act was passed in India. With this, the universalisation of primary education (standards one to eight) received a new impetus. The Act makes education a fundamental right of every child between the ages of 6 and 14 and specifies minimum norms in primary education. It requires all private schools to reserve 25 percent of seats for poor children and prohibits taking donation or capitation fees. The emphasis in recent times is on enhancing supply and increasing access to higher education. Consequently, the 'gross enrolment ratio' (GER) for higher education (both degree and diploma programmes) in India, expressed as a percentage of population in the eligible age cohort of 18-23 years, has increased from 13 percent in 2007-08 to 18 percent in 2011-12. Vocational education and training (VET) consists of practical courses through which one gains 'skills and experience' directly linked to a career and employment opportunities. These training courses are parallel to other conventional courses of study (like B.Sc., M.Sc., etc). However, considering the huge labour force entering the job market every year and the high unemployment rates, besides the low employability levels of graduates from different programs, VET (except in computer-related courses) is underdeveloped in India. Among the BRICS economies, the percentage of students in upper secondary education enrolled in vocational education in 2013 were: Russia: 60 percent, China: 48 percent, South Africa: 14 percent, Brazil: 8 percent and India: 2 percent.

Health: Since independence, India has built a huge health infrastructure in the form of primary, secondary and tertiary healthcare institutions. Under this, government hospitals include healthcare centres, district hospitals and general hospitals while private hospitals includes nursing homes and super-speciality hospitals in cities. In India, private healthcare expenditure accounts for nearly 74 percent of the country's total healthcare spending (IBEF, 2017). The share of private sector in hospitals and hospital beds is 74 percent and 40

percent respectively. There is a growing demand for healthcare due to: (i) rising incomes and affordability; (ii) growing elderly population; (iii) changing disease patterns; (iv) rise in medical tourism; (v) better awareness; and (vi) preventive and diagnostic care. However, the average (per 1000 persons) number of medical professionals is very low in India: 0.7 physicians, 1.5 nurses and number of hospitals is 1 whereas the world average for these are respectively 2.5, 2.5 and 2.9.

4.6 INSTITUTIONS AND GOVERNANCE

Good governance focuses on well regulated administration of efficient and effective co-existing public and private sector managed institutions. It encompasses the legal frameworks for competitive functioning, accountability of public officials, transparency in governance procedures, freedom of information, access to citizens, participatory governance by the public through a major role for civil society, etc. The relative role of the public and private sectors in providing infrastructure will therefore vary depending upon the state of development in each one of these constituents. In some sectors such as irrigation and water resources management, construction of rural roads, developmental investment in economically or situationally disadvantaged regions, etc. the bulk of the initiative for investment in infrastructure development have to be from the public sector. Available public sector resources must therefore be directed to such sectors of priority. Precisely for this reason, PPPs need to be seriously explored in other areas. Major Challenges to Infrastructure Development in India can be stated as follows.

Land Acquisition: There are multiple challenges to infrastructure development of which 'land acquisition' is the single largest roadblock for the development of infrastructure. Several projects have been stalled or delayed due to land acquisition issues. There are multiple reasons that lead to delays in land acquisition like statutory clearances, public agitations, disputes, etc., as it invariably requires an amendment to existing land usage provisions.

Delay in Regulatory and Environmental Clearance: There are various categories of approvals required across the project cycle at every stage, right from the pre-tendering stage to post-construction. For instance, at the pre-tendering stage, there are substantial delays in inviting bids. Further, approval is required from multiple layers of the government at the central, state, and local levels, from a number of regulatory bodies like National Green Tribunals, Environmental Pollution Control Authorities etc.

Water Issues: Increased demand for water from all sectors and a lack of a rational water pricing policy has impacted the demand for water adversely. Widespread unscientific usage of groundwater resources and inefficient management of conflicts between states has adversely impacted the development of agricultural sector in particular.

Modernisation of Ports: Despite the immense potential for modernisation and growth of Indian ports, the government has not been able to modernise

even the major ports. Compared to the large international ports, India lags behind badly. Major contributors to this state of Indian ports are political pressure, (many a time based on traditional rights of fishing communities living in the coastal areas) lack of autonomy, absence of incentives, excessive bureaucratic and hierarchical rigidities.

Vocational Education: There is an urgent need to expand vocational training in India making it oriented to current labour market needs. As the Indian economy becomes increasingly knowledge based, new and revised courses that fulfil the requirement of modern industries become imperative. Thus, the private sector, which is more adaptable in this respect, should be allowed and supported to play a larger role. Public–private partnership can be a good option in this respect. In addition to the degree and diploma programmes in vocational courses, there is a need for shorter and informal training facilities.

Check Your Progress 2 [answer within the space given in about 50-100 words]

1) In what respects 'infrastructure' determines the course of development of a country?

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2) In what way 'infrastructure services' help the poor to contribute to environmental sustainability?

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3) What is the estimated share of private healthcare expenditure in India? What factors have contributed to such a huge share of private healthcare in India?

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4) What are the constituents of 'good governance'?

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5) What are the major constraints to 'infrastructure development' in terms of good governance and institutions in India? In particular, what factors are identified to come in the way of modernisation of ports/airports?

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4.7 LET US SUM UP

It is important to sustainably use the available natural resources from which many modern day needs of man-made resources are produced. This is imperative in the context of 'infrastructure development' which depends upon the availability of both the natural and the man-made resources. There is thus a close link between the availability of resources and the development of infrastructure in a country. There are two constituents of infrastructure namely the physical infrastructure and the social infrastructure. The former includes: roads, ports, air transport, energy, banking and financial services, ICT, etc. The latter covers the two major constituents of education and health. It is important that good institutional framework with an efficient governance system prevails in a country in order to support the infrastructural development of the economy. Governance and institutions is a broad term encompassing the legal framework for the rule of law (including the accountability of public officials and transparency in government procedures), right to information of citizens, participatory governance by the civil society, etc. In India, the development of infrastructure is hindered by many constraints. Some of these are: land acquisition, delay in regulatory and environmental clearance, water issues, development of ports and airports, vocational education, etc.

4.8 SOME USEFUL BOOKS/REFERENCES FOR FURTHER READING

1) Agrawal, P. (2015). *Infrastructure in India: Challenges and the Way Ahead,* Institute of Economic Growth, IEG Working Paper No. 350.

2) IBEF (2017). Health Care, https://www.ibef.org/download/Healthcare-January-2017. pdf

3) Rajagopalan, R. (2015). *Environmental Studies: from Crisis to Cure* (No. Ed. 3). Oxford University Press.

4.9 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) Air, coal, minerals, natural gas, oil, sunlight and water. See Table 4.1 and answer.

2) Economic growth, environmental stability, biodiversity conservation, food security and healthcare. The factors are: population growth, increasing irrigation needs, rapid urbanisation, industrialisation and increase in production and consumption.

3) Those man-made resources which are important for community and economic development (e.g. paper, books, semiconductors, hospitals, roads & bridges, educational and research institutions) are compositely termed as 'infrastructure'.

4) Transportation, communication, energy, intermediate goods output, productive manmade natural resources, S & T, information systems, finance & banking and all HRD components.

5) Physical infrastructure comprise of power, irrigation, transportation and telecommunication. Social infrastructure comprise of education, health and medical care, nutrition, housing and water supply.

6) Poor physical infrastructure and human capital constraints (Sub-section 4.3.2).

Check Your Progress 2

1) In terms of: (i) diversification of production and expansion of trade; (ii) control of population growth; (iii) alleviation of poverty; and (iv) protection as well as improvement of conditions of environment.

2) Clean water and sanitation, non-polluting sources of energy, safe disposal of solid waste, better management of traffic in urban areas, etc. provide environmental benefits besides contributing to maintaining environmental quality.

3) This is estimated to be 74 percent of the total spending. Factors contributing to this are: rising incomes and affordability; growing elderly population; changing disease patterns; rise in medical tourism; better awareness; and preventive and diagnostic care.

4) Legal frameworks for competitive functioning, accountability of public officials, transparency in governance procedures, freedom for information access to citizens, participatory governance by the public through a major role for civil society, etc.

5) Land acquisition, delay in regulatory and environmental clearance, slow resolving of inter-state water issues, modernisation of sea ports and airports and vocational education. Factors of impediment are: political pressure, lack of autonomy, absence of incentives, excessive bureaucracy and hierarchical rigidities.

UNIT 5 DEMOGRAPHIC FEATURES*

Structure

5.0 OBJECTIVES

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

- define the concepts of 'Density of Population' (DoP) and 'Growth of Population' (GoP);
- state the basic demographic equation of 'Vital Statistics' with a specification of its main constituents;
- explain the different types of 'fertility' and 'mortality' rates along with their merits and demerits;
- analyse the trends in 'demographic transition' in India;
- outline the concepts of 'population ageing' and 'demographic dividend; and
- indicate the objectives and achievements of NPP, 2000.

5.1 INTRODUCTION

Demography means 'the scientific study of human population, with respect to size, structure and development'. The study of Demography is important

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since human population in terms of its structure, composition and growth, has significant bearing on economic growth and development. Population is the only and ultimate source of labour supply for development activities. It is also the ultimate beneficiary of development. Hence, population is both the means and the end of economic development. In India, the Demographic data is available in the Census Reports which is conducted every once in ten years. The last such census was conducted in the year 2011. The present unit delves into the important demographic features of India.

5.2 POPULATION OF INDIA: SIZE AND GROWTH

India's population, as per the 2011 census, was 1211 million (a million is equal to 10,00,000 i.e. 10 lakhs). Stating the figures in millions, it was 1029 in 2001, 846 in 1991, 683 in 1981, 548 in 1971, 439 in 1961 and 361 in 1951. At present, India is the second most populous country after China. As per the World Bank data (for 2016), China's population is 1359 million and India's population is 1324 million. However, the geographical area of India, in terms of square kilometres, is much smaller than that of China. The demographic measure that accounts for number of people per square km of land area is called the Density of Population **(DoP)**. It is measured as:

$$\boldsymbol{DoP} = \frac{\text{Population of a Geographical Area}}{\text{Land Area in Sq. Km of that Geographical Area}}$$

As per 2011 Census Report, DoP of India is 382. As per World Bank data, for 2016, the DoP of India is 445, of China 147, USA 35 and Australia 3.

The figures show that amongst these countries, India is the most thickly populated country. The figures also point out that the population of the world is not distributed uniformly across the regions. This is true within India also. Some states of India are densely populated whereas others are relatively sparsely populated. The states of Bihar (1106), West Bengal (1028), Uttar Pradesh (829) are densely populated. On the other hand, the states of Himachal Pradesh (123), Sikkim (86), Mizoram (52) and Arunachal Pradesh (17) are sparsely populated. Broadly speaking, territories with Mountains, hills, deserts and large dense forest areas are sparsely populated whereas territories having fertile land, industries, better transport facilities, etc. are densely populated.

5.2.1 Growth of Population

The size of the population of a given area changes over time through: (i) migration and (ii) natural factors like *births and deaths*. The change in the size of population over time, expressed as a percentage to its base year value, is called the growth of population. Thus, the rate of growth of population (or simply the growth rate) is estimated as: Rate of Growth of Population **(RGP)** $= \frac{P_{t+1}-P_t}{P_t} \times 100$ where, P_t is the size of absolute population at time point 't' and P_{t+1} is the size of absolute population at time point 't+1'. The growth rate of the population is expressed in percentage.

The population in India was 1028.5 million in 2001; it increased to 1210.6 million in 2011. The Rate of Growth of Population over the period 2001 to 2011 is 17.7 (or 18) percent. However, when the decadal rate of population growth is divided by 10, we get the average annual growth rate of population which in the present case is 1.8 percent. The rate of decadal growth of India's population increased from 22 percent in 1951-61 to 25 percent in 1961-71. After that, it has been declining steadily at a very slow pace at first but at an accelerated rate since 1991. The growth rate of population, as per 2011 census, is not uniformly the same across the states of India. Some states have exhibited higher average annual growth rate than the national growth rate. For instance, Meghalaya (2.8 percent), Bihar (2.6 percent), Arunachal Pradesh (2.6 percent), Jammu & Kashmir (2.4 percent), Rajasthan (2.2 percent), etc. The lowest growth rate is in Nagaland (– 0.6 percent).

5.3 VITAL STATISTICS

To understand the population dynamics, it is important to study the birth (fertility) rate, death (mortality) rate and migration pattern along with their methods of measurement in a scientific way. The basic demographic equation is:

$$P_{t+1} - P_t = (\text{Births} - \text{Deaths}) + (\text{In} - \text{Out})$$

i.e. Population Change = Natural Growth of Population + Net Migration.

Vital Statistics deals with the two demographic fundamentals i.e. births (fertility) and deaths (mortality). It is also concerned with migration, marriage, longevity, etc. In this section, we shall discuss four types of fertility and four types of mortality rates.

5.3.1 Fertility Rates

The four important types of fertility measures are: (i) crude birth rate (CBR), (ii) general fertility rate (GFR), (iii) age specific fertility rate (ASFR) and (iv) total fertility rate (TFR).

Crude Birth Rate (CBR): The Crude Birth Rate (CBR) in an area, in any year (or time) is defined as the number of live births in that area in that year or time per thousand population. Thus, CBR = $\frac{B}{P} \times 1000$, where B is the total number of live births registered in a defined geographical area (or a social group) within a time frame (usually a complete year) and P is the mid-year population in the defined space and time. Trend in CBR in India shows that the CBR has come down from 40 during 1941-51 to about 26 in 1991-2001 and about 22 in 2011. The main reasons for the decreasing trend in CBR in India are: (i) the promotion of family planning programmes by government, (ii) spread of literacy and increase in education level of people, (iii) increasing awareness among the people of the benefits of adopting a small family norm, (iv) more participation of women in paid work and (v) increasing opportunity cost of child bearing and rearing for women. The CBR in India compares to about 14 in U.S., 12 in China and 9 in Japan. Thus, compared to developed countries, CBR in India is high. The major factors responsible for this are: (i) high infant mortality rate; (ii) strong preference for

a son; (iii) high economic value of children in traditional agrarian society; (iv) lack of knowledge about family planning and contraception; (v) low age at marriage and polygamy; (vi) low education of parents; and (vii) religious norms and practices.

Merits and Demerits of CBR: CBR is easy to understand and estimate. CBR can reasonably compare well the birth rates at two not very distant points of time of the same region since the age and sex distribution of population generally do not change in short term. CBR takes into consideration the total population almost half of which are males who are not directly involved in child birth. Moreover, only a restricted segment of women population (15-49 year) has the ability of child bearing.

General Fertility Rate (GFR): GFR is the number of births per year per thousand women of childbearing age (aged 15-49). It is computed as: GFR = $\frac{B}{\sum_{x=15}^{x=49} {}^{f}P_x} \times 1000$, where B refers to the total number of live births (as in CBR) and, $\sum_{x=15}^{x=49} {}^{f}P_x$ refers to the mid-year population of women in the age group 15-49 which are generally considered as the two limits of the 'child bearing age' of women.

Merits and Demerits of GFR: GFR overcomes the crude approach adopted in case of CBR. It is more scientific since it considers total births with reference to women population of child bearing age only. The age of puberty is not the same for girls coming from cold, temperate and hot climatic regions. Therefore, before applying the formula, a judicious decision regarding the two limits of child bearing age of women is required to be decided. Moreover, fertility varies with age i.e. within the two limits of fertility span. Therefore, it is inappropriate to consider all women segment of age group 15-49 together.

Age Specific Fertility Rate (ASFR): The ASFR for any age group is the ratio of number of live births per woman to the mid-year female population of the particular age group. The ASFR is thus given by: ASFR = $\frac{B_x}{{}^{f}P_x} \times 1000$, where B_x is the number of live births given by women in the age group of x to x+1 and ${}^{f}P_x$ is the average size of the women population in the age group of x to x+1. ASFR is usually calculated for every single year of 15 to 49 age or for some broad age groups like 15-19, 20-24, …..The above formula shows ASFR of women of age x. We can compute ASFR between any two age limits by making necessary modifications in numerator and denominator.

Merits and Demerits**:** Since it is age-specific, the fertility rate of women belonging to different age groups within 15-49 is taken into account. Generally ASFR remains small in early ages of puberty, it rapidly increases till around 30 and then declines until it comes down to almost zero around the age of 49 years. Not all women belonging to child bearing age are exposed to the chance of child bearing but only those who are married in that age group and being able to give birth. ASFR ignores both the marital status as well as the infertility element of some women in the child bearing age-group.

Total Fertility Rate (TFR): TFR provides a general index of fertility in a population under two assumptions: (i) every woman who enters the child

bearing age gives live births as per the ASFR for each age and (ii) no woman will die before she leaves the reproductive period. TFR is calculated by the formula: TFR = $\sum_{x=15}^{x=49} \frac{B_x}{{}_{49}P_{15}}$, which is simply the summation of ASFRs. The expression tells us that if 1000 women enter the child bearing age together, then TFR is the number of children to be born live to these women before the time of their exit from their reproductive period. If the multiplier 1000 is dropped, TFR will simply mean the average number of babies to be born to mothers at the end of their reproductive phase. When ASFRs are calculated for age groups 15-19, 20-24,.... 45-49, TFR is computed as: TFR = $\frac{5\ x\ \sum_{15}^{49} ASFR}{1000}$.

Merits and Demerits: TFR is the most frequently used index of birth rate. It takes into account the entire fertility span of women population and at the same time fertility of women belonging to particular age groups. TFR is less precise because of the fact that not every woman shall start her reproductive period at age 15 and some would not bear children.

TFR was estimated to be 5.2 for India in 1971 but is estimated to have come down to 3.6 in 1991 and further to 3.0 in 2002. According to UNDP Human Development Report 2001, TFR for the world population has dropped from 4.5 in 1975 to 2.8 in 1995-2000. In India, TFR has declined from 3.0 in 2002 to 2.4 in 2012. According to latest data available, TFR stands at 2.3 in 2013. Such a high value for TFR means that at the current prevalent age-specific fertility rates, a woman in India would add, on an average, 2.4 children to the population before she completes her reproductive life. Although TFR has been brought down to the level of 2.3 in 2013 over a period of more than 40 years, it is still high enough and 0.2 higher than Replacement Level Fertility (i.e. TFR = 2.1) which is a matter of great concern.

5.3.2 Mortality Rates

We shall discuss four mortality rates viz. CDR, ASDR, IMR and expectation of life at birth. The Crude Death Rate (CDR) or the Crude Mortality Rate (CMR) in any year in an area is defined as the number of deaths in the year per thousand population i.e. CDR = $\frac{D}{P} \times 1000$, where D refers to the total number of deaths from all causes registered in a defined geographical area (or a social group) within a time frame (usually a calendar year) and P is the mid-year population in the defined space and time.

Merits and Demerits: This is the most frequently used and most easily calculated and understood index of mortality. It gives a general picture of mortality situation prevailing in the entire population under consideration. However, it is based on the assumption that the risk of dying for every individual (P) is the same. It is not desirable to compare death rates of two countries, two regions or two communities on the basis of CDR because of this limitation. CDR in India has declined from a high rate of 49 per annum per thousand during 1911-21 to 9 in 2001, 8 in 2006 and further to 7 in 2012.

Age-Specific Death Rate (ASDR): Death occurs at all ages and the risk of mortality varies with age. It is therefore necessary to analyse death rates for populations at different ages (or age groups) by calculating age-specific death rates (ASDR). This is calculated as: ASDR = $\frac{nDx}{nPx} \times 1000$ where ${}_nD_x$ is the number of deaths recorded for persons in the ages x to x+n–1 and ${}_nP_x$ is the mid-year population size for this age group. When n=1, the ASDR becomes annual age specific death rate and is given by: AASDR = $\frac{D_x}{P_x} \times 1000$.

Merits and Demerits: ASDR makes comparison between two population groups more meaningful. It reveals whether persons in some specific age-group have the same probability of dying as in the total population. However, estimation of ASDR is difficult because unless we know accurately the age of the deceased, errors are bound to creep-in.

Infant Mortality Rate: Children face a greater risk of mortality (i.e. deaths) than adults, especially during the first year of their life. The health status of infants (i.e. those who are less than 12 months old) is an important indicator of the level of healthcare and medical facilities available in an area. The Infant Mortality Rate (IMR) is defined as the number of infants dying 'under one year of age' in a year in an area per thousand live births.

That is: IMR = $\frac{{}_1D_0}{{}_1B_0} \times 1000$ where ${}_1D_0$ is the number of infant deaths under age 1 year (< 1 year) and ${}_1B_0$ is the number of live births in the same year and area. IMR for India was about 129 in 1971. It declined to 57 in 2006 and further to 42 in 2012. It varies widely across states. In 2012, at the lower end are Kerala (12), Manipur (10) and Goa (10) and at the upper end are Madhya Pradesh (56), Assam (55), Odisha (53) and Uttar Pradesh (53).

Expectation of Life at Birth: It is the average number of years a new-born child is expected to live under current mortality conditions. Expectation of life can be estimated at any age. For instance, expectation of life at age five is the average number of years a child aged 5 today is expected to live. Expectation of life at birth for India has increased from 41 years in the period 1951-61 to 56 years in 1981-85 and further to 61 years in 1992-96 and to 66 years in 2006-10. It varied (in 2006-10) from the highest in Kerala (74) to the lowest (62) in Assam among the major states of India.

Check Your Progress 1 [answer within 50-100 words within the space given]

1) How is 'density of population measured'? What is its current density for India and how does it compare with those of other countries?

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2) How is the DoP distributed across states in India?

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3) How is CBR defined? What has been its trend in India? How does the CBR in India compare with that in countries?

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4) How is GFR superior to CBR? In spite of this, what is GFR's limitation?

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5) How is TFR estimated? How is it superior to all other fertility rates? What is the significance of the term 'replacement level fertility'?

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6) How is IMR defined? What is its significance?

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5.4 DEMOGRAPHIC TRANSITION

Demographic transition is a process by which countries transit from a situation of high birth and death rates to one of low rates in both. Less Developed countries (LDCs) typically have high birth and death rates: as with development slowly picking-up, death rates tend to fall earlier than birth rates, resulting in rapid population increase. Advanced countries tend to have

low birth and death rates, and a low or even negative rate of natural increase. Theory of demographic transition is based on the actual demographic experience of Western Countries. C. P. Blacker (1945) identified five distinct phases of demographic transition as follows.

1) High Stationary stage, characterised by high birth rates and high death rates.

2) Early Expanding Stage characterised by falling birth rates with a time lag, for decreasing mortality.

3) Late Expanding Stage characterised by falling birth rates but rapidly decreasing mortality.

4) Low stationary stage of population characterised by low birth rates balanced by equally low mortality.

5) Declining stage of population with low mortality and deaths exceeding births.

The figures for CBR and CDR in India for the period 1901-2011 is given in Table 5.1. The data indicates that India has been experiencing a fast decline in death rate since 1931. On the other hand, the birth rate has remained very high during the period from 1901 to 1951. This, therefore, was the 'early expanding stage' of population i.e. the second stage of demographic transition in India. From 1981, both the birth rate and the death rate has been declining fast indicating that India is now in 'late expanding stage' of demographic transition. In 2010-15, at the World level, 83 countries were experiencing below replacement level fertility i.e. negative natural growth rate of population. Thus, in spite of including in-migration, countries like Japan (–0.1), Spain (–0.2), Greece (–0.4), Romania (–0.8), Lithuania (–1.6), etc. have registered negative average annual growth rate of population indicating their present stage of demographic transition to be in the 5th stage. Some of the major demographic features in which economies would experience significant shift during the course of demographic transition are: (i) urbanisation; (ii) changing sex-ratio; (iii) structure of population pyramid; and (iv) dependency ratio.

Table 5.1: CBR and CDR in India – 1901 to 2011

Year	CBR	CDR
1901	46	44
1911	49	43
1921	48	47
1931	46	36
1941	45	31
1951	40	27
1961	41	23
1971	41	19

1981	37	15
1991	33	11
2001	25	9
2011	22	7

Source: Health and Family Welfare Report, 2013.

5.4.1 Urbanisation

Urbanisation is a process by which societies become more urban. It refers to a population shift from rural to urban areas. Thus, it is a case in which the rate of growth of urban population is more than the rate of growth of rural population. Two simple measures to gauge the degree of urbanisation are the following.

i) Percentage of Population in Urban areas (PU):

$$PU = \frac{\text{Size of Urban Population}}{\text{Size of Total Population}} \times 100$$

Higher the value of PU, higher is the degree of urbanisation.

ii) Ratio of Urban-Rural Population (UR):

$$UR = \frac{\text{Size of Urban Population}}{\text{Size of Rural Population}} \times 100$$

Higher the value of the ratio UR, higher is the degree of urbanisation.

The share of urban population in India (PU) has increased from about 11 percent in 1901 to about 17 percent in 1951 and further to 31 percent in 2011. There has been a gradual increase in the trend of urbanisation in India over the period. The Urban-Rural ratio (UR), on the other hand, has increased from 21 percent in 1951 to 45 percent in 2011. The rate of urbanisation has, however, been uneven across the states. For instance, the NCT of Delhi is the most urbanised with as much as 98 percent of its population living in urban areas. Goa is the most urbanised among the states with 62 percent of its population living in urban areas. The least urbanised states are Himachal Pradesh (10 percent) and Bihar (11 percent). Census classification treats areas with population above a certain level as Urban Areas. Thus, every census has a potential for reclassification certain areas into 'urban', though people in those areas continue to live in the same place.

Still urbanisation is considered beneficial because of better opportunity for earning higher incomes, better infrastructure and better awareness and response of people to social issues in general. Urbanisation therefore contributes to modernisation and social change, the latter through lower birth rate, lower death rate, lower IMR and lower fertility rates. These are mainly due to higher levels of education and healthcare facilities which are much better in urban areas than in rural areas.

The pattern of urbanisation in India is characterised by continuous concentration of population in large cities without adequate expansion of resource base and amenities. As a result, it has generated problems in the

areas of housing, transport, water supply and sanitation, water, air and noise pollution, social infrastructure (schools, hospitals etc), urban poverty and unemployment and growth of slum areas.

5.4.2 Sex Ratio

The gender composition of the population is measured by the sex ratio, defined as the number of females per thousand males. It has been observed that females outnumber males in developed countries. India's sex ratio, however, shows that the society is masculine in respect of this demographic feature. The sex ratio in India has declined from 972 in 1901 to 933 in 2001 which slightly increased to 943 in 2011. It varies widely across states: from 1084 in Kerala to 879 in Haryana and among Union Territories, from 1037 in Pondicherry to 618 in Daman & Diu (as per 2011 census). The declining trend in the sex ratio in India has been due to a number of factors like: high Maternal Mortality Rate (MMR), high IMR among the girls, high Child Mortality rate among the girls, strong son preference prevalent among the parents, female illiteracy and low level of education, illegal female infanticide and female foeticide, etc. Efforts to promote gender equality through emphasis on education of girls, empowerment of women, legislation to prevent domestic violence against women and ban on the use of pre-delivery sex determining technology have been scaled up to tackle these issues in the recent years in India. The latest initiative launched viz. 'Beti Bachhao, Beti Padao' is worth noting in this context.

5.4.3 Population Pyramid

Population Pyramid or age-sex pyramids are an elegant and useful way of graphically presenting the age-sex distribution of population. A pyramid comprises of two ordinary histograms placed on their sides. The rules of drawing pyramids are generally the same as those for plotting histograms, but there are certain conventions and special features. These are:

first, pyramids are always drawn showing the male population on the left hand side and the female population on the right hand side. The young are always at the bottom and the old at the top. It is conventional to use single year or 5-year age groups, though other groupings are also possible.

second, the last open ended age-group is normally omitted, but in some cases it is shown.

third, the vertical scale shows the age groups and the horizontal scale shows the percentage of population or absolute number of population of each group. In case of percentages, the percentages are to be calculated using the total population of both sexes combined as the base.

fourth, the horizontal scale must be uniform for both the sides of the pyramid. The vertical scale must also be uniform for both the sides while drawing the histograms.

The population pyramids of India for 2001, 2016 and 2026 (projected) are shown in Fig. 5.1. They reveal that the shape of the population pyramid has been changing gradually. In 2001, it had a much broader base than that in

2016 and 2026 implying larger proportion of young children in the population in 2001 compared to 2016 and 2026. The proportion of elderly has also grown over the period as revealed by the slightly bigger size of histograms at the top of population pyramid-2026 (Projected). The latter is because of population ageing. The pyramids of developed countries are almost rectangular in shape indicating lower proportion of children and a higher proportion of the adults and the elderly in the population. The larger proportion of working age population in India particularly belonging to age groups 20-24 to 55-59 in pyramids 2016 and 2026 point out towards the country's entering the phase of demographic dividend.

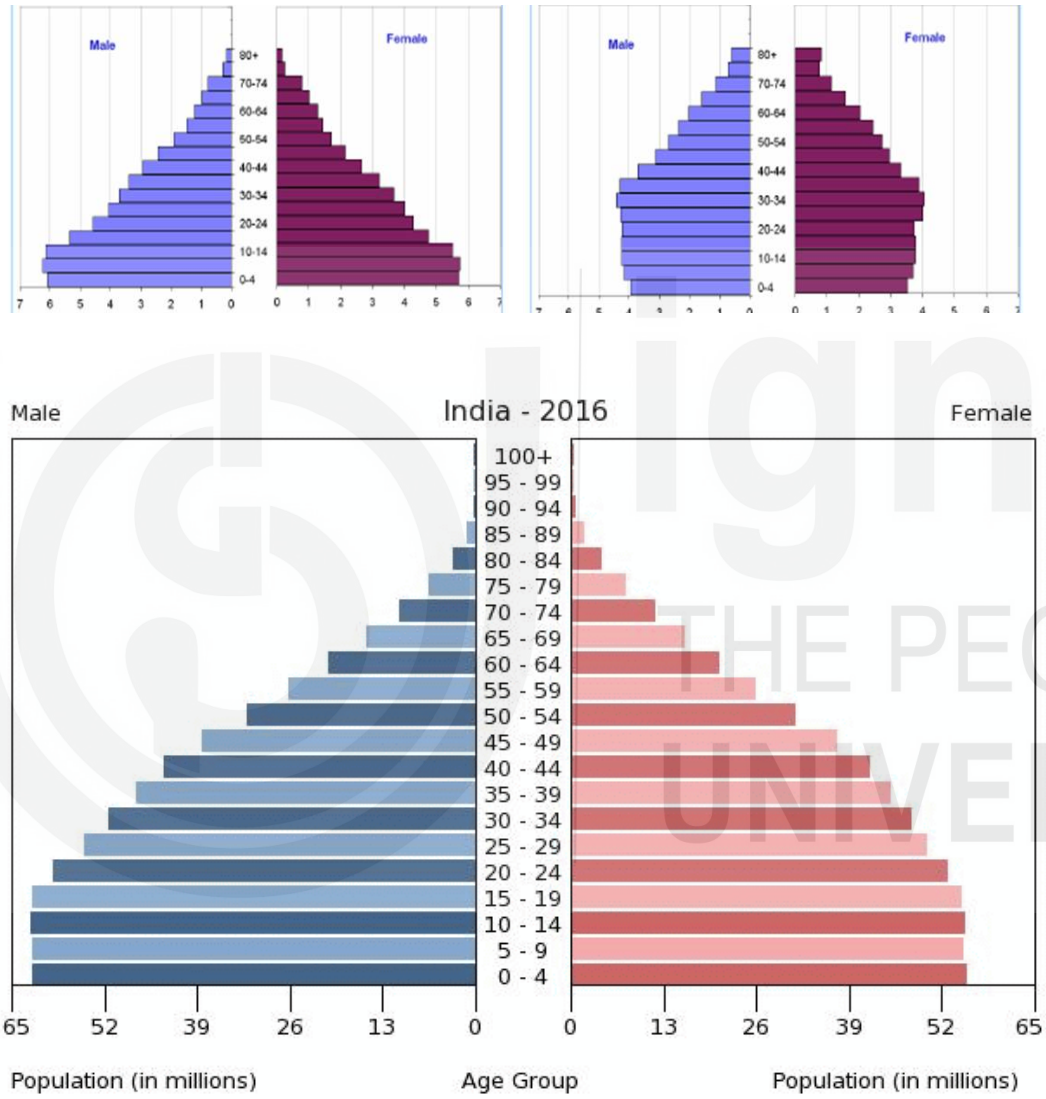

Fig. 5.1: Population Pyramid of India 2001, 2016 & 2026

Source: Internet, http://www.populationpyramid.net/India/2015.

5.4.2 Dependency Ratio

It is customary to classify age data in five-year age groups, such as 0-4, 5-9, 10-14, 15-19, 20-24 years and so on. Such presentation of population age-group-wise is useful for a wide variety of analytical purposes. Usually, population data is clubbed for certain age-groups to get an idea on the potential labour force, economically active population, etc. as follows.

Table 5.2: Classification of Population by Age-Group

Age Group	Classification
0-14	Children
15-24	Young
25-59	Economically productive
60-59	Elderly
80+	Aged

The age-group wise distribution of population facilitates estimation of the size of population among children, young, economically productive, elderly and aged segments of the population by country and region. Different indicators of development can then be estimated among which 'dependency ratio' is one important indicator of development. The UNDP HDR 2016 has defined the 'dependency ratio' separately for young age population and old age population as follows.

(A) Young-age dependency ratio = $\frac{\text{Young Age}(0-14)\text{population}}{\text{Population ages }(15-64)} \times 100$

(B) Old-age dependency ratio = $\frac{\text{Old Age}(65 \text{ and above})\text{population}}{\text{Population ages }(15-64)} \times 100$

As per the above, the values of (A) and (B) for India in 2015 were 44 and 9 respectively. The corresponding ratios for a developed country like USA are 29 and 22. In less developed countries, dependency ratio is generally high. In India, the 'dependency ratio' is measured by taking both the 0-14 and 60+ population as follows.

(C) Dependency Ratio = $\frac{\text{Population of Children }(0-14)+\text{ population of Elderly }(60+)}{\text{Population ages }(15-59)}$

Children and elders i.e. those in the age groups of 0–14 and 60+ are expected to be taken care of by the working age population 15-59. The Dependency ratio at (C) above indicates the responsibility of dependents per member of the working age group population. A favourable dependency ratio tends to boost savings. This is possible only if the working age population is productively employed. The Dependency Ratio for India has come down from 0.92 to 0.56 between 1951 and 2001.

5.5 POPULATION AGEING

One of the prominent global demographic events of 21st century is population ageing. Population ageing is a course of demographic change in which the share of aged people increases in total population with a simultaneous decrease in the share of younger ages. The main factors behind the incidence of population ageing are decline in mortality rate followed by decrease in fertility rate along with increase in life expectancy rate. In 1950, the global share of 60+ people was 200 million or 8 percent of the total population. This percentage has increased to 11 in 2011 and is projected to double to 22 in 2050. More specifically, in 2045, it is projected that the number of aged persons will exceed the number of children in the world as a whole. In India

also the percentage of 60+ people is increasing steadily. For instance, the percentage of aged population to total population was 5.5 percent in 1951 but has increased to about 7.5 percent in 2001 and further to 8.6 percent in 2011. It is projected that the number of elderly population would be about 17 percent of the total population in India by 2051.

5.5.1 Demographic Dividend

The recent rapid fertility decline in some parts of the world has opened up a new window of opportunity for achieving faster growth rate in economic and human development. With steady decline in fertility, there will be fewer and fewer children in the age group 0-14. The past high fertility ensures the growth of the present workforce and the present low fertility implies smaller size of dependent child population in future. This feature of population trend is called 'demographic window or dividend'. More specifically, the dividends that accrue are: (i) higher labour supply for larger economic activities; (ii) fewer children with better health for women's health, education and opportunity to join work force (iii) larger size of working age adults with larger earnings and larger savings i.e. improved capital supply for economic activities; (iv) less investment will be required on children at both micro and macro level as less number of children will be there to look after in the country; (v) better human development due to larger earnings, more investment in higher education and better health for women and children (China improved its ranking in HDI by resorting to one-child family planning norm); and (vi) because of fertility decline and increase in the population of working age people, the dependency ratio will decline. Low dependency ratio is helpful in economic development.

Typically, this window of opportunity, or the availability of the demographic dividend, lasts for 30 to 40 years, depending upon the country. India reached the point of demographic window in 2011. The proportion of those aged less than 15 years is still above 30 percent and the proportion of those aged 65 and above is below 15 percent. The share of the working age population is rising (almost 60.3 percent in 2011) in India. On the other hand, Work Participation Rate (WPR) is low at 39.8 percent in 2011. Urgent steps are, therefore, required to: (i) generate employment opportunities on a scale sufficient to eradicate unemployment and underemployment; and (ii) prioritise skill development among the youths to utilise new avenues of self employment; and (iii) extend the reach of the modern educational and training system so as to enable larger sections of the population to benefit and thereby participate in the development process. Only then can India reap the benefits of 'demographic dividend'.

5.5.2 National Population Policy

The National Population Policy, 2000 (NPP 2000) reiterates the commitment of the government towards voluntary approach in administering family planning services. It provides a policy framework to meet the reproductive and child health needs of the people to achieve the net replacement levels in terms of TFR. The immediate objective of the NPP 2000 is to address the unmet needs for contraception, healthcare infrastructure and to provide

integrated service delivery for basic reproductive and child health care. The medium term objective is to bring the TFR to replacement level by 2010 through the implementation of inter-sector operational strategies. The long term objective of NPP 2000 is to achieve a stable population by 2045 in conformity with requirements of the country to ensure sustainable economic development. The government has already taken several steps and initiatives under the immediate objectives of NPP 2000. As a result, TFR has declined from 3.0 in 2002 to 2.3 in 2013. As per latest data available, 24 states/UTs have achieved replacement level of fertility of TFR =2.1 by 2013.

Check Your Progress 2 [answer within the space given in 50-100 words]

1) What is urbanisation? How is it measured? What has been the trend in India's urbanisation process as per these indicators?

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2) What does the population pyramid depict? How does it differ between the developing and the developed countries?

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3) When does a country signifies to have entered a phase of 'demographic dividend'? What are its implications for economic planning?

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5.6 LET US SUM UP

Population assessment for its demographic features is important for economic planning. Different sections of population like young age children, women in the reproductive age group, labour force in the economically active section and the old aged persons – require different kinds of support services from the government in general and the various social infrastructure in particular. Assessment of changing demographic profile is important for economic planning from this point of view. In this context, the unit has introduced several concepts like growth rate in population, fertility and mortality rates, demographic transition, population ageing, etc. India has entered its phase of 'demographic dividend' but several facilities and services to make use of this window of opportunity is as of now still lacking. These include adequate employment opportunities to support its expanding labour force and skill development programs to increase their marketability.

5.7 SOME USEFUL BOOKS

1) Cassen, R.H. (1958). *India : Population, Economy, Society*, Chapter 4, The Macmillan Co. of India Ltd., Delhi.

2) Colin Newell (1994). *Methods and Models in Demography*, John Willey and Sons, England.

3) Human Development Report, (2016). UNDP, New York, NY 10015.

5.8 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) It is measured as the ratio of 'population' to 'square km of land'. 445 for 2016. It is 147 for China, 35 for US and 3 for Australia.

2) It is high in states like Bihar, W. B. and U. P. (with a DoP ranging from 829 to 1106) and low in states like H. P., Sikkim, Mizoram and Arunachal Pradesh (ranging from 17 to 123).

3) It is defined as the ratio of 'number of live births' in an area per '1000 mid-year population'. It has come down from 40 in 1951 to 22 in 2011. It is: 14 in US, 12 in China and 9 in Japan.

4) Unlike CBR, in the denominator it takes into account only the women in the child bearing population. But it does not also discriminate between women coming from different climatic regions with differing fertility potential.

5) TFR is estimated by: TFR = $\frac{5\times \sum_{15}^{49} \text{ASFR}}{1000}$. The multiplier 5 is applicable when the age groups considered are at 5-yearly intervals. Its takes into account the entire fertility span in each age group. Replacement level fertility means that the 'number of children in the population are sufficient to replace the parents' ensuring stability in population. Generally, TFR = 2.1 is considered as replacement level fertility.

6) It is defined as: IMR = $\frac{1D_0}{1B_0} \times 1000$. It indicates the level of healthcare and medical facilities available in an area.

Check Your Progress 2

1) It refers to the population shift from rural to urban areas. It is measured by PU i.e. percentage of population in urban areas and UR i.e. ratio of urban to rural population. In terms of PU, it has doubled from 15 percent to 31 percent over 1951-2011. As per UR, it has increased from 21 to 45 percent over 1951-2011.

2) They depict the distribution of population in percentages by age groups with a broader base indicating more children which is usually the case in developing countries. In developed countries it is rectangular in shape indicating that old age population is higher.

3) This is indicated by the portion of the population pyramid for working age group (20-59) to be wider. It calls for economic planning to increase the jobs available and also to match the skill needs of the market to avoid the consequences of mismatch in it.

UNIT 6 EDUCATION SECTOR*

Structure

6.0 OBJECTIVES

After reading this unit, you will be able to:

- distinguish between the terms 'human capital' and 'human development';
- describe the growth in the Education Sector (ES) in India;
- analyse the adequacy of expansion in the ES in terms of its quantitative and qualitative dimensions;
- critique the performance of ES with the educational attainment in terms of its gender and quality dimensions;
- discuss the trend in Public Expenditure on ES in India with a comparative profile of the same in other countries; and
- explain the role of 'state' versus 'market' in financing education with an outline of alternative sources of financing the ES.

6.1 INTRODUCTION

Education contributes to building up what has come to be known as 'human capital'. Human capital is distinct from 'physical capital' but is complementary to the latter. Physical capital facilitates economic growth which, in turn, creates conditions which demand better education facilities.

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This results in human capital formation in the economy. Human capital formation, in turn, spurs economic growth. Thus, these social aspects of development invariably attract the attention of both policy-planners and political leaders albeit with differing motivations for each. In this context, the present unit discusses the issues relating to one of the two specific sub-sectors of social sector development viz. education sector in the Indian economy (the other one being health).

6.2 HUMAN CAPITAL AND HUMAN DEVELOPMENT: DISTINCTION

Human capital can be defined as the body of knowledge possessed by the population and the capacity of the population to use the knowledge effectively. Human capital **therefore** includes all the knowledge, talents, skills, abilities, experience, intelligence, training, judgement, and wisdom possessed individually and collectively, the cumulative total of which represents a form of wealth available to nations and organisations to accomplish their goals. Till the late 1950s, economists and other social scientists did not pay much attention to the role of investment in human capital as an important determinant of economic development. The birth of this idea can be traced to the presidential address of Prof. Theodore W. Schultz to the American Economic Association in December, 1960. The human capital theory propounded by Schultz (1961) laid a strong foundation for treating education as an investment in human beings and for treating it as an important source of economic growth. According to the human capital theory, education transforms raw human beings into productive 'human capital' by imparting knowledge and inculcating skills required by both the traditional sector and the modern sector of the economy. It thus makes individuals more productive members of the society, not only in the market place but also in the households and also in the whole society. Available evidence in almost all the countries, including India, establish significant positive association between proportion of people below the poverty line and the proportion of illiterate persons.

Human development, on the other hand, is defined as the process of enlarging people's freedoms and opportunities thereby improving their overall well-being. Human development is about the real freedom of ordinary people with which they have to decide who they want to be, what they want to do and how they should live. The concept of human development was developed by the economist Mahbub ul Haq and is based on the idea that education and health are integral part of human well-being because only when people have the required ability and a healthy body, they will be able to lead a good and meaningful life. Human development is thus a broader concept which considers human beings as ends in themselves. Human development occurs when majority of people in the economy are educated and healthy.

6.3 EDUCATION SECTOR IN INDIA

The role of education in facilitating social and economic progress is well recognised. It opens up opportunities leading to enhancement of both

individual and group potentials. Education, in its broadest sense, is the most crucial input for empowering people with skills and knowledge, giving them access to productive employment opportunities. Improvements in education are not only expected to enhance efficiency but also augment the overall quality of life. The current growth strategy being pursued in India places the highest priority on education as a central instrument for achieving rapid and inclusive growth. It encompasses programmes designed to strengthen the education sector covering all segments of the education pyramid viz. (i) elementary education, (ii) secondary education, and (iii) higher education.

6.3.1 Elementary Education

Elementary Education i.e. class I-VIII consisting of primary (I-V) and upper primary (VI-VIII) levels, is the foundation of the educational system pyramid and has been emphasised in all our programmes of development. The goal of universalisation of elementary education (UEE) got a big push with the adoption of the *Sarva Shiksha Abhiyan* (SSA) programme in 1999. The scheme has been guided by five principles viz. (i) universal access, (ii) universal enrolment, (iii) universal retention, (iv) universal achievement and (v) equity. Besides these, the SSA recognises it as imperative to ensure good quality elementary education to 'all children in the age group of 6 to 14 years'. To ensure this, the 86th Constitutional Amendment (2002) included a new Article (21-A) providing for 'free and compulsory education to all children of 6 to 14 years of age as a Fundamental Right'. The growth of 'primary and upper primary' schools in India has been 6 times (from 0.2 million to 1.3 million) over the period 1951-2015. The enrolment in these schools has increased 9 times (from 22 million in 1951 to 198 million in 2015).

6.3.2 Secondary Education

Secondary education serves as a bridge between elementary and higher education. Like the elementary education, secondary education also has two parts viz. secondary (covering classes 9th and 10th) and senior secondary (classes 11th and 12th). Since universalisation of elementary education has become an accepted goal, it has become essential to push this vision forward towards universalisation of secondary education, something which has already been achieved in a large number of developed countries and the newly industrialised East Asian economies. Till now, the thrust of secondary education has been on improving access and reducing disparities by emphasising on the Common School System in which it is mandatory for schools in a particular area to take students from low-income families in the neighbourhood. The thrust has also been on revision of curricula with an emphasis on vocationalisation of education. In essence, vocationalisation means focusing on providing employment-oriented courses. Other areas of thrust are: (i) expansion and diversification of the open learning system, (ii) reorganisation of teacher training, etc. These objectives till now have, however, been achieved only partly. The number of institutions for secondary education has grown from 0.1 million in 2001 to 0.2 million in 2015. The

enrolment in these institutions has grown from 29 million in 2001 to 62 million in 2015. Thus, both the number of institutions and their enrolment have grown by 2 times over the period 2001-15.

6.3.3 Higher Education

The investment made in higher education in the 1950s and 1960s has given India a strong knowledge base in many fields contributing significantly to economic development, social progress, and strengthening political democracy in Independent India. The number of colleges has increased from about 0.1 million in 1951 to 3.8 million in 2015 i.e. a 38 times increase. Likewise, the number of universities has increased from 27 in 1951 to 760 in 2015 i.e. a 28 times increase. The combined enrolment in these 'colleges and universities' has increased from 0.4 million in 1951 to 34.2 million in 2015 i.e. by nearly 86 times. However, despite the expansion that has occurred, the system is under stress to supply the required numbers of skilled human power, equipped with the required knowledge and technical skills helpful in catering to the demands of the economy. The accelerated growth of the economy has already created shortages of high-quality technical manpower. Moreover, unlike the developed countries where the young working age population is fast shrinking with higher dependency ratio, India is in a stage of demographic transition with about 70 percent of the population below the age of 35 years. But this advantage can be realised to economic advantage only if opportunities for youth are expanded on a scale and diversity spread over different fields of basic sciences, engineering and technology, healthcare, architecture, management, etc. This is possible only if rapid expansion is initiated along with long overdue reforms in the higher, technical and professional educational sectors.

Check Your Progress 1 [answer within the space given in about 50-100 words]

1) How is Human Capital defined? To which economist, the credit of getting the importance of human capital recognized attributed?

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2) How is Human Development different from Human Capital?

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3) What are the five principles by which the programme SSA is governed?

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4) What has been the magnitude of expansion in respect of 'elementary education' in India?

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5) What has been an important feature of the Common School System in the 'secondary education' system in the country?

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6) What has been the extent of expansion in respect of 'higher education' in India?

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7) Would you say that the expansion in the education sector has kept pace with the requirements of the economy? Why?

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6.4 EDUCATIONAL ATTAINMENT/OUTCOMES

Education is the basic requirement which has now been made a fundamental right through the enactment of RTE (i.e. right of children to free and compulsory education act or the Right To Education – RTE). While higher education is important, elementary education serves as the base over which the super-structure of further education can be built up. Enrolment in schools

have improved substantially in recent years but the performance of students in basic aspects of reading, writing and arithmetical operations have remained low. Further, substantial gender-bias in both access to and completion of education has remained as a major cause of concern. Owing to these, wide regional variation exists even within the sub-standard performance of the basic education system. Factors like: (i) poverty, (ii) presence of a wide child-labour market, (iii) absence of assured employment after schooling and (iv) infrastructural problems are identified as responsible for the ills plaguing the elementary education system in India. Providing incentives for attending schools, making the schooling process attractive to the children, streamlining the middle and high school curriculum to vocational and job-oriented courses and providing better infrastructure in schools are some of the policies needing to be focused upon to improve the scenario.

Literacy rate is regarded as one of the basic indicators to reveal the disparity in educational attainment. The urban-rural gap in this respect has fallen substantially (from 34 percent in 1961 to 16 percent in 2011). Despite this, the progress in rural India has not been enough to catch up with the urban literacy levels (urban literacy rate is 85 percent as opposed to 69 percent for rural India in 2011). State-wise attainment shows that while Kerala (94 percent) [along with Mizoram, Lakshadweep and Tripura] has ranked at the top in overall literacy, Bihar has remained at the bottom (61.8 percent) in its overall literacy. The rural-urban disparity is the lowest in Lakshadweep and Kerala, both of which are among the high performing states. Disparities in attainment have also remained on many other fronts, most important of which are in terms of gender and quality.

6.4.1 Gender

There are two indicators which reveal gender-based performance in education. These are: (i) the gross enrolment ratio (GER) and (ii) the gender parity index. Used in place of 'net enrolment ratio' when data on enrolment by exact years of age is not available, the GER is used to reveal the general level of participation in education. The GER is defined by level of education. For instance, for primary education, the GER is defined as percentage of actual enrolment to total eligible official primary school age population in a year. A ratio of GER ≥ 1 (i.e. 100 percent) indicates that in principle a state or country is able to accommodate all its school age population. It, however, does not indicate the actual proportion of eligible population enrolled. In other words, the achievement of GER of ≥ 1 is thus a necessary but not sufficient condition of actual achievement. A typical situation where GER can exceed 1 is when 'over-aged' and 'repeaters' are included. This characteristic of GER makes it require a careful interpretation based on the data used. Computed separately for males and females first, the ratio of 'GER for females to males' is then defined as the 'gender parity index' (GPI). The GPI in India for the recent period of 2007-13 shows that for primary and secondary education it has crossed the level of 1. Besides this, in respect of dropout rate also, there has been a significant improvement in gender parity for three out of four levels of education viz. primary, secondary and senior secondary education (e.g. in 2013-14 it is 4.1 for girls and 4.5 for boys for

primary education, 17.8 for girls and 17.9 for boys for secondary education and 1.6 for girls and 1.5 for boys in senior secondary education). In relative terms, therefore, only in 'upper primary' level of education the dropout rate for girls is higher for girls (4.5) as compared to boys (3.1) [2013-14]. Considering that the dropout rate in 1960-61 was as high as 65 percent, there is a major improvement in this respect. One aspect on which the achievement of improving girls' enrolment could depend is the 'number of female teachers per 100 male teachers'. This figure was as low as around 20 (for each of the three school levels) in 1951. This has gradually risen to the level of 65-80 for different levels of education by 2011-12. Thus, while there is improvement in this respect, there is scope for increasing the number of female teachers at all levels of education both towards achieving greater gender parity as also to minimise dropout rates of female children from schools.

6.4.2 Quality

A nationwide survey of children's reading and arithmetic capabilities in rural India is conducted every year by the NGO Pratham. Given its scale and comprehensive coverage, its Annual Status of Education Report (ASER) is a path-breaking initiative, being the only Indian nationwide survey for assessing the learning achievement of children between classes I and VIII. There are four basic tests of increasing difficulty to gauge the arithmetic competence and the students are asked to perform each only after clearing the lower level. These are: (i) recognition of randomly chosen numbers from one to nine, (ii) recognition of randomly chosen numbers between 11 to 99, (iii) subtraction of two-digit numerical problems with borrowing and (iv) division of three-digit by one-digit numerical problems. The survey results in 2010 reveal that only 37 percent of the children in class III could recognise numbers up to 100. Furthermore, just 27 percent of the students could reach the next level i.e. subtraction. What is even more worrying is that the proportion of children reaching the highest test level has consistently declined since 2005, when the survey was first conducted. In 2005, at least 15 percent of the children in class III could perform all the tests, while in 2010 only 9 percent of the children could do so. Also, in 2010, 67 percent of the children in class VIII could reach the highest level, while the corresponding figure in 2005 was 70 percent. Clearly, pushing enrolment is not automatically translating into improved learning.

Quality of higher education has also been a major concern in India. To rectify this situation, some of the policy measures taken in this direction are: (i) redesigning academic programme to synchronise with the market demands, (ii) laying greater emphasis on interactive modes of learning, (iii) changes in the assessment procedure and examinations, (iv) introduction of the semester system, (v) teachers' assessment, (vi) grading of institutions, (vii) introduction of credit system to afford inter-institutional mobility, (viii) faculty development programmes, (ix) maintenance of national database of academic qualifications, etc. National Policy on Education in India has all thorough laid special emphasis on improving the quality of higher education in India by the establishment of accreditation agencies. Notwithstanding the fact that we have 13 regulatory bodies of higher education, the quality of

education is fairly low and content in the programmes less relevant to the 'needs of the individual and the society'. Out of 3,674 colleges assessed by NAAC, only 24.4 percent of colleges have been awarded the A grade. The educational system suffers from what has been called 'diploma disease' i.e. it does not aim at conveying knowledge and skills but is more concerned with certification and credentialing. As such, its contribution to the growth of human capital is minimal and is unable to meet the emerging demands for skilled professionals.

6.5 FINANCING OF EDUCATION

Financing, and in particular mode of financing higher education, is crucial for addressing all the major objectives envisaged for higher education viz. expansion, inclusion and excellence. Though public financing has remained the dominant source of financing higher education, fiscal constraints faced by both the centre and the states and the widening gap between stagnant revenue and the burgeoning cost have compelled the publicly funded universities to look for additional and alternative sources of funding. As a part of the new economic policy, policies have been framed to usher-in the private sector in the delivery of higher education to contribute in its expansion. Between the two extremes of public and private funding, of late, the government is exploring possibilities of partnerships with the private sector to realise the advantages of both the modes of funding, though we already have several variants of PPP working in the country. We have government schools, government aided schools and private schools. Similarly at higher education level we have government colleges, partially UGC funded colleges, etc..

6.5.1 Role of State Versus Market Funding

The role of market as a source of funding took off post-1990s with the suggesting of structural adjustment programmes by the WB & IMF to curtail the public expenditure in social sectors like education. The supporters of market considered the subsidies provided by the government as regressive as mainly the elite gets access to higher education and hence remain the major beneficiaries of subsidies. The funds are thus transferred from poor to the rich since the amount that could be spent on poor gets reduced. To rectify this, they argued that the public funding should be shifted from higher education to school level education. Another argument put forth by the market supporters is that the state funding of education would make educational institutions dependent and, therefore, deprives them of the much needed institutional autonomy for efficient functioning. To overcome this, it was suggested that the generation of private funding should be promoted. It was also argued that the cost recovery measures would improve the quality of education both by making the students more diligent and instilling a measure of accountability among the teachers. The private returns being higher than the social returns, beneficiaries were believed to be willing to pay for their education.

The argument of market proponents that the social rate of return to investment in education is less than the private rate of return was countered by the 'for state funding advocates' on the following grounds. First, the social

returns are lower only for higher education whereas for school education there is a consensus that it should be regarded as a public good. Further, when positive externalities are taken into account, the resulting social rate of return far exceeds the private rate of return. This makes the role of state crucial in funding education. Second, consumers are often ignorant of the benefits that they would receive by investing in education. Besides, they cannot take into account the positive spill-over effects of their education on the society (like improving family health, productivity, reduction in poverty rates, etc.). Since the government is considered wiser in making such decisions, state funding in the provision of education is required for ensuring equality of opportunity. Further, since not every household/individual has the resources required to invest in education, in the absence of state subsidies, only those who could afford to pay would enrol in schools and colleges. In other words, those who are meritorious but lack resources would be left out.

In order to meet the ends of equity, market proponents argued that the access to education loans could be improved. However, since the capital market suffers from its own imperfections, such measures would not suffice. Moreover, since the human capital is embodied in individuals, it cannot be offered as liquid collateral. What about inclusion? Will a child from poor family take education loans and at the end of college, begin with a debt burden? Will it be progressive? There is also a long gestation period for the repayment of such loans to commence due to the uncertainty of future income opportunities. Such factors would constrain both the availing of such loans by the individuals and also the institutions from advancing the loans. Thus, the presence of imperfect capital market becomes a major reason due to which the role of state to invest in education needs to continue. The other view point is that educational loans to poor people do not serve the objectives of inclusion and equity as these loans are available for selected courses/institutions only and hence the objective of inclusivity is far from net.

6.5.2 Public Expenditure on Education

If we consider the spill-over effects in the form of positive externalities, education at any level, not only at the elementary and secondary levels, merits to be treated as a ‘public good’. In its strict sense, education is considered as a ‘merit good’. By definition, a good like ‘education’ which is regarded by society or government as deserving public finance, is treated as a merit good. More generally, merit goods are treated as those goods (or services) which the government does not want people to under-consume merely because their consumption depends upon their ‘ability to pay’. To prevent such under-consumption, the government chooses either to subsidise such services or provide it totally free at its point of consumption. In view of the mixed characteristics of education i.e. of both public as well as merit good, education is also sometimes referred to as ‘public merit good’. Impinging on investment for providing the educational services, i.e., a huge establishment or fixed cost as well as a recurring operational cost, the characteristics that impinge on investment considerations of the government are: (i) consumer ignorance, (ii) technical economies of scale, (iii) externalities in production and consumption and (iv) inherent imperfections

in the market like absence of credit institutions. On the issue of public investment in education, it is customary to express the total allocation or expenditure as a percentage of GDP (Table 6.1). The trend in this respect for India shows that over the years 1961-81, public expenditure on education doubled from 1.5 percent to 3 percent. Thereafter, it increased marginally by just another 1 percent between 1981 and 2001 (to touch 4.1 percent in 2001). In the post-2000 years, the public expenditure on education has declined (e.g. 2005-06, 3.3%). Since 2005-06, it has ranged from 3.5 percent in 2007 to 4 percent in 2010. The stagnation of public expenditure in education at just around 4.1 percent of GDP (in 2014) is in stark contrast with the comparative profile with other countries (Nepal, 4.7 percent; Germany, 4.9 percent; USA, 5.2 percent; U.K., 5.7 percent and South Africa, 6.1 percent). As stated before, the decline in public expenditure on education in India is for reasons of fiscal constraints whereby for elementary and secondary level more resources are allocated but for higher education, there is a shift towards cost recovery.

Table 6.1: Public expenditure on education as percent of GDP

Year	Percent
1960-61	1.5
1970-71	2.1
1980-81	3.0
1990-91	3.8
2000-01	4.1
2010-11	4.1
2010-11	4.1

Source: MHRD, GoI.

6.5.3 Alternative Sources of Financing

With a view to reducing the burden of educational finance, many alternative methods have been tried. One way of achieving this objective is to reduce the subsidies given to institutions. This would entail the recovery of costs by taking recourse to methods of cost-sharing. Cost sharing is a method by which the burden of financing educational programmes are passed on to the beneficiaries viz. households, industries and the students themselves. Cost sharing is popularly effected mainly in respect of higher/professional education programmes. Some of the methods followed under this include: (i) increasing the fees; (ii) following discriminating fee structure; (iii) graduate tax; and (iv) student loans.

The method of 'increasing the fees' has many variants. Some of these are: (a) a uniform increase across graduate and post-graduate programmes; (ii) increasing the fee based on the cost of provisioning of courses; and (iii) giving autonomy to colleges and universities for deciding on the fees to be charged. In all these cases, students opting for similar courses are levied the same fee. In other words, this does not discriminate between those with

ability to pay and those who cannot afford to pay. The approach is thus violative of equity considerations. To deal with this, the method of discriminatory fee structure i.e. course fee linked to the income level of the family or the ability to pay is suggested. Those from the lower socio-economic strata are levied less burden and those from the upper income groups are made to pay more. The 'graduate tax' method levies a tax on the employers employing educated workforce. The case for the method is made on the ground that while the employers get the benefit of such educated persons, they themselves do not pay for their training. The method is disadvantageous in that it may motivate the employers to go for less educated workers thereby causing the problem of unemployment among the educated. However, since only educated workforce can undertake certain type of works which are knowledge intensive, the substitution effect is expected to be less. The method of 'student loans' targets the beneficiaries directly. While many committees constituted by the government have favoured this approach, it is also said to adversely impact equity considerations. For instance, the method may lead to the promotion of those courses which are having higher employment market neglecting the courses which may be important from a societal angle. Another problem with this method is the issue of insufficiently developed credit markets and the problem of recovery of loans which is dependent on uncertain future employment markets.

For elementary and secondary level of education, a commonly practised method is 'earmarking'. This refers to a levy of a special cess for the particular purpose. The programme of SSA generated a major part of its funds by this method. Many countries, both developed and developing, have successfully adopted this method. Another method which has successfully been implemented for school level is the 'direct benefit transfer' (DBT) method. A major problem of government schools is of accountability impinging on quality of education. The method of DBT is said to deal with this by transferring the power of selecting a school of their choice to the poor household/parent. It is a voucher system in which a parent can admit a child to the school which charges fees up to the amount of the voucher. Parents can choose any type of institution (private, aided or government) where the fee charged, if higher than the voucher amount, can be supplemented by the family. With the value of the voucher being set 'inverse to the family income' (i.e. poorer families getting higher valued vouchers), the method is argued to afford the potential of being an instrument of greater equity. One criticism of this method is that the method may not work in backward/rural areas as private schools may not be popular in such areas. However, data from NSSO for 2014-15 shows that the per month median fee charged by private unaided elementary schools in rural areas was Rs. 292 while in urban areas it was Rs. 542. In the light of this, it is argued that even a relatively low voucher value of Rs. 500 per month would represent significant share of total expense even in remote rural areas. Another concern about DBT is how to do away with the present 'grants-in-aid' system which is kept equivalent to meet the requirement of teachers' salary. The grants method, thus, gives priority to schools and not to pupils/students. Such a grant does not even take into account the number of students. It is far from trying to address the attitude of the teachers towards their accountability. With DBT, it is pointed out that

teachers would have to focus more on attracting, retaining and then giving quality education. Towards implementing DBT, the government is contemplating 'school consolidation' where tiny schools are merged with bigger schools nearby and redeploying teachers from over-enrolled schools to under-enrolled schools. Many countries (e.g. Colombia, Chile, Netherlands, New Zealand, US) have used the DBT method to good effect.

Check Your Progress 2 [answer within the space given in about 50-100 words]

1) What specific policies are needed to improve the sub-standard performance in education?

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2) How is GPI defined?

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3) In what way, the ratio of female enrolment in schools can be improved? To what extent, there is improvement in this regard over time?

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4) What is an indicator available to establish that the school level education system has declined in quality in recent years?

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5) On what grounds, the public funding of education was defended in the face of market proponents arguing against it?

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6) Is education rightly a public good or a merit good? Give reasons for your answer.

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6.6 LET US SUM UP

There has been a good deal of progress in the quantitative expansion of the education sector in India. However, the demand for education has also expanded outpacing the available supply. Owing to this, disparity in educational attainments has remained both in quantitative and qualitative fronts. How to use the available resources more efficiently, without compromising on considerations of equity, has remained a major concern of our policy planners. Towards rationalising on the resource front, public funding for school level education and cost sharing for higher level of education is being considered. To address the ticklish problem of teachers' accountability at school level, methods like direct benefit transfer, school consolidation, etc. are being tried.

6.7 SOME USEFUL BOOKS/REFERENCES FOR FURTHER READING

1) Varghese N.V. and G. Mallik, Eds. (2017). India Higher Education Report 2015, Routledge, 2017.

2) Romer, Paul M. (1990). "Human Capital and Growth: Theory and Evidence", *Carneige- Rochester Series on Public Policy* 32: 251-86.

6.8 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) It is defined as the body of knowledge possessed by the population and encompasses knowledge, talents, skills, abilities, experience, intelligence, training, judgment, etc. Prof. Theodore W. Schultz.

2) By including people's freedoms and opportunities and relating it to overall human well-being. It is thus a broader concept which considers human beings as ends in themselves.

3) Universal access, universal enrolment, universal retention, universal achievement and equity.

4) By 6 times in terms of institutions and 9 times in terms of enrolment

(from 0.2 million 1.3 million and 22 million to 198 million respectively).

5) Under the CSS, it is mandatory for schools in a particular area to take students from low-income families in the neighbourhood.

6) Colleges by 38 times, universities by 28 times and enrolment in colleges/universities by 86 times.

7) No. Because, rapid expansion has not been accompanied by the long overdue reforms in the higher, technical and professional educational sectors.

Check Your Progress 2

1) Incentives for attending schools, streamlining middle/high school curriculum to job-oriented vocational courses, etc.

2) It is defined as the 'ratio of GER for males to females'.

3) By focusing on increasing the proportion of female teachers (per 100 male teachers) in schools (sub-section 6.4.2).

4) The ASER report which has reported a decline in the proportion of children who could qualify from one level of test to another over the period 2005-2010 (sub-section 6.4.3).

5) The social benefits were considered higher even in higher education when positive externalities were taken into account. Lower levels of education, are in any case, considered like public good which would benefit the entire society.

6) Since the benefits of education reach the entire society, and not only the ones getting educated, it has the characteristic of a public good. However, precisely due to this reason, since its non-public funding might make some to under-consume it, it is more rightly regarded as a 'merit good'.

UNIT 7 HEALTH AND NUTRITION*

Structure

7.0 OBJECTIVES

After reading this unit, you will be able to:

- define the concepts of health and nutrition;
- explain the status of health and nutrition in terms of major indicators;
- identify the factors contributing to increasing health expenditure;
- describe the structure of Indian Public Health System;
- distinguish between preventive and curative healthcare needs;
- discuss the trends in healthcare financing in India; and
- outline the features of different health policies introduced by the government in India.

7.1 INTRODUCTION

There is a common saying that 'Health is Wealth'. From a human development perspective, good health and nutrition are invaluable in their contribution to an individual's physical and cognitive development. Malnutrition increases the susceptibility to infection and delayed recovery, making the burden of disease and morbidity very large for the country. Malnutrition increases the incidence of non-communicable diseases adding to

* Dr. Smritikana Ghosh, Asstt. Prof., Scottish College, Kolkata.

a huge cost of healthcare. However, most of the developing and underdeveloped countries unfortunately have a chronic problem of ill health with India being at a very low position in respect of its health and nutritional ranking. Specifically, in case of children, the situation is more vulnerable as according to World Bank, 22 percent disease burden of the Indian children is because of malnutrition.

Conceptually, **health** refers to 'freedom from illnesses'. Empirically, it is measured in terms of illness prevalence rates and functional disability measures. A person is called healthy when he/she has very low illness prevalence rate and no functional disability. **Nutrition**, on the other hand, is a measure of nourishment. It refers to a process through which the body absorbs the required amount of nutrients contained in the food that one consumes. Health status is thus invariably linked to the nutritional status of a person or community.

7.2 MEASUREMENT OF HEALTH AND NUTRITION: CONCEPTS

Given the current level of India's development, its health scenario is also improving. In terms of infant mortality rate (IMR) and under-five mortality rates, India has achieved significant improvement. Over the last roughly two decade period (from 1992-93 to 2015-16), IMR has come down from 86 to 41 and the under-five mortality rate from 119 to 50 (Table 7.1). It is important for us to know how these major indicators are measured and calculated.

Infant Mortality is the probability of a newly born child's death before its first birthday. Numerically, it is the number of infant deaths per 1000 live births in a year. Abbreviated as IMR, it is measured as: IMR = (Number of resident infant deaths/Number of resident live births)*1000. For example, say in 2016, among the State residents, number of infant death is 1300 and number of live births in the State is 150000. Then IMR= (1300/150000)*1000 = 8.7. According to World Health Organisation (WHO), 75 percent of world's under-five deaths is within first year of infant's life.

Table 7.1: Health Status of India: 1993-2016

Health Status	NFHS I (1992-93)	NFHS II (1998-99)	NFHS III (2005-06)	NFHS IV (2015-16)
Infant Mortality	86.3	73	57	41
Under-five Mortality	118.8	101.4	74	50
Neonatal Mortality	52.7	47.7	NA	NA
Post-neonatal Mortality	33.7	25.3	NA	NA
Maternal Mortality rate	437	530	NA	NA
Crude Death rate	9.7	9.7	NA	NA

Source: NFHS I, NFHS II, NFHS III and NFHS IV. NA: Not Available.

Under-Five Mortality: This is also known as child mortality. It is the probability of dying between first and fifth birthday and is measured as 'the number of deaths per 1000 per year'. Empirically, it is measured as: Child Mortality Rate (CMR) = (D/N)*1000 where D = deaths between 0-4 years during the year of calculation and N = number of live births among the new born during the year of calculation. For computational purposes, the data is to be drawn from the registration of newborns. According to WHO, world-over nearly 9 million children die before their 5^{th} birthday. Main causes of this type of death are pneumonia, diarrhoea and malnutrition.

Neonatal Mortality: This is the probability of dying in the first month or within the first 28 days of the life of an infant after birth. Thus, Neonatal Mortality = (number of neonatal deaths/total number of live birth)*1000. As per UNICEF, the worldwide neonatal mortality has fallen from 36 deaths per 1000 live birth in 1990 to 19 deaths per 1000 live birth in 2015.

Post-neonatal Mortality: This is the difference between infant and neonatal mortality i.e. it is the number of newborns dying between 28 days and 364 days (in a specific geographical area) divided by the number of resident live birth in the same area. This value is multiplied by 1000 to indicate the mortality rate per 1000 live births. Thus, post-neonatal mortality = (Number of resident post-neonatal deaths/total number of resident live births)*1000.

Maternal Mortality Rate: This refers to the number of women who die as a result of childbirth and pregnancy related complication per 100,000 live births. It thus indicates the risk associated with pregnancy. Thus, Maternal Mortality Rate (MMR) = (maternal deaths during a reference period/total number of live birth during the reference period)*100,000. According to UNICEF, between 1990 and 2015, maternal mortality rate has reduced by about half or 50 percent.

The Indian health scenario with respect to the above indicators is indicated in Table 7.1. It shows that except maternal mortality rate and crude death rate, all other rates are falling. Crude death rate (defined as number of deaths per year per 1000 people) is constant for first two National Family Health Survey (NFHS) rounds and maternal mortality rate has increased for the same time period.

7.2.1 Malnutrition

Malnutrition may be over-nutrition or under-nutrition. Under-nutrition is measured by indicators like under-weight, stunting and wasting. ***Wasting*** represents the failure to receive adequate nutrition in the period immediately preceding the survey and is a sign of the extent of malnourishment. It may be the result of inadequate food intake or a recent episode of illness causing loss of weight and the onset of malnutrition. Persons whose ratio Z-score of weight-for-height is below –3 SD (i.e. minus three standard deviation from the median of the reference population) are considered 'severely malnourished' and those below –2 SD as 'malnourished'. Thus, if there are 10 individuals whose Z-scores as: –4.1 SD, –3.9 SD, –3.1 SD, –2.8 SD, –2.1 SD, –2.0 SD, –1.1 SD, 1.5 SD, 1.9 SD and 2.5 SD respectively then, the first

three individuals are severely malnourished, the next three individuals are malnourished and the last four are nourished. Note that on the negative side, up to –1 SD, a margin is given for not regarding a person in the malnourished category. Similarly, the height-for-age is the ratio of 'height in cms and age in months'. The Z-score of this ratio is taken as an indicator of 'linear growth retardation' and 'cumulative growth deficits'. Linked to the extent of malnourishment, persons whose Z-score of height-for-age is below –2 SD from the median of the reference population are considered 'stunted' for their age and are labelled '*malnourished*'. Likewise, when this Z-score is less than –3 SD, the person is called 'severely stunted' or 'chronically malnourished'. Stunting reflects failure to receive adequate nutrition over a long period. Such failures are also affected by recurrent and chronic illness. ***Weight-for-age*** is a composite index of height-for-age and weight-for-height which takes into account both the acute and chronic malnutrition. Persons whose weight-for-age is below – 2SD from the median of the reference population are classified as ***underweight***. Sometimes, anaemia level is also taken as an indicator of under-nutrition. In nutrition literature, adult malnutrition and child malnutrition are separately distinguished as follows.

Adult malnutrition is measured by 'body mass index' (BMI), Aneamia level and overweight. BMI is measured as 'weight divided by height-square' (i.e. kg/m^2 where weight is taken in kgs and height is expressed in meters). The standard value of BMI is 18.5. Thus, when a person's BMI is below this standard value, he/she is called '***malnourished***'. On the other hand, when the BMI value is more than 25, the individual is called '***obese***'. In case of anaemic persons, the BMI level is taken as 12 for female and 13 for male. In India, there is a decreasing trend of underweight women and men over time (Table 7.2). However, the percentage of overweight women and men has increased significantly over the last 15 to 20 years. This is very alarming. Within the same time span, percentage of women and men with anaemia has not fallen significantly. This is also a major concern. The trend for ***underweight*** children in India is continuously falling (it has declined

Table 7.2: Adult and Child Malnutrition: 1993-2016

Adult Malnutrition (BMI)	NFHS I (1992-93)	NFHS II (1998-99)	NFHS III (2005-06)	NFHS IV (2015-16)
Women's BMI less than normal (18.5)	NA	35.8	35.5	22.9
Men's BMI less than normal (18.5)	NA	NA	34.2	20.2
Anaemia level of Female (age 15-49) (12)	NA	51.8	55.3	53
Anaemia level of Male (age 15-49) (13)	NA	NA	24.2	22.7
Overweight Women (>25)	NA	10.6	12.6	20.7
Overweight Men (>25)	NA	NA	9.3	18.6

Underweight Children (%)	53.4	47	42.5	35.7
Wasted Children (%)	7.5	5.5	9.8	21
Stunting Children (%)	52	45.5	48	38.4

Source: NFHS I, NFHS II, NFHS III and NFHS IV. NA – Not Available.

from 52 percent in 1992-93 to 38 percent in 2015-16). However, the percentage of ***wasted*** children, which was declining up to NFHS II, has been increasing touching an all time high of 21 percent in 2015-16. Percentage of ***stunting*** children was also falling up to NFHS II, but it has increased to 48 percent in NFHS III falling again to 38.4 percent in NFHS IV.

7.2.2 QALY/DALY

Other than the above measures, there are two more popular measures to assess the health standard of people. These are: Quality Adjusted Life Year (QALY) and Disability Adjusted Life Year (DALY). QALY is a measure of disease burden which includes both quality and quantity of life lived. One QALY means one year of perfect health. DALY measures how many years are lost due to ill health, disability or early death. Thus, DALY shows health loss and QALY shows health gain (i.e. QALY is the inverse of DALY). Thus, in practice, the difference between a DALY and a QALY depends on whether the quality of life is expressed as a loss (DALY) or a gain (QALY). Additional differences are taken into account by the way in which disease weights are assigned.

Check Your Progress 1 [answer within the space given in about 50-100 words]

1) How are Health and Nutrition defined?

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2) State the five major health indicators? Which of these has fallen internationally by about 50 percent over the period 1990 and 2015?

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3) What are the three sub-components of under-nutrition? How are they measured?

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4) How is 'adult malnutrition' measured? What is a notable trend in this respect for India?

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5) What has been the trend in respect of underweight children in India?

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6) Distinguish between the concepts of QALY and DALY.

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7.3 HEALTH EXPENDITURE

Over past century, worldwide, expenditure on healthcare has risen consistently. The share of GDP devoted to medical spending in the OECD countries has increased from 5.1 percent in 1979 to 8.9 percent in 2006. The corresponding figures on public healthcare expenditure in India has increased marginally from 1.1 percent of GDP in 1995 to 1.4 percent of GDP in 2014. The percentage of GDP, particularly public health expenditure, devoted to healthcare poses public financing challenges for all the countries. The factors responsible for this may be broadly clubbed under the following two heads viz. demand factors and supply factors.

Demand factors:

a) Population Ageing: With increase in average age of the population, demand for medical care is also increasing.

b) Income: It is generally agreed that there is a strong positive relationship between per capita GDP growth and health spending. However, the income elasticity of demand for healthcare spending may vary depending on factors like geographical location, time frame etc.

c) Spread of Insurance Market: The growing health insurance market is also increasing the demand for healthcare expenditure as insurance is an important instrument for covering the risk of rising healthcare cost.

Supply factors:

a) Supplier-Induced Demand: Sometimes health service suppliers create demand for healthcare facilities to increase their market share. This is called supplier induced demand. This is done by adoption of new medical technology, providing medicines and treatments not absolutely related to patient's condition, etc.

b) General Economic Growth: Economic growth of the country is improving the living standard of the population which has also increased the availability of improved medical technology. This induces demand for healthcare expenditure.

7.3.1 Sources of Health Expenditure

Two broad channels for expenditures on healthcare are: (i) the State through public expenditure (i.e. public health expenditure: PHE); and (ii) the individuals/families through their personal expenditure [called out-of-pocket expenditure (OPE)]. Public expenditure consists of all government expenditure on health and family welfare. It includes expenses on medical education, research, hospitals, public health centres and different types of subsidies given by the government [e.g. huge network of primary health centers (PHCs) across the length and breadth of the country, government schemes like ESI/CGHS, medical reimbursements, etc.]. Health expenditure, in general, is increasing because of: (i) increased life expectancy; (ii) demographic change with the share of aged population on the rise; and (iii) increase in chronic diseases. While the per-capita public health expenditure in

India has increased nearly five times over the period 1995-2014, as noted above, as a percentage of GDP it has only marginally increased from 1.1 to 1.4 percent over the period 1995-2014 (Table 7.3). Out-of-pocket expenditure (OPE), on the other hand (which by definition refers to cost sharing and other expenditures incurred by the patients and their families themselves), is very high. As per WHO estimates, the total OPE on healthcare in India has increased from 76 percent in 2005 to close to 90 percent in 2012. In fact, a similar trend in OPE is witnessed in many countries over this period (Table 7.4).

Table 7.3: Profiles of Health Expenditure in India – 1995-2014

India	Per Capita Health Expenditure (US $)	Public Health Expenditure (as % of GDP)	Public Health Expenditure as a % of Total Govt. Expenditure	Public Health Expenditure as a % of Total Health Expenditure
1995	16	1.1	4.3	26.2
2014	75	1.4	4.4	30

Source: WHO

Table 7.4: Share of Out of Pocket Expenditure (OPE) to Total Health Expenditure (THE)

Country	Share of OPE to THE (2005)	Share of OPE to THE (2012)
India	76.1	89.2
Pakistan	80.9	86.8
Bangladesh	62.6	92.9
Nepal	62.6	79.9

Source: WHO

7.4 PUBLIC HEALTHCARE SYSTEM IN INDIA

Public Health is a process of preventing disease, prolonging life and promoting human health through organised efforts and informed choices of society. Healthcare covers not only medical care but also many aspects of preventive care. Indian healthcare system is regressive as private out-of-pocket expenditure dominates the cost of financing healthcare. An ideal healthcare system should be accessible to all with a fair distribution of financial cost and competent service providers.

Healthcare spending can be divided into public and private spending. Despite several growth-orientated policies adopted by the government, economic/regional/and-gender disparities have remained posing challenges for health sector in India. For instance, nearly 75 percent of health infrastructure, medical manpower, and other health resources are

concentrated in urban areas where only 27 percent of the population live. To reduce this disparity, public health has to focus on health promotion and disease prevention and control by taking into account the social determinants of health. The focus of public health should be on bringing about changes not only for preventing disease but also for promotion of health through organised action at societal level.

India is the second most populous country of the world with a widely varied socio-political-demographic and morbidity pattern. Most of the States in India face severe healthy workforce shortage. A large number of health service providers, managers and support workers are needed to fill this gap. Many States are unable to provide even basic, minimum lifesaving services in a consistent manner. The challenges of public healthcare system in India may, therefore, be summarised as: (i) inadequate resource availability for public healthcare; (ii) severe geographical and social disparity; (iii) inadequate integration between health programmes; (iv) lack of community focus; (v) fragmented functional responsibility; (vi) inadequate attention to primary healthcare; (vii) inadequate public health orientation; etc.

7.4.1 Preventive and Curative Healthcare

Preventive healthcare refers to measures taken for disease prevention as opposed to disease treatment. It encompasses a variety of interventions undertaken to prevent or delay the occurrence of disease or reduce further transmission or exposure to disease. Several measures instituted for this include: (i) alcohol misuse counselling; (ii) blood pressure screening; (iii) cholesterol screening; (iv) depression screening; (v) diabetes and diet counselling; (vi) hepatitis B and C screening; (vii) syphilis screening; (viii) anaemia screening; (ix) campaigning on importance of breast feeding; (x) folic acid supplements; (xi) urinary tract infection screening; (xii) autism screening (18-24 months); (xiii) immunisation/ vaccination; (xiv) iron supplements; (xv) vision screening; etc.

Curative Healthcare refers to hospitalisation for helping the patients treated for a disease. Currently in India, there are over 5 lakh trained doctors, 7 lakh 'auxiliary nurse midwives' (ANMs), 22,975 PHCs and 2,935 child healthcare centres (CHCs). There are also 22,000 dispensaries and 2,800 hospitals. In spite of this, gaps in facilities, supply and staff exist. Budget is the main problem of different state-run units. Under-funding of the recurring cost is another problem. Private hospitals are provided concessional land with liberal tax structure with conditions for meeting some social obligation. However, there is no proper monitoring to ascertain whether they are fulfilling these obligations. There is also no proper quality control on the large number of small nursing homes run by private doctors and doctors-agencies.

7.4.2 Health Financing

There is a view that healthcare expenditures are largely imposed on individuals, rather than freely chosen. A more demanding requirement is that the financing should be according to 'ability to pay'. A financing structure is called progressive if healthcare expenditure takes a larger proportion of

income from the rich than from the poor. If the absolute level of healthcare expenditure is about the same for the poor and rich, then by design this expenditure will take up a larger fraction of income from poorer households. Different studies show that user charges have a strong regressive component in the healthcare financing structure of developing countries.

Health financing is divided in two parts – public financing and private or individual financing. The main challenges faced by the government in deciding on: (i) how much to invest and where; and (ii) how to healthily balance its health investment paying due regard to concerns of equity and efficiency are: (a) increasing public health expenditure [due to which the government, in addition to making increased budgetary allocations, sometimes partners with private sector (e.g. pulse polio immunisation) for delivery of services]; (b) more efficient and effective use of the available scarce resources; and (c) provide financial protection from the rising healthcare cost to the poor.

Of the above, the first i.e. objective of public healthcare expenditure was discussed briefly in Section 7.3. Regarding the second objective on efficient use of the budget, government has recently rearranged its infrastructure totally under the National Rural Health Mission (NRHM). Next comes the objective related to providing financial assistance in meeting the rising healthcare cost to the poor and the needy. This objective is at least, in part, related to the institutional mechanisms of establishing a healthy health insurance market in which the regulatory role of the government plays an important part.

In the last two decades, Central and State governments have been providing insurance premium for meeting the health costs of the underprivileged sections of the society. Even with all these efforts, the current distribution of main sources of health insurance premium is as follows: households (49.5 percent), government (27 percent) and others (employers) (23.5 percent). Such health insurance coverage is mostly for in-patient care i.e. patients who are admitted in the hospital. Comprehensive health insurance (i.e. covering the out/in-patient, preventive, primary and post-hospitalisation care) is offered by only select social health insurance schemes of the government like ESI, CGHS, etc. which caters only to a small section of total population. Few private insurance companies are providing the pre and post hospitalisation follow-up service which only some of the more affluent section of the society are able to avail. The goal of universal health coverage, therefore, continues to remain a distant challenge for India's policy makers and government.

Check Your Progress 2 [answer within the space given in about 50-100 words]

1) As a percentage of GDP, how does Indian public healthcare expenditure compares with those of OECD countries over the recent time period?

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2) Which three factors from the 'Demand Side' influences the government's decision to spend more on healthcare? Why?

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3) What factors contribute to influencing higher healthcare expenditure for the public from the 'supply side'?

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4) What are the two major sources of 'health expenditure'? Which of these dominates in Asian Countries? What is its current level in India?

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5) Do you consider the Indian healthcare system regressive? Why?

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6) What are the major challenges faced by the public healthcare system in India?

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7.5 HEALTH POLICY IN INDIA

When one considers the health and related policies in India, we find that we have well-formulated policy guidelines in terms of National Policies for Health, Nutrition, Education, Children, etc. These policies provide an overall framework for health and development reflecting political commitment. The Constitution of the country, [the directive principles] and the national policies provide the broad guidelines for mobilisation and distribution of resources in such a way as to meet the health needs of the masses. The constitutional amendments from time to time and their ratification by the State assemblies also provide the guidelines to planners and administrators to direct the resources to the priority areas. Over the years, the country has expanded its healthcare delivery system and has, by and large, adequate availability of health manpower, except for a few categories and specialised training facilities.

A National Health Mission was launched with specific goals to be attained during the period 2012-17. Main objectives of this mission are to: (i) safeguard the health of the poor; (ii) strengthen the public health system; (iii) empower the community for achieving the maximum health standards; and (iv) improve the efficiency to optimise the use of available resources. Under this mission, many schemes have been launched. Some of these are:

a) **Rashtriya Bal Swasthya Karyakram:** This is an initiative to cover early detection and intervention among children (i.e. from birth to 18 years age) with respect to four D's i.e. defects at birth, diseases, deficiency and developmental delays.

b) **Janani Shishu Suraksha Karyakram:** This is for pregnant women and newborn sick. Through this scheme, diagnosis, treatment, diet, and most of the drugs are provided free of cost. Transport from home to the treatment centre is also provided free of cost. The C-section is also performed free of cost for pregnant women.

c) **Reproductive, Maternal, Newborn, Child and Adolescent Health:** This scheme, introduced in 2013, has the main objectives of reducing the: (i) infant mortality rate to 25 per 1000 live birth; (ii) maternal mortality rate to 100 per 100000 live births; and (iii) total fertility rate (TFR) to 2.1 by the year 2017.

d) **Rashtriya Kishor Swasthya Karyakram:** Established in 2014, the scheme aims to reach 253 million adolescents in the country by intervening through the routes of nutrition, mental health and other health promotional approaches.

e) **India Newborn Action Plan:** This was also established in 2014 with the main objectives of developing the health of newborn and reduces cases of stillbirth.

7.5.1 National Health Policy

The National Health Policy (2002) recognised that morbidity and mortality levels of the country are exceptionally high and hence stronger preventive and curative measures are needed. It took special note of the fact that macro and micro nutrient deficiency among women and children are high. Major diseases like Malaria, TB and HIV have also received special attention here. Given this scenario, the main features of the policy thrust are:

1) More flexibility to state public health administrations to implement policies in their areas;

2) Vertical implementation structure for disease control programmes;

3) More training to paramedical staff to cater to backward regions of the country;

4) Rectifying the uneven distribution of medical colleges across country;

5) Certain medical disciplines like molecular biology etc. to get developed infrastructure;

6) Increasing the number of persons specialised in family medicine and public health;

7) Encourage the usage of generic drugs and vaccine;

8) Include mental health in the public health domain;

9) Since college and school children are the most impressionable target for inculcating the basic principles of preventive healthcare, the policy suggests targeting these youth for increasing the awareness of health promoting behaviour; and

10) Encourage health related research among non-government service providers.

The National Mental Health Policy (2014) aims at: (i) providing universal access to mental healthcare; (ii) increasing access to mental health service to the vulnerable section of the country; (iii) reducing the risk and stigma of mental disease; (iv) ensuring the supply of skilled resources to treat the cases of mental sickness; and (v) identifying the social, biological and psychological determinants of mental health disorder. The more recent National Health Policy, 2017 also reiterates the goal of attaining the highest possible level of health and well-being by ensuring universal access to good quality healthcare services (without financial hardship) linked to the

Sustainable Developmental Goals. To achieve universal health coverage, specific steps identified under this are: (i) establishment of a comprehensive and free primary healthcare service for maternal, child and adolescent health through public hospitals and not-for profit private care providers; and (ii) provide a good quality secondary and tertiary healthcare service. The policy particularly emphasises the need for reducing the out-of-pocket expenditure on healthcare needs. The other major objectives of this policy are to: (i) increase the life expectancy at birth from 67.5 to 70 by 2025; (ii) reduce the under-five mortality to 23 by 2025 and maternal mortality to 100 by 2020; (iii) reduce the infant mortality rate to 28 by 2019; (iv) reduce neo-natal mortality to 16 and still birth rate to single digit by 2025; (v) eliminate leprosy by 2018; (vi) fully immunise 90 percent newborn by 2025; (vii) ensure adequate availability of paramedics and health workers for primary and secondary healthcare in high priority Districts by 2025; (viii) ensure District level electronic database of information on health system by 2020; etc.

The 2017 policy thus aims to project an incremental assurance based approach. However, the policy gives cause for two types of criticisms viz. (i) agency stakeholder critique; and (ii) feasibility critique. On the first, while the policy identifies what needs to be done, it does not identify the 'who, what and the how' sides of its implementation. This is perhaps due to the reason that healthcare is a State subject but it is important to improve the monitoring of the delivery systems. On the second, i.e. the feasibility critique, the policy calls for a reform in financing the public healthcare facilities where the operational costs would be in the form of reimbursements for care provision on a per capita basis for primary care. But the policy is silent on how these financing reforms will happen and who will manage them. Thus, while the policy more lucidly identifies the need to address problems with respect to three As (Access, Affordability, Accountability) of healthcare system of India, it fails to provide a cohesive, tangible action plan to address the problems pertaining to any of the As – especially when the public healthcare system is sinking under micro and macro managerial inefficiencies and is low on training and capacity building efforts.

Check Your Progress 3 [answer within the space given in about 50-100 words]

1) State the four specific goals of the National Health Mission: 2012-17.

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2) What are the two specific steps identified to achieve 'universal health coverage' under the National Health Policy, 2017?

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3) State the five major aims of the National Mental Health Policy, 2014.

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4) On what fronts, is the National Health Policy, 2017, is critiqued?

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7.6 LET US SUM UP

For a developing country like India, improving the nutrition and the general health status of its population is a critical concern of the government. Even though there is a gradual improvement over time in many of the major health indicators for India, the improvement is at a very slow rate. In particular, under-five mortality rate is still 50 percent. In case of nutrition status, cases of stunting and wasting are increasing which is alarming. To improve the situation, the Indian Government has initiated several policies and programmes. However, its overall public expenditure on health, which is less than 1.5 percent of GDP is very low. Consequently, the average share of out-of-pocket expenditure to total expenditure is not only very high (90 percent in 2012) but has continuously maintained an increasing trend. Further, most of the public healthcare infrastructure is concentrated in urban areas. Lack of adequate supply of health workforce is also an area of concern. Health insurance is getting importance in the society as well as in the government circles. Government is improving the situation through different policies and by providing improved preventive and curative healthcare services. Among different policies some of the important ones are: National Health Mission, National Mental Health Policy of India (2014), National Health Policy (2002, 2017), etc.

7.7 SOME USEFUL BOOKS

1) Neun and Santerre: *Health Economics: Theories, Insights and Industry Study*.

2) Ministry of health and family welfare, Government of India: National Family Health Survey (I,II,III and IV).

3) Government of India: RBI Bulletin.

4) Ministry of health and family welfare, Government of India: National Health Policy.

7.8 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) Health refers to 'freedom from illnesses'. Nutrition refers to a process through which the body absorbs the required amount of nutrients contained in the food that one consumes. It is thus a measure of nourishment.

2) IMR, Under-5 mortality, neo-natal mortality, post-neonatal mortality and MMR. MMR has fallen by about 50 percent between 1990 and 2015.

3) Under-weight, stunting and wasting are the 3 sub-components of under-nutrition. They are measured in terms of deviation from Z scores (Sub-section 7.2.1).

4) By BMI, anaemia level and overweight. There is a decreasing trend of underweight women and men over time.

5) The trend for ***underweight*** children in India is continuously falling (it has declined from 52 percent in 1992-93 to 38 percent in 2015-16).

6) QALY is a measure of disease burden whereas DALY shows health loss. Taken as an inverse of each other, QALY measures health gain.

Check Your Progress 2

1) For OECD countries, over 1979-2006, it has increased from 5.1 percent of GDP to 8.9 percent. In India, over 1995-2014, it has increased from 1.1 percent to 1.4 percent of GDP.

2) Population ageing, income and spread of insurance market.

3) Supplier Induced Demand and general economic growth.

4) PHE and OPE. For Asian countries, OPE is more than 80 percent. For India, it is estimated as 89.2 percent in 2012.

5) Yes because of high private out-of-pocket expenditure. An ideal healthcare system should be accessible to all with a fair distribution of financial cost between the public and the private healthcare spending.

6) Inadequate resource availability for public healthcare, severe geographical and social disparity, inadequate integration between health programmes, lack of community focus, etc.

Check Your Progress 3

1) Safeguard the health of the poor, strengthen the public health system, empower the community for achieving the maximum health standards and improve the efficiency to optimise the use of available resources.

2) Establishment of a comprehensive and free primary healthcare service for maternal, child and adolescent health through public hospitals and good quality secondary and tertiary healthcare service.

3) Providing universal access to mental healthcare, increasing access to mental health service to the vulnerable section of the country, etc. (Sub-section 7.5.1).

4) On two ground viz. agency stakeholder critique and feasibility critique (Sub-section 7.5.1).

UNIT 8 POVERTY*

Structure

8.0 OBJECTIVES

After reading this unit, you will be able to:

- define the concepts of poverty and poverty line;
- discuss the methods of measurement of poverty;
- explain the approach adopted in India to measure poverty;
- analyse the linkage of poverty with factors influencing its alleviation;
- describe the important measures initiated to alleviate poverty in India up to 2010; and
- outline the recent measures initiated to combat poverty in India during the post-2010 years.

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8.1 INTRODUCTION

In the year 2015, as per a WHO estimate, the world had 872 million people below the poverty line out of which 180 million were living in India. This makes the percentage of people living below the poverty line in India close to 21 percent. Poverty is epidemic dearth. It is the state of a person lacking a 'minimum' amount of material possessions or money. Poverty may be absolute or relative. Absolute poverty refers to the lack of means necessary to meet the basic needs such as food, clothing and shelter. Relative poverty takes into consideration the individual's social and economic status compared to the rest of society. Considered in the relative sense it is a multifaceted concept. In view of this, any measure of poverty based only on income cannot capture all its dimensions. In other words, in addition to having basic measures of poverty, we also need to have a multidimensional concept of poverty. In India, poverty estimates have been developed based on the concept of poverty line by two methods: one keeping the income required to purchase the basic necessities in view (income approach) and the other by taking into account the actual consumption made by families (consumption approach). Poverty line reflects a minimum living standard which should be assured to every individual. Those falling below this level are counted as people living in poverty. In the income approach, it is stated as the number of rupees required per day for purchasing the basic necessities.

8.2 MEASUREMENT OF POVERTY

There are different measures of poverty. In this section, we shall study some of the important methods of poverty measurement.

8.2.1 Methods of Measurement

We begin with the head count ratio, which, while being simple to compute, and hence widely used, does not help us to know the relative intensity of poverty between two comparing groups. A measure called the 'poverty gap ratio' gives us an idea of intensity of poverty between two regions or groups. However this latter method too does not provide a measure of the severity of poverty. This lacuna is removed by the method of 'squared poverty gap ratio'. In this section, besides familiarising ourselves with these measures of poverty, we shall learn about two more measures, one developed by Harold Watts (1964) and the other by Amartya Sen (1976) both of which are known for satisfying theoretical properties.

Head Count Ratio (H): This is defined as the percentage of the total population that is poor i.e. it is defined as $H = \frac{q}{n}$ where q is the number of poor people and n is the total population. For instance, if there are 1000 people in a region among whom 430 are poor (as per a pre-defined poverty line), then H = 430/1000 = 0.43. Thus, expressed as a percentage, this means 43 percent of people in the region are poor. In this measure, while the proportion of people below the poverty line can be known, we cannot know the extent (or the intensity) of poverty i.e. how much poor these 430 persons are, cannot be determined.

Poverty Gap Index (PGI): For studying the intensity of poverty, estimation of poverty gap ratio is useful. This tells us the extent to which individuals, on average, fall below a poverty line. It is thus an indicator that tells us how far the

extremely poor fall below the poverty line. Defined as the mean distance below the poverty line, it reflects both the depth and the incidence of poverty. The PGI considers persons who are non-poor to have 'zero' poverty gap. Aggregated over a group of individuals surveyed, the poverty gap ratio becomes a poverty gap index (PGI). Thus, if Y_i is the income of an individual 'i', and the poverty line is taken as Z, then PGI is defined as:

$$PGI = \frac{1}{N}\sum_{i=1}^{J}\left(\frac{Z-Y_i}{Z}\right) \quad (8.1)$$

where *N* is the total population surveyed. Thus, if there are 100 people (*N*) among whom 40 are poor with their respective income denoted by Y_1, Y_2, $Y_{3,\ldots\ldots,}Y_{40}$ and Rs 1000 is taken as the poverty line, then PGI is calculated as:

$$PGI = \frac{1}{100}\left[\left(\frac{1000-Y_1}{1000}\right)+\left(\frac{1000-Y_2}{1000}\right)+\cdots\ldots\ldots\ldots\ldots\ldots\ldots+\left(\frac{1000-Y_{40}}{1000}\right)\right] \quad (8.2)$$

In order to understand how the PGI is superior to H, it is useful to consider an empirical illustration. Notice that for a sample of 8 households, the head count ratio of poverty is commonly coming out as 0.375 (Table 8.1) for both the regions under investigation since the head count method considers the number of persons below the poverty line of Rs. 800 only into account. However, in case of PGI (where we take G_i as equal to '0' if $Y_i > Z$ and equal to $Z - Y_i$ if $Y_i < Z$) we notice that, for the same data, the *PGI* for region 1 (0.013) is lower than that for region 2 (0.119). Thus, the *PGI* value is more instructive to the planners in conveying that better targeting of schemes is necessary to focus in region 2 due to higher intensity of poverty in that region as compared to the region 1. PGI is also not without its own limitation as a principle called Dalton's transfer principle is violated by the PGI. The principle requires that by transferring some money from a above poverty line household to a below poverty line household (called progressive transfer), the PGI in the more severe region should come down. This principle requires that a poverty index should be 'sensitive' to the degree of inequality between the incomes of the poor households or individuals. This principle is violated both by the head count ratio and the PGI. This is because in the case of PGI the gaps are all weighed equally. This lacunae is overcome by the 'squared poverty gap ratio' where the weights are kept proportionate to the poverty gaps themselves (i.e. a poverty gap of 'x' percent is given weight equal to 'x' percent).

Table 8.1: Headcount Ratio Method

Region	MPCE (in Rs.) in 8 Sample Households								Headcount Ratio (P_0) Z = Rs. 800
	1	2	3	4	5	6	7	8	
Region I	950	1100	1000	975	750	775	790	1400	3/8 = 0.375
Region II	1250	1150	1400	1100	550	600	490	1200	3/8 = 0.375

Table 8.2: Poverty-Gap Ratio Method

Region	MPCE (in Rs.) in 8 Sample Households								Poverty Gap Index (P_1)
	1	2	3	4	5	6	7	8	
Region I	950	1100	1000	975	750	775	790	1400	Z = 800
$G_i = Z - Y_i$	0	0	0	0	50	25	10	0	
G_i/Z	0	0	0	0	0.0625	0.03125	0.0125	0	0.10625/8 = **0.013**
Region II	1250	1150	1400	1100	550	600	490	1200	
$G_i = Z - Y_i$	0	0	0	0	250	200	310	0	
G_i/Z	0	0	0	0	0.3125	0.25	0.3875	0	0.95/8 = 0**.119**

Note: G_i is written as 'zero' if $(Z - Y_i) < 0$ and the actual difference otherwise.

Squared Poverty Gap Index (SPGI): Defined as the mean of the squared proportionate poverty gap, this measure reflects the severity of poverty and hence also called as Poverty Severity Index. Defined as a weighted sum of poverty gaps, with weights proportionate to the poverty gaps themselves, the index is marked for being sensitive to inequality among the poor. This means a poverty gap of 5 percent will get the weight of 5 percent, a poverty gap of 60 percent will get the weight of 60 percent, and so on. This is an advanced version of poverty gap index where the weights were equal. In other words, by squaring the poverty gap, the SPGI gives more stress on the observations that fall significantly below the poverty line. The index is thus represented as:

$$SPGI = \frac{1}{N}\sum_{i=1}^{N}\left(\frac{G_i}{z}\right)^2 \quad (8.3)$$

where N is the total number of population or observations in the poverty survey, G_i is the poverty gap of the i^{th} individual and z is the poverty line. The measure of severity (or depth) of poverty is important as it provides complementary information on the incidence of poverty. This is in the sense that while some groups may have a high poverty incidence (i.e. numerous members are just below the poverty line) but with a low poverty gap, other groups may have a low poverty incidence (i.e. relatively few members are below the poverty line) but have a high poverty gap (e.g. extremely low levels of consumption for those who are poor).

Sen's Index: Prof A K Sen (1976) proposed a poverty index combining all the three factors of number of poor, depth of poverty and distribution of poverty within a group. The index is given by:

$$P_s = P_0[1 - (1 - G^p)\frac{\mu^p}{z}] \quad (8.4)$$

where P_0 is the head count index, μ^p is the mean income of the poor and G^p is the Gini coefficient of inequality among the poor individuals ($0 \leq G^p \leq 1$). Sen's index is thus the weighted average of headcount and poverty gap measures. The index is mainly used in theory and not so much in the practice due to its difficult composition than the earlier three measures considered. The index also suffers

from the limitation that it cannot decompose the contribution of poverty into different subgroups.

Watts Index: This is a distribution sensitive poverty measure defined as:

$$W = \frac{1}{N}\sum_{i=1}^{q}[log(Z) - log(Y_i)] \quad (8.5)$$

where N is the number of individuals arranged in ascending order of income (or expenditure), summed over 'q' individuals whose income Y_i falls below the poverty line Z. This index is gaining in its popularity as it satisfies many theoretical properties. However, this index is also not yet popular in application.

8.2.2 Poverty Measurement in India

During the first two five year plan periods, poverty was defined in India as the minimum energy requirement to enable an active and healthy life. For this an energy norm was set as 2400 Kcal per adult per day in urban areas and 2900 Kcal per adult per day in rural areas. Based on this norm, at 1960-61 prices, the poverty line was defined as a national minimum of Rs. 20 per capita per month for rural areas and Rs. 25 per capita per month for urban areas. Many experts have conducted independent studies and recommended different poverty line expenditure levels for rural and urban population. The figures quoted here are those used by the planning commission. These estimates represented a broad judgement of minimum needs, and was not strictly related to nutritional requirements, although these were also taken into account.

Later, for the sixth five year plan (1980-85), the per capita consumption expenditure approach was used. The energy requirement per day was lowered to a norm of 2400 Kcal per adult per day in rural areas and 2100 Kcal per adult per day in urban areas. Based on observed consumer behaviour in 1973-74, it was estimated that on an average consumer expenditure of Rs. 49 per capita per month for rural areas and Rs. 57 per capita per month for urban areas was the poverty line. The concept of poverty line used at this stage was thus partly normative and partly behavioural. The approach did not seek to measure the nutritional status nor did it take into account the incidence of malnourishment and under nourishment in the population. Thus, the poverty lines drawn were based on consumption requirement and not actual income. The approach thus obfuscated dependence on 'debt, use of common property resources and informal social security'.

The approach to measuring poverty line was further modified to include five non-food items (viz. Clothing, footwear, durable goods, education and institutional medical expenses) based on consumer expenditure data for a 365-day recall period w.e.f. 2004-05 (61st round of NSSO survey). Further, to assist a more scientific basis for including the 'protein calorie requirement', the National Nutrition Monitoring Bureau (NNMB) had begun collecting data on diet and nutritional status of rural households for 10 states since 1974-75. The periodic reports of NNMB had revealed that the protein calorie adequacy status was stable till 1981 but had been declining since then. A second revelation of these reports was that in 2002 only one-third of preschool children were meeting the protein calorie adequacy norm. The latter is suggestive of the fact that under-nutrition is a major problem among the preschool children in India. And yet another change introduced in the methodology of estimating poverty line was the introduction of

'mixed recall period' approach in 2004-05. Prior to this (in the consumer expenditure survey of 2000) a 'uniform recall period' (URP) of 30-days was adopted for all items including both food and non-food. The modified approach of MRP in 2004-05, in which the 365-day recall approach was used for non-food items and 30-day recall approach was used for other items. The estimates of poverty line for 1999-2000 were placed at Rs. 27 per capita per day for rural areas (or Rs. 810 per month) and Rs. 24 per capita per day for urban areas (i.e. Rs. 720 per month). The corresponding estimates for the year 2004-05 were Rs. 28 for rural areas (Rs. 840 per month) and Rs. 26 (Rs. 780 per month) for urban areas.

Estimates of poverty line made to a time point closer to post-2010 are from two major reports. The first of this relate to the Tendulkar report (2009) which placed the per capita per day requirement (for 2009-10) in rural areas at Rs. 27 with the corresponding estimate for urban areas at Rs. 33 (i.e. Rs. 810 per capita per month for rural areas and Rs. 990 per capita per month for urban areas). The Tendulkar estimates used a common poverty line basket (PLB) for both the rural and urban areas which was a departure from considering two separate baskets of consumption in all earlier exercises. This was done by the Tendulkar committee to avoid the element of 'arbitrariness in specifying the numerical nominal level of PLB' and it therefore chose to regard the relatively less controversial urban level PLB of a poor household as the common PLB for both rural and urban areas. This was done after duly adjusting for 'intra-state and inter-country rural-urban price differentials'. Reverting to the earlier two separate poverty line baskets for rural and urban areas, the second report by Rangarajan (2014) estimated the poverty line for 2014 as Rs. 32 per capita per day for rural areas and Rs. 47 per capita per day for urban areas. This works out to a monthly per capita per day estimate of Rs. 972 for rural areas and Rs. 1407 for urban areas. The report of 2014 estimated the percentage of people below the poverty line in 2011-12 as 29.5 percent at the all India level with its distribution over the rural and urban locations placed at 30.9 percent and 26.4 percent respectively.

Check Your Progress 1 [answer within the space given in about 50-100 words]

1) Define poverty.

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2) Distinguish between absolute poverty and relative poverty.

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3) What are the two approaches used to measure poverty? How do they differ?

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4) What was a basic lacuna of the consumption or income approach of measuring poverty?

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5) How is the 'headcount ratio' of measuring poverty defined? What is its basic limitation?

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6) How is the 'poverty gap index' (PGI) measure an improvement over the 'headcount ratio/index'? In what way PGI is useful as compared to the headcount ratio? What is the limitation of PGI measure of poverty?

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7) How is the 'squared poverty gap index (SPGI)' an improvement over the PGI?

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8) What is the Sen's index of poverty? In what way it is superior to the other methods?

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9) What are the major factors that have been taken into account in the approaches to estimate poverty in India? In what way they have changed over time?

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10) Present a chronological picture of the different estimates of poverty worked out for rural and urban regions in India.

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8.3 POVERTY LINKAGES

We earlier noted that poverty is multidimensional. This means it has linkages with many factors cutting across social and economic spheres. In this section, we shall see how these linkages work, some in favour and some against.

8.3.1 Nutrition

Poverty restricts the income and thereby the expenditure causing in turn the dietary deprivation and malnutrition. Due to malnutrition, there is lack of mental and physical development. The poor in India have had access to subsidised food through the public distribution system. As a result, though pockets of food scarcity still exist, famines have been eliminated. Over the years, there has been a decline in household expenditure on food, particularly among the poor. To combat such situation, since 1975, the government has launched the Integrated Child Development Services (ICDS) programme in which food supplements are provided to children and pregnant and lactating women in the entire country. In spite of this, low birth weight rates are still over 30 percent and about half the children are undernourished. High undernutrition rates among children is mainly due to low birth-weight and poor infant and child feeding/caring practices.

8.3.2 Credit

After the financial liberalisation, there has been expansion in services of microfinance. Initially, this was considered a positive development, but over time it has been realised that it is burdening the poorer sections of the society with higher interest rates charged. There is, however, evidence that better access to credit by the poor enables them to pull themselves out of poverty by helping them invest in their human capital and set up microenterprises which has the potential for making a dent into their poverty.

Improvement in credit services can be measured by two indicators: (i) the ratio of total bank credit to the Net State Domestic Product and (ii) financial inclusion or penetration measured by per capita bank branches (i.e. total number of operating bank branches per million persons in each state). It is observed that financial depth has a negative and significant correlation particularly with rural poverty in India. This is effected by reduced migration from rural to urban areas. Thus, banking sector development and financial inclusion can reduce income inequality and poverty.

8.3.3 Insurance

Tertiary healthcare is often too expensive for people with low incomes. As a result, those requiring tertiary healthcare often go untreated or are left with devastating hospital bills, both of which exacerbate poverty. In addition, cases of heart disease and cancer, requiring tertiary healthcare are rising in many countries particularly in countries with higher incidence of poverty like in India. To meet the need in this respect, many states in India have introduced social insurance programmes that provide free tertiary healthcare to households below the poverty line. For instance, the Vajpayee Arogyashree Scheme (VAS) launched (in Karnataka) in 2010 entitles beneficiaries for free targeted tertiary healthcare services covering cardiac, oncologic, neurologic, burn and trauma care. Unlike the national health insurance programme (i.e. Rashtriya Swasthya Bima Yojna) for people below poverty line, VAS covers only tertiary healthcare and requires no prior enrolment or annual premiums. It also incentivises healthcare providers to seek out patients with cardiac and oncologic conditions whose treatment requires costly specialised care.

8.3.4 Informal Economy

Informal economy includes both self-employment in small unregistered enterprises and wage employment in unprotected jobs of the formal sector. This means, not all informal workers are poor and not all working poor are engaged only in informal sector. In other words, there is a growing segment of workers world-wide who derive informal employment in the formal sector without any benefits of social security. This trend requires recognition for its vulnerability to catastrophic healthcare expenses which would marginalise the poor even more.

8.3.5 Discrimination

Poverty and discrimination are often linked. Discrimination based on ethnicity, race, gender, etc. directly influence access to economic opportunity through a complex set of institutional effects in families, schools, and work settings.

Discrimination can both cause poverty and be a hurdle in alleviating poverty. Although the achievements under 'millennium development goals' (MDGs) have supported aggregate progress, even in countries where there have been significant gains toward achieving the MDGs, inequalities have grown. Recognition of this fact has brought about an increasing awareness on the importance of working to reduce the growing economic inequalities in the post-2015's renewed MDG framework. A key element of this is to actively work to eliminate discrimination.

8.4 POVERTY ALLEVIATION INITIATIVES TILL 2010

An integral part of a well-rounded and holistic anti-poverty strategy must be sustained rapid growth. Conceptually, sustained rapid growth works through two channels to rapidly reduce poverty. First, rapid growth creates jobs and raises real wages. Second, rapid growth leads to growth in government revenues. Enhanced revenues, in turn, allow the expansion of social expenditures at faster pace. India began with very low income and low growth for more than three decades after independence. The result was relatively low level of per-capita expenditure on health, education and direct anti-poverty programmes. Faster growth during the 1990s, and during 2003-04 to 2011-12, changed the situation to enable India afford a universal rural employment guarantee scheme and near-universal public distribution system (PDS) that offers cereals at highly subsidised prices. Against this background, in the present section we will take note of three *major* areas which are *important* from the point of view of poverty alleviation in India.

8.4.1 Agricultural Growth

Any strategy for poverty reduction must tackle the issues facing rural India which still accounts for 68.8 percent of the total population (i.e. close to 833 million people as per the 2011 Census). Further, in 2011-12, about 80 percent of India's poor lived in rural areas with the livelihood of most of them dependent directly or indirectly on the performance of agricultural sector. The rural farm and non-farm incomes are so much interdependent that a strong non-farm rural economy requires a vibrant agricultural growth. As per the 2011-12 Employment-Unemployment Survey of NSSO, agriculture and allied activities employed 49 percent of total workforce in India. Despite this huge workforce dependent on agriculture, the share of agriculture in the GDP is below 15 percent. One of the reasons for this skewed distribution of labour force in agriculture is the paucity of alternative livelihood opportunities either at village level or in the nearby townships and cities. Excess labour force coupled with traditional agricultural practices has resulted in low farm yield and income. To break this cycle of poverty in rural areas, a two-pronged strategy is required: one, we must improve the performance of agriculture sector and, two, simultaneously create jobs in industry and services in both the rural and urban areas.

8.4.2 Mid-day Meal Scheme (MDMS)

The MDMS was launched as a Centrally Sponsored Scheme in 1995 with the objectives of: (i) improving the nutritional status of school children, (ii) eliminate classroom hunger and enhance school enrolment and (iii) retain school attendance minimising the dropout rates. With effect from 2008-09, the programme has been

extended to upper primary level. The government envisages expansion of MDMS in a progressive manner to include children in private schools (as they have a 25 percent quota for Economically Weaker Sections), particularly in SC/ST and Minority concentrated areas. There is however a poor convergence of MDMS with the school health programme. As such, there is a need to form networks of Medical Colleges, Home Science faculties and State level MDMS steering and monitoring committees to evolve state-specific guidelines for improved quality and safety of food provided under the MDMS. As of now, only 75 percent of schools have kitchen sheds. This means that 25 percent of schools (3.62 lakhs) prepare the mid-day meal either in an open area or in the classrooms. This is a major cause of concern for the health and quality of education of students.

8.4.3 MGNREGA

MGNREGA guarantees 100 days of unskilled employment at a specified wage in a given financial year to one member of every rural household. The scheme was launched in 2006-07 in 200 selected districts but was gradually extended to the whole country. The underlying objective of the scheme is to enhance the livelihood security of the poor households in rural areas of the country. Other objectives include rejuvenating natural resource base, creating productive rural assets, stimulating local economy by providing safety net to rural poor, ensuring women empowerment and strengthening grassroots level democratic institutions. Approximately two-third of works taken up under MGNREGA are related to water conservation and other activities with positive impact on agricultural productivity. A large number of MGNREGA workers are small and marginal farmers. Scheduled Castes and Scheduled Tribes account for nearly 47 percent of the total person-days employed. As against the norm of 33 per cent, women's participation in the scheme is upwards of 50 percent (e.g. 51.3 percent in 2012-13, 52.8 percent in 2013-14 and 54.9 percent in 2014-15). The average wage has risen from Rs. 65 in 2006-07 to Rs. 144 in 2014 (per person per day). In an important development, MGNREGA has been notified by the Ministry of Finance under Direct Benefits Transfer (DBT) scheme for all districts in the country. On the negative side, as against the guaranteed 100 days of wage employment to one person in each household annually, MGNREGA's average achievement has been less than 50 days except in 2009-10 when it touched about 54 days.

8.5 RECENT MEASURES OF POVERTY ALLEVIATION: POST-2010

Three important measures have been initiated during the post-2010 years. These are as follows.

8.5.1 National Food Security Act, 2013

India has had a long history of maintaining a public distribution system (PDS) whereby the government offers subsidised food grains to the citizens. Originally, the system was universal but was later made selective to target the poor. The National Food Security Act (NFSA) of 2013 specifies that 75 percent of rural and 50 percent of urban populations are eligible for five kilograms of food grain per person per month at subsidised prices. A small subset of extremely poor households is provided seven kilogram of food grain under the programme. In

broad terms, the PDS works on the basis of government procurement of foodgrains at pre-specified Minimum Support Prices (MSP) in selected regions of the country. It then offers this grain to the states which in turn pass them on to beneficiaries through a vast network ending with the PDS shops.

8.5.2 Direct Benefit Transfer

Two key instruments viz. Jan Dhan bank accounts and biometric identity cards (Aadhar) are aimed at revolutionising the anti-poverty programmes by replacing the current leaky distribution of benefits under various schemes by the Direct Benefit Transfer (DBT) method. Under MGNREGA, in which direct transfers of wages have already begun, the employer records employment of a worker in a central database using the Adhar identity. This ensures a transfer of the wage payment from a central government account to the worker's bank account. The worker can then access that account via mobile or a banking correspondent. The government introduced certain insurance schemes for Aadhar-linked bank accounts. For instance, RuPay cards to more than 10 crore beneficiaries who will get a benefit of personal accidental insurance of Rs. 1.00 lakh per household have been issued. There is also a life insurance cover of Rs. 30,000. The major shift in DBT is that it targets households covering both rural and urban areas.

8.5.3 Housing for All, 2016

Merging the two rural-urban housing schemes of Indira Awas Yojana (IAY) and Rajiv Awas Yojana (RAY) a new programme of 'Housing for All (Rural and Urban)' has been launched in 2016. The programme aims at providing pucca houses with basic amenities of water, sanitation, electricity and broadband for all by 2022. If successfully implemented, the programme has the potential of resulting in increased investment creating much needed decent jobs across the country. There are, however, several challenges in the successful implementation of this scheme. First, affordable housing is not possible unless land is made available for the purpose. Issues related to the Urban Land Ceilings Act (1976) need to be addressed in this regard.

Check Your Progress 2 [answer within the space given in about 50-100 words]

1) How is nutrition status an important determinant of poverty?

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2) How is credit useful in alleviating poverty?

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3) What role does insurance play in combating poverty?

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4) How does sustained rapid growth help in reducing poverty?

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5) In what way 'agricultural growth' is important to combat poverty?

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6) In what way does DBT aims at revolutionising the antipoverty programmes in India?

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8.6 LET US SUM UP

Some poverty measures like the head count ratio are simple to compute but are less efficient in capturing the severity of poverty. Measures like PGI and SQGI are superior as they take into account the severity of poverty. In India, estimates of poverty have been developed by taking into account the consumption pattern revealed by the NSSO consumer expenditure surveys. Taking a minimum basket of consumption needs, to which more recently some non-food items have also been added, poverty lines are determined equivalent to a level of income required to access the basic needs. Estimates made from time to time have varied from a poverty line income of Rs. 20 per month per capita for rural regions in 1961 to Rs. 972 around 2010. Many poverty alleviation schemes have been launched which have contributed to reducing the proportion of poverty level persons in the population. More recently, in the post-2000 years, the launch of MGNREGA, DBT, VAS, gradual extension of MDMS to different levels of education, etc. are some of the government initiatives aimed at plugging the leakages of resources and ensuring targeted delivery.

8.7 SOME USEFUL BOOKS

1) Datt Gaurav and Martin Ravallion (1992). 'Growth and Redistribution Components of Changes in Poverty Measures: A Decomposition with Applications to Brazil and India in the 1980s." *Journal of development economics* 38, No. 2 (1992): 275-295.

2) Gillis Malcolm, Dwight H Perkins, Michael Roemer and Donald R. Snodgrass (1992). *Economics of Development,* No. 3, WW Norton & Company Inc.

3) Gupta Akhil (2012). *Red Tape: Bureaucracy, Structural Violence and Poverty in India,* Duke University Press.

4) Kohli, Atul (1987). *The State and Poverty in India: The Politics of Reform,* Cambridge University Press.

8.8 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) Poverty refers to a lack of minimum level of income, or material possessions, due to which one is not able to meet the basic needs of food, clothing and shelter. Technically, it is defined by the concept of 'poverty line' which refers to the line indicative of the minimum needs to support oneself productively.

2) Relative poverty takes into consideration an individual's social and economic status in relation to that of others in the society. Absolute poverty is what we have stated above i.e. absence of minimum income or wealth to enable the purchasing of basic needs like food, clothing and shelter.

3) Poverty is measured by the income approach or the consumption approach. The latter includes consumption made not necessarily by spending money i.e. food received in exchange for wages. In the income approach it is defined as the money required per day to purchase the basic needs. Both are subject to change over time.

4) The approaches did not measure the undernourishment or malnourishment. It also did not take into account the need to meet the basic education and health expenses.

5) This is defined as the ratio of number of persons below poverty line to total number in the population. It does not therefore reveal the severity or extent of poverty.

6) While the headcount ratio for two regions having the same number of persons below the poverty line would be equal, their PGI would be different enabling the policy planner to focus on targeted assistance in the region. A limitation of PGI is that it is not sensitive to the degree of inequality between the incomes of poor households or individuals.

7) By using weights proportionate to the poverty gaps, the SPGI overcomes the lacuna of PGI which assigns equal weights to all those who are poor. In effect, you can observe this difference from the fact that the ratio for PGI is commonly multiplied by '1' [i.e. $\left(\frac{Z-Y_i}{Z}\right)$ is multiplied by '1'] for all those who are poor whereas in SPGI it is: $\frac{G_i}{z}$ multiplied by $\frac{G_i}{z}$.

8) Sen's measure takes into consideration what is centrally considered by all three measures viz. the headcount ratio (number of persons below the poverty line), PGI (intensity of poverty) and SPGI (distribution of poverty within a group). It is actually the weighted average of headcount and the poverty gap measures.

9) Whereas only the food items were considered in the earlier surveys, post-2000 non-food items also were taken into account.

10) Expressed as monthly per capita expenditure, the estimates for rural poverty have varied from Rs. 20 in 1961 to Rs. 49 in 1974 and Rs. 810 in 2000. Post-2010, the rural poverty is estimated at Rs. 972, while the urban poverty level is placed at Rs. 1407 mark.

Check Your Progress 2

1) By resulting in lack of mental and physical development of new born children, low birth weight of children by undernourished mothers, lack of child rearing and caring practices, etc.

2) It can help poor family invest in better healthcare and education of children. It can also help them set up microenterprises.

3) Social security insurance, extended without need for prior enrolment and premium burden, can play a useful role by providing coverage for major tertiary healthcare which are costly and unaffordable by poor households.

4) In two respects: (i) by creating jobs and raising real wages; and (ii) by leading to growth in government revenues allowing for increased social sector investments.

5) In two ways: (i) improve the performance of agricultural sectors; and (ii) create jobs in industry and services in both rural and urban areas.

6) Aimed at country wide coverage, and by linking payment and subsidies to the poor workers directly into their bank accounts, the major lacunae of pilferage of public funds is sought to be curtailed through the DBT.

UNIT 9 INEQUALITY*

Structure

9.0 OBJECTIVES

After reading this unit, you will be able to:

- define inequality;
- describe the types of inequality, differentiating in particular, between horizontal inequality and vertical inequality;
- indicate the measure of inequality in income given by Gini (Gini coefficient) with the expression used for its computation in a sample data;
- analyse the trends in inequality in terms of 'income, consumption and nutrition' in India;
- discuss the issue of regional divergence in inequality in terms of 'standard of living' and 'sectoral growth' profiles in India; and
- examine the concept of 'sectoral divergence' in inequality in a comparative profile of the pre- and post-reform years in India.

9.1 INTRODUCTION

The dictionary meaning of **Inequality** is 'an unfair situation in the society where some people have more opportunity, income, etc. than others'. It is the difference in social status and wealth or opportunity between people or groups. Inequality in economics means the difference in the economic well-being among individuals, groups or countries. Such inequality depends upon people's disability, ethnic background and gender. A broad distinction is thus

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made between 'inequality in outcome' and 'inequality in opportunity'. The former occurs when individuals cannot posses equal level of material wealth which indicates the state in which people live in dissimilar economic conditions. Inequality in opportunity, on the other hand, is concerned with ensuring a common starting point. Introduced by Prof Amartya Sen, through his capability approach, well-being under inequality of opportunity is defined in terms of 'the people's freedom to choose and act', both of which must be provided by the state as a matter of 'right' under the 'social justice theory'. Apart from these two basic distinctions, there are many other specific types of inequality. For instance, inequality can be defined in terms of income, consumption and nutrition. It can also be defined in terms of 'inequality among groups' (called horizontal inequality), and 'inequality among individuals' (called vertical inequality). To have an idea of different types of inequalities, we have different measures. In this unit, we shall be dealing with these concepts and issues.

9.2 TYPES OF INEQUALITY

Broadly, inequality is distinguished as economic inequality and social inequality. Economic inequality mostly means 'income inequality' which translates into inequality in consumption, nutritional and living conditions. Social inequality, on the other hand, has multiple dimensions of which two major ones are: (i) political inequality and (ii) inequality in opportunities (arising from opportunities to access education and health services).

Income inequality shows the extent to which income is unevenly distributed among the population. It could be the unequal distribution of household or individual income. Income inequality is often presented as percentage of income to a percentage of population e.g. 70 percent of a country's income is controlled by 20 percent of the country's population. From this point of view, income inequality is associated with the idea of 'fairness' or 'justice' since it is generally considered 'unfair' if the rich have a disproportionally large portion of a country's income. The causes of income inequality could vary by region, gender, education and social status. There is a lack of consensus among economists on the implications of income disparity and on whether it is ultimately positive or negative.

In India, income inequality has grown since the 1980s; top 10 percent of earners had 30 to 35 percent of national income in the 1980s, but of late (2016) the percentage share of income of the top 10 percent has increased to 55 percent (World Inequality Report, 2018). Such a trend is interpreted as a 'widening of disparity between high earners and low earners' or 'increasing income inequality'. Social inequality can be viewed in many ways. It could be concerned with the type of opportunities needed to enhance income (e.g. achieving equality in opportunities to avail educational and health services) or inability to mobilise to have their voice heard (e.g. political inequality). They are concerned with the circumstances which are beyond the control of individual human beings but can be made good either by the state or by organised mobilisation.

9.2.1 Horizontal Inequality and Vertical Inequality

Inequality can be differentiated from the perspective of inter-group (i.e. between groups) or intra-group (i.e. within a group) inequality. Based on this, two types of inequalities are distinguished viz. horizontal inequality and vertical inequality. Horizontal inequality refers to inequality among culturally defined or constructed groups (i.e. inter-group e.g. by ethnicity, religion). There is growing evidence that the nature and level of horizontal inequality are important determinants of the 'risk of violent conflict'. Group inequality generates powerful grievances which leaders can use to mobilise people to political protest. While such mobilisations might themselves work as instruments to reduce inequality through benefits extended by the government in response to organised protests, from an economic standpoint, focusing on reduction of horizontal inequality is particularly important in conflict-prone societies. This is because violent conflicts are known to undermine development and increase poverty.

Vertical inequality refers to inequality among individuals or households. The nature and extent of vertical inequality are important for a number of reasons. One is that of creating a just society because happiness tends to be higher in an egalitarian or more equal society. Secondly, the extent of inequality, for any given national income per capita, determines the level of poverty. The millennium development goals (MDGs) are concerned with the number of individuals living in poverty in the world as a whole. Thirdly, there is evidence that a more equal economy grows faster. Hence, reduction of vertical inequality becomes an economic objective. Fourthly, higher inequality is generally associated with higher rates of criminality. In view of these, developing policies to reduce vertical inequality are important.

Hence while it is important to tackle both types of inequalities, for countries at risk of conflict, it is particularly important to focus on reducing horizontal inequality especially where there have been a major past source of conflict. While vertical inequality is typically measured in terms of income, and occasionally assets, the measurement of horizontal inequality extends to a broad range of political, economic and social variables.

9.3 INEQUALITY IN INCOME, CONSUMPTION AND NUTRITION IN INDIA

A number of programme have been implemented by the government of India to help raise the income of poor households by giving them 'wage employment' opportunities thereby reducing the ill-effects of income inequality. Given that a large number of poor are uneducated and therefore unskilled, such employment programme are run to ensure a fixed number of days of employment, sometimes on 'food for work' basis, mainly to assist poor families subsisting below the poverty line. A detailed account of the efforts made in this direction is provided in the next unit on Employment and Unemployment (Section 10.3). For the purposes of this section in the current unit, we shall see what has been the trend (i.e. the impact of the efforts made over time) in terms of 'income, consumption and nutrition' inequalities in India over the past seven decades.

9.3.1 Income Inequality

India is the second most unequal country globally with millionaires controlling 54 percent of its wealth (amounting to 5600 billion dollars). It is among the 10 richest countries in the world and yet the average Indian is relatively poor. Major reasons behind this income inequality, for any country in general, are: (i) highly unequal asset distribution; (ii) inadequate employment generation; and (iii) differential regional growth. In particular, for India, major causes of income inequality could be identified as follows.

As stated before, vertical inequality is typically measured in terms of income and assets. For assets, in rural areas, landholdings are typically considered. The classes of landholding in India (based on the size of land owned where 1 hectare is equal to 2.47 or roughly 2.5 acres), are distinguished for the following six classes: (i) landless (below 0.002 hectare); (ii) marginal (0.002 to 1 hectare); (iii) small (1-2 hectare); (iv) semi-medium (2-4 hectares); (v) medium (4-10 hectares) and (vi) large (more than 10 hectares). Further, for the purpose of this classification, the social class of population is considered as a secondary variable. The social class is classified into four major classes viz. (i) scheduled caste (SC), (ii) scheduled tribe (ST), (iii) other backward classes (OBC) and (iv) others. Data on land holding, across different social classes, are collected and published by NSSO (national sample survey organisation). The latest data available in this respect for 2010-11 (published in the 70th round of NSSO in 2013) shows the following trend:

- 75 percent of total operational holdings are marginal holdings with another 10 percent of holding coming in the small class. About 7 percent are landless (i.e. less than 0.0002 hectares). Thus, a total of 85 percent of operational holding belong to the 'small and marginal' segment operating in a cultivable area of less than an acre. In terms of the total area operated they account for about 44 percent. Thus, the average holding is typically very low. On the other hand, large holdings (i.e. area of above 10 hectares) are less than 1 percent (0.7 percent) of total holdings but account for nearly 11 percent of the total cultivated area. The extent of inequality in land holdings is thus apparent but can be further gauged by an indicator like Gini.

- The Gini-coefficient for concentration of land by social category of ownership is 0.8 for the SC, 0.7 for OBC and 0.6 for ST. Since the value of Gini closer to 1 means more inequality, it follows that the class of people below the social rung is also the ones at an absolute disadvantage in respect of the ownership of landholdings.

- Due to easy availability of finance from banks and other financial institutions, large industrialists belonging to the private corporate sector have acquired a high degree of concentration of assets/wealth.

The consequences of such high income inequality are: (i) class conflict; (ii) political domination; (iii) exploitation; (iv) creation of monopoly; (v) suppression of talent by undemocratic means; (vi) moral degradation; and (vii) promotion of unequal capital formation.

9.3.2 Consumption Inequality

Consumption inequality is measured by the data on Monthly Per Capita Expenditure (MPCE) in rupees at MMRP (modified mixed reference period) levels. Until 1993-94, the poverty line was based on URP (uniform reference period) data which involved asking people about their consumption expenditure across a 30-day recall period. Since 1999-2000, the method is changed to collecting data according to the 'mixed reference period' (MRP). Under the MRP, data on *five less-frequently used items* are collected over a one year period and for other items the 30-day recall is adopted. The low-frequency items include expenditure on health, education, clothing, durables, etc. Currently, all poverty line data are compiled using the MRP method. In the MMRP method, for some food items, instead of a 30-day recall, a 7-day recall is adopted. This is believed to provide a more accurate reflection of consumption expenditures. With the collection of data by the new method, consumption expenditures for people in both urban and rural areas are observed to have gone up by 10 percent to 12 percent. This shows that people could better recall their food expenditure over a shorter 7-day period than over the longer 30-day period. The higher expenditures, combined with the high population density around the poverty line means that the poverty rate for India (for 2011-12) has come down sharply. By states, the rural-urban gap in consumption is wider for Jharkhand, Karnataka, West Bengal and Odisha (gap is more than 90 percent of rural MPCE) whereas in Bihar, Kerala and Punjab the gap is less than 35 percent. The average rural-urban gap for India as a whole is also 82 percent. This is despite the fact that for rural India the MPCE has consistently increased from Rs. 160 in 1993-94 to Rs. 220 in 2011-12 (at constant 1987-88 prices). The corresponding figures for urban India are 265 and 400. The rural-urban gap has thus increased from 65 percent in 1993-94 to 82 percent in 2011-12.

Gini-Coefficient: This is the widely used method to measure income and consumption inequalities. It measures the degree of concentration in the inequality of a variable in a distribution of its elements. It ranges in its limits between 0 and 1 where it assumes the value 'zero' when there is perfect equality in society. The Gini-coefficient gives the summary figure for Lorenz curve which first ranks the population according to different levels of consumption/income and then plots the 'cumulative proportion of consumption/income against the cumulative proportion of the population enjoying that level of consumption/income' (Fig. 9.1). The Gini coefficient takes the theoretical maximum value of 1 when in a population the income level of every individual except one is zero. The Gini-coefficient is calculated as: ***G*** = ***area*** *AEDF*/***area*** *AEDB*. Since this lies between zero and one, the inequality increases as the index moves from zero to one. In empirical exercises the Gini-coefficient is calculated by the formula:

$$G = \frac{1}{n}\left[n + 1 - 2\left(\frac{\sum_{i=1}^{n}(n+1-i)Yi}{\sum_{i=1}^{n}Yi}\right)\right]$$

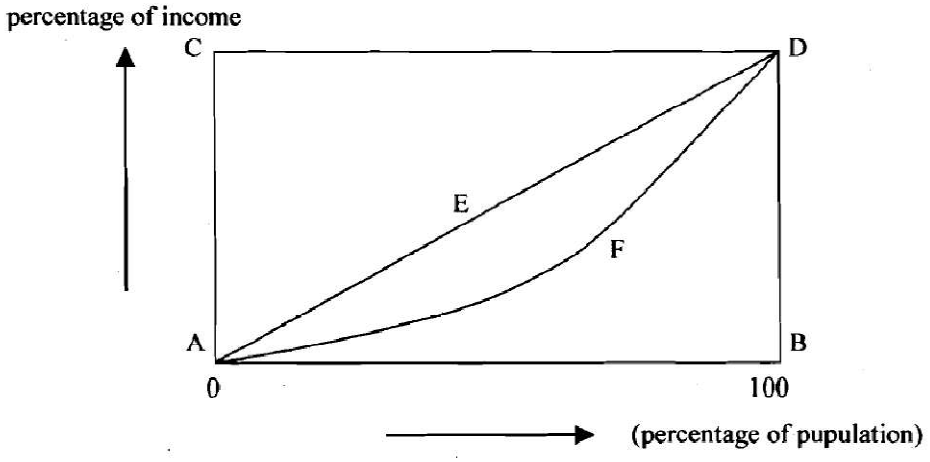

Fig. 9.1: The Lorenz Curve

9.3.3 Nutritional Inequality

The gap between the nutritional needs of the body and the absorption of nutrition by the body is taken as the extent of malnutrition. The concepts underlying malnutrition and its measurement have already been studied by you in Unit 7 (Sub-section 7.2.1). To recall, under-nutrition is measured by indicators like under-weight, stunting and wasting. *Wasting* represents the failure to receive adequate nutrition. Children whose weight-for-height (WAZ) is below minus three standard deviations (–3 SD) from the median of the reference population are considered to be *severely wasted* and those below –2 SD as *wasted*. The height-for-age (HAZ) index is an indicator of linear growth retardation and cumulative growth deficits. Children whose height-for-age Z-score is below –2 SD from the median of the reference population are considered *stunted* or acutely malnourished. Similarly when this Z score is less than –3 SD, the child is called severely stunted or chronically malnourished. Stunting reflects failure to receive adequate nutrition over a long period and is affected by recurrent and chronic illness. Weight-for-age is a composite index of height-for-age and weight-for-height reflecting both acute and chronic malnutrition. Children whose weight-for-age is below –2 SD from the median of the reference population are classified as *underweight*. To capture the long-term malnutrition among children, *stunting* is considered as the most important measure. As per the different NFHS survey reports, except for *stunting*, the malnutrition level in India is falling in all other respects over the years. This situation is alarming as it indicates long term impact of malnutrition.

Check Your Progress 1 [answer within the space given in about 50-100 words]

1) Define inequality distinguishing it between 'inequality in outcome' and 'inequality in opportunity'.

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2) Do you agree that the inequality has increased over the recent years in India? Why?

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3) Distinguish between 'horizontal inequality' and 'vertical inequality'.

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4) Give reasons as to why it is important to focus on reducing the horizontal and vertical type of inequalities?

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5) Why is India regarded as one of the most unequal economies? What reasons are attributed to this situation?

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6) State the six classes into which the landless in India are classified. What does the distribution of these six classes by social groups indicate? What are its consequences?

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7) How is consumption inequality measured in India? What does its trend reveal?

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8) In Sub-section 9.3.2, you have noticed a progressive State like Karnataka figuring with relatively slow progressive states like Jharkhand, W. B. and Odisha and a relatively slow progressive state like Bihar, figuring with more progressive states like Kerala and Punjab. What would you say, could be the possible reason for this?

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9) How is long term malnutrition among children captured? What has been the trend in this respect in India?

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9.4 REGIONAL INEQUALITY

According to the neo-classical growth theory, in the initial stages of capital growth the marginal productivity of capital will be increasing, with a corresponding decline in labour absorption. However, in the long run, if it results in labour augmenting technical progress, then the declining effect of labour absorption would be reversed. As a result, the per capita income of regions will increase, and if all states/regions pursue proactive policies of growth, the growth rates would show a tendency to converge to a steady state. In other words, it would result in a reduction in income inequality among those regions over time. This gives rise to the issue of testing the hypothesis of 'divergence or convergence' in a situation where the different states would be experiencing differing growth rates in their SDP owing to their intensity of policies pursued. In this context, there have been concerns that regional inequality in India has increased after the introduction of economic reforms in 1991. While some studies support this concern, there are others which do not. In such a situation, what conclusions can be drawn in this regard? In this section, the issue of divergence in regional inequality will be discussed in terms of 'standard of living' and 'sectoral growth'.

9.4.1 Standard of Living

Using the results of computed Gini coefficients, many studies have reported that there is no conclusive evidence for increasing inequality in terms of SDP

in India across the rural and urban households in the states for a longer period like the 1980s and the 1990s. However, during shorter time spans like the immediate years following the introduction of economic reforms (1993-2000), some states have registered increased urban inequality. However, no state has registered increase in consumption inequality, particularly in rural households. Even in terms of income, while some studies have shown convergence among some states in terms of SDP, there are studies which have reported the opposite i.e. divergence. Evidently, it depends on whether we are making a comparison of developed states with progressive states or whether we are comparing fast growing states with slow growing states. In other words, the differing results revealed by studying only the per-capita state SDP are bound to reveal differing trends showing convergence among some states and divergence among some others. Moreover, it would only be based on income as the measure of growth. On the other hand, if one looks at regional inequality measured in terms of a composite set of indicators like per capita expenditure, head count poverty ratio, literacy rate, formal education enrolment, infant mortality rate, life expectancy, access to safe drinking water and access to housing made by relatively permanent materials, the results would be more reliable. As we know, at present, the HDI constructed by employing three indicators viz. life expectancy, education and per capita income, used as a measure of 'standard of living' of the people, is the best choice for this. Analysis based on HDI shows that in India after 1990s, standard of living has not fallen in general over the states. However, across the regions, divergence is observed in respect of the following:

- there is a east-west divergence after liberalisation with the western part of the country having increased its share of income. But there is no strong north-south division in terms of the relative income shares;
- most regions which are better performing are in urban parts of the country i.e. the rural India has benefited less in relative terms;
- liberalisation has not improved the agricultural rain-fed regions; and
- while some states are doing consistently well in terms of all regions (e.g. Karnataka, Kerala, Punjab and Haryana), there are others with marked disparities in their performance (e.g. Andhra Pradesh, Madhya Pradesh and Maharashtra).

9.4.2 Sectoral Divergence

Making an analysis by principal sectors (i.e. agriculture, industry and services), some studies have shown that the reforms have made no impact on the regional inequality for the agricultural sector. But as far as the industrial and the services sectors are concerned, the reforms have completely changed the trends in terms of their contributions to GDP from the constant trends observed during the 1980s to the sharply increasing trends observed during the 1990s. For the agricultural sector, on the other hand, a moderate upward trend in regional inequality within the sector is noted. Despite this upward trend, a strong decline in its relative size has ensured that the contribution of this sector to regional inequality has remained almost constant over the two

decades of 1980s and 1990s. The rising trend in regional inequality within the sector is explained as partly due to the high growth rate of agriculture in some states (e.g. Madhya Pradesh, Andhra Pradesh, Assam) with a stronger agricultural base and partly due to the corresponding stagnation and shrinking of the sector in the agriculturally backward states like Bihar and Odisha. Since the location of agricultural production is tied to arable land, this divergence cannot be explained by the 'agglomeration effect' discussed in the literature. Another plausible explanation for this divergence may be that the more prosperous agricultural states have the surplus to make the necessary investment in irrigation, warehouses, cold storages and other infrastructure that sustained the growth rate of agriculture in these states, while the poorer states with no surplus either stagnated or shrunk further in the absence of sufficient investment.

In so far as the industrial and the services sectors are concerned, owing to the relative size of the two sectors and their inter-linkages to the economy, there was a fall in regional disparity in the pre-reform period but a distinct rise in the post-reform period. In other words, the industrial and services sectors have registered a fall in inequality before the reforms due to the centrifugal effect (i.e. a receding effect) and a rise due to the centripetal effect (i.e. a galvanising effect) post-reforms. The reason for this is conjectured to be the policy of the government in the pre-reform period, to check the regional divergence by focusing on expansion of the industrial and services sectors through multiple channels. One channel worked through the public sector, where, a sizeable part of the public investments were made in relatively backward areas. The other channel worked through the private sector, which was encouraged through the use of fiscal incentives and industrial licensing, to invest in these areas. In other words, while the state played a crucial role in bringing down inequality in these two sectors during the pre-reform period, in the post-reform period, the expansion of the industrial and service sectors contributed to the observed divergence due to factors like: (i) dismantling of the industrial licensing system giving the private sector the freedom to choose its location and minimise the transportation costs which triggered the shift in their production base to the metropolitan areas in the richer states; (ii) the reforms gave a boost to export-oriented production which contributed to increasing the share of exports to GDP ratio from 8.5 percent in the 1980s to about 15.5 percent in the 1990s; and (iii) the manufacturing exports sector minimised its transportation costs to international markets by preferring to locate itself near the coastal areas with good infrastructure. Since these facilities were mostly available in the relatively developed states in the western and the southern parts of the country, such a preference increased the regional inequality between these states and the poorer ones.

There was a modest rise in the average exports ratio in the services sector from about 4 percent in the 1980s to about 5.5 percent in the 1990s. The constituents of services sector which benefited from these exports are the information technology and the financial services. As both these sectors needed highly developed telecommunication infrastructure and high quality human capital, both of which were available in the metropolitan areas, the growth of these sectors in these areas contributed to increasing the gap in

inequality between the relatively underdeveloped regions and the more prosperous ones. Further, the reforms contributed to shifting the focus of the public sector to providing utilities and infrastructure. This resulted in increasing the average share of electricity, gas and water (i.e. utilities) in the total industrial GDP which went up from about 24 percent in the 1980s to about 32 percent in the 1990s. Likewise, the average share of banking and insurance (a part of the financial infrastructure of the economy) went up from about 13 percent in the 1980s to about 20 percent in the 1990s. Since the utilities and infrastructure are in higher demand in developed regions, a shift in the public sector's investment in these services sectors, diminished the capacity of the government to check regional divergence through public investments.

Check Your Progress 2 [answer within the space given in about 50-100 words]

1) What does the analysis of regional performance based on SDP reveal? Is it reliable? If not, what is the alternative to study regional performances by different states?

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2) In what respects divergence in inequality is found among the Indian states?

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3) In terms of sectoral profiles, in a comparison of pre and post reform periods, how has the agricultural sector fared in respect of regional inequality?

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4) State the two reasons advanced for the inequality observed in agricultural growth between the states in India.

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5) What trend is evidenced between states in respect of 'industry and services' sectors on the expected diverging or converging character (to either accentuate or reduce) inter-regional inequality?

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6) State the three reasons which contributed to increased regional inequality between the states which registered higher growth and the states which registered lower growths.

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7) Which are the three services sector constituents which contributed to the higher growth resulting as a consequence in increased inter-regional inequality? By what measure did these three constituents benefit in terms of their relative GDP shares between the pre-and the post-reform years?

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9.5 LET US SUM UP

Inequality can be of different types. Broadly, it can be classified into economic and social inequality. Related to the former, inequalities in income, consumption and nutrition are identified. Related to the latter, political and opportunity inequalities are identified. In particular, inequality in opportunities, which results in inequality in outcome, can be identified to the ease or lack of 'access to education and health services'. A further differentiation is made between horizontal inequality and vertical inequality. The former refers to inequalities between groups based on factors like caste,

religion, ethnicity, etc. The latter relates to inequality in household or individuals. Consumption and nutritional inequalities lead to population with stunted growth impacting heavily on the nation's productivity and growth. Taken together, the various types of inequalities could affect the standard of living or the socio-economic well-being of the population. In India, over the recent years, there is evidence of divergence in income-inequality but convergence in consumption inequality. This suggests that all regions have prospered but some have prospered faster than others leading to the observation that there is a 'divergence' experienced in the regional inequality between the Indian states. This observation has occurred during the post-reform years which unleashed the productive spirits of the private sector owing to relaxation in industrial licensing policies. The public sector investment also has seen a diversion: from the agricultural and backward sector investments in the pre-reform years to 'infrastructure and utilities' sector in the post-reform years. Since such investments have taken place in some states/regions endowed better in terms of the geographical or infrastructural bases, the inequality between the backward and the forward states have widened in the recent two decades. This is the feature of Indian economy which is referred to as the 'divergence in inequality' from an inter-regional perspective.

9.6 SOME USEFUL BOOKS AND REFERENCES FOR FURTHER READING

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3) Piketty, Thomas (2015). *The Economics of Inequality,* Harvard University Press.

4) Rao, M. Govinda, Richard T. Shand, and Kali P. Kalirajan (1999). Convergence of Incomes Across Indian States: A divergent view, *Economic and Political Weekly*: 769-778.

5) Ravallion, Martin (1997). Can High-Inequality in Developing Countries Escape Absolute Poverty?, *Economics Letters* 56, No. 1: 51-57.

9.7 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) Defined as the difference in social status and wealth, the former depends upon people's disability, ethnic background and gender while the latter is concerned with ensuring a common starting point as a matter of 'right' by the state.

2) During the 1980s, the top 10 percent of high income earners owned about one-third of total national income. But in recent years, this proportion has shot up to over 50 percent.

3) Horizontal inequality refers to inequality among culturally defined or constructed groups. Vertical inequality refers to inequality between individuals or households.

4) Horizontal inequality is known to feed on development increasing poverty levels in the population. Vertical inequality impacts on the creation of a just society, reduction of poverty levels, to aid faster growth of economy, have a lower degree of criminality in society, etc.

5) Millionaires control more than half of its national income while the average Indian is relatively poor. Major reasons in general are: (i) highly unequal asset distribution; (ii) inadequate employment generation; and (iii) differential regional growth.

6) Landless, marginal, small, semi-medium, medium and large. Distribution by land into social category shows a high Gini ranging from 0.6 to 0.8 indicating high inequality among the vulnerable sections like the SC, ST and OBC. The consequences of such high income inequality are: (i) class conflict; (ii) political domination; (iii) exploitation; (iv) creation of monopoly; etc.

7) By MPCE (monthly per capita expenditure measured in rupees). There has been a steady increase in the MPCE measured in constant prices over time and consequently a significant reduction in proportion of people living below the poverty line. However, there are states where the gap between the urban and rural MPCE differ by more than 90 percent. Even at the all-India level the gap is 84 percent.

8) In Karnataka, the urban MPCE is very high. Likewise, in Bihar, both the rural and urban MPCEs are very low. This has resulted in these states figuring among the ones with which we may not expect to find them. But this feature explains the difference convincingly and hence their places are not misplaced. The example points out to the need for careful observation before interpretation of empirical figures.

9) By using 'stunting' as an indicator. The situation in this respect is alarming as there has been no reduction in this respect over the different periods of NFHS reports and it indicates long term impact of malnutrition as not coming down in India.

Check Your Progress 2

1) It shows divergence in some cases and convergence in some others. Based only on income, this is bound to be the case. An indicator like HDI is better to be adopted for a comprehensive assessment.

2) There is evidence of east-west divergence, but no such divergence is noticed for north-south states. Rural India has benefited relatively less. Agricultural rain-fed regions have lagged behind.

3) A moderate upward trend in regional inequality is noticed. But due to the shrunken size of the agricultural sector itself, the increase is not pronounced but has remained more or less constant.

4) One, stronger agricultural base in some states with the corresponding shrinkage experienced in agricultural weaker states. Two, the former also had surplus to invest in required infrastructure which the latter did not.

5) Two concepts of effects viz. the centripetal effect and the centrifugal effect are used to describe the trend in growth of 'industry and services' among the Indian states. The former is referred for the 'receding effect of demand' due to low investment in the pre-reform period. The latter is referred to for the 'surge in demand' owing to proactive policies unleashed by liberalisation measures.

6) Licensing was used as an instrument to channelise resources to backward areas for promoting the setting up of industries in the pre-reform years. This kept the inequality trends more balanced. In the pro-reform years, its dismantling led to investments getting made in those areas with better infrastructure (i.e. the centrifugal effect) which were in metropolitan cities and other parts of richer states. Coastal areas also benefited under the pro-reform industrial promotion policies to the disadvantage of states not endowed with this geographical advantage.

7) Information technology, utilities & infrastructure, and banking & insurance. The respective increase in their share in GDP, between the pre- and the post-reform years, was from: 4 to 5.5 percent, 24 to 32 percent and 13 to 20 percent.

UNIT 10 EMPLOYMENT AND UNEMPLOYMENT*

Structure

10.0 OBJECTIVES

After reading this unit, you will be able to:

- state the importance of employment and the difficulties in its measurement in a predominantly agrarian economy;
- define the various concepts of employment and unemployment;
- distinguish between the 'workforce participation rate' (WFPR) and the 'labour force participation rate' (LFPR);
- discuss the major features of employment policies pursued in India during the decades of 1950s to 2002;
- describe the changes introduced in employment planning in India during the post-2002 years;
- outline the concept of 'informal economy'; and
- list the social security schemes for unorganised sector workers in India in recent years.

10.1 INTRODUCTION

Employment is important from various points of view. It provides the basic means for earning income to a household from which the financing of its expenditure is facilitated. It offers the means for educating the children, the potential future work force, affording the nation in the process to build up its human capital. By spending on food and nutritional needs, it helps in the

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maintenance of the required health for a productive household. After meeting such basic needs, with the setting aside of a part of the household income as savings, the cumulative savings becomes an important component of nation's investment to aid further the process of economic growth. This generates multiplier benefits in many other sectors of the economy. A nation's economic health is indicated by the extent of domestic savings (expressed as a percent of GDP) and a small rate of 'unemployment'. It is therefore important for an economy to have a periodic assessment of its employment requirements and implement suitable policies required for generating the type of employment required. Since the latter depends on the structure of the economy, particularly in terms of the skill composition of its workforce, an important policy decision rests on the mix of labour-intensive and capital-intensive methods of production practices to be adopted. It is important to note that employment is a resulting factor (i.e. it is a result of appropriate policies pursued) and in its mismatch an economy would face the consequences of either lower growth (with higher unemployment levels) or a situation of 'jobless growth' (i.e. income growth not accompanied by enough employment generation). Both these situations, due to their linkage with the overall macroeconomic stability required, are unhealthy for the economy. Against this background, the present unit deals with the concepts and issues of employment and unemployment as is applicable for a predominantly agricultural or agrarian economy like India. In particular, it deals with the issues of their measurement and the employment polices pursued. Besides these two aspects, we will also study about the concept of 'informal economy' and in its light the importance of strengthening social security provisions for the poor.

10.2 CONCEPTUAL OUTLINE

As we have already seen in Unit 3 of this course BECE-145, 48.9 percent of workforce in India is still dependent on agriculture. Even though this percentage has come down from a much higher level of 60 percent in 2000, it is still high enough to make our economy classified as 'agrarian' in its character. In such a situation, the high percentage of 'agricultural labourers' who would be depending on day-to-day wage employment for subsistence, needs to be provided with alternative employment to sustain themselves during the non-agricultural season. The percentage of 'agricultural labour to total agricultural workers' has increased from 28 percent to 55 percent over the period 1951-2011. In this context, it is important to understand how 'employment' is defined and measured.

10.2.1 Employment

An agricultural worker, or a typical person 'seeking work' (whether in rural or urban areas), needs to be assessed for his employment status by a definitional framework which permits the categorisation into 'worker' or 'non-worker' on a day to day basis. This is because such workers may not get work on all the days and, being dependent on their daily earnings, need to seek and work on as many days in a year as possible. In other words, their employment is not on a 'regular basis' with 'paid holiday' (like those in

regular salaried jobs) and hence every day is a work seeking day for them. Evidently, a classificatory framework to measure such day-to-day employment status, or its complement the unemployed status, needs to be based on different reference periods so as to capture the varying employment statuses of the persons. In India, such 'employment and unemployment surveys' (EUSs) are being conducted by the NSSO (i.e. National Sample Survey Organisation) in a periodicity of once in 5 years since 1972-73. These surveys are also therefore called as quinquennial EUSs. The EUSs adopt four type of approaches viz. (i) the Usual Status (US) approach; (ii) the Usual Principal and Subsidiary Status (UPSS) approach; (iii) the Current Weekly Status (CWS) approach; and (iv) the Current Daily Status (CDS) approach. The approaches relate to two 'reference periods' viz. a long term reference period of 'one year' (for the US and the UPSS approaches) and a shorter 'reference period' of 'one week' (for the CWS and the CDS approaches). The rationale for adopting the two separate reference periods are to: (i) assess the long term employment status; and where this is not the case; (ii) assess the same from a short term perspective. It thus follows that the two week-based approaches provide a basis for assessing the magnitude of 'chronic' employment or unemployment situation as compared to the former two viz. the US and UPSS approaches which indicates a relatively higher/better employment status.

Under the US approach, a person is categorised as employed if he/she reports having been employed for the greater part of the reference year i.e. more than half or 183 days of the year under reference in a single principal activity. If a respondent does not fall into this segment, his status is then ascertained by the UPSS approach. Under this, his principal time of engagement in any one activity (principal activity) is first determined and then further probed to ascertain his secondary activity i.e. the subsidiary activity. The principal activity is one in which he has worked for maximum time and the subsidiary is one in which he has worked for at least 30 days. Thus, based on the three reference periods (viz. one year, one week and each day of the reference week), three different measures of activity status are arrived at. The activity status determined on the basis of the reference period of one year is known as the usual activity status (US) of a person, that determined on the basis of a reference period of one week is known as the current weekly status (CWS) of the person and the activity status determined on the basis of the engagement on each day during the reference week is known as the current daily status (CDS) of the person. In contrast to this approach adopted by the NSSO, the decadal censuses classify the workers as 'main worker' or 'marginal worker' depending on whether the person was working for more than 183 days of the year or not. The census does not further probe in this direction and hence its estimates of workers are comparable with the US approach of the NSSO. Although, to indicate the seasonal character of employment, the typical instance of a rural agricultural worker is chosen in the above description, the classificatory framework is uniformly applied across the rural-urban divide so as to capture the day-to-day employment status on which a large number of persons depend for their daily earnings. The classificatory framework further requires the simultaneous recording of the 'unemployed status' as outlined below.

10.2.2 Unemployment

The EUSs are also called as the 'labour force' surveys. The term 'labour force' comprise of 'employed' plus 'unemployed'. The latter, i.e., the unemployed includes those who are seeking employment and, therefore, available for work. In other words, it excludes those who are not voluntarily willing to work. In all the four approaches i.e. US, UPSS, CWS and CDS, respondents are first categorised as those 'in labour force' and 'out of labour force'. The 'out of labour force' includes students, rentiers, pensioners, recipients of remittances, beggars, infirm or disabled persons, persons too young to work i.e. children and casual labourers not working due to sickness. In view of this, besides the time spent criterion, the receipt of income (either in cash or in kind or notionally), whether explicitly received or not, is implicitly being taken into account for classifying a person as 'worker'. The worker so classified is thus an economically active person. The EUSs provide comprehensive estimates of the 'labour force' for four broad groups of workers as follows:

- number of persons in the labour force as per the 'usual status' by considering the usual principal activity only [hence also called as UPS workers];
- number of persons in the labour force as per the 'usual status' by first considering the 'primary activity' and then their 'subsidiary activity' performed for more than 30 days [called as UPSS workers];
- number of persons in the labour force as per the CWS approach; and
- number of 'person days' in the labour force as per the CDS approach.

Thus, under the US and the UPSS approaches, the activity statuses are determined based on the 'majority time' and 'priority time' criterion i.e. for the 'principal activity' under the US and UPSS, the 'majority time criterion' is used and for the 'subsidiary activity' under the UPSS, the 'priority time criterion' is used. In view of this, the US approach is also connotated as the UPS (usual principal status) approach. For the CWS and CDS approaches, due to the shorter spell of time period considered, only the 'priority criterion' is applied.

For the purpose of employment planning, it is important to focus on the 'growth' in the labour force. Discounting for the backlog of unemployed (i.e. the carry over figure of unemployed from one period to the next), unemployment results when the 'growth rate of labour force' is higher than the 'growth rate in employment'. The labour force in India has marginally declined from 469.2 million in 2004-05 to 468.8 million in 2009-10 (the two major rounds of NSSO for the EUS i.e. the 61st and the 66th rounds for which the data is currently available). Note that rounded without decimal, the number of persons in the labour force has roughly been the same i.e. 469 million during the above period. However, the number of persons unemployed has fallen from 11.3 million in 2005 to 9.8 million in 2010. As a result, the unemployment rate (i.e. unemployed expressed as a percentage of labour force) has decreased from 2.4 percent in 2005 to 2.1 percent in 2010.

Unemployment is thus a phenomenon when 'people who want to work do not find work at a given wage rate' due to lack of availability. It surfaces in many forms like: structural, frictional, cyclical, seasonal, etc. Structural unemployment exists when there are jobs available with people willing to work but are not qualified to do the job. It thus refers to a mismatch in skills caused by 'inadequacies in the educational system' and/or use of inappropriate technology like capital-intensive techniques. Frictional unemployment is caused in periods of economic change like closing of firms, changes in production techniques within the firm, etc. Cyclical unemployment is associated with a downturn in economic activity. Seasonal unemployment refers to fluctuations in the demand and supply conditions from time to time (e.g. post-rabi, pre-kharif times in agriculture). A type of unemployment common in agrarian economies is 'disguised unemployment' which refers to people being employed but with low productivity returns. Broadly, therefore, unemployment in India can be grouped into two types: (i) rural unemployment which is seasonal and disguised under-employment in nature; and (ii) urban unemployment which is structural in nature.

10.2.3 WFPR and LFPR

The WFPR (workforce participation rate) in a country is represented as the proportion of working population to total population. This is also therefore alternatively called as 'worker population ratio' (WPR). The LFPR (labour force participation rate), on the other hand, is defined as the section of 'working plus work-seeking population' in the age-group of 16-64 expressed as a percentage of the total population. It is usually expressed as the number of persons 'employed plus unemployed' per 1000 persons in the NSSO reports. Notice that these rates would differ depending on which class of workers we consider i.e. whether US or UPSS or CWS or CDS. For India, in 2015-16, the LFPR by UPS (i.e. usual principal status) classification, for 'total persons' [i.e. males and females combined] was 50.3. By gender, it was 75 percent for males and 24 percent for females i.e. a huge difference of more than 3 times for males than females. The WFPR for 'total persons' was 48 percent (72 percent for males and 22 percent for females). The unemployment rate was 5 percent for total (by gender, it was 9 percent for females and 4 percent for males). Thus, if the less than one-third of male's LFPR for women points out to social constraints faced by women of at least of a certain order (as there may be women who have voluntarily chosen not to work), the more than two-times the unemployment rate for women than men points out to 'labour market challenges' experienced by women. The disparity between males and females is indeed glaring for which policies to bridge the gender-gap is needed. Relatively, the LFPR for females is higher for the North Eastern and the Southern states and low for the Northern states.

Check Your Progress 1 [answer within the space given in about 50-100 words]

1) In agrarian economies, what is a specific feature of a 'worker' requiring to be taken into account for assessing the employment status?

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2) What are the four approaches on which the EUSs are conducted by NSSO? What is the rationale behind these approaches?

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3) How is the term 'labour force' defined? How is the 'unemployment rate' estimated?

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4) The 2004-05 labour force survey yielded the magnitude of employed and unemployed as 415 million and 13 million respectively. What is the unemployment rate?

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5) Given that the reference period is the same for both the US and UPSS approaches, what is the essential distinction between the two?

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6) Distinguish between LFPR and WFPR. How would you express the glaring differential in terms of LFPR and unemployment rates in India?

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7) State the difference between rural and urban unemployment in broad terms.

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10.3 EMPLOYMENT POLICIES

Given that the employment policies pursued should aim at achieving all types of employment required (i.e. unskilled daily wage employment, employment for semi-skilled and skilled workers, employment for higher skilled and educated workers at different levels), the employment policies followed in India since independence had a broad scope in their implementation. This vision is seen in the thrust of different employment policies and programmes pursued in India right from the initiation of the First Plan period (1951-56) onwards. The efforts of the first few plans were marked with the belief that targeting the overall economic growth rate would suffice to ensure the

generation of required employment at different levels. Thus, during the first two decades of 1950s and 1960s policies implemented were in the direction of efforts focusing on sectors with the potential to generate higher levels of employment. In other words, no specific effort to address the wage-employment needs of very poor households was implemented due to the expected percolation effect from the general or overall economic growth. However, in the late 1970s, with the initiation of the IRDP (Integrated Rural Development Programme) programme in 1978, specific efforts to assist the below poverty level household/persons, by wage-employment opportunities, were launched. In the subsequent decades, many specific employment generation programmes (e.g. TRYSEM, RLEGP, DPAP, etc.) were implemented, mainly as supply side response to combat poverty by generating wage-employment avenues. The programmes also aimed at skill development to enable the setting up of self-employment ventures. However, after more than 50 years of experience, with the situation of poor households further becoming acute (particularly after the implementation of economic reforms in 1991), it was realised that employment generation needs to be made a demand-driven effort to enable the potential workers to seek and obtain a minimum number of days of employment in a year. This intent was given the shape of an Act (NREGA) in 2005. We shall now take a brief look at the various policy initiatives made in this direction in two separate periods viz. 1950s to 2000/2002 and in the post-2000 years.

10.3.1 1950s to 2002

In the early 1950s, unemployment was recognised as a problem which can largely be taken care of by focusing on the achievement of faster economic growth. Particular attention was laid on promotion of labour intensive sectors like small scale industry. A close watch on the estimated magnitude of the backlog of unemployment was kept. For instance, by the end of second FYP (five year plan), 1957-62, the estimated unemployment was placed at 5 million with an expected annual addition of 1.5 to 2 million fresh entrants to the labour force. To meet the requirement of employment for this magnitude of persons, it was envisaged that a target of 5 percent annual growth rate in GDP would be adequate to generate employment to take care of both the backlog and the fresh addition to the labour force. In later years, to aid the process of developing the farming community, two special agencies viz. (i) the small farmers development agency (SFDA) and (ii) the marginal farmers and agricultural labour development agency (MFALDA) were established during the Fourth Plan (1969-74). But, despite the thrust for employment generation and achievement of targeted growth rates in GDP, India could achieve a growth rate of an average 3.5 percent through the 1960s and 1970s. While employment grew by an average of 2 percent per annum, the labour force grew faster at 2.5 percent. As a result, the number of unemployed rose to 10 million by 1973-74. In recognition of the required reorientation, the Fifth Plan (1974-79) introduced special anti-poverty and employment programmes. The two programmes/agencies of SFDA and MFALDA were merged into one comprehensive programme in the name of 'integrated rural development programme' (IRDP) in 1978. A 'national rural employment programme' (NREP) was launched in 1980 with the twin objectives of: (i)

providing wage income to rural poor; and (ii) creating rural infrastructure. This was followed in 1983 with the launch of another programme called the 'rural landless employment guarantee programme' (RLEGP) with the objective of providing 100 days of employment in selected backward areas in 1983. Though such programmes were able to generate substantial amount of 'person days of employment' during any one given year, it did not help to bring down the overall magnitude of unemployment in the country. As a result, the magnitude of unemployment continued to increase making the development strategy of the Seventh Plan (1985-90) to place employment at the centre of its development strategy. Notwithstanding all these thrusts and efforts, even though the decade of the 1980s experienced a relatively faster GDP average annual growth of 5.5 percent, the employment growth was lower at 1.8 percent. Thus, by the end of 1980s, the number of unemployed was estimated to have risen to 14.5 million and to a further 17 million by 1991-92.

A detailed assessment of the employment and unemployment trends was undertaken in the beginning of 1990s by especially factoring-in the likely impact of the process of economic liberalisation introduced in 1991. This assessment became the basis of the employment strategy of the Eighth Plan (1992-97). By taking into account both the openly unemployed plus the severely under-employed, and factoring-in an addition to the labour force of about 35 million during the years 1992-97 and another 36 million during 1997-2002, the Ninth Plan (1997-2002) set a target of achieving a 2.6 to 2.8 percent annual growth in employment. Set with a view to achieving the goal of 'employment for all' by 2002, the target was sought to be internalised in the plan strategy through efforts like: (i) overall and sectoral priorities; (ii) policies and programmes aimed at achieving spatial and sub-sectoral diversification of agriculture; (iii) wasteland development; (iv) support by policy framework for development of rural non-farm sector; (v) small and decentralised industrialised sector; (vi) faster growth of informal and services sectors; etc. Despite these efforts, although the economic growth measured by GDP showed impressive results (GDP growth accelerated to 6.7 percent during 1994-2000), employment growth slowed down from 2.7 percent achieved during 1983-93 to 1.1 percent during 1994-2000. In other words, the assumption that a higher growth rate will result in faster employment growth was not realised and the growth process began to be identified as one of jobless growth i.e. higher GDP growth with lower employment content. The growth was marked by an estimated decline in employment elasticity from 0.52 to 0.16.

10.3.2 Post-2002

After 20 years of its implementation, the IRDP was replaced by the Swarnajayanti Gram Swarojgar Yojana (SGSY) in 1999. As per evaluation reports of IRDP, the programme had led to an increase in income in most cases enabling nearly 15 percent of the assisted households to cross the poverty line income level. Despite this, it was realised a renewed effort is needed to mitigate the distress of day-to-day employment seekers in the country. This led to a major initiative of the post-2000 period by way of the

enactment of the National Rural Employment Guarantee Act (NREGA) in 2005 to guarantee work up to 100 days of employment in a year to every household in selected poorer districts of the country. A national commission was set up to examine the problems of enterprises in the unorganised, informal sector in 2004 and devise policies and programmes for strengthening the capacity of growth of this sector with high employment potential. Both these steps were a particularly important initiative since the bulk of the workforce is in the 'unorganised' or 'informal' sector of the economy and the critically poor, who belong to this sector, require assured employment on daily-wage basis.

The trends in employment in the post-2000 years is mixed. For instance, the estimates based on the 61st round of NSSO suggest an upturn in the growth of employment during 2000-05. The growth rate in employment is estimated to have been at 2.85 percent per annum over the period 2000-2005 (as against just over 1 percent during 1994-2000). However, employment situation fluctuates widely within a short term time frame. For this reason, it is important to study the same over longer time intervals which may be stated as 10+ years. Such an assessment over a long term frame has to be made over the different quinquennial rounds of NSSO as this is the only source which gives data on employment covering the entire economy (spanning over both the organised and the unorganised sectors of the economy). For this reason, data for 3 long term and 3 short term period, over the period 1983-2010, are presented in Table 10.1.

Table 10.1: Growth Rate (%) in Employment and GDP

Period (Long/ Short)	Employment	GDP	EE
1983-93 (Long)	2.0	5.0	0.40
1994-2005 (Long)	1.8	6.3	0.29
1999-2010 (Long)	1.5	7.5	0.20
1988-93 (Short)	2.4	-	-
1994-00 (Short)	1.0	-	-
2005-10 (Short)	0.2	9	0.02

Source: Papola & Sahu, 2012, p-26.

Such a long term assessment for the three sub-periods, juxtaposed with the corresponding growth rates in GDP, shows that the growth rate in GDP is inversely related to growth rate in employment over the long period of 1983-2010. Employment elasticity, measured as the ratio of growth rate in employment to that in GDP, has also consistently declined. The trend in this is supportive of the hypothesis of jobless growth in the Indian economy over

the period 1983-2010. The short-long term comparative profile indicates the sensitivity of growth rate to changes in the short term which averages out when data for long term is considered.

With some difference in its achievement from year-to-year, the results of NREGA's efforts indicate that the Act has succeeded in getting an average number of about 50 days to the participating households which is significantly lower than the maximum provision envisaged at 100 days. However, the programme has contributed to shooting up the average wages in the neighbouring areas of its implementation. The review of MGNREGA (its rechristened name since 2009) suggested many weaknesses like: (i) non-provision of work on demand; (ii) lack of transparency in calculating wages based on schedule of work; (iii) non-payment of minimum wages; (iv) non-payment of wages with the stipulated 15 days of work; (v) use of contractors in spite of prohibition; (vi) non-payment of employment allowance; (vii) non-provision of worksite facilities, etc. Cases of 'fudging' of muster rolls to 'sell' entitlements are also reported. Notwithstanding these instances, the programme has helped create many assets in the areas of: (i) water conservation; (ii) irrigation; (iii) road connectivity; (iv) land development; and 'others'. Of all these, water conservation works has accounted for more than '50 percent' of physical achievements over the five year period of 2007-11. It can therefore be conceded that given its scale of operations amidst poor management capability of village councils (who are supposed to be responsible for its implementation), MGNREGA programmes are better implemented than similar programmes in the past. In 2011, the National Rural Livelihoods Mission (NRLM) was launched as a restructured version of the SGSY.

10.4 INFORMAL ECONOMY

The account on employment generation provided in Section 10.3 above is largely to cater to the wage employment needs of both the rural and the urban poor. They refer to merely the quantitative dimension of employment generation problem. There is also the qualitative dimension in which respect the country has far to go to reach what is described as a 'decent work' level. A distinction can be made in this respect with the term 'wages' as used in the wage employment programmes for 'casual workers' and 'salary' which is given in an assured manner for 'regular workers'. This also brings into picture the dichotomy that exists in the labour markets of agrarian and developing countries like India. The former, i.e., the wage earners subsist in a sector popularly called as the 'informal sector'. Their employment conditions are not governed by any Act or legislation which protects their earnings in times of sickness or post-employment years i.e. old age. On the other hand, a small proportion of workers in the complementary formal or organised sector is covered by at least one such legislative provision and in many cases more than one. The organised or the formal sector of workers is defined as 'those workers working either in public sector organisations or private sector organisations employing more than 10 workers'. As the economy develops, either more and more of informal sector workers can be absorbed in the formal sector, or, the economy may so expand that not only the number of

informal sector workers would increase, but even some of the workers in the formal sector might be classified as 'informal sector workers'. The latter refers to the phenomenon of hiring workers in the formal sector on an informal basis by way of contracting out certain non-core works like cleaning, security, maintenance services, etc. The process has come to be referred to as 'informalisation' of the economy. The proportion of 'formal to informal' (or 'organised to unorganised' as they are called in India) was 7 : 93 for a long time in India. Of late, with the process of shifting in the status from informal to formal, and also on the reverse, estimates of formal to informal workers are placed at 16 : 84. Another dominant segment of workers in India is the 'self-employed workers' who are a major part of the informal workforce. The status of self-employed workers may be considered as better than 'casual labour' but inferior to 'regular workers' or 'employees'. A large number of self-employed workers in India are engaged in own-account farming or small businesses in the non-farm sector. Their condition is prone to change even in the short term, i.e., some of the self-employed workers may be earning so little that they may be forced to move out to take up casual jobs on daily wage basis. The changing structure of the three type of workers i.e. self-employed, regular employees and casual labour over the period 1973-2010 reveals the following: (i) the proportion of regular employees has only marginally increased from 15.4 to 16.6 over the 38 year period (meriting to be regarded as having been in a 'stagnant state'); (ii) the proportion of 'casual labour' has increased from 23 percent to 33 percent over the corresponding period (a phenomenon described as increasing informalisation of the economy); and (iii) the proportion of 'self employed' has come down from 61 percent to 51 percent. The increase (by 10 percent) of the share of 'casual workers' to a corresponding decline of the same proportion by the 'self-employed' workers has been suggested to indicate 'the moving out of own-account workers (another name for self-employed workers) due to low earnings to join the numbers of casual workers'. In other words, this is indicative of a 'deterioration in the quality of employment in aggregate'.

10.4.1 Social Security for Unorganised Workers

Following the recommendation of the National Commission for Enterprises in the Unorganised Sector (NCEUS), a social security Act by the name 'Unorganised Workers Social Security Act' was passed in 2008. The Act stipulates the formulation of suitable welfare schemes for unorganised workers on matters relating to: (i) life and disability cover; (ii) health and maternity benefits; (iii) old age protection; and (iv) any other benefit as may be determined by the central government through the National Social Security Board. Many schemes have since been formulated under these broad heads. These are: (i) Indira Gandhi National Old Age Pension Scheme; (ii) National Family Benefit Scheme; (iii) Janani Suraksha Yojana; (iv) Aam Admi Bima Yojana; (v) Rashtriya Swasthya Bima Yojana; (vi) Janashree Bima Yojna; (vii) Atal Pension Yojana; and (viii) Pradhan Mantri Jeevan Bima Yojana.

Check Your Progress 2 [answer within the space given in about 50-100 words]

1) What was the basic approach followed in the first two FYPs to address the employment situation in India?

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2) In which year special employment generation and anti-poverty programmes were implemented? What was the motivation for this step?

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3) What special efforts were made in the 1990s to tackle the problem of employment and unemployment? Did it bear out in the realised outcomes?

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4) What were the two important initiatives taken during the post-2000 years to mark a departure in the efforts of the government?

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5) Over a longer term time frame, how would you describe as the performance of employment planning in India?

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6) Over a longer time frame of 1973-2010, what has been the trend in respect of 'informalisation' of Indian economy?

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10.5 LET US SUM UP

The problem of employment in India is associated with a large number of unskilled workers who depend on their getting daily wage jobs of casual nature. Such jobs are informal in nature and are available for only some days in a year. To meet their subsistence requirement, the government has implemented many wage employment programmes. Between 1950-2000, these programmes have succeeded in shifting up the BPL status of 15 percent of assisted households. Implemented as supply side response, these were recognised to have made limited impact and to redress this situation, in 2005, a demand driven Act of NREGA was enacted. The programmes implemented under this Act have contributed to ensuring the availability of jobs by a certain number which is in fact far lower than the 100 days of employment guaranteed by the Act. Despite this, and many other gaps identified in the implementation of the Act, the programmes under the Act are credited to have given a sense of stability besides pushing up the average wage levels in the areas of its country-wide implementation. The government has also implemented several social security schemes to assist the workers in the unorganised or informal sector who are vulnerable to employment and income insecurities. The unit has discussed the problem of unemployment and underemployment typical in rural areas. In urban areas the problem is one of structural unemployment which relates to a mismatch in skills.

10.6 SOME USEFUL BOOKS AND REFERENCES FOR FURTHER READING

1) Papola, T. S. (2008). Employment in India's Development Strategy, in S K Bhaumik (Ed.), Reforming Indian Agriculture: Towards Employment Generation and Poverty Alteration, Sage, New Delhi.

2) Papola, T. S. (2008). Employment Challenge and Strategies in India, ILO, Asia-Pacific Working Paper Series, New Delhi. Pp 2-10.

3) Papola and Sahu (2012). Growth and Structure of Employment in India: Long Term and Post-Reform Performance and the Emerging Challenge, ISID, New Delhi.

10.7 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) Since their work is not of a regular nature, their day-to-day disposition needs to be considered.

2) US, UPSS, CWS and CDS. To capture the long term status of employment as well as that of the short term.

3) Labour force is defined as 'employed plus unemployed'. Unemployment rate is then calculated as a percentage of 'unemployed to the labour force'.

4) [13/{415 + 13}]*100 = 3 percent.

5) For the US/UPS approach, the 'majority time criterion' is applied. For the UPSS approach, both the principal activity based on the 'majority time' criterion and the subsidiary activity based on 'priority time' criterion are applied.

6) The denominator for both is total population. For the numerator, for WFPR it is the number of workers and for LFPR it is the labour force.

7) Rural unemployment is disguised or under-employment due to seasonal factors while urban unemployment is structural due to a mismatch in skills.

Check Your Progress 2

1) The basic approach was to set a growth target with the expectation that the benefits of growth would automatically percolate downwards in employment generation.

2) In 1978 by way of IRDP. It was realised that a special effort focused on poor families is required as the trickle down effect anticipated was not really working.

3) Set with the objective of achieving the goal of 'employment for all' by 2002, the effort was to internalise the target in the plan strategy.

However, while the targeted growth rate in employment is 2.6 to 2.8 percent, the actual achievement is 1.1 percent during 1994-2000.

4) Setting up of NCEUS and the enactment of NREGA (10.3.2).

5) Comparative profile of employment and GDP growth rates over 1983-2010 reveals that the two growth profiles are inversely related.

6) The situation has significantly changed from 93 : 7 to 84 : 16. Although this suggests greater formalisation, in reality there is an increase in the proportion of 'casual workers' from 23 to 33 percent.

UNIT 11 GROWTH AND STRUCTURAL CHANGES

Structure

11.0 OBJECTIVES

After reading this unit, you will be able to:

- discuss the theoretical insights on inter-sectoral transfer of workforce;
- compare the trend in inter-sectoral transfer of workforce in India with the theoretical insight on the same;
- present a comparative profile of structural changes between India and developed countries;
- explain the inter-sectoral transfers in GDP shares in a comparative profile of India with other developing Asian countries;
- define the terms 'debt to GDP ratio' and 'junk status debt' and indicate their trends for major economies in the recent years; and
- describe the trends in growth rates of India in the recent years (2010-16) in a comparative profile with the world, other developed countries and BRICS economies.

11.1 INTRODUCTION

The process of economic development is historically associated with structural change in national economies. Structural change implies shifts in the shares of GDP and labour force from primary sector to the secondary and tertiary sector. Structural changes not only characterise economic development but are also

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necessary for sustaining economic growth. Kuznets and others have demonstrated that sustained growth is brought about by changes in sectoral composition of workforce. Changes in the structure of an economy would not only be an outcome of the rate of growth but also depends on the nature of development (e.g. human development, inclusive development).

11.2 INTER-SECTORAL TRANSFER OF WORKFORCE: THEORETICAL INSIGHTS AND TRENDS

Pioneering works by Fisher (1935), Clark (1946), Chenery (1960) and Kuznets (1971) suggest that in the early stages of development, the share of agriculture in both output and employment would be overwhelmingly large. But as industrialisation proceeds, the share of agricultural sector in income falls and that of industrial sector rises. Once countries have sufficiently industrialised and reached an advanced stage of economic development, the share of industry also declines while the share of services/tertiary sector rises. After an economy reaches a sufficiently high level of income, the rate of increase in demand for services increases sharply. This is because the services have a higher income elasticity of demand than for the goods of agricultural and industrial sectors.

Rowthorn and Wells (1987) provide a similar description of the pattern of structural change in respect of employment shift in the present day advanced economies. They found that the modern economic growth is associated with a decline in the share of agriculture in total employment resulting in an increase in both the proportion and number of workers engaged in non-agricultural sectors. The non-agricultural sector includes the industrial sector as well as commercial, government and personal and household service (PHS) sectors. In the first stage of development, called the industrial phase, the share of agriculture in total employment continues to decline and a domestic personal service sector builds up. So long as there is surplus labour employed in agriculture and adequate workers in domestic personal services, non domestic services can increase their share of total employment leaving the share of industry unaffected. But eventually, any significant rise in the share of non-domestic services will be at the expense of the industrial sector. The decline in the share of industry and corresponding increase in the share of services in total employment are referred to by Rowthorn and Wells (1987) as the phase of 'de-industrialisation' in the developed countries.

The importance of service sector activity is highlighted in a study of a sample of 123 non-socialist countries for the period 1970-1989 [Kongsemut, Rebelo and Xie (2001)]. The study notes a decline in the share of the agricultural sector, both in output and employment, as an economy matures. The decline is accompanied by an increase in the share of services in output and employment. Hence, as countries develop, there is an increase in the share of service sector economic activity. As a matter of fact, the service sector constituted 70 percent of world GDP in 2016. Using data on a cross section of developed and developing economies over the period from 1950 to 2005, Eichengreen and Gupta (2009) identify two waves of service sector growth: a first wave as a country moves from 'low' to 'middle' income status and a second wave as it moves from 'middle' to 'high' income status.

In case of India, the share of agriculture in GDP declined from 60 percent in 1950-51 to 24 percent in 2002 and further to 17 percent in 2015. The industrial sector increased its share from 16 percent in 1960 to 25 percent in 2002 but thereafter its

increase slowed down (reaching only 25.8 percent in 2015). On the other hand, the share of services sector increased from 21 percent in 1960 to 51 percent in 2002 and 57 percent in 2015. The difference between India and the developed and emerging economies is that while most of the latter entered the phase of predominance of services sector, graduating sequentially from predominance in agriculture, first to manufacturing and then to services, Indian industry failed to show such a trend. It stagnated in the expansion of its industrial sector but leap frogged to a significant expansion of the services sector. Whether this trend was unique to India or whether it was followed by any other economy too is thus an aspect to which we shall now turn to see.

11.3 COMPARATIVE PROFILE OF STRUCTURAL CHANGES: INDIA VS DEVELOPED COUNTRIES

The historical pattern of structural changes in the presently developed countries have had a similar stage of sectoral structure about 100 to 150 years back as India had at the beginning of its independence. This is to say that most of the developed countries of today, around the year 1900, embarked upon their industrialisation with about 60 percent of GDP accounted for by agriculture. Industry and services contributed about 13 and 27 percent respectively in these economies. Thus, the Indian economy in 1950 was structurally comparable to the economy of the Great Britain in late eighteenth century, of Japan in 1900, of Germany at the beginning of the nineteenth century and United States and Italy of mid-nineteenth century. Similar comparisons hold in respect of the share of labour force in the three leading sectors in which in 1950 India had the relative shares of 73 percent in agriculture, 11 percent in industry and 16 percent in services. This is comparable with the United States of 1841 when it had about 72 percent of its workers in agriculture, 12 percent in industry and 16 percent in services, or Japan of 1880 with the respective shares of employment in the three sectors being 65, 15 and 20 percent. The main features that, therefore, come out from this historical pattern of changes in the economic structure observed in today's developed countries are:

1) all developed countries followed a similar sequence of changes in their economic structure with predominance of agriculture before attaining their developed status;

2) the structure of the economies of most developed countries is similar in the sense that in their developed state each of them has a miniscule share of agriculture, then a slightly higher share of industry and then a much higher share of services in their national output; and

3) the share of each sector's employment, moves in line with the output share of that sector i.e. highest share in employment in the services sector, a medium share in industries and the lowest share in agriculture.

Economic development in India over a period of half a century (1951-2004) experienced the same pattern of structural changes that the developed economies of today underwent over a period ranging backwards by 100 to 150 years. The share of agriculture in GDP declined from around 60 percent in 1950-51 to 17 percent in 2016-17, share of industry increased from 13 to 29 percent and of services increased from 28 to 54 percent over the corresponding period. This pattern of shift has been continuous throughout the period of over half a century but the pace of shift has been faster since 1990-91. The first forty years saw a

decline in the share of agriculture from 60 percent to 35 percent whereas the next 25 years reduced it from 35 to 17 percent. Share of services, on the other hand, increased from 28 to 40 percent in the first 40 years and from 40 to 54 percent in the next 25 years. Share of industry in GDP which had stagnated up to 2003-04 has since picked up to reach the level of 29 percent in 2016-17.

But the most striking feature of the structural change in the Indian economy in recent (two and a half decades) has been the pre-eminence of services sector as the major contributor to growth, raising its share rather sharply in the national output. Industry, particularly manufacturing, which has been observed historically to be the main contributor to growth, at least in the initial period of economic development, has played only a minor role in India's economic growth. While developed countries entered the phase of predominance of services in their economies after going through a major phase of industrialisation where the industry attained a share of 50 percent in the economy, the Indian case is different. India has marched towards a post-industrial 'service economy' without industrialising. Such a swift and a historical transition of an economy, directly from an agricultural to a service economy bypassing industrial development can be explained on two fronts. First, technological advancements over the past few decades have led to increasing demand for services in countries even at a relatively low level of per capita income. Development of communication technologies and movements of people across countries have produced demonstration effect creating similar pattern of demand in developing as well as developed countries leading to larger demand for services. As a result, elasticity of demand for services has become greater than unity even in countries with relatively low per capita income levels. This has led to a rise in the contribution of services in national product. Second, with increasing openness of economies and trade playing significant role in them, changes in demand pattern are met through trade. Trade, thus, has served as a driving force in bringing about this bypassing of industries by services.

Check Your Progress 1 [answer within the space given in about 50-100 words]

1) What is the underlying reason for the theoretical insight on the sectoral transition of income first from the primary to the industry and then in the later stages from the industry to the services sector?

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2) What does the term 'de-industrialisation' used by Rowthorn and Wells mean?

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3) What has been the experience of India in respect of its sectoral share in GDP over the period 1960 to 2015?

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4) What are the common features that could be stated from the historical trends of inter-sectoral shares of GDP and employment for today's developed countries and India?

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5) How would you compare the pace of structural change in India, in terms of inter-sectoral share in GDP, over the years 1951 to 2017?

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11.4 COMPARATIVE PROFILE OF STRUCTURAL CHANGES: INDIA VS OTHER DEVELOPING ASIAN COUNTRIES

To place the performance of the Indian economy in a comparative framework, we can consider economies of South East Asia and East Asia viz. China, Indonesia, Malaysia, Pakistan, Thailand and Republic of Korea. Share of the agricultural sector in their GDP has decreased for all the countries and that for services sector has increased over the period 1960-2015. Important trends in this respect can be stated as follows.

Share of Agricultural Sector in GDP (agriculture-GDP)

- The share of agricultural sector in GDP was higher than 50 percent in 1960 for only two of these seven countries viz. Indonesia (50 percent) and India (55 percent). By 2015, their respective shares in 'agriculture-GDP' had decreased to 14 percent and 17 percent respectively.
- In 1960, China had the lowest share by agriculture to its GDP than all the other countries (30 percent). By 2015, China is one of the three countries whose contribution to GDP had declined to less than 10 percent (8.6 percent); the other two countries being Malaysia (9.1 percent) and Korea (2.7 percent).
- Even by 2002 itself i.e. by the beginning of the millennium, three countries had achieved decline in their share of agriculture-GDP below the 10 percent

mark. These three countries are: Thailand (9 percent), Malaysia (9 percent) and Korea (4 percent). However, Thailand's share of agriculture-GDP increased to 12.4 percent by 2015.

- Malaysia is notable to have maintained its level although there was a marginal increase in its share of agriculture-GDP to 9.1 percent in 2015. China joined this distinctive category by achieving decline in its agriculture-GDP from 15 percent in 2002 to 8.6 percent in 2015. Korea is the only country whose share of agriculture-GDP had declined below the 5 percent mark by 2015 (2.7 percent).

Table 11.1 : Changes in Sectoral Shares (%) in GDP in Some Asian Countries (1960-2015)

Countries	Agriculture			Industry			Services		
	1960	2002	2015	1960	2002	2015	1960	2002	2015
China	30	15	8.6	49	51	39.8	21	34	51.6
Indonesia	50	18	14.3	25	45	46.9	25	38	38.8
Thailand	40	9	12.4	19	43	44.7	41	48	42.9
Malaysia	36	9	9.1	18	47	41.6	46	44	49.3
Korea	37	4	2.7	20	41	39.8	43	55	57.5
Pakistan	46	23	21.8	16	23	23.6	38	54	54.6
India	55	24	17.4	16	25	25.8	29	51	56.9

Source: Compiled from Papola (2012) and WDR database

- The two points made above are specified with the view that the share of agriculture-GDP to fall below 10 percent is a landmark achievement and to achieve a further decline below 5 percent is a even major landmark to achieve.
- In developed countries the share of agriculture-GDP is very low (e.g. US – 1.1 percent in 2015 and UK – 0.6 percent for same year).

Share of Industrial Sector in GDP (industry-GDP)

- Moving on to the share of industry-GDP, China is the sole country whose industry-GDP share was close to 50 percent in 1960 (49 percent). All other countries had less than 20 percent share of industry-GDP in 1960 with the exception of Indonesia (25 percent).
- However, China's share of industry-GDP slid down below 40 percent mark by 2015 (39.8 percent). This is a steep reduction although a reduction in industry-GDP over 2002-15 is observed for Malaysia and Korea too.
- Korea had increased its industry-GDP from 20 percent in 1960 to 41 percent in 2002 but since then there has been a slight decline to 39.8 percent in 2015.
- Share of industry-GDP was similar for three countries viz. Indonesia, Thailand and Malaysia. This is in the sense all three had their industry-GDP share closer to the 20 percent range in 1960 (Indonesia, 25 percent; Thailand, 19 percent; Malaysia, 18 percent). By 2002, all these three

countries along with Korea had crossed the mark of 40 percent in their industry-GDP share (Korea, 41 percent; Thailand, 43 percent; Indonesia, 45 percent and Malaysia 47 percent). More notably, over the next 10+ years i.e. by 2015, Indonesia and Thailand had marginally increased their industry-GDP share (to 47 percent and 45 percent respectively), whereas, for Malaysia and Korea there was a decline in this respect (to 41.6 percent and 39.8 percent respectively).

- Both India and Pakistan are outliers in respect of their industry-GDP share i.e. both had the same share of 16 percent in 1960 and both had not only marginally improved their industry-GDP share by 2002 (to 25 and 23 percent respectively) but both demonstrated a stagnancy with a very marginal increase in their industry-GDP share over 2002 to 2015 (to 25.8 and 23.6 percent respectively).

- Over 2002 to 2015, the stagnancy observed in industry-GDP share in India and Pakistan had also set-in in Korea, Indonesia and Thailand with varying degrees marginally differing from each other (Table 11.1). However, the structural shift or change is marked for an expansion of industry with a corresponding decline in agriculture-GDP (i.e. as the historical trend revealed for the developed economies and also as the theoretical insights had outlined) more markedly for all countries except India and Pakistan. The expansion of industry is not to the extent as in other five economies for these two countries.

Share of Services Sector in GDP (service-GDP)

- The highest shift over the period 1960-2015 in the service-GDP is for China (30.6 percent) followed by India (27.9 percent) i.e. 31 percent and 28 percent rounded to the nearest digit.

- Malaysia is an outlier in the sense that it had reached its peak level in 1960 itself in its service-GDP (46 percent) and over the next 55 year period its service-GDP share has increased by the smallest measure among all these seven economics (i.e. 3.3 percent).

- Thailand and Korea are the other two economies whose service-GDP share was higher than 40 percent in 1960. Korea has seen an increase of 14.5 percent since then up to 2015 whereas Thailand had increased its service-GDP share by 7 percent up to 2002 but has since experienced a steep decline to 43 percent in 2015. This means over the long term horizon of 1960-2015, Thailand's increase in service-GDP is the lowest i.e. a mere 2 percent.

- Pakistan's service-GDP had increased by 16 percent over the period 1960-2002 to reach the level of 54 percent but has since shown stagnation – its share in service-GDP having risen only by 0.6 percent.

- India experienced the highest increase in service-GDP over the period 1960-2002 i.e. by 22 percent. Its increase in this respect over the period 2002-15 has been modest at 5.9 percent (i.e. 6 percent rounded).

Employment Shift over 1991-2017

- Shift of labour force from agriculture has been slower than that in GDP in all countries. Over the period 1991-2017, China has managed to reduce their agricultural sector employment by half) from 55 to 27 percent [Table 11.2].

During this period, India has managed to reduce it by one-third (from 63 to 44 percent). Japan stands out as the country employing least workforce in agriculture (single digit for both time points).

- Share of industry in labour force shows that four countries viz. Malaysia, Sri Lanka, Philippines and Pakistan have experienced a period of stagnation for employment absorption in their industries. In contrast, India has increased its share of industrial employment from 15 to 25 percent. With this percentage increase, India is the second among these 10 countries (first is Vietnam where there is a 14 percent increase) to have created industrial employment of this magnitude as all other countries have done less than this [e.g. China, 6%; Indonesia, 8%].
- What distinguishes India from other countries of this group is the difference in the absorption of employment by the services sector. In all other countries, the share of services sector has increased more or less in tune with that of GDP. However, in India the employment share has shown much smaller increase that the shift in the GDP share to the services sector. This means, whereas the services sector is the major economic sector in terms of its contribution to GDP, it is a minor contributor to employment.
- In services sector, all the 10 countries without exception have had their employment share increased. However, countries which have managed to achieve an increase of more than 15 percent over this period (1991-2017) are: China (23 percent), Thailand (18 percent), Vietnam (17 percent) and Malaysia (15 percent). Indonesia and Japan have increased their services sector employment by 13 and 12 percent respectively. India, with a 9 percent increase in this respect, is among the three countries which have managed to create additional employment avenues in the services sector of the lowest order [the other two countries in this bracket being Philippines (8 percent) and Pakistan (5 percent).

Table 11.2: Share of Employment by Major Sectors (Percentage to Total Employment)

Major Asian Economies	Agriculture		Industry		Services	
	1991	2017	1991	2017	1991	2017
China	55	27	19	24	26	49
India	63	44	15	25	22	31
Indonesia	53	31	14	22	33	46
Japan	7	4	35	27	58	70
Malaysia	26	12	27	27	46	61
Pakistan	48	42	20	20	33	38
Philippines	43	28	15	16	42	50
Sri Lanka	42	27	26	26	32	47
Thailand	60	34	15	23	25	43
Vietnam	73	42	9	23	18	35

Source: ILO [http://www.ilo.org/global/statistics-and-databases]

Check Your Progress 2 [answer within the space given in about 50-100 words]

1) Which are the only two countries which had its agriculture-GDP share more than 50 percent in 1960? What are their current levels in this regard (in 2015)?

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2) Which country had the lowest share of all others in 1960 in agriculture-GDP? What is its share in 2015? Which are the other two countries which have also achieved this level in 2015?

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3) In what respects, Korea stands out as unique among all these 7 countries in comparison?

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4) In respect of industry-GDP, what is notable about China?

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5) Why are India and Pakistan outliers in respect of their industry-GDP?

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6) Which are the two countries that have experienced the highest shift in services-GDP over the period 1960-2015?

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7) How does Thailand stand out in respect of its Services-GDP?

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8) What is remarkable about the Indian services sector in comparison to other economies?

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11.5 COMPARATIVE PROFILE OF STRUCTURAL CHANGES: INDIA VS DEVELOPED AND BRICS ECONOMIES

Structural change in economies would indirectly derive from the growth rates experienced at the overall economy level. Both the growth rates achieved and the resulting structural changes are a reflection of overall policy and institutional insights. From this point of view, although not directly, taking a look at the comparative profile of overall economic growth rates is useful. A comparative profile of this scenario for a mix of countries comprising of developed and the developing or emerging economies is presented in Table 11.3. Major features that flow from the figures therein are the following.

Table 11.3: Comparative Growth Profiles for Developed and BRICS Economics (%): 2010 to 2016

Year	World	USA	Euro-zone	Germany	Japan	Brazil	Russia	India	China	South Africa
2010	5.2	3.0	1.8	3.6	4.4	7.5	4.5	9.9	10.4	5.4
2011	3.8	1.8	1.5	3.0	-0.9	3.9	4.3	7.4	9.2	4.4
2012	2.4	2.2	-0.9	0.5	1.5	1.9	3.5	5.6	7.8	3.8
2013	2.6	1.7	-0.3	0.5	2.0	3.0	1.3	6.4	7.8	4.8
2014	2.8	2.3	1.2	1.6	0.4	0.5	0.7	7.5	7.3	4.6
2015	2.7	2.6	1.5	1.7	1.2	-3.8	-2.8	8.0	6.9	3.3
2016	2.4	1.6	1.8	1.9	0.9	-3.6	-0.2	7.1	6.7	1.2

Source: World Bank database

- The global economic growth rate has halved over the short term period of 2010 to 2016 from 5.2 percent in 2010 to 2.4 percent in 2016 (Table 11.3). In particular, the US economy's growth rate has also slid down from 3 percent in 2010 to 1.6 percent in 2016. A similar declining growth trend is noticed for Germany (from –3.6 percent in 2010 to 1.9 percent in 2016), Japan (from 4.4 percent in 2010 to 0.9 percent in 2016) and South Africa (from 5.4 percent in 2010 to –1.2 percent in 2016)

- Economies of Euro-zone, Japan, Brazil and Russia have experienced negative growth rates for some year or the other during the period 2010-16. In particular, Brazil's economy has slumped from a high of 7.5 percent growth in 2010 to a low of –3.6 percent in 2016 and of Russia from 4.5 percent growth in 2010 to –0.2 percent in 2016.

- India and China are two countries which stand apart in this regard. Both the countries have experienced declining growth performance in their economies, in tune with the global trend, but from a high growth rate in 2010 to a lower growth rate in 2016. While China's growth rate has declined from 10.4 percent in 2010 to 6.7 percent in 2016, India's growth rate has declined from 9.9 percent in 2010 to 7.1 percent in 2016.

A number of downside risks continue to linger on the horizon. These include: (i) continued sluggishness of the global economy, (ii) possible capital outflows consequent upon the recent increase in the interest rate in USA, (iii) a possible reversal of the global oil price trends, (iv) inadequate monsoon rainfall and financial market vulnerabilities. Besides recession in some economies as noted above, a growing trend of concern in many economies has been the increasing debt-to-GDP (DTG) ratio. For instance, China experienced a high DTG ratio of 250 percent. Likewise, as per two rating agencies, Brazil's DTG has been demoted to a junk status.

11.6 LET US SUM UP

Structural change during the development status is theoretically expected to result from agricultural to industry and then from industry to services sectors. Such a change is a reflection of rising incomes and better living conditions. Many developed economies have experienced this type of transition in the course of their development. However, some emerging economies like India have reached a higher share of services sector in GDP with their industrial GDP share having remained low at around 25 to 30 percent. This is in contrast to some other economies like China, Indonesia, Thailand, Malaysia and Korea all of which have a stronger industrial base of around 40 to 50 percent. One of the reasons for such a skip over of the industrial sector's expansion i.e. directly to services sector dominated share in the GDP, is the impact of 'international trade'. This is also aided by the developments in the communication technologies and people's movement across countries. There is a declining trend in the overall economic growth rates experienced by many developed countries with many advanced economies like US, Germany and South Africa registering half of their growth rates in more recent years like 2016 as compared to what they achieved in 2010. India and China are two countries standing out as exceptions to this declining trend. An yet another striking feature of services sector's dominance in countries like India is its relative low employment absorption potential.

11.7 SOME USEFUL BOOKS

1) Kuznets, S (1966). *Modern Economic Growth: Rates, Structure and Spread*, Oxford and IBH Publishing Co.

2) Kuznets, S. (1971). *Economic Growth of Nations: Total Output and Production Structure*, Cambridge: Harvard University Press.

3) Papola, T. S. (2008). Emerging Pattern of Indian Economy, *The Indian Economic Journal*. Vol.54, No.1, April –June.

4) Papola, T. S. (2005). 'Structural Changes in the Indian Economy: Some Implications of the Emerging Pattern', *Artha Beekshan*, Vol. 13, No. 4,

5) Rakshit, Mihir (2007). Services Led Growth: The Indian Experience, Artha Beekshan , Vol.15, No. 4.

11.8 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) This is because of the reason that the services have a higher income elasticity of demand as compared to the goods of primary and industrial sectors.

2) The phrase is referred to in the sense that increase in the share of employment, after a certain phase of industrial development, will be solely at the cost of industrial sector's employment share i.e. decline in the share of industry is matched by the corresponding increase in the share of service sector's employment.

3) Share of agriculture in GDP decreased substantially from a high of 60 percent in 1951 to 17 percent in 2015. However, while the share of industry's income in GDP rose from 16 percent to 25 percent over 1960 to 2002 but thereafter nearly stagnated (by reaching up to only 25.8 percent by 2015). For the services sector the increase was significant: from 21 percent in 1960 to 57 percent in 2015.

4) These are: (i) in GDP the developed countries had a predominant contribution from agriculture (between 65 to 72 percent) followed by industry (12 to 15 percent) and services (16 to 20 percent. For other common features, see Section 11.3 and answer.

5) The pace of change has quickened since 1991. Agricultural share decreased from 60 percent to 35 percent up to 1991 (i.e. a decline of 25 percent) but by 2017, it had further fallen to 17 percent (i.e. by another 18 percent since 1991). Share of industry which had increased by a mere 0.8 percent, from 25 to 25.8 percent over the period 2002 to 2015, has suddenly improved its share to touch 29 percent in 2017. Share of services sector has increased from 28 to 54 percent over the period 1951-2017.

Check Your Progress 2

1) Indonesia and India. 14 percent and 17 percent respectively.

2) China (30 percent); 9 percent in 2015. Korea and Malaysia are the other two

countries (3 and 9 percents respectively). In fact, Malaysia and Korea had achieved this level of less than 10 percent share in 2002 itself. But Malaysia's share in 2015 in its agriculture-GDP has increased to 12 percent.

3) Korea is a unique case which has most exactly followed the theoretical insights indicated by literature. Not only its agriculture-GDP is the lowest and below 5 percent level, a distinction it had achieved in 2002, its industry-GDP had doubled from 20 percent in 1960 to 41 percent in 2002 – a level it has nearly consistently maintained up to 2015. Further, its rising services-GDP is consistent (i.e. without any sign of decline or stagnancy as seen in case of other countries).

4) First, it is the only country which had the highest and close to 50 percent share even in 1960 (49 percent). Second, whereas in all countries there is an increase in industry-GDP, China is the only country where there has been a steep decline (from 51 to 40 percent over 2002-15).

5) They are the two countries with the lowest of industry-GDP. Secondly, they have nearly stagnated in this respect over the period 2002-15.

6) China and India (31 percent and 28 percent).

7) It had one of the highest services-GDP in 1960 itself (i.e. more than 40 percent). And over the long term time frame of 1960-2015, its services-GDP has increased by a mere 2 percent.

8) The shift of services-GDP is higher. Corresponding shift in employment is smaller.

UNIT 12 SOCIAL AND ECONOMIC DEVELOPMENT OF INDIA *

Structure

12.0 OBJECTIVES

After reading this unit, you will be able to:

- state the limitations of using 'per capita income' as a basis for inter-country comparative profile;
- specify a framework for drawing a comparative profile of countries for their social and economic development;
- outline the 'economic dimension' of India's growth profile with other countries over a long term time frame of 1961-2018;
- highlight the principal differences in the economic growth profiles of India with those of Sri Lanka and China over the period 1961-2018;
- present an account of the 'deficits of development' in India in a comparative profile with other economies;
- contrast the social sector development in India with other economies; and
- write a note on 'comprehensive indices of development'.

* Prof. D.N. Reddy, Osmania University

12.1 INTRODUCTION

Ever since the end of the Second World War, and the gradual end of colonialism in most of the newly independent countries including India, 'development' is considered as most important for achieving better living conditions for people. Development was initially conceptualised as achievement of higher levels of GDP and GDP per capita. For this, the targets for achieving development were set in terms of growth rates in national income. The levels of development of countries were measured in terms of the levels of per capita incomes. Measuring development in per capita income terms helped in: (i) differentiating countries as developed and developing, and (ii) identifying the financial assistance needed for developing countries by multilateral institutions like International Monetary Fund and the World Bank.

While the measurement of countries' development in per capita terms continues, questions have been raised about the adequacy of considering the level of per capita income to reflect the living condition of people. It is rightly argued that per capita income is only an average and does not reflect the distribution of income. This criticism is well reflected in cases of those countries which enjoy high per capita income but lack basic achievements of development in terms of capabilities and freedom. Hence, per capita income is only a means for better living but not adequate for development. For development, it necessarily should be seen in conjunction with population size and gender equality level. This argument has given a fillip to the concept of development from a multidimensional perspective. In other words, a measure of development should consider many dimensions of socio-economic significance. Such measures, compositely defined and constructed, should then be taken as a basis for making inter-country comparisons. In the immediate foregoing section of the present unit, a broad framework for making a comparison of countries for assessing their levels of social and economic development is outlined. Based on this framework, the subsequent sections present a comparative profile of India's development with those of other select economies. The basis on which this sample of select economies is chosen is also outlined in the section below.

12.2 FRAMEWORK FOR INTERNATIONAL COMPARISON

The factors which need to be considered are: (i) basic 'economic dimensions' like size of population, GDP, per capita income, growth in GDP, share of agriculture in total employment and GDP; (ii) deficits of economic development in terms of levels of poverty, hunger, inequality and unemployment; (iii) progress in social dimensions of development like education, health and gender development status; and based on all these three (iv) a comprehensive index or indices of social progress like human development. We proceed in the subsequent sections in this very order making in each a comparative assessment of India's status with those of other select economies. For making a selection of countries for comparison, we keep one country from each of the five continents restricted to Asia, Africa, North

America, South America and Europe. Specifically, we include the following countries cutting across the developing and the developed divide: India, Bangladesh, Nepal, Pakistan and Sri Lanka (from South Asia), China from East Asia, Brazil from Latin America, South Africa (from Africa), USA (from North America) and United Kingdom (from Europe). We limit our comparative profile to these ten countries here. Together, the ten countries account for more than half (51 percent) of world's population. In particular, China and India taken together account for more than one-third (36.6 percent) of world population. Hence, whatever development could be achieved in these two countries will have significant impact for global human progress.

The World Bank for its differential lending purposes groups countries into four categories viz. (i) low-income countries with per capita income of less than $ 1025 (2018), (ii) lower middle-income countries with per capita income of $1026-$3995, (iii) upper middle-income countries with $3996-$12375 and (iv) high-income countries with per capita income of $12376 or more. According to this classification, out of the ten countries kept in our sample, the four South Asian countries, except Sri Lanka (which qualifies as a upper middle income country), are in the low middle-income group. Along with Sri Lanka, China, South Africa, and Brazil are also in the upper middle-income group. USA and UK have always been in the high-income group. You must note that, over time, positions of countries change within the four groups and hence it is necessary to keep oneself updated by referring to the World Bank's publication on Development Indicators. For instance, Sri Lanka has been a recent entrant into the upper middle income group while Nepal has recently moved up from low-income to lower middle income group.

12.3 ECONOMIC DIMENSION

The Asian countries, except China, during this long period of 1961-2011, were languishing in a relatively low growth rate scenario (defined as below 4 percent average annual growth in GDP) [Table 12.1]. Their growth rates varied from a low of 1.4 percent for Nepal to a high of 3.3 percent for Sri Lanka. China was an exception which recorded the highest growth rate of 6.8 percent averaged over the long term period of 50 years. But in recent years, in 2018, all these countries, except Sri Lanka, have moved up to high growth trajectory (defined as 'above 5 percent'). Typically, the developed countries are notable for their low growth rate in the range of 0-2 percent. This is because developed countries have better established (i.e. formal) structural base. This contributes to many factors of production and distribution being at a state of near equilibrium from where further ICOR (incremental capital output ratio) would be comparatively less than that in developing countries. Further, developed countries have large GDPs relative to their population and labour force. All these factors are the opposite in case of developing countries where technological infusion has a tendency to yield higher ICOR return.

Table 12.1: Economic Dimension of Development

Country	Population 2018 (millions)	Per Capita GDP 2018 (Current US $)	Average Annual Growth Rate of GDP: 1961-2011	Growth Rate 2018	Share of Agriculture in GDP (%) 2018	Share of Agriculture in Total Employment 2018 (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
India	1352	2010	3.1	6.8	14.6	43
Bangladesh	161	1698	1.37	7.9	13.1	40
Nepal	28	1033	1.4	6.7	25.3	70
Pakistan	212	1482	2.6	5.8	22.9	41
Sri Lanka	21	4102	3.3	3.2	7.9	26
China	1392	9770	6.8	6.6	7.2	27
South Africa	57	6374	NA	0.8	2.2	5
Brazil	209	8920	NA	1.1	4.4	9
USA	327	62795	NA	2.9	0.9	1
UK	66	42944	NA	1.4	0.6	1

Source: 1. Except for Col. 4 (growth rate for 1961-2011), World Bank Development Indicators.
2. For Col. 4: Dreze and Sen (2013).

12.3.1 Per Capita GDP

In terms of per capita GDP, among the four South Asian countries, India's position is second ($2010 in 2018). Sri Lanka's per capita GDP is nearly twice that of India ($4102). But China's per capita GDP is one of the highest: it is more than twice that of Sri Lanka's ($9770). The per capita GDP of the two high income countries in our sample is many times more than even China (4 times higher for UK and 6 times higher for USA). The PCI of South Africa and Brazil are lower than that of China but higher than that of Sri Lanka ($6374 and $8920 respectively).

12.3.2 Structural Dimension

Progressing towards higher levels of income would involve structural transformation from the predominantly agrarian stage (defined as more than 40 percent of workforce engaged in agriculture) to that in manufacturing and services. From this yardstick, four countries viz. India, Bangladesh, Nepal and Pakistan have workforce in agriculture in the range of 40-70 percent (Bangladesh 40 percent and Nepal 70 percent). Relatively higher dependence on agriculture for income and employment reflect lower level of development. This is because the per capita productivity (defined as the ratio of income to workforce) pulls down the overall economy's PCI due to the dependency of higher proportion of workforce (with a lower share in its income/GDP) on agriculture. The above four countries are having their GDP share from agriculture high (in the range of 10-25

percent: from 13 percent in Bangladesh to 25 percent in Nepal). With structural transformation from agriculture to industries, developed countries tend to have not only the lowest share of their workforce in agriculture but the sector's contribution to GDP also become lowest. Both USA and UK are notable in this respect with just 1 percent of their workforce depending on agriculture with their GDP share too at less than 1 percent.

Finally, it is noteworthy to highlight the following three principal differences in the economic growth profiles of India with Sri Lanka and China (the two neighbours who have progressed impressively, one with as large a population as India and the other with much smaller population base: only 21 million in 2018) over the long term period of 1961-2018.

- India and Sri Lanka have both experienced nearly equal GDP growth of just above 3 percent average annual but owing to a huge difference in the population dimension, the per capita GDP of Sri Lanka is twice that of India.
- Although China's growth rate was twice that of India over the nearly 60 year time frame, in 2018, the two country's growth rate was nearly equal (6.8 percent for India and 6.6 percent for China). This is revealing of the fact that even though China took a giant leap in economic growth, India too has caught up with China in more recent years.
- The employment share of agriculture in China and Sri Lanka are both comparatively lower and nearly equal (27 and 26 percent in 2018 respectively). Indian comparative share of agriculture employment is still much higher (43 percent in 2018).

Check Your Progress 1 [answer within the space given in about 50-100 words]

1) Why is PCI considered limiting particularly for international comparative purposes? Nevertheless, how is still used for international comparison purpose?

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2) Specify an analytical framework for drawing a comparative profile of India with other economies?

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3) What variables are considered for an analysis of 'economic dimension' of development? How does India figure in this respect in a comparative profile with other countries?

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4) In what respects comparison between India, Sri Lanka and China stand out?

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5) Why is Bangladesh and Nepal notable for their development achieved?

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6) What is meant by 'structural dimension of development'? Why is Sri Lanka notable in this respect?

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12.4 DEFICITS OF DEVELOPMENT

In the post-Second World War era, many developing countries launched focussed strategy of planned economic growth. It yielded results of relatively higher growth rates in some countries but not in India till the late 1990s. By 1970s, it was realised that high rates of growth in many of these countries did not improve the condition of living of large majority of people. In other words, in spite of relatively higher growth rates, not only high levels of poverty and unemployment persisted but income inequalities too increased. There was an increasing criticism on an obsession for growth with a focus only on increasing the GDP without addressing the issue of its reach to the lower segments of the population. This called for attention to 'deficits of development' in terms of poverty, unemployment and inequality. Because of this demand, there was a focussed

attention on a direct effort on poverty alleviation programmes and employment generation strategies.

12.4.1 Poverty

For measuring poverty, every country has evolved a poverty-line based on norms of per capita calorie consumption and consumption of certain essential items like fuel, clothing and transport. Further, in order to have a common base for inter-country comparison, the concept of 'per capita consumption of Purchasing Power Parity (PPP)' is evolved. The norm for PPP is changed to account for rise in prices with its present level fixed at $1.90 per day. Although there has been a decline in the poverty levels over time, still, almost one-fourth of the population in South Asian countries (except Sri Lanka) have their poverty ratios above the 20 percent level (Table 12.2). Since large populations amount to larger number of persons below the poverty level, in absolute terms, as many as 280 million people (in 2011) were below poverty level in India. It is important to note that poverty has a inverse relationship to per capita income (PCI) i.e. higher the PCI lower is the poverty level. For instance, China with a PCI of 9770$, has the lowest poverty ratio of 3.1 percent, Sri Lanka with a PCI of 4102$, has the next lowest poverty ratio of 4.1 percent, etc. Typically, India, Bangladesh and Pakistan have more than one-fifth (20 percent) of their population with their PCI also being low in the range of 1000-2000 dollars. South Africa is an extreme case where even though its PCI is higher at 6374$, its poverty ratio is also very high at 56 percent (in 2014).

Table 12.2: Deficits of Economic Development

Country	Poverty Ratio (% Below PPP 1.9 $ per day)	Unemployment Rate (% of Labour force – 2018)	Inequality (Gini Index) 2018
(1)	(2)	(3)	(4)
India	21.9 (2011)	6.5*	40.8
Bangladesh	24.8 (2016)	4.3	46.4
Nepal	25.2 (2010)	1.2	32.8**
Pakistan	24.3 (2015)	3.0	32.1
Sri Lanka	4.1 (2016)	4.3	48.9
China	3.1 (2017)	4.4	48.8
South Africa	55.5 (2014)	27.3	69.6
Brazil	NA	12.2	52.5
USA	NA	3.9	39.0
UK	NA	3.8	32.0

*India's unemployment – PLFS 2017-18,

**World Bank Database

Source: 1. For Poverty Rate and Unemployment: World Bank Database.

2. For inequality, World Inequality Database, World Institute for Economic Development and Research (WIDER).

12.4.2 Unemployment

Interpreting unemployment across countries needs caution. This is because of considerable informal sector's presence in developing countries since poor cannot afford to be unemployed. They would accept any work regardless of level of wages and duration of employment. Thus, they end up reporting employed even though they are often underemployed at very low wages. Therefore, in relatively less developed countries like India where close to 90 percent of employment is informal, unemployment is often reported very low (6.5 percent in 2018: Table 12.2). The higher rates of unemployment in South Africa (27 percent) and Brazil (12 percent) are due to higher proportion of formal employment in which scope for under-employment is less i.e. either one gets formal employment or one is unemployed. In contrast, in all developing economies, there is both high proportion of disguised unemployment in informal sector and high proportion of open unemployment due to lack of jobs in formal sector.

12.4.3 Inequality

Although many developing countries, including India, started their development strategy with an emphasis on growth with distributive justice, over the years there has been increase in inequality. It is ironical but true that when these economies were on low growth path, inequality was very low. But as they moved to higher growth trajectory, inequality also started increasing. Such high degree of inequality is observed to be disconcerting, so much so that it is now seen as a major development challenge. Conventionally, inequality in income distribution has been expressed as a Gini Ratio (i.e. a percent obtained by multiplying the Gini coefficient by 100). But since data on income itself is hard to obtain in developing economies (again due to the large scale presence of informal employment), estimation of income is indirectly made on the basis of household consumption surveys. Inequality estimates based on consumption data underestimates inequality. However, more recently, due to the initiative of the World Inequality Database (WID), data on income is generated for all countries based on novel methods employed to make the data comparable between countries. The data on inequality by WID (Table 12.2) shows that among the South Asian developing countries, inequality ranges from 32 percent in Pakistan to 49 percent in both China and Sri Lanka. Further, with rise in incomes, there is a steep increase in inequality in developing countries. This is also true of South Africa which has the highest Gini Index of 70 percent (one of the highest in the world next only to some middle-east countries). Another example is Sri Lanka which, though figures much better in most of the development indicators, has the highest inequality Index of 49 percent (same as China) in South Asia. For developed countries, it ranges from 32 percent in UK to 39 percent in USA, a level comparable to South Asian economies of Nepal, Pakistan and India.

Check Your Progress 2 [answer within the space given in about 50-100 words]

1) What is meant by 'deficits of development'?

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2) Is it true that with increase in PCI, poverty too comes down? Can there be an exception to this inverse relationship? Give examples.

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3) Why is measurement of unemployment an issue in developing countries?

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4) What efforts have been made to generate data on income which is comparable across countries? What does such data reveal for inequality across countries?

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5) What is the extent of inequality in developed countries? How does this compare with those in the developing countries?

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12.5 SOCIAL DIMENSIONS OF DEVELOPMENT

Ever since questions were raised about the limitations of the per capita income as a measure of development, there has been an effort to expand the domain of development. The deficits in development, like persistence of poverty and unemployment, are seen as consequence of single-minded attention to growth of GDP and GDP per capita, to the neglect of social dimensions like education and health. In the last two decades, there has been a growing attention paid to education and health dimensions of development. This is mainly owing to the realisation that improvements in educational and health status are of prime importance in increasing the capabilities of people. Improved capabilities, in turn, help in increasing the productive performance of people and better utilise the various goods and services. In this section, we shall examine the status of the countries in terms of indicators of education and health.

12.5.1 Educational Status

Conventionally, 'adult literacy rate' used to be taken as an indicator of educational status. This was expected to reveal historical neglect or achievement in the educational status of people. But currently, educational achievements are discussed in terms of 'access, equity and quality' of education. In keeping with this trend, the focus here is kept on 'access to different levels of education'. On quality, the indicator of 'learning poverty' as defined by World Bank (WB) is considered. 'Learning poverty' is defined by WB as 'being unable to read and understand a short, age appropriate text by age 10'. This index has focus on early childhood and school education.

Adult literacy ratio gives a broad indicator of educational status of a country. Its relative lower levels indicate the inadequate attention to education. Adult literacy rate in India (74%) is better than Pakistan (59%) and Nepal (68%) but other countries [Sri Lanka (92%), South Africa (87%) and Brazil (93%), China (97%)] are far ahead in this respect [Table 12.3]. In terms of 'access to school education', access to primary education being almost 100 percent in most of the countries, the 'gross enrolment rate (GER) in secondary education' is considered here. In this respect, among the countries of South Asia, except Sri Lanka, the other four countries still have a little over one-fourth of the relevant age group 'out of school'. Pakistan, with a GER in secondary education of 43 percent is behind the other countries in this region.

Table 12.3: Status of Education Development in a Comparative Perspective (2018/2019)

Country	Adult Literacy Rate (%)	Gross Enrolment in Secondary Education	Gross Enrolment in Tertiary Education	Mean Years of School (for 25 + pop)	% of Pop. Completed Lower Secondary Education	Public Expenditure on Education (% to GDP)	Quality of School Education (Learning Poverty)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
India	74	73	28	6.5	37.6	3.8	54.8
Bangladesh	74	73	21	6.4	43.6	2.0	57.2
Nepal	68	74	12	3.5	26.9	5.2	NA
Pakistan	59	43	9	5.0	36.4	2.9	74.5
Sri Lanka	92	98	20	10.9	81.6	2.8	14.4
China	97	88	51	10.6	65.3	1.9	18.2
South Africa	87	105	22	10.2	72.3	6.2	79.8
Brazil	93	101	51	8.0	60.0	6.2	48.4
USA	-	99	88	13.8	96.0	5.0	7.9
UK	-	126	60	13.2	99.7	5.5	3.4

Source: World Bank Database on World Development Indicators.

There is a growing concern that with increasing bias of future jobs towards higher skill capabilities, the minimum requirement of education for entry into employment would be secondary school completion. In this respect, Sri Lanka with 98 percent enrolment in secondary education stands out as the best achiever in South Asia. However, there are two dimensions to school education. On is enrolment and the other is 'completion of the school education at different levels'. From this angle, the 'mean years of schooling' for the population in the age group of 25 years or more is lowest in Nepal (3.5 years). This is followed by Pakistan (5 years), Bangladesh (6.4 years), India (6.5 years), Brazil (8 years), China (10.6 years) and Sri Lanka (10.9 years). In developed countries, it is still higher (UK, 13.2 years; USA, 13.8 years). When we take the gross enrolment rate (GER) in tertiary education, India (28%) scores better than other South Asian countries including Sri Lanka (20). But it is much behind China and Brazil (51% for both). This is much higher for UK (60%) and USA (88%). There is a widely shared view that in most of the developing countries public expenditure on education is much lower than the minimum required (considered 6% of GDP). Interestingly, this is indeed so not only in most of South Asia and China (1.9%) but even in USA (5%) and UK (5.5%). This may be because in high-income countries much of higher education is privatised. Further, the GDP of countries like USA and China being many more trillions of dollars higher than that of India, even smaller percentages for these countries also would be higher in absolute terms.

On quality of education, we use the estimates for 'learning poverty'. Since this index lays emphasis on reading skills, in a way it focuses on foundational learning in many subjects. It is measured as a combination of 'out of school children' and the 'proportion of children in school who have not achieved minimum reading proficiency'. This therefore is a measure of 'quality of school education'. For India and Bangladesh the learning poverty ratios are 55 and 57 percents respectively. This means that close to two-thirds of children in these two countries are not able to demonstrate the expected learning skills. The corresponding percentage for other countries are: China (18), Sri Lanka (14), USA (8%) and UK (3%). This means, in relative terms, the quality of education in these countries is markedly higher.

12.5.2 Health Status

The condition of health of people is an important dimension of development which may not reflect clearly with focus on only per capita income. Likewise, mere high years of life expectancy also may not reflect other aspects of health. For instance, female life expectancy in almost all countries is higher than that of male. But this does not mean that the health condition of women are better than men. It is, therefore, necessary to consider a range of indicators for health (Table 12.4). Life expectancy in India (69) is less than Bangladesh (72) and Nepal (70). These two countries are better off even with respect to 'infant mortality rate' (IMR) [Bangladesh (25), Nepal (27), India (30)]. Sri Lanka's IMR is lowest (6) and is comparable to China (7), USA (6) and UK (4). Maternal Mortality Rate (MMR) is very high in all the South Asian countries (>140) except Sri Lanka (36). A more disturbing feature is the high rate of malnourishment which reflects a form of 'stunting and wasting' in children below five years. Stunting is high in India, Bangladesh and Nepal (>35 in all these 3 countries) and it is much more critical in

Pakistan (45). High levels of stunting is an indicator of poor health in early childhood which has an adverse impact on the productive potential in adulthood. The performance of China on health indicators is therefore comparable to the developed countries like the USA and UK.

Two major determinants of a country's health status are: (i) public expenditure as a percentage of total health expenditure and (ii) government expenditure on health expressed as percentage of GDP. The four poor performing countries among South Asia (viz. India, Bangladesh, Nepal and Pakistan) are also the countries where the public expenditure on health is least (<30%). This means that almost three-fourths of health expenditure in these countries is met 'out-of-pocket' i.e. private expenditure. Government expenditure on health as a ratio of GDP in these countries is also low (ranging from 0.4% of GDP in Bangladesh to 1.2% in Nepal). The involvement of the State in this respect is higher in other countries [Sri Lanka (1.7%), China (2.9%), Brazil (3.9%), South Africa (4.4%)]. In developed countries like USA and UK the involvement of government in health is still higher (UK, 7.8%; USA, 14%). It is thus clear that without substantial increase in public expenditure on health, India would not be in a position to improve its rank on the social dimension of development in spite of high growth rates and growing per capita income.

Table 12.4: Health Development in Comparative Perspective (2017/2018)

Country	Life Expectancy at Birth	Infant Mortality Rate (per 1000 live births)	Maternal Mortality Rate (per 100,000 live deliveries)	Stunting of Children Below 5 (%)	Wasting (Weight for Height) (% Children below 5)	Public Expendi-ture as % of Total Health Expendi-ture	Government Expenditure on Health (% of GDP)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
India	69	30	145	38.4	21	25.4	0.9
Banglades h	72	25	173	36.6	14.3	18.0	0.4
Nepal	70	27	186	35.8	9.7	18.6	1.2
Pakistan	67	57	140	45.0	10.5	27.9	0.8
Sri Lanka	77	6	36	17.3	15.1	43.1	1.7
China	76	7	29	8.1	1.9	58.0	2.9
South Africa	64	29	119	27.4	2.5	53.7	4.4
Brazil	75	13	60	7.1	1.6	33.2	3.9
USA	79	6	19	2.1	0.5	81.9	14.0
UK	81	4	7	-	-	80.2	7.8

Source: World Bank Database on World Development Indicators.

12.6 COMPOSITE INDICES OF DEVELOPMENT

Individual indicators of social and economic dimensions of development discussed in section 12.3 and 12.5 does not enable us to comprehend composite development by way of a single metric like the per capita income. Efforts have therefore been made to combine different socio-economic components into a single value or index so as to arrive at a more comprehensive measure. Some of these measures are: (i) Human Development Index (HDI), (ii) Social Progress Index (SPI), and (iii) World Happiness Index.

12.6.1 Human Development Index (HDI)

The earliest effort for a comprehensive measure of development was made in the form of 'human development index' (HDI) in 1990. The objective of development being to create an enabling environment for people to enjoy long, healthy and creative lives, the HDI defined development as 'a process of enlarging people's choices'. These choices could be seen in three essential aspects viz. (i) leading a long and healthy life, (ii) acquiring knowledge and (iii) having access to resources needed for a decent standard of living. Corresponding to these three aspects, three separate components are selected for the construction of the HDI. These components are: (i) longevity measured in 'life expectancy at birth', (ii) knowledge measured by literacy and (iii) resources for a decent living represented by per capita income. Since 1990, with some modifications, HDI is being calculated for most of the countries. Table 12.5 provides HDI values and ranks for 2019. India with a rank of 129 (from among 189 countries) shows marginally better performance than Bangladesh (135), Nepal (147) and Pakistan (152).

Table 12. 5: Comprehensive Indices of Development

Country	Human Development Index 2019		Social Progress Index 2018		World Happiness 2016-18
	Value	Rank	Score	Rank	Rank
India	0.65	129	56.3	100	140
Bangladesh	0.61	135	52.2	108	125
Nepal	0.58	147	56.1	101	100
Pakistan	0.56	152	49.2	115	67
Sri Lanka	0.78	71	68.0	67	130
China	0.76	85	64.6	87	93
South Africa	0.71	113	-	-	106
Brazil	0.76	79	72.7	49	32
USA	0.92	15	-	-	19
UK	0.92	15	88.7	13	15

It is way down compared to China (85) and Sri Lanka (71). Interestingly, the HDI ranking corresponds to the income performance especially for three out of five

South Asian economies [vide Table 12.1 (PCI within brackets): Sri Lanka ($4102), India ($2010) and Bangladesh ($1698)]. Pakistan's PCI is higher than Nepal but in terms of HDI rank, Nepal's rank (147) is better than that of Pakistan (152).

12.6.2 Social Progress Index (SPI)

Social Progress Index (SPI) is published by an international civil society organisation called 'Social Progress Imperative'. It defines social progress as: the capacity of a society to meet the basic human needs of its citizens. It specifies the achievement of this by establishing the building blocks that allow citizens and communities to enhance and sustain the quality of their lives. It thereby ensures that the conditions necessary for all individuals to reach their full potential is created in a country. The SPI is based on 54 indicators. They encompass three basic aspects viz. basic human needs, foundations of well being and opportunities. The SPI is published regularly since 2014. The SPI for 2018 ranks the countries in our sample as: India (100), Bangladesh (108), Nepal (101), and Pakistan (115). These four countries are at the near bottom of the 146 countries ranked. China (87), Sri Lanka (67), Brazil (49) and UK (13) are way above in this regard.

12.6.3 World Happiness Index (WHI)

In July 2011, the UN General Assembly passed a historic resolution. It invited member countries to measures the happiness of their people and use this to help guide their public policies. Following this, the OECD came out with 'Guidelines for the Measurement of Subjective Well-being'. The first 'World Happiness Report' was brought out in 2012. Based on six indicators (corruption, generosity, years of life, life experience, sense of freedom and GDP per capita), the happiness index is constructed on a scale of 0 to 10. The report for 2016-2018, surveys 156 countries and ranks them (Table 12.5). India with a rank of 140 ends up at the bottom of the ten countries compared here. Pakistan which was a much lower performer in most of the other socio-economic dimensions considered before, emerges on the top of all the six Asian countries in terms of happiness (67). Sri Lanka which was on top of Asia in many aspects, recedes to a much lower happiness ranking (130). Brazil (32), USA (19) and UK (15) are the leading countries ranked higher in this regard. The subject of 'well-being' is, however, a still nascent idea. With further refinement over time, it must be able to sort out the above anomaly.

Check Your Progress 3 [answer within the space given in about 50-100 words]

1) Why was 'adult literacy' historically considered for measuring the level of education in a country? What has been the recently reoriented emphasis?

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2) What is India's position in respect of 'gross enrolment rate (GER) in secondary education'?

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3) Where does India stand on 'mean years of schooling'? In which respect, India's position is better than other countries in the South Asian region?

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4) State the two major determinants of a country's health status.

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5) How is 'social progress' defined? What is the relative position of India in respect of Social Progress Index?

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12.7 LET US SUM UP

The limitation of PCI as a means for measuring the relative development of countries has led to construction of composite indices like HDI and SPI. The development of these measures has enabled according due importance to the basic factors which matter in creating wealth in a country. In this effort, the social factors of education and health have received due weightage. In the comparative

profile of ten countries made in the unit, the position of India is seen to be just above its three Asian neighbours viz. Nepal, Bangladesh and Pakistan. Substantial increase in public expenditure in social sectors, both education and health, is vitally needed for India to improve its position by improving its rank in its overall development.

12.8 SOME USEFUL REFERENCES

1) Dreze, Jean and Amartya Sen (2013). An *Uncertain Glory: India and Its Contradictions, Allen Lane,* Penguin Books, London.

2) Nayyar, Deepak (2019). *Resurgent Asia: Diversity in Development,* Oxford University Press, New Delhi.

12.9 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) PCI does not relate to distribution of income but merely to the total magnitude of income expressed in per capita terms. It is useful differentiating countries into developed-developing and for categorising economies based on their average income level.

2) The framework should have representation from all category of countries across the developing-developed divide. It should cover a fairly large proportion of population of the world. The sample of countries chosen is justified since they cover more than 50 percent of global population.

3) Population, per capita GDP, long term average annual growth rate in GDP, share of agriculture in total employment and its contribution to GDP.

4) China gained a giant leap over India by registering an impressive long term annual average growth rate of 6.8 percent over the period 1961-2011. India, though figured far less impressively in this respect, has managed to catch up with China in this respect in recent times. Sri Lanka's graduation to upper middle income category is notable for its structural shift in terms of lower agriculture employment and agriculture GDP share (7.9 percent).

5) Bangladesh for having moved up to 'upper middle income group' and Nepal for having lifted itself up from 'low income' to 'lower middle income' group.

6) Structural dimension refers to an impressive shift in lowering the employment and GDP share of a country from its agricultural sector. Sri Lanka is the only country in the sample of 5 South Asian countries to have managed to reduce the employment-GDP share from agriculture to comparable levels with China.

Check Your Progress 2

1) Deficits of development refers to prevalence of poverty and unemployment despite rising PCI with growth. It also signifies widening of inequality in the society.

2) In case of India, Sri Lanka, China, there is evidence to see that with rising income (GDP), there is reduction in poverty. However, in case of South Africa there is income rise but poverty ratio is also very high (56 percent in 2014).

3) It is because of large proportion of employment being informal where disguised unemployment is very high.

4) Novel methods are employed by WID to generate data on income comparable between countries. Its trend reveals that inequality in South Asian economies is around 40+ percent for India and Bangladesh and much lower at just above 30 percent for Nepal and Pakistan. It is highest for Sri Lanka and China (both equal to 49 percent).

5) Developed countries too have high inequality of 32 percent in UK and 39 percent in USA (in 2018). This compares with that of 33 percent in Nepal and 32 percent in Pakistan (in 2018).

Check Your Progress 3

1) Because it was expected to reveal historical neglect or achievement in the educational status of people. The more recent emphasis is on 'access, equity and quality' of education.

2) It is bracketed with Bangladesh and Nepal with more than 25 percent of eligible students still staying out of the secondary education system.

3) India stands somewhat in the middle of the 10 countries chosen for comparison with its mean years of schooling at 6.5 years. In respect of enrolment in tertiary education, India's position is better than the other four countries of South Asia including South Africa.

4) (i) public expenditure as a percentage of total health expenditure and (ii) government expenditure on health expressed as percentage of GDP.

5) Social progress is defined as: the capacity of a society to meet the basic human needs of its citizens. On SPI, India ranks just above Bangladesh, Nepal and Pakistan.

UNIT 13 TRADE AND BALANCE OF PAYMENT*

Structure

13.0 OBJECTIVES

After reading this unit, you will be able to:

- indicate the benefits of trade specifying its three dimensions of measurement;
- define the term 'balance of payment' (BoP);
- specify the classificatory framework of a BoP account;
- delineate the concepts of 'BoP Account Deficit or Surplus';
- state why high 'current account deficit' (CAD) is undesirable for the health of an economy ;
- present an account on the process of 'liberalisation of capital account' in India;
- make a comparative profile of CAD between the developed and developing economies of the world;
- highlight the importance of 'settlement account' in BoP; and
- enumerate the factors which influence 'current account balance' in BoP.

* Mr. Vishaka Goyal, Asst. Professor, Sharda University.

13.1 INTRODUCTION

Even at the time of primitive stages of development, economies were engaging in trade with other countries. Now, most modern economies are engaged in free trade. Such interactions with other economies widen the choice for consumers. Producers can increase their scale of production and find new markets for their goods. International trade, thus, has the potential to facilitate both production and consumption. Countries also get the opportunity to have foreign companies setup their production units in their countries. These transactions create the need to keep a systematic record of all transactions. The account which records all such transactions is called 'balance of payment (BoP) account'. The concept of BoP is central to understanding the international conflicts relating to trade and exchange rate. In the globalised world, foreign trade plays a vital role in the development of any economy. It is, therefore, important to have measures of foreign trade so that a government can take necessary step to steer its economy in the desired direction. The magnitude of foreign trade is calculated in terms of its: (i) volume, (ii) composition and (iii) direction. Volume of trade tells us the size of international transactions. It is measured in value terms and is accounted separately for both exports and imports of a country. Composition of trade refers to the major commodity or sectors in which a country is exporting and importing. Direction of foreign trade is indicative of the economic linkages with rest of the world. It tells us the countries to which India exports its goods and the countries from which it imports. Thus, direction consists of destination of exports and sources of our imports. It reflects the pace of economic development of the country. This is because, as the country begins to trade with a large number of countries, economic development becomes faster.

13.2 BALANCE OF PAYMENT (BoP) ACCOUNT

Foreign trade requires international currency. If a country's exports are high, then the country can accumulate surplus foreign currency reserves. But in case of a developing country having high imports as compared to exports, there is always a deficit of foreign exchange. It is necessary to strive for a balance of international trade to have the surplus required to pay for necessary imports. In order to keep a check on foreign exchange reserves, an accounting statement is prepared giving an exact profile of country's transactions with other countries in a financial year. This is known as the 'balance of payments' (BoP) of a country. It is a systematic record of all economic transactions between the residents of a country and the rest of the world. It comprises of: (i) all receipts on account of goods exported, services rendered and capital received by residents and (ii) all payments made by the residents for goods imported, services received and capital transferred to non-residents or foreigners.

Balance of payment provides the government with the data needed for the formulation of fiscal and monetary policies. For instance, to reduce the nation's borrowing, the government can levy a tax on certain imports. Such a tax contributes to reducing the 'current account deficit' (CAD) of a country. CAD refers to a situation where the total value of a country's imports (M) exceeds the total value of its exports (X) i.e. $(M - X) > 0$ or $(X - M)$ i.e. CAD < 0. The current account of the BoP captures the details of exports and services which is important for negotiating the trade policy of a country with its trading partners. Likewise, the Balance of Payment information is also important for firms, investors and

banks even though they might not be involved in international trade and finance. Their interest would be to assess the financial stability of a country.

13.2.1 Components of BoP Account

The classificatory framework of the BoP account comprise of three account heads viz. (i) current account, (ii) capital account and iii) reserve assets account. The current account records all current year transactions of flow of goods and services (exports and imports) during a given financial year. It has two sub-parts viz. 'trade account' which records export and import of 'goods' [called 'balance of trade' (BoT)] and 'transaction of other invisibles' (like financial services, insurance services, shipping services, etc.). The latter (i.e. 'transaction of other invisibles') is thus mainly a record of movement of services [hence called the 'balance of services (BoS) account'] during a financial year. The two, BoT and BoS, together constitute the 'current account' of BoP account. Capital account (in the BoP account) shows receipts of capital and payments between the country and rest of the world. It includes foreign investment flows, external loans, borrowings and other items like loans or donations. A third important component of BoP account is the government's 'official reserve assets' accounts. This comprises gold stock, holdings of convertible foreign currencies and 'special drawings rights' (SDRs). This account acts as a balancing item for current and capital account deficits and hence also serves as the official account on 'foreign exchange reserves'. There will be a decline in this account if the net outflow of foreign exchange is high compared to the net inflow or when the total disbursement on the current and capital accounts exceeds the total receipts. Ideally, the balance on current account and capital account needs to be offset by the 'official reserve assets' account.

13.2.2 BoP Account Deficit or Surplus

A country is said to face a BoP deficit situation when the value of its total imports (of goods, services and investment income i.e. capital inflow) exceeds the value of exports (of goods, services and capital outflow). Conversely, a country will face a surplus of BoP account when the total value of exports of 'goods, services and capital inflow' exceeds the value of imports of 'goods, services and capital outflow'. Formally, in terms of 'national income accounting' identity i.e. in terms of 'aggregate expenditure' and 'aggregate output' this can be written as:

Aggregate Expenditure (AE) = Consumption Expenditure (C) +

Private Investment (I) + Government

Spending (G) + Exports (X) (13.1)

and Aggregate Output (Y) = Consumption (C) + Savings (S) + Taxes (T)

+ Imports (M) (13.2)

The economy is in equilibrium when AE = Y. That is:

$$C + I + G + X = C + S + T + M \quad (13.3)$$

$$\text{or, } I + G + X = S + T + M \quad (13.4)$$

$$\text{or, } X - M = (S - I) + (T - G) \quad (13.5)$$

The component (X – M) is the net of exports and imports (i.e. current account deficit), (S – I) is 'savings-investment gap' and (T – G) is the 'budget deficit'. Assuming a balanced budget (i.e. T = G), net exports in the economy can be

linked to the savings-investments gap. Hence, a country with a 'current account deficit' (CAD) will have to fund its deficit from international borrowing. We can, therefore, see why 'current account deficit' is the same as the 'BoP deficit'.

13.2.3 Current Account Deficit (CAD)

Ideally, the CAD [i.e. (X – M)] should be positive. A negative CAD implies that total imports are higher than total exports. Such a deficit can be financed by foreign investments or debt. This can, however, be problematic if the country is unable to re-pay its debt. In such situations, a country is said to face a 'BoP crisis'. Another way by which CAD can be financed is by external borrowing i.e. either from other countries or financial institutions like IMF. In the long run, however, it is not sustainable to finance consumption with borrowing. This is because countries with large interest payment would often have less investment. For long term growth, it is important to have more investment as current investment fuels future growth.

A widening CAD implies the country will need more foreign currency than domestic currency. An excess demand for foreign currency would, in turn, imply a weaker domestic currency. This could result in cost-push inflation especially if the country's foreign basket comprises more of imported goods. A rising 'trade deficit' could also be indicative of the domestic industries being unable to compete against cheaper imported goods. This might result in loss of jobs as domestic manufacturers might have to shut down their establishments. This could especially be true for infant industries in the trade-deficit country. In such a situation, the trade unions might demand protectionist measures against imports. In view of these factors, it is important to keep the CAD under control.

Check Your Progress 1 [answer within the space given in about 50-100 words]

1) What is meant by a 'Balance of Payment Account'?

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2) State the three dimensions in terms of which BoP account is measured? In what way they are useful?

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3) What is meant by a BoP of a country? In what way is it useful?

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4) State the three main 'heads of account' of BoP. In particular, what are the two sub-heads of the 'current account of BoP' and what do they capture?

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5) What is 'current account deficit' (CAD)? What does a widening CAD imply?

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13.3 LIBERALISATION OF CAPITAL ACCOUNT IN INDIA

Capital account liberalisation is a process by which a country eventually attains the status of full convertibility of its BoP's 'capital account'. It is ideal to liberalise 'current account' before liberalising 'capital account'. This is because liberalisation of capital account makes an economy susceptible to massive exchange rate fluctuations. Wide speculation in international markets can trigger massive inflow and outflow of capital causing instability in the capital account. Likewise, massive capital inflows will put appreciation pressure on the domestic currency affecting the competitiveness of domestic exports which, in turn, worsens the CAD (current account deficit). Thus, a natural order to follow is to first liberalise the 'current account' and then adopt 'capital account convertibility'.

India's experience of 'capital account liberalisation' needs to be looked at in three phases: (i) 1950-1990, (ii) 1990-92 and iii) 1992 onwards (post-liberalisation). In the early years of India's independence, there was a focus on industrial development in the public sector. This required massive import of technology and machines (particularly of capital goods) which exerted pressure on BoP account of India. Despite this, India witnessed a surplus in its 'current account' of BoP from 1950 to 1954. During the second five year plan (1956-61), rapid industrialisation through the development of basic and heavy industries were adopted. This led to an unfavourable balance on 'current account' during the decade of the 1960s. India had to seek external assistance by way of loans from the World Bank and IMF. Heavy trade deficits, debt obligations and a sharp fall in foreign exchange reserves led to the first devaluation of the rupee in 1966. In the early 1970s, though exports grew, there was also a large increase in imports leading to continued trade deficits. Despite this, in the year 1973-74, India enjoyed substantial 'current account surplus'. This was largely due to surplus in terms of 'invisible transfers' (e.g. inflow of foreign aid). After 1973, there was a gradual increase in crude oil prices in the international market resulting in a sharp increase

in the total import bill of the country. The export performance continued to suffer by the severe international recession of 1980-83. The repayments to IMF during this period put an added pressure on India's BoP. In spite of significant external assistance, commercial borrowings and non-resident deposits, India's external debt too increased.

By 1990-91, India had witnessed three major developments which contributed to a 'BoP crisis'. Firstly, during the late 1980s, oil prices witnessed a sharp increase. This was followed by the Gulf war which led to further increase in the oil import bill of the country. Secondly, there were many Indian which was a good source of remittances. The gulf war rendered the Indian worked to return home stopping the remittances from Indian workers. Thirdly, USSR, which was a high destination for Indian exporters, witnessed disintegration into many smaller countries. The economy of these newly independent countries themselves faced an economic crisis. This led to a decline in exports to USSR. All these factors led to a dwindling of India's foreign exchange reserves (from a level of Rs. 54800 million at the end of August 1990 to Rs. 16660 million in January 1991 i.e. a steep decline of nearly 70 percent reserves). By June 1991, the level of foreign exchange reserves dropped to such an extent that it was insufficient to finance the necessary imports. As a result, the Indian economy witnessed sharp inflation leading to India experiencing the worst ever 'BOP crisis' since independence.

During the economic reforms initiated in 1991, macro-economic stabilisation measures were introduced to control the crisis. Drastic changes in trade policy, devaluation of the rupee, rupee convertibility, tariffs cuts and import liberalisation were introduced. For the first time, the union budget of 1992-93 made the Indian rupee partially convertible. This was an inevitable move for the integration of Indian economy with the rest of the world. Under this, 60 percent of exchange earnings were convertible in rupees at market determined exchange rate and the remaining 40 percent earnings at the officially determined exchange rate. The term convertibility (of a currency) indicates that it can be freely converted into any other currency. Convertibility thus gives freedom in terms of removal of quantitative restrictions in trade and payments made on 'current account'. It establishes a system where the market determines the exchange rate by a free interplay of demand and supply forces. During 1993-94, the BoP position improved due to growth in exports, fall in international prices of crude oil and the slack in the growth of non-oil imports. During 1994-95, both exports and imports grew significantly (exports by 18.4 percent and imports by 22.9 percent). Due to this, India's 'invisible payments' rose considerably and as a result, India's 'current account deficit' (CAD) also widened. But the total capital flows in 1994-95 were much in excess of financing needs and hence the build-up foreign exchange reserves was good. The surge in exports and imports continued in 1995-96. But the CAD also grew touching 1.7 percent of GDP. The CAD narrowed down to about 0.5 percent GDP in the year 2000-01. It has largely continued to remain low (around 2-3 percent range) since then (e.g. 0.7 percent of GDP in 2016-17 and 1.8 percent of GDP in the first half of 2017-18). Since 2002-03, there was a sharp increase in India's 'invisibles account' due to significant rise in gross receipts and payments. The strong growth in services exports, especially of software and Information Technology (IT) services, and remittances from overseas contributed to this. During the period 2001-08, the 'invisibles receipts' constituted around 45 percent of current account receipts, while invisible payments accounted for around 25 percent of current account payments. The lower order of payments vis-à-vis receipts in the 'invisibles account' contributed to the build-up of significant

surplus accounting to an average growth of nearly 35 percent over the period 2001-08 which fully financed the trade deficit over the corresponding period.

It is considered remarkable that India made these achievements in the face of appreciation of rupee, high interest rates, spiralling oil prices and general economic slowdown in the major trading countries in the world. It is important to note that the rising trend in capital inflows was accompanied by a change in its composition (e.g. services upsurge). Another welcoming feature was the rise in gross FDI (foreign direct investment) inflows. India emerged as the second most favoured FDI destination after China in 2005 and 2006. This led to an overall BoP surplus resulting in an accretion of foreign exchange reserves. Presently, large merchandise trade deficit coexist with a lower CAD because of the surplus on 'services account'.

Check Your Progress 2 [answer within the space given in about 50-100 words]

1) Why is it preferable to liberalise 'current account' of BoP before its 'capital account'? What does 'full convertibility' imply?

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2) When was the first devaluation of Indian rupee done? What circumstances led to this?

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3) State some situations which marked India's continued the situation destabilised on the BoP front during the 1970s and 1980s?

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4) What policy changes were introduced during the early years of 1990s to cope with India's worst ever 'BoP crisis' since independence?

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5) What factors contributed to result an ease on the BoP front in the early 1990s? What was the level of CAD through 1990s to early 2000s?

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6) What factors contributed to a further ease in the BoP situation during the later years of first decade of 2000s?

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13.4 INTERNATIONAL COMPARATIVE PROFILE OF CAD

It is important to understand the linkage between the 'current account deficit' and the development stage of an economy. It is a well-known fact that the LDCs (low developing countries) and the UDCs (under developing countries) need larger funds to import capital goods. This does not mean that a developed country does not import much. As we saw above, CAD (current account deficit) measures a country's saving gap i.e. the excess of investment over savings. This gap is bridged by the net transfer of resources from the rest-of-the-world to the country running the deficit. This implies that higher CAD by itself cannot be bad for an economy so long as it has sufficient flow of foreign funds. However, in a developing country, high CAD can sometimes become an alarming situation. Developing countries need a push-through investment and if it is to a great measure from the rest of the world, it means that it will not be able to sustain financing fresh investments with its own savings. Ultimately, therefore, it comes down to an economy's ability to absorb and service its capital inflows. If the resources can be distributed in such a way as to enhance its ability to repay (through production), a high CAD to GDP ratio could be sustainable. If they cannot, it can become a hindrance for the development path of an economy. Too high a ratio can prove unsustainable in the long run as it happened in East Asian economies (in late 1990s) and in Mexico slightly before (1994). To that extent, low ratio of CAD has its advantages. But, very low ratio carries with it an opportunity cost i.e. of not being able to benefit from resources that could be drawn from outside. This is the reason why every economy wants to control its CAD by which is meant maintaining a healthy or sustainable balance. It is, therefore, important to note that high CAD is not necessarily a hindrance in the economic development of a country.

13.4.1 CAD and Developing Economies

Developing countries usually lack in technology. Due to this reason, they have to depend on imports for technology and machines which accounts for a substantial part of their BoP. Besides importing high amount of capital goods, to stimulate the process of development, developing economies also have to import consumer goods, raw materials and spares. R&D and innovation in the initial stages of development usually remain low and hence they have to import many kinds of services too from developed economies. In such a scenario, total amount of import cannot be matched by export earnings which results in high CAD. In the last few decades, the process of globalisation has given some advantage to developing countries by way of exporting their human resources. This has propelled developing economies from being a debtor economy to a creditor economy. In other words, globalisation has contributed positively to not only get investment but also technical knowledge. For instance, China, by controlling their imports and boosting low cost manufacturing exports, managed to attain a status of 'surplus current account'. In 2017, its current account surplus was 1.3 percent of its GDP which was a decline from 1.8 percent in 2016. This ratio has been steadily falling from a high of 10 percent in 2007. This trend has continued and in 2018 it turned around to become a country with a CAD of 0.4 percent of its GDP. Other examples in this category are Iran and Iraq.

13.4.2 CAD and Developed Economies

Developed countries usually have a strong manufacturing sector. They therefore export technology and machines to developing economies. But they also experience large CAD. For instance, the US had a CAD of 2.3 percent in 2017 which is substantial given its large economic base. Other developed economies with a CAD of around this value (in 2017) are: Turkey (5.6 percent), Argentina (4.9 percent), U. K. (3.7 percent), Egypt (3.4 percent) and Australia (2.7 percent). Conceptually, 'current account surplus' (CSS) is opposite to CAD which is a situation where the value of (X – M) is positive (which is the reverse with a negative sign for CAD). Some examples of developed countries which have high CSS (in 2017) are: Germany, Japan, China, South Korea, Netherland, Taiwan, Switzerland, Singapore, Italy and Thailand. This brings us to an important concept of 'settlements account' of BoP.

13.4.3 Settlements Account

Deficit or surplus in the BoP account is an ever-changing state i.e. it changes from one year to the next. The overall health of BoP, and its impact on a country, can be measured by the 'settlements account' of BoP (which is also called as 'the official reserve assets account'). The 'settlements account' measures the change in nation's position of 'liquid and non-liquid liabilities' and thereby the change in a nation's official 'reserve assets' during the year. The official 'reserve assets' of a country include its gold stock, holdings from its convertible foreign currencies and 'special drawing rights' (SDRs). It shows transactions in a country's net official reserve assets.

In India, foreign exchange reserves denote the foreign assets held or controlled by the Reserve Bank of India. The reserves are made up of gold or a specific currency. They can also be special drawing rights and marketable securities denominated in foreign currencies like treasury bills, government bonds, corporate bonds and equities and foreign currency loans. In terms of the official 'reserve assets' (in 2018), China held the number one position followed by Japan,

Switzerland, Saudi Arabia, Taiwan, Russia, Hong Kong, India, South Korea and Brazil. The countries listed here being in the descending order of the magnitude of 'reserve assets' held, it shows that for any particular year the relative health of an economy depends also on its 'built reserves' rather than on the current account of the BoP alone. It shows the resilience or the stability of a country's currency to attract capital flows to fund its CAD with the country's growth prospects seen as good. In other words, higher 'reserve assets' are reflective of an investment environment of a country whose financial markets are not prone to frequent speculative attacks. In such an economic climate, foreign investment (FDI in particular) contributes to augmenting the export capacities of the economy. In the long run, it helps in narrowing the CAD to more sustainable levels.

13.4.4 Factors Influencing Current Account Balance

Current account imbalances arise for a number of reasons. Sharp commodity price swings at international level is one of the major factors. For instance, there has been a sharp increase in crude oil prices over the last decade. This particular feature in the global prices of crude oil has the potential to affect the spending pattern of most of the countries. Another factor is that a country may begin to serve as a major hub for foreign firms in manufactures while its own population may lack the earning capacity to consume imports on a scale sufficient to balance-out its rising income from surging exports (e.g. China). This factor becomes stronger with free trade treaties. A third factor is when a country suffers from protracted domestic demand stagnation by an excessive reliance on exports for its growth (e.g. Japan and Germany). Finally, current account imbalances might also result from the loss of competitiveness at the national level. International tensions between countries also affect the 'terms of trade' (ToT).

Check Your Progress 3 [answer within the space given in about 50-100 words]

1) Is it always a hindrance for an economy to have higher CAD? Why?

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2) In what way China's case is illustrative on the relative merits of high/low CAD? What empirical evidence can you cite in support of this context?

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3) How has globalisation proved particularly beneficial for developing economies?

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4) What is meant by 'settlements account'? How is this important?

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5) State the factors which affect 'current account balances'?

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13.5 LET US SUM UP

International trade (i.e. trade between countries) is important for reaping the benefits of comparative advantage. While both exports and imports are equally important, it is necessary to have a country's exports on the higher side as compared to its total imports. If this could be achieved, it leaves a country in a state of 'current account surplus'; else, in a state of CAD (current account deficit). A system of systematically recording all transactions of exports and imports of a country, with countries in the rest of the world, is what is referred to as BoP account. By focused policies, it is possible to convert the status of a country from a CAD country to a country with CSS (current account surplus). Given that it is a year-to-year changing status, it is not necessarily bad to be even in a state of substantial CAD. What is important is to have enough capital flows required to finance a country's debt or international payment obligations. Against this backdrop, the unit discusses many important concepts like BoP, BoP account, components of BoP (viz. current account, capital account and reserve assets account), CAD, CSS and settlements account. Besides drawing a comparative profile of CAD and CSS of many countries vis-à-vis India, the unit indicates the various factors responsible for causing 'current account imbalance'.

13.6 SOME USEFUL BOOKS AND REFERENCES FOR FURTHER READING

1) Basu, Kaushik (ed.) (2008). *The Oxford Companion to Economics in India,* OUP, New Delhi.

2) Basu, Kaushik and Annemie Maertens (eds.) (2011). *The New Oxford Companion to Economics in India,* OUP, New Delhi.

3) Ratha, D, S Mohapatra and Z Xu (2008). *Outlook for Remittances 2008-10*, Development Prospects Group, Migration and Remittances Team, World Bank.

4) Suparna Karmakar, Rajiv Kumar and Bibek Debroy (eds.) (2008). *India's Liberalisation Experience,* Sage, New Delhi.

13.7 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) It is a systematic record of all transaction on exports and imports of a country to other countries.

2) Volume, composition and direction. Volume is measured in 'value terms' and indicates the size of international transactions. Composition refers to the commodity or sectors involved in exports and imports. Direction indicates economic linkage with other countries of the world. It consists of destination of a country's exports and source of its imports.

3) BoP is an accounting statement giving an exact position on account of exports and imports of a country between the residents of the country and the rest of the world. It is useful to know a country's position on its 'foreign exchange reserves'. For the government, it is useful to formulate its monetary and fiscal policy. It is also useful as an indicator of the health of an economy.

4) The three main heads of account of BoP are: current account, capital account and reserve assets account. The two sub-heads of current account are: BoT and BoS i.e. 'balance of trade' and 'balance of services'. BoT and BoS respectively captures the record of export and import of 'goods' and 'services' respectively. The 'current account of BoP' = BoT + BoS.

5) CAD refers to the gap between total exports and total imports. The term deficit implies that it is happening the other way round i.e. instead of exports being higher than imports, it is the imports which is exceeding the exports. The gap or deficit is expressed with a 'negative' sign which needs to be balanced by borrowing or debt. A widening CAD implies a higher negative value and need for more borrowing.

Check Your Progress 2

1) Liberalisation of capital account makes an economy susceptible to massive exchange rate fluctuations. Wide speculation in international markets can trigger massive inflow and outflow of capital causing instability in the capital account. It is therefore prudent to first liberalise 'current account' and

then gradually adopt 'capital account convertibility'. Full convertibility implies free convertibility on both the 'current' and the 'capital' accounts of BoP.

2) In 1966. Heavy trade deficits, debt obligations and a sharp fall in foreign exchange reserves led to this.

3) Gradual increase in crude oil prices in international market resulting in a sharp increase in the total import bill after 1973, severe international recession of 1980-83, repayments to IMF, sharp increases in oil prices during the late 1980s followed by gulf war, disintegration of USSR resulting in lowered exports to these newly formed countries, etc.

4) Changes in trade policy, devaluation of rupee, rupee convertibility, tariffs cuts, import liberalisation, partial convertibility of rupee, etc.

5) Growth in exports, fall in international prices of crude oil and the slack in the growth of non-oil imports. In 1995-96, the CAD was 1.7 percent of India's GDP. By 2000-01, CAD further slid to 0.5 percent of GDP.

6) Sharp increase in India's 'invisibles account' due to significant rise in gross receipts and payments since 2002-03, strong growth in services exports, especially of software and Information Technology (IT) services, and remittances from overseas.

Check Your Progress 3

1) No. Economies might be able to sustain servicing of capital inflows provided the financial inflows are productively channelled. If the economic climate is managed healthily, then investments made from such inflows generates domestic incomes which helps in sustaining the economy to service its inflow of finance.

2) China's is a unique case where from a status of a very high level of CAD, it has managed to transform itself to a country with CSS in recent years. This it has managed with controlled imports and steady boost of its 'low end manufactured goods' export. In empirical terms it has managed its CAD of nearly 10 percent level to gradually go down to – 0.4 percent over the period 2007-2018.

3) Globalisation effectively shifts investment from a capital surplus country to a capital deficient (but potentially economically rich) countries. Developing countries are characteristically rich in cheap unskilled labour, rich skilled workforce, specific types of raw materials and natural resources. They typically lack the technology (which comes with huge investment) needed to harness their otherwise rich human and material resources. Viewed from this angle, the experience of many developing countries over the last 3-4 decades testifies for the beneficial aspects of globalisation.

4) While the actual CAD i.e. (X – M) can be positive or negative (deficit if negative and surplus if it is positive, its actual impact on the economy is determined by the country's 'settlements account'. The 'settlements account' is a measure of the change in a nation's position of 'liquid and non-liquid liabilities'. Thus, while (X – M) takes only the liquid assets, the 'settlements account' includes the value of non-liquid assets like "gold stock, holdings from convertible foreign currencies and 'special drawing rights' (SDRs)". For any particular year, the relative health of an economy also depends on its

'built reserves' rather than on the current account of the BoP alone. The importance of the 'settlements account' is indicative from the fact that it reflects the resilience (or the stability) of a country's currency to attract capital flows to fund their CAD (with the country's growth prospects considered good).

5) Sharp commodity price swings at international level, large part of a country's domestic population lacking in purchasing power needed to consume imports (on a scale sufficient to balance-out its rising income from surging exports – a factor which becomes stronger with free trade), domestic demand stagnation (on account of an excessive reliance on exports for growth), loss of competitiveness at the national and international levels and international tension between countries.

UNIT 14 GOVERNANCE AND INSTITUTIONS *

Structure

14.0 OBJECTIVES

After reading this unit, you will be able to:

- outline the features of the broad types of government;
- distinguish between government and governance;
- delineate the relationship between type of government and development;
- differentiate between 'governance' and 'good governance';
- highlight the two important constituents of governance differentiating it for its economic and institutional importance;
- discuss the important governance indicators with an appraisal of their significance for development; and
- describe in brief India's relative position in terms of quality of governance institutions with those of its neighbouring economies.

14.1 INTRODUCTION

The use of the concept of governance, and institutions, in development studies is of a relatively recent origin. Hence, there is as yet no universally accepted definition of governance or institutions. In light of this, the literature on the

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subject is confined to some research studies and reports of multilateral organisations like the WB (World Bank) and the UNDP (United Nations Development Programme).

Ever since the evolution of Development Economics in the immediate post-Second World War period, one of the important subjects of debate has been the role of 'state' in development. This is in contrast with the role of 'market' in development as made in the mainstream economics. During the 'Cold War' period, there was a political divide between the Socialist and the Capitalist blocks. The development debate then assumed an ideological undertone in the form of 'state versus market'. In the 1960s, the rapid strides in growth achieved in Japan and South Korea were seen as driven by the initiatives of the state. These states had come to be characterised as 'developmental state'. Such key features of a 'developmental state' were later applied to other East and South-East Asian economies like Hong Kong, Singapore and Taiwan. There were other countries like India where state played a vital role but with very low growth rates. By the late-1980s, with the disintegration of the Soviet Union and the end of Cold War, the slow growth in state-led economies like India was attributed to 'state-failure'. This turned the debate on development towards 'good governance' to facilitate market-driven growth. By early 1990s, Western governments and aid institutions made 'governance' a key condition for providing economic aid. With it there was a distinct turn towards research on 'governance issues and institutions' in development. More recently, the UNESCAP (2017) report observed that: 'the quality of governance and the effectiveness of public institutions are critical factors that contribute to the process of development'.

14.2 GOVERNMENT AND GOVERNANCE

In a literal sense, the two terms 'government' and 'governance' are used interchangeably. But with the growing use of the term governance in its institutional dimension, government is differentiated for its political stance and is seen for the manner in which authority (i.e. legitimate power) is exercised. While power is the ability to influence the behaviour of others, authority is the right to do so. Therefore, government is an authority in a country to exercise legitimate power. The terms government and state are often used interchangeably.

14.2.1 Types of Government

Governments are broadly classified into three types viz. monarchy, dictatorship and democracy. Monarchy is the traditional form of inheritance of authority by a king or ruler to exercise legitimate power for ruling a country. This is a rare exception in the present times. Hence, dictatorship and democracy, in their various hues, are the two widely prevalent forms of government across the countries at present.

Dictatorship is an authoritarian regime defined as a system in which the concentration of power lies within a few hands. In its worst form, there is a single individual-centred dictatorship. The strategies that dictators use in order to be in

power include: use of force, suspension of civil liberties and denial of voice or freedom to people, self-regulated constitutional process, patronage, propaganda (which are but fascist tendencies), etc. Most of the dictatorships are either backed by the military or are direct military regimes with suspended rights of representation by the people.

Democracy, is a form of government, marked for a shift of legitimate power to people through representative governments. The shift of legitimate power to democratic rule has a long history and is depicted in terms of three 'waves of democracy'. The first wave was the 'Glorious Revolution of 1688' in England with the monarchy conceding more power to 'parliament, free elections and freedom of speech'. The 'second wave' of democracy, also a shift from monarchy to democracy, was seen in the 'French Revolution of 1789' with an emphasis on 'liberty, equality and fraternity'. Though there is a certain ideological bias, the disintegration of Soviet Union and the fall of socialist regimes in Southern Europe by the late 1980s, is depicted as a 'third wave of democracy'. This third wave marks a shift from not only authoritarian regimes to democracies but also a shift from 'state-driven economies' to 'market facilitating states'. It is this notion of the democratic state as a facilitator state that brought 'governance' to the centre stage of development debate. In terms of the types of governments across countries in the world, though there is a widespread belief that democracy is the dominant form of government across the countries, the reality is otherwise.

Through a complex exercise, the Intelligence Unit of 'The Economist' publishes a 'Democracy Index' of more than 160 countries since 2006. The Democracy Index is based on five categories of indicators viz. (i) electoral process and pluralism, (ii) the functioning of government, (iii) political participation, (iv) political culture and (v) civil liberties. Based on its scores on a range of indicators within these categories, each country is classified as one of the four types of governments viz. full democracy, flawed democracy, hybrid regime or authoritarian regime. The latest Democracy Index for 2019 shows that only 22 countries (representing about as little as 6 percent of world's population) are 'full democracies'. As many as 54 countries (covering another 36 percent of world's population) are 'authoritarian regimes'. The democracy index is a composite score assessed for all the five indicators above and is expressed on a scale of zero to ten where a country scoring more than 8 is regarded as a full democracy. India, with a score of 6.9, and with a rank of 51 out of 167 countries, belongs to the category of 'flawed democracies'. This category shows that these countries suffer from several democratic deficiencies. Table 14.1 shows a comparative picture of six neighbouring South Asian countries to India in this regard. Their overall rank in the world is: India (51), Sri Lanka (69), Bangladesh (80), Nepal (92), Pakistan (108) and China (153). In particular, China figures as an 'authoritarian regime. In contrast, Scandinavian countries like Norway (1) and Sweden (3) are on the top with near perfection as 'full democracies'.

Table 14.1: Democracy Index 2019

Country	Electoral Process and Pluralism	Functioning of Government	Political Participation	Political Culture	Civil Liberties	Overall Score	Rank
India	8.7	6.8	6.7	5.6	6.8	6.9	51
Bangladesh	7.8	6.1	6.1	4.4	5.0	5.9	80
Nepal	4.8	5.4	5.0	5.6	5.6	5.3	92
Pakistan	6.1	5.7	2.2	2.5	4.7	4.3	108
Sri Lanka	7.0	6.1	5.6	6.3	6.5	6.3	69
China	0.0	4.3	3.3	2.5	1.2	2.3	153
Norway	10.0	9.6	10.0	10.0	9.7	9.9	1
Sweden	9.6	9.6	8.3	10.0	9.4	9.4	3

Note: Score: 8 to 10 = Full Democracy, 6 to 8 = Flawed Democracy, 4 to 6 = Hybrid, 0 to 4 = Authoritarian

Source: The Economist Intelligence Unit, 2020.

14.2.2 Government and Development

Does the type of government make a difference to development? The answer is: 'yes'. Economic growth is expected to be sub-optimal under dictatorship for the following reasons: First, in order to safeguard their roles, dictators use much of the revenues expropriated from the public for expenditure on military, police and secret service with lower priority to social development like health, education and social security. Second, fear of expropriation discourages the investors, new entrants and innovators in making investment. Third, Authoritarian regimes perpetuate inequalities because of their dependence on the support of the rich and treat the poor as a threat. Most of the strategies of the authoritarian regimes are socially undesirable. In view of this, over the years in the 20th Century, most of the authoritarian regimes have yielded place to democratic transition in response to strong and sustained peoples mobilisation against them. Yet, even in 2019, there are as many as 54 countries which are categorised as 'authoritarian regimes' across the world.

In contrast to dictatorship, democracy as a representative government endows power to the ruled. Democratic institutions like (i) elected legislature, (ii) independent judiciary and (iii) respect for law, individual rights and freedom, encourage enterprise and innovation. An economy will be able to reap all potential gains from investment, and from long term transactions, only if it has a government that is believed to be both strong enough to last (i.e. stable) and inhibited from violating individual rights. Thus, the conditions needed to have individual rights for maximum economic development are exactly the same conditions as are needed to have a lasting or stable democracy. There is a criticism in some quarters that democracy generates redistributive demands that undermine

investment priority and affect growth. However, this criticism does carry much validity since growth rates in many democratic countries (including India) are much higher than many authoritarian countries. As Amartya Sen (1999) points out, democracy matters for governing large complex societies such as India for two reasons: (i) democracy protects and manages pluralism (creating political underpinnings of recognition in heterogeneous and diverse societies) which, in turn, nurtures diverse enterprise and (ii) democracy favours demand for better living standards which promotes a fair distribution of 'gains of growth'.

In light of the above, there is a growing mobilisation in more and more countries for democracy. With it, there has been an increasing emphasis on governance to overcome the 'deficits of democracy'. Let us, therefore, turn to analyse the term 'governance' in some detail.

14.2.3 Governance

The term 'governance' is differentiated from government. The emergence of the term 'governance' can be traced to a disaffection with the state dominated models of economic development that were prevalent in the 1950s through 1970s. The term 'governance' subsumes institutions of state and beyond. In this context, the term 'new institutional approach' lays particular emphasis on 'non-state institutions'. The term 'governance' is defined in various ways by different organisations. Two comprehensive definitions, one by the World Bank and the other by the United Nations Development Programme (UNDP) are presented here.

World Bank (1994): The WB defines 'governance' as the manner in which power is exercised in the management of a country's economic and social resources. There are three distinct aspects of governance: (i) the form of political regime; (ii) the process by which authority is exercised in the management of a country's economic and social resources for development; and (iii) the capacity of government to design, formulate, and implement policies and discharge functions.

UNDP (1997): The UNDP defines 'governance' as the exercise of economic, political and administrative authority to manage a country's affairs at all levels. It comprises mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences.

These definitions, particularly the one by UNDP, are the ones that dominate the debates and analysis of governance. As such, it is clear that governance refers to a much wider ambit than government. First, these definitions capture various units of governance that are not mere instruments of the state or government. Second, they show that governance is embedded-in and interwoven-with state and civil society interactions. Hence, governance is that part of the public realm which encompasses both the government and the civil society. Third, both the definitions include political dimensions with an implicit reference to 'democratic accountability'. In other words, it deals not only with how power is exercised but also how power is acquired. These definitions are thus in contrast with apolitical definition of Fukuyama (2013) for whom governance is rather about 'a government's ability to make and enforce rules, and deliver services, regardless of whether that government is democratic or not'.

14.2.4 Good Governance

Good governance has an aspirational dimension. It reflects a limited scope compared to the comprehensive definitions referred above. Good governance, among other things, is 'participatory, transparent and accountable'. It is therefore effective and equitable in promoting the 'rule of law'. Good governance ensures 'political, social and economic priorities' based on a broad consensus in society in which the voices of the poorest and the most vulnerable are also heard in decision-making over allocation of development resources. According to the World Bank, policy makers, civil society groups, aid donors and scholars around the world increasingly agree that good governance matters for development. This growing consensus has emerged from a proliferation of empirical measures of institutional quality, investment climate and the accompanying research showing the strong impact of good governance on development.

Check Your Progress 1 [answer within the space given in about 50-100 words]

1) Distinguish between Government and Governance.

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2) In terms of the overall 'democracy index', what is the relative position of India with reference to its neighbouring countries?

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3) State the criticism against democracy. Do you think that the criticism is merited?

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4) Bring out the essential constituents of the term 'governance'.

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5) In what way 'good governance' is different from 'governance'?

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14.3 CONSTITUENTS OF GOVERNANCE

Within the analysis of the role of governance, there is a reference to two important constituents of governance viz. 'economic governance' and 'institutions for governance'. These two are important for the larger governance analysis. They can be, therefore, considered as sub-sets of governance as follows.

14.3.1 Economic Governance

'Economic governance' relates to the functioning of markets and economic activity. It refers to the structure and functioning of legal and social institutions to support economic activities and transactions. Avinash Dixit (2009) uses the term 'good governance' in the context of the economy to point out that 'good governance' is needed to secure three essential pre-requisites for a well functioning market economy. First, security of property rights, without which individuals will lack the incentives to save and invest. Second, enforcement of contracts which are necessary to assure that the gains accruing from economic transactions reaches all participants. Without guarantee of enforcement, people would fear to enter into contracts and transactions would not take place. Third, collective action is needed to provide adequate provision of public goods through which much of private economic activity takes place. Equally important is control of 'public bads' like crime and violence which adversely affect incentives for private economic activity.

14.3.2 Institutions for Governance

The emergence of 'new institutional economics' (vide the 'new institutional approach' referred to in 14.2.3 above) is as much in the context of 'state-failure' as of 'market failure'. It is argued that differences in growth and development of countries is not merely because of resource differences (i.e. differences in physical capital, human capital and technology) which are but only proximate causes. This is to say that 'Institutions' are the fundamental cause for differences in economic

growth and development. According to a leading light of the New Institutional School [viz. D. North (1990)], 'Institutions are the rules of the game in a society'. In other words, they are the humanly designed constraints to shape human interactions. From this view point, there are three important features of institutions viz. (i) 'humanly devised' (in contrast with others like geographic factors outside human control), (ii) 'rules of the game' (which set constraints on human behaviour) and (iii) their major effect through incentives.

The emphasis of the new institutional school is on 'free markets' and 'protection of private property rights'. Both these are identified as essential requirements for economic development. Critics point out that belief in free markets, with limited role of state, is a major limitation of the institutional approach. They argue that the new institutional approach suffers from a poor understanding of changes in the institutions themselves. This raises the issue of the link between the 'New Institutional approach' and the 'emphasis on governance'. The implicit relation is to be seen in terms of the role of non-state institutions in the development process and in the emphasis on protection of property rights. Analysis of governance issues is therefore much broader encompassing not only property rights and freedom of enterprise but also the implicit normative political bias for democracy. In other words, 'institutions for governance' encompass much larger dimensions.

Check Your Progress 2 [answer within the space given in about 50-100 words]

1) What does the term 'economic governance' relate to?

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2) According to Dixit (2009), what are the three essential things needed to ensure 'good governance'?

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3) What is meant by the term 'institutions for governance'.

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14.4 GOVERNANCE INDICATORS

Broadly, there are two types of measures of governance. One is a set of 'objective measures' and the other 'subjective measures'. The objective indicators of governance measure mainly the state of a political institution (democracy, dictatorship), the type of institutional regime, the occurrence of political instability and violence, and the existence of executive constraints (checks and balances). Data sources for these measures are the POLITY database and the 'Democracy Index' by The Economist Intelligence Unit. The major drawback of these objective measures are that they provide a narrow perspective of governance without providing information on the quality of institutions critical for assessing governance.

There is an alternative to the above objective measures by way of subjective measures of governance which are based on expert opinions and perception surveys. It draws on the database of the 'Worldwide Governance Indicators' (WGI) jointly maintained by the Brookings Institution and the World Bank. The WGI approaches governance from the dimension of 'traditions and institutions by which authority in a country is exercised'. Thus defined, governance includes three major dimensions viz. (a) the process by which governments are selected, monitored and replaced; (b) the capacity of the government to effectively formulate and implement sound policies; and (c) the respect of citizens and the state for the institutions that govern economic and social interactions among them. The database of WGI provides some composite indicators of governance. These relate to: (i) voice and accountability (VA), (ii) political stability and absence of violence/terrorism (PV), (iii) government effectiveness (GE), (iv) regulatory quality (RQ) and (v) control of corruption (CC). The subsequent part of this section analyses the performance of India in terms of each of these five 'Governance Indicators' (Table 14.2), in a comparative perspective, using the latest scores (or ranks) for the year 2019 based on the WGI database. The WGI data used here is in the form of percentile i.e. with 0 to 100 range: zero indicating the worst and 100 the best.

Voice and Accountability (VA) indicates the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association and a free media. India with the provision of freedom of speech as a fundamental right in its Constitution, maintains a relatively high profile in this respect (60.1) compared to its neighbouring countries. Yet, it is nowhere near the top scorers like Norway (100), Denmark (98) or Sweden (97.5). The indicator on 'political stability and absence of violence/terrorism' captures the perception on the likelihood that the government will be destabilised or overthrown by unconstitutional or violent means, including politically motivated violence and terrorism. The score of India on this front (14.8) puts the region in a very poor light of stability not only in comparison with high scoring countries like Norway (90.5) or Sweden (80.5) but even compared to Nepal (23.2) and Sri Lanka (40.5). The indicator on 'government effectiveness' captures perceptions of the quality of public services, the quality of civil service and the degree of its independence from political pressures. It also reflects the quality of policy formulation and implementation and the credibility of the government's commitment to such policies. Of the five governance indicators analysed here,

India's highest score (63.9) is in the case of 'government effectiveness'. China has a slightly better standing in this regard (69.7). Other South Asian neighbours have a much lower ranking in this regard. But the exemplars again are the Scandinavian countries with a score of more than 96 (led by Finland with 99).

Table 14.2: Comparative Profile of Select Economies by Governance Indicators

Governance Indicator	India	Bangladesh	Nepal	Pakistan	Sri Lanka	China
VA	60.1	27.6	39.4	25.6	46.8	8.9
PV	14.8	13.8	23.2	3.3	40.5	36.7
GE	63.9	21.6	16.8	26.9	45.2	69.7
RQ	55.3	28.4	33.7	27.9	55.8	48.1
CC (WGI)	49.5	16.8	27.4	23.6	43.3	45.7
CPI (TI)	41 (80)	26 (146)	34 (113)	32 (120)	38 (93)	41 (80)

Source: WGI except for 'corruption index' for which scores/ranking from two sources are indicated.

Note: Figures within parentheses refer to rank of the country (out of 180 countries surveyed) for the CPI by Transparency International (TI).

'Regulatory Quality' (RQ) is another important indicator reflecting on the capacity of government. It captures the perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. The indicator shows that most of the developing and lower-middle level countries suffer from a relatively poor regulatory quality. India, China and Sri Lanka with a score in the range of 48-56 are better than Bangladesh, Pakistan and Nepal. The weakness in the regulatory capacity of the state over private sector could act as a source for regulatory capture, corruption and inequality.

As we saw before in Sub-section 14.2.1, both India and Sri Lanka were bracketed as 'flawed democracies', while Bangladesh, Nepal and Pakistan ended up still lower as 'hybrid regimes'. Here we see that similar rankings are there for these countries for the indicator on 'rule of law'. This is reflective of the close association between the two dimensions of government and governance. China's rule of law situation seems relatively better than its depiction as an authoritarian regime.

Control of Corruption (CC): CC is another governance indicator closely related to regulatory quality. Of late, across the globe (regardless of whether a country is developed or underdeveloped, whether a democracy or authoritarian) two issues that have been the cause of widespread discontentment and protests are corruption and inequality. Corruption is a much severe governance flaw as it could accentuate inequality. Besides, corruption seriously undermines development by increasing the 'cost of doing business'. It discourages investment and reduces economic growth leading to higher inequality and political instability. Corruption has a disproportionate impact on the poor and the most vulnerable by distorting

prices. It increases costs and reduces access to public services like health and education. Corruption erodes trust in government and undermines social contract. Corruption comes in different forms. For instance, corruption could unfairly determine the winners of government contracts, with awards favouring friends or relatives of government officials. Or, it may lead to regulatory capture with far reaching effect on the policy formulation and implementation with adverse consequences on overall economic development. Therefore, tackling all forms of corruption is critical for achieving progress and sustainable change.

Given the importance of controlling corruption due to the factors mentioned above, there have been several agencies, besides WGI, which measures the extent of corruption in countries. Here, we present indicators published by two sources viz. the WGI and the 'Corruption Perceptions Index' by the Transparency International (TI). The survey by the latter (TI) covers 180 countries which is larger than that covered by the CC of WB/Brookings. Corruption Control (CC) indicator of WGI captures perceptions on the extent to which public power is exercised for private gain (including both petty and grand forms of corruption) as well as 'capture of the state' by elites and private interests. As in the case of other WGI indicators, even in the 'Control of Corruption', the standing of India and Sri Lanka is poor but better than that of other neighbours like Bangladesh, Nepal and Pakistan. China, except in 'voice and accountability', sails with India and Sri Lanka in all indicators including CC. Finland with a score of 100 is marked for 'zero corruption'!

The Corruption Perceptions Index (CPI) of the Transparency International (TI) aggregates data from a number of different sources that provide perceptions by business persons and country experts on the level of corruption in the public sector. The CPI 2019 uses 13 different data sources from 12 different institutions to capture the perceptions on corruption (with a reference period of past two years). The data are standardised for a score in the scale of 0 to 100 (the higher the score lesser the corruption). The TI data too confirms the relative corruption position of India and its neighbours though with a relatively lower score (i.e. 49.5 in case of WGI and 41 in case of TI). While India is relatively better in voice and accountability and rule of law, China out-performs India in 'government effectiveness' and 'political stability'. But they are precisely at the same level on corruption index (with a score of exact 80 for both as per the TI).

Critics point out to certain limitations of WGI database. First, it uses several different databases to derive the indicators of WGI. These perception surveys differ in their samples. Moreover, as over a period of time, the sources and methods change, inter-country comparisons over a period is difficult. However, WGI source is transparent in pointing out their methodology (like the 'latent variable' approach used to make corrections to the data). Second, it is pointed out that there is a difference between perceptions of a phenomenon and its actual measurement. This is to say that perceptions differ with the position of those in the sample though appropriate adjustments are made depending on experience from earlier surveys. A third point of criticism is that since there is no universal definition of 'governance' it cannot be measured directly. But it is a common practice to use proxy variables when measuring a phenomena which cannot be

observed directly. Hence, methodologically, WGI, despite these criticisms, has retained its significance.

Check Your Progress 3 [answer within the space given in about 50-100 words]

1) What are the major factors to which the indices provided by the WGI database relates?

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2) In which respect India scores better than its neighbouring countries? What does it indicate?

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3) What does the governance indicator of 'government effectiveness' (GE) suggests and how does India and China compare on this front?

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4) State the two agencies which measure corruption as a factor of governance indicator.

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5) What are the criticisms made against the WGI database?

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14.5 LET US SUM UP

Governments are classified into three types of which the democratic form is widely acknowledged to be pro-development. Nevertheless, although more and more countries are becoming democratic, still, not only there are many countries under authoritarian regime, but many democratic countries (including India) are categorised as 'flawed democracy' - a term signifying deficiencies on several front. The term 'governance' encompasses multiple dimensions like form of political regime, process by which authority is exercised, capacity to design and implement policies, etc. The term 'governance' signifies the harmonious coexistence of both government and civil society for 'democratic accountability'. The term 'governance' is distinguished from the term 'good governance' which ensures a 'consensus based decision making' in which the voices of the poorest and most vulnerable are also duly taken into account. In view of the strong linkages of good governance with the development indicators, many 'governance indicators' have been developed in recent years. Based on this, countries are ranked. In particular, in respect of the 'corruption perception index' (CPI), India and China are at equal level though India fares better in comparison to China in respect of the 'voice and accountability index'.

14.6 SOME USEFUL BOOKS AND REFERENCES FOR FURTHER READING

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14. 7 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) Government is an authority in a country to exercise legitimate power. Governance refers to a notion of democratic state in which the 'state' is a facilitator of markets to function efficiently.

2) India, though is also yet a flawed democracy, fares better than its 5 neighbours (rank within brackets) as follows: India (51), Sri Lanka (69), Bangla Desh (80), Nepal (92), Pakistan (108) and China (153).

3) A criticism against democracy is on the ground that it 'generates redistributive demands that undermines investment priority and affect growth'. The criticism is not merited because 'growth rates in many democratic countries (including India) are much higher than many authoritarian countries'.

4) 'Governance' refers to a notion of democratic state. The term subsumes institutions of state and beyond. The latter includes non-state institutions like the civil society. Governance, thus, refers to a much wider ambit than a government. There is an implicit reference to 'democratic accountability' in the term governance.

5) Good governance is 'participatory, transparent and accountable'. It takes into account the voices of the poorest and the most vulnerable including under it the principles of 'inclusive growth'.

Check Your Progress 2

1) It refers to the structure and functioning of legal and social institutions to support economic activities and transactions.

2) Security of property rights, institutions to ensure the enforcement of contracts and collective action for the effective provision of public goods.

3) It is much broader than mere 'property rights' and 'freedom of enterprise'. It includes a political bias for democracy.

Check Your Progress 3

1) It relates to: (i) voice and accountability (VA), (ii) political stability and absence of violence/terrorism (PV), (iii) government effectiveness (GE), (iv) regulatory quality (RQ) and (v) control of corruption (CC).

2) Voice and Accountability. It indicates the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association and a free media.

3) It captures perception on quality of public services and its independence from political pressures. It also captures the credibility of the government in its commitment to policy formulation and implementation. China scores marginally higher (69.7) than India (63.9) in this respect.

4) CC of WGI (by Brookings and WB) and CPI by Transparency International.

5) It uses different databases, the surveys differ in their sample characteristics making inter-country comparison difficult, etc.

GLOSSARY

Agglomeration Effect	It means cluster of population and economic activities. In economics, agglomeration means the phenomenon of locating firms close to one another. At its core, agglomeration's underlying theory is that businesses and resources can take advantage of a number of efficiencies by being located close to one another. There are actually two major categories of agglomeration: urbanisation economies and localisation economies. Urbanisation economics means benefits that firms in a number of different industries receive from population and infrastructure clusters. A great example of this is a shopping mall. Localisation economics means firms in the same industry get benefits from being located close to each other.
Balance of Payments	It summarises all transactions of country's individuals and government with rest of the world. These transactions consist of imports and exports of goods, services and capital, as well as transfer payments such as foreign aid and remittances.
Body Mass Index (BMI)	It is a measure of body fat adjusted for the height of the individuals. It is measured as the body weight in kg divided by height in metres squared. Thus, if height is 175 cm and weight is 70 kg, then BMI = 70/(1.75*1.75)= 22.86 (since 1 metre is = 100 cms, 175 cms = 1.75 meters).
Centripetal/Centrifugal Effects	These are the concepts from Newtonian mechanics. Centrifugal effect means the inertial force directed away from the rotation that affects all objects at the time of rotation. In economics, we can say that Centrifugal force pulls population apart and on the other hand, Centripetal effect pulls population together.
CDS (Current Daily Status) Unemployment	This approach measures unemployment in terms of 'person days' during the reference week.
CWS (Current Weekly Status) Unemployment	A person is treated as unemployed by this method, if a person who is available for work, does not find work even for one hour during the reference week.

Current Account Deficit	It is a measurement of a country's trade where the value of goods and services imported exceeds the value of goods and services it exports. The current account includes net income (e.g. interest and dividends) and transfers (e.g. foreign aid) although these components account for only a small percentage of the total current account.
Debt-GDP Ratio	This is the ratio between a country's government debt (a cumulative amount) and its GDP. A low debt-to-GDP ratio indicates that an economy can produce and sells goods and services sufficient to pay back its debts without incurring further debt.
Demographic Transition	It is the process by which countries transit from a situation of high birth and death rates to one of low rates in both birth and death.
Democracy Index	An Index developed and published by The Economist's Intelligence Unit. It surveys more than 165 countries and bases its democracy index on five categories viz. electoral process and pluralism, the functioning of the government, political participation, political culture and civil liberties.
Density of Population	Refers to the number of people per square km of land area.
Desertification	It is a process by which fertile land becomes desert, as a result of drought, deforestation, inappropriate agriculture, etc.
Dictatorship	Refers to an authoritarian regime in which the concentration of power lies in a few hands.
Disguised Unemployment	Also referred to as hidden unemployment, it exists when the labour force is either left without work or is working in such a manner where its marginal productivity is zero.
Economic Planning	Economic planning is the process by which central governments makes key economic decisions. It is in contrast with the laissez-faire which eschews any attempt to guide the economy, relying instead on

	market forces to determine the speed, direction and nature of economic evolution.
Foreign Direct Investment	Foreign direct investment (FDI) is an investment made by an investor from another country in tangible capital assets like infrastructure, production unit, etc.
GFR	Refers to the number of births per year per thousand women of child bearing age.
Governance	Governance encompass the legal frameworks for the rule of law, accountability of public officials, transparency in government procedures and practices, freedom for information access and participation of citizens through civil society organisations.
Governance	The term subsumes institutions of state and beyond. In the latter, it includes many non-state institutions.
Good Governance	Refers to that form of governance which ensures 'political, social and economic priorities' based on a broad consensus in society in which the voice of poor and the vulnerable is also included.
Governance Indicators	Are indicators like 'World Wide Governance Indicators' (WGI: developed by Brookings and WB) and the 'Corruption Perception Index' (developed by Transparency International).
Growth Rate	Measures how fast a variable is increasing. When it is economic growth rate, it refers to how an economy is growing. It does this by comparing one quarter of the country's GDP to the previous quarter. Averaged over the four quarters, it gives us the annual growth rate.
GER	Reveals the general level of participation in education.
GPI (Gender Parity Index)	Refers to the ratio of GER for females to males.
Head Count Ratio (HCR)	A method of measuring poverty in which the total number persons below the poverty line income would be divided by the total number surveyed or in the population.

Human Capital	Treating education as an investment in human beings, it refers to the cumulative wealth of trained persons in the society.
Human Development	Refers to the process of enlarging people's freedoms and opportunities thereby improving their overall well-being.
Inclusive Growth	Inclusive growth is economic growth that creates opportunity for all segments of the population and distributes the dividends of increased prosperity, both in monetary and non-monetary terms, in a fair manner across all sections of the society.
Incremental Capital output Ratio (ICOR)	ICOR indicates additional unit of capital (or investment) required to produce an additional unit of output. From Harrodian equation we can say that *Incremental Capital-Output Ratio* (*ICOR*), is the *ratio* of investment to growth. The higher the *ICOR*, the lower is the productivity of *capital.*
Junk-Grade Debt	Long-term credit ratings, denoted as triple A (AAA) is the highest credit quality. C or D (depending on the agency issuing the rating) is the lowest or junk quality. In case of downgrade in credit rating, the government has to pay more in debt servicing costs. This means that it will have less to spend on social initiatives and infrastructure. In order to plug the funding gap, government will have to increase revenue through higher taxes.
Learning Poverty	Refers to the ability to read and understand a short age-appropriate text by age 10. This is an indicator developed by WB to assess the quality of education.
Mixed Economy	This is defined as an economic system consisting of a mixture of both the public and private sector enterprises operating in a mutually coexisting manner. In most cases, 'mixed economy' refers to market economies with strong regulatory oversight and governmental presence in provisioning the public goods and expanding the infrastructural base of the economy to facilitate efficient functioning of markets.

Natural Resource	Natural resources are materials provided by nature which mankind uses to make complex products.
Per Capita Income	Per capita income is a share of national income, on an average that each person is getting. It can be calculated by dividing national income by the total population.
Physical Infrastructure	Physical Infrastructure is directly related with the production sectors like agriculture, industry and trade. It includes facilities like power, irrigation, transport telecommunication.
Poverty Line	A minimum level of income required to purchase the basic necessities expressed on per capita basis below which any person would be deemed poor i.e. below poverty line person.
Poverty Gap Index (PGI)	This is a measure of severity of poverty in which persons whose income is above the poverty is numerically considered 'zero' (i.e. above poverty line) and persons with income below the poverty line would be numerically considered equal to the difference between the actual income and the notional equivalent of poverty line level income.
Rate of Growth of Population	Refers to the change in the size of population expressed as a percentage to its base year population value.
Resource	A resource is a source of supply from which beneficial goods and services can be produced.
Social Progress Index	Is a measure developed to assess the capacity of a society to meet its basic human needs. It encompasses two other aspects besides human needs viz. foundations of well being and opportunities.
Structural Change	Refers to changing dominance of industry-GDP and services-GDP with a transition from a high agriculture-GDP shares.
Special Drawing Rights	An instrument created to replace gold. SDRs are used as a unit of account by the IMF. They are 'potential claims' on the

	freely usable currencies of IMF members.
Squared Poverty Gap Index (SPGI)	The PGI assigns equal weight to each person below the poverty line. This makes the PGI insensitive to the degree of poverty. The SPGI removes this deficiency by assigning weights equal to the actual extent of poverty which ensures greater weight to those whose poverty status is acute relative to others.
Stable Population	A Population is called stable when its size grows/diminishes over time at a constant rate and each age group has a constant share of total population.
Structural Change	This is defined as the outcome of economic growth in which major change in the shares of different sectors of income or employment is evidenced. For instance, the decline in the share of agricultural employment by over 20 percent during the period 1951-2012 is a structural change in the Indian economy.
Still Birth Rate	Still birth refers to the death of an infant in the womb after 28 weeks of pregnancy. It is measured as 'the number of still births per 1000 births (including live and still births) during the year'.
Sustainable Development	*Sustainable development* is a way for people to use resources without the resources running out for successive generations. The term used by the Brundtland Commission defined it as development with sustainability that 'meets the needs of the present without compromising the ability of future generations to meet their own needs'.
TFR	It is the summation of age specific fertility rates (ASFR) which is the 'ratio of number of live births per woman to the mid-year female population of a particular age-group.
TFR	TFR is the average number of children that would be born in the reproductive age of a girl/woman if she were to survive her entire reproductive life. The value of TFR is taken as 2.1 because it is the average number of children a woman would potentially have if she was subject to the

	prevailing fertility rates.
Terms of Trade	Refers to the relationship between exports and imports. It is the relative price of a country's exports to imports.
Under Employment	Is a situation when a part of labour force is willing to work but not getting work as per their skill, education and capacity.
UPS (Usual Principal Status) Unemployment	As per this concept, a person is considered unemployed if he is available for work but could not get work for major part of the year.
UPSS (Usual Principal and Subsidiary Status) Unemployment	Besides the UPS as defined above, this category of unemployed includes those who could not even get work on a 'subsidiary basis' during a year.
Urbanisation	Urbanisation is a process that influences the rural-urban distribution of population in a country. It increases by: (i) natural increase of urban population; (ii) migration from rural areas; and (iii) transformation of rural areas into urban through upgrading of places into new towns, establishment of new industrial townships and growth of urban agglomerations.
Waves of Democracy	Refers to shift of power from monarchy to representative governments through a long history marked for: the Glorious Revolution of England in 1688, the French Revolution in 1789 and the disintegration of USSR in the late 1980s.
Z-Score	Z score is the 'ratio' of the 'difference between the actual value (or the observed value) and the median value' and the 'standard deviation' of the values in the sample. Since the numerator of the ratio is a difference between the actual and the median value for a population, some Z scores are positive and some are negative. It is positive when the actual value is greater than the median value. This is an indicator of good health. The opposite is the case when the Z score is negative i.e. when the actual value is less than the median, the negative value of Z is an indicator of poor health.

STATISTICAL APPENDIX

Table 3.2 (a): Sectoral Share (%) of GDP: 2013-21 (base 2011-12)

Year	Agriculture	Industry	Services
2013-14	20.7	28.3	51.1
2016-17	18.3	28.4	53.3
2019-20 (PE)	17.3	27.5	55.2
2020-21 (AE)	18.8	26.9	54.3

Source: Table 1.3 B, A7, Economic Survey 2020-21.

Note: PE: Provisional Estimates. AE: Advanced Estimates

Table 3.3: Domestic Savings as Percentage of GDP: 2012-19 (2011-12 Series)

Sector	2011-12	2014-15	2017-18	2018-19
Household	23.6	19.6	19.2	18.2
Private Corporate	9.5	11.7	11.6	10.4
Public Sector	1.5	1.0	1.7	1.5
Total	34.6	32.2	30.5	30.1

Source: Table 1.9, A 26, Vol. 2, Economic Survey 2020-21.

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