MAECO 1.3

M.A. ECONOMICS

SEMESTER - I

(REVISED SYLLABUS AS PER NEP 2020)

INDIAN ECONOMY

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INDIAN ECONOMY

Semester I

Credits: 04

Course Objectives

The paper aims at building strong fundamentals to varied challenges confronting the Indian economy with special reference to it's developmental challenges. Wherever possible an effort is made to incorporate the discussion on relevant case studies in different sectors of the economy.

Course Outcomes

CO1: Students get familiarized with the sectoral issues to be tackled with the Indian perspective.

CO2: Generate awareness on the solutions to deal with the development challenges of the Indian economy in the 21st century globalised world.

Module 1: Characteristics of Indian Economy (15 Hours)

Features and Characteristics of the Indian Economy, Trends and Structure, Demographic features, National income, Growth and Structural Change in the Indian Economy, Poverty, inequality and policy implications.

Module 2: Infrastructure and Human Development (15 Hours)

Energy; Conventional and Non-Conventional energy development in India, Energy policy, Social infrastructural developments; Education and Health, Recent debates on Human Development in India; Concept and Measurement.

Module 3: Industry and FDI **(15 Hours)**

Industrial Profile of India - Private Sector, Large, Medium and Small Scale Industries, VillageIndustries, Public Sector, Role and Problems of Public Sector Industries, Small-scale and cottage industries in India-SMEs in India. Recent trends in Industrial growth. Industrial sickness, Exit policy, Role of BIFR, Impact of Globalization: Trends and pattern of FDI in India; Trends and pattern of Indian industry abroad, Export and import component of Indian industrial sector, Industrial Combinations; Causes, Mergers & Amalgamations.

Module 4: The Agricultural Sector **(15 Hours)**

Agricultural Production and Productivity issues, Institutional structure, land reforms in India, technological change in agriculture, Pricing of agricultural inputs and output; Terms of trade between agriculture and industry, Agricultural finance policy, Agricultural Marketing and Warehousing, Issues in food security, Policies for sustainable agriculture.

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Module 1

1

CHARACTERISTICS OF INDIAN ECONOMY

Unit Structure :

1.0 Objectives

1.1 Characteristics of the Indian Economy

1.2 Demographic features of India

1.3 The National Income Trends (NNP)

1.4 Questions

1.0 OBJECTIVES

- To study characteristics of Indian economy
- To study demographic features of Indian economy
- To understand the concepts of National Income, Growth and structural change in Indian economy

1.1 CHARACTERISTICS OF INDIAN ECONOMY

India is a low-middle income economy and in terms of size, it is the fifth largest economy in the world with a GDP of USD 4.12 Trillion in the year 2024 with a GDP per capita of USD 2850. The IMF projected growth for the year 2024 is 6.2 per cent. At current annual rate of growth of GDP, India is projected to cross the five trillion dollar mark in the next five years to be third largest economy in the world with only China and the United States in the lead with second and first position respectively. In the year 2024, China's GDP was USD 18.57 trillion and the United States had a GDP of USD 27.97 trillion. By 2028, India will be the third largest economy in the world, however, thereafter the Indian economy will have to be content being the third largest economy for quite a long time. In per capita terms, China's per capita GDP in the year 2024 is USD 13,160 and that of the US is USD 83060. Both China and the US are miles ahead of India in terms of per capita GDP.

The World Bank classifies countries in four categories: low income, low middle income, upper middle income and high income. Countries with GNI per capita of less than USD 1135 are categorized as low income countries (LICs), those with between USD 1136 and USD 4465 are known

as lower middle income countries (LMCs), those with between USD 4466 and USD 13845 are called upper middle income countries (UMCs) and those with incomes above USD 13845 are called high income countries (HICs). These classifications are adjusted periodically for inflation and the one given here is for the year 2022. At current rates of real growth in GDP per capita, the Indian economy may be successful to scrape the bottom of the high income figure of USD 13845 by 2047 i.e. 23 years from now. Longer the duration of prediction lesser is the probability that the prediction will come true and 23 years is a very long period. Ideally and realistically speaking, we should be having medium targets for PCI i.e. to set the target for the next five years and also make a planned effort to achieve the target.

With this state of the economy preface, let us look at the broad characteristics of the Indian economy.

1. **Low Per-Capita Income** : According to the IMF, the GDP per capita of India in the year 2024 in USD was 2850. The figure for the year 2022 was USD 2389. In terms of purchasing power parity, India's per capita GDP was USD 8379 and had a 41% share in the average world per capita GDP. India's rank in terms of per capita GDP (PPP) in the same year was 120 out of 179 countries. Sri Lanka ranked 97th, Bangladesh ranked 121st, Luxembourg ranked number one with a PPP per capita GDP of USD 142,214 and a share of 689% of the average world per capita GDP. The United States at number 08 had a per capita GDP of USD 76,399 and China ranked 72 with a per capita GDP of USD 21,476 and had a 104% share in the average world GDP. Out of the 179 countries for which data was available, 119 countries were better off than India. China a country which was one time equal in terms of GDP and per capita GDP is now having a per capita GDP which is roughly three times that of India and a GDP figure which is next to the USA. In the year 2022, China's nominal GDP was USD 17.963 Trillion and a GDP per capita of USD 12,598 with a 17.86% share in world GDP. The USA GDP figure was at USD 25.463 Trillion with a 25.32% share in world GDP. India ranked 5th in terms of GDP with a nominal GDP of USD 3.385 and a 3.37% share in world GDP. Both China and India has an almost equal population number and therefore they can be rightfully compared.

2. **Occupational Distribution of Labor Force :** India has the largest share of the workforce employed in agriculture. In the year 2011-12, agriculture employed 49.26 % of the labor force and in the year 2021, this figure came down to 43.96%. Hence in the 10 year period, the agricultural workforce declined by five percentage points and in percentage terms the decline was 10.75 per cent. The industrial workforce was 23.11% and 25.34 per cent respectively for both the years and for the service sector, these figures were 27.53 and 30.7. The industrial and service sector workforce increased by about 10 and 11 percent respectively during the decade 2011-12 and 2021-22. The contribution made by agriculture to the GDP of India in the year 2021-22 was 21%, that of industry was 26.50 and service sector contributed

52.50 per cent of the GDP. These figures for the year 2011-12 were 21.70 (agriculture), 29.3% (industry) and 49.0% (services). Employment in the primary sector has declined by 10.75% as against a 3.23% decline in the contribution by the primary sector to the GDP. It is surprising to see that the employment in the secondary sector had gone up by 9.65% but the contribution to the GDP has declined by 9.55%. The tertiary sector saw the highest growth in employment by 11.52% and its contribution to the GDP had gone up by 7.15% over the ten year period. The primary sector therefore continues to be the major employer in India with the lowest share in the GDP indicating poor productivity.

Table 1.1 - Occupational Distribution of Labor force & Sector-based Contribution to GDP of India

Sector	2011-12		2021-22		% Change in Employment	% Change in GDP Contribution
	Employment	GDP Contribution	Employment	GDP Contribution		
Primary	**49.26**	**21.70**	**43.96**	**21.00**	**-10.75**	**-3.23**
Secondary	**23.12**	**29.30**	**25.34**	**26.50**	**+9.65**	**-9.55**
Tertiary	**27.53**	**49.00**	**30.70**	**52.50**	**+11.52**	**+7.15**

Source: Collated from Economic Survey of India 2022-23

3. **Historical Burden of High Population with a Silver Lining on the Horizon :** The year 1921 is considered as the year of Great Divide in the history of population growth of India. It is because population began to rise rapidly from the year 1921. The existence of stable and organized State, advances in science and technology and improvements in health infrastructure contributed to the rapid decline in death rates while the birth rates continued to remain high over decades thereby leading to rapid increase in the population of India. In the year 2022, India has achieved the status of a country with the largest population in the world by surpassing China. India today is therefore the new population behemoth of the world.

Table 1.2 - India's Demography (1911 to 2100)

Year	Population (in Millions)	Birth Rate	Death Rate	Annual Growth Rate (%)	Decadal Growth Rate (%)	Total Fertility Rate
1911	315.156	-	-	-	7.4	-
1921	318.942	-	-	-	1.2	-
1931	352.838	-	-	-	10.6	-
1941	388.997	-	-	-	10.2	-
1951	361.088	43.97	27.58	2.21	-7.17	5.90
1961	439.235	41.83	21.94	2.33	21.6	5.89
1971	548.160	38.96	16.99	2.24	24.8	5.53
1981	683.329	35.99	13.22	2.30	24.7	4.79
1991	846.421	31.22	10.72	2.12	23.9	4.00
2001	1028.737	26.17	08.66	1.82	21.5	3.27

2011	1210.855	20.85	07.48	1.37	17.7	2.55
2021	1407.564	17.37	07.34	0.80	16.25	2.17
2024	1441.720	16.75	07.47	0.92	-	2.12
2031	1526.209	15.32	7.93	-	8.43	2.01
2041	1619.318	13.16	8.83	-	6.10	1.88
2051	1674.343	11.90	9.77	0.25	3.40	1.80
2061	1696.121	10.97	11.08	-	1.30	1.75
2064	1696.962	10.73	11.44	0.00	-	1.74
2071	1687.990	10.18	12.23	-	-0.48	1.72
2081	1649.862	9.72	13.13	-	-2.26	1.71
2091	1591.484	9.48	13.62	-	-3.50	1.71
2100	1529.850	9.25	13.78	-0.46	-3.87	1.71

Data up to 2011 are based on census figures and thereafter based on UN estimates and projections.

The annual growth rate of population figures are over the previous year and not decadal.

Birth rates and Death rates are per 1000 of the population.

The decadal growth rate of India's population was only 1.2% in 1921. Thereafter, the decadal growth rates entered double digits. The year 1951 shows a negative growth rate on account of partition of India but after 1951, the decadal population growth rates were twice as much as the pre-partition decades. The decadal growth rates began to decline only after 2001. The year 2064 is projected to register zero growth in population and thereafter there will be an absolute decline in the population of India. This is because much earlier in the year 2024, India has achieved the replacement level of fertility rate which is 2.1. When the fertility rate is 2.1, the population will replace itself. However, you will notice that the annual growth rate of population becomes zero only in 2064. It is only after 2064 India will experience an absolute decline in the population. Between 1951 and 1991, the annual growth rate of population was more than 2 per cent per annum whereas the average annual growth rate in the GDP was about 4 per cent. As a result, the annual growth in per capita income was about 2 per cent. At this rate, India took more than 36 years to double her per capita income and remained as a low income country in the world for quite a long time. India became a low middle income country only in the year 2009 and by 2047 we are probably going to be an Upper Middle Income Country with a PCI range of USD 4466 and USD 13845 because the income range will be substantially revised in the next 23 years.

4. **Unemployment and the Labor Market in India.** Unemployment in India assumes various forms. However, due to rapid increase in the population of the country since the year 1921, the labor force also increased rapidly. The agricultural economy is not big and advanced enough to absorb the growing labor force, thus leading to structural unemployment. As a result, there is a significant rural to urban migration of labor force. Migration takes place both due to push and pull factors. While the excess labor force is pushed out of the rural

areas, the urban areas pull a significant part of the rural labor force by virtue of varied employment opportunities in the cities. However, due to rural to urban migration of labor force and the excess of push over the pull factor, a part of the rural unemployment gets manifested in urban areas in the form of urban unemployment. The major forms of unemployment in India are therefore urban unemployment and rural unemployment. Urban unemployment may be classified into industrial unemployment and educated unemployment whereas rural unemployment may be classified into seasonal unemployment and disguised unemployment. The usual status unemployment rate is a person rate and indicates chronic unemployment because all those who are found usually unemployed in the reference year are counted unemployed.

According to PLFS Annual Report 2022-23, the current weekly status unemployment rate in India for various years is given in Table 1.2. A person is considered to be employed if he or she pursues any one or more of the gainful activities for at least one-hour on any day of the reference week. On the other hand, if a person does not pursue any gainful activity, but has been seeking or available for work, the person is considered as unemployed.

Table 1.3
Unemployment Rate as per Current Weekly Status for Persons of Age 15 years and above. (2018-19 to 22-23)

Year	Male	Female	Persons
2018-19	8.7	8.7	8.7
2019-20	9.3	7.3	8.8
2020-21	7.8	6.6	7.5
2021-22	6.9	5.8	6.6
2022-23	5.1	5.1	5.1
PLFS Annual Report 2022-23			

The unemployment rate was as high as 8.7 % in the year 2018-19. It went up marginally in the subsequent years and surprisingly declined in the pandemic year and thereafter to the lowest level in the five year period to 5.1% in the year 2022-23. You can see from Table 1.2 that the unemployment rate on current weekly status basis has fallen from 8.7% in 2018-19 to 5.1% in 2022-23. When the activity status is determined on the basis of the reference period of last 365 days preceding the date of survey, it is known as the usual activity status of the person. The usual status unemployment rate or chronic unemployment was 4.2% in the year 2020-21, 4.1 in the year 2021-22 and 3.2 in the year 2022-23 according to PLFS Annual Report 2022-23.

While the data on employment and unemployment appears to be good for the last year with reference to weekly and usual status unemployment, the labor force participation rate although improving is not good enough when

compared to advanced countries like the United States. The details of LFPR as per the PLFS Annual Report for the year 2022-23 are given in Table 1.4.

Table 1.4 – All India Labor Force Participation Rate in Usual Status for persons age 15 and above.

Survey Period	Rural			Urban			India		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
2017-18	76.4	24.6	50.7	74.5	20.4	47.6	75.8	23.3	49.8
2018-19	76.4	26.4	51.5	73.7	20.4	47.5	75.5	24.5	50.2
2019-20	77.9	33.0	55.5	74.6	23.3	49.3	76.8	30.0	53.5
2020-21	78.1	36.5	57.4	74.6	23.3	49.1	77.0	32.5	54.9
2021-22	78.2	36.6	57.5	74.7	23.8	49.7	77.2	32.8	55.2
2022-23	80.2	41.5	60.8	74.5	25.4	50.4	78.5	37.0	57.9

PLFS Annual Report 2022-23

During the survey periods 2017-18to 2022-23, it is clearly found that the rural female LFPR is higher than the Urban Female LFPR. The same is true of male LFPR, however, the margin of difference with reference female LFPR is high. By itself, the urban female LFPR is very low and the same is true of all India female LFPR which was 37% in the year 2022-23 as against the male LFPR of 78.5%. The male LFPR is higher than the females by more than one hundred per cent although during the period under reference, the female LFPR rose from the lowly figure of 23.3% to 37%. The LFPR for India stood at 57.9% in the year 2022-23. In the same year, the LFPR in the United States was 62.5%. Poor LFPR signifies a great waste of productive human resources and potential loss of GDP. Efforts, therefore needs to be put to improve the LFPR particularly the female LFPR in the country.

Table 1.5 – Unemployment Rate in Usual Status for persons age 15 and above.

Survey Period	Rural			Urban			India		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
2017-18	5.7	3.8	5.3	6.9	10.8	7.7	6.1	5.6	6.0
2018-19	5.5	3.5	5.0	7.0	9.8	7.6	6.0	5.1	5.8
2019-20	4.5	2.6	3.9	6.4	8.9	6.9	5.0	4.2	4.8
2020-21	3.8	2.1	3.3	6.1	8.6	6.7	4.5	3.5	4.2
2021-22	3.8	2.1	3.2	5.8	7.9	6.3	4.4	3.3	4.1
2022-23	2.7	1.8	2.4	4.7	7.5	5.4	3.3	2.9	3.2

PLFS Annual Report 2022-23

A look at Table 1.5 reveals that the unemployment (usual status) has considerably over the period under reference from 6% to 3.2% of the labor force. However, the all India male unemployment rate has been marginally higher in all the survey years. The urban female unemployment rate is similarly higher than the male unemployment rate in all the years. The rural male unemployment rate has also been higher than the female unemployment in all the years of survey.

Unemployment rate although low in the year 2022-23 does not augur well for the country because the very low female LFPR of 37% in the same year. The reasons must be sought and appropriate remedial measures must be taken so that female LFPR matches with the male LFPR.

5. **Growing Capital Formation** : Capital formation refers to creation of productive capacity in the economy. The productive capacity of an economy depends upon savings and investment. Looking at Table 1.6, you will notice that the Gross Domestic Savings (GDS) was as low as 9.4 % of the GDP in the year 1950-51 and thereafter the GDS has steadily improved to peak at 36.9% in the year 2010-11. The GDS has fallen in the year 2020-21and the reason can be safely attributed to the pandemic. When savings are converted into real investment, capital formation or productive capacity is generated. You will notice that the rate of capital formation in India had considerably improved and reached an all time high of 39.8% in 2010-11.

Table 1.6
Gross Domestic Savings and Gross Capital Formation in India
At current market prices (2011-12 series)

Year	GDS	GCF
1950-51	9.4	10.1
1960-61	11.3	15.4
1970-71	13.9	16.4
1980-81	17.2	20.7
1990-91	23.2	28.2
2000-01	24.8	26.2
2010-11	36.9	39.8
2020-21	28.2	27.3

Table IES 2022-23

6. Development Indicators of Indian Economy :

According OXFAM International, a British founded consortium of 21 independent NGOs, the top 10% of the Indians holds 77% of the national wealth and 73% of the wealth produced in the year 2017 went to the richest one per cent. On the other extreme, 670 million Indians who constituted the bottom half of the population experienced only a one per cent increase in their wealth. There were only nine billionaires in the year 2000 and this number grew to 101 in 2017. The wealth of Indian billionaires exceeded the Union Budget of India in the year 2018-19 at INR 24,422 billion. Every year 63 million people are pushed into poverty due to unaffordable health care cost.

The study of income distribution and income inequalities all over the world suggests that fruits of economic growth and development are not shared equally by all income classes in a society. Different sections of the society and different classes will have different abilities to earn and therefore income inequalities will always remain as a natural facet of all

societies. However, it is not income inequality per se but the extent and degree of income inequalities that all societies are plagued with, is a matter of concern. Greater the income inequalities lesser will be the economic welfare of the lower classes of the society. Apart from the ability to earn, there are a number of socio-economic factors that determines income distribution in general and the ability to earn in particular. If incomes were equally distributed there would be no different economic classes i.e. there would be absolute economic equality or it would be a classless society. A classless society is not conducive to economic growth and development and hence a certain degree of economic inequality as ingrained by nature is essential to fuel the economic engine. However, if the income inequalities are wide and pervasive, the socio-economic scene would be one of plenty and poverty existing side by side as is the case of India and other less developed economies of Asia, Africa and Latin America.

In terms of income equality, according to the **World Inequality Report 2022**, the top 10% Indians had a 57% share in the national income and the bottom 50% Indians had only a 13% share in the national income in the year 2021. The income gap between the top 10% and the bottom 50% was 22 times. The top one per cent had a 22% share in the national income. Inequality in ownership of wealth is higher than income inequality. The bottom 50% had a share of 5.9% in the wealth of the nation as against the top 10% owned 64.6% of the national wealth and the top one per cent owned 33% of the wealth of the nation. A study on the extent of inequality was conducted by the World Bank and University of Sussex, England. The study classified the extent of inequality into three broad categories namely: high, moderate and low inequality. The degree of inequality was measured on the basis of the share of the lowest 40 per cent of the population. The classification is given in Table 1.7.

Table 1.7
Classification of Income Inequality.

S.No.	Share of the Lowest 40% of population	Income Inequality
1.	Less than 12 per cent.	High
2.	Less than 17 per cent but more than 12 per cent.	Moderate
3.	More than 17 per cent.	Low

Thus it is clear that both income and wealth inequalities in India is very high with a small class of affluent at the top and a mass of poor at the bottom.

India has the distinction of having the marginal rate of Income Tax higher than the corporation tax and hence the contribution made by the income tax payers to the exchequer is greater than the corporate sector in the country. When it comes to indirect taxes, 64% of the GST came from the bottom 50% of the population. As against this, the top 10% Indians made only a four per cent contribution to the GST kitty.

According to the **State of Food Security and Nutrition in the World 2023**, 74% of Indians could not afford a healthy diet. According to the **Global Hunger Index 2023**, India's GHI score was 28.7 and was placed at Number 111/125 countries. The world GHI score was 18.3 considered moderate in 2023. In the year 2022, India was placed at 107/125. The GHI ranks countries on a 100 point scale with zero indicating absence of hunger and 100 indicating all pervasive hunger. The severity scale of GHI is as follows:

Table 1.8 - Global Hunger Index 2023 (Severity Scale)		
Classification	**Score**	**India's Score & Rank**
Low	≤ 9.9	
Moderate	10 – 19.9	
Serious	20 – 34.9	GHI Score = 28.7
Alarming	35 – 49.9	Rank = 111/125
Extremely Alarming	≥ 50	

The GHI score is based on four indicators representing under-nutrition and malnutrition. These indicators are Under-nourishment (below par calorie intake), Child stunting (below par height of children under age five), Child wasting (below par weight of children under age five) and Child Mortality (death rate of children under age five). The Global Gender Gap Report 2023 placed India at 127 out of 146 countries in terms of Gender Inequality. Given the low female LFPR, gender inequality in India has to be high. The share of female labor in the national income was only 18%, a shade higher than the 15% figure in the middle-east and a shade below the Asian average (excluding China) of 21%. While gender inequality is distressing in India, one may take comfort from the fact that the share of female labor income had increased from 10.6% in 1990 to 18.3% in 2020.

The Gender Inequality Index for India in the year 2021 was 0.490 and the rank was 122 indicating that 121 countries in the world had a better GII than India in the year 2021. Denmark with a score of 0.013 ranked first, the USA ranked 21st with a score of 0.179, Australia ranked 5th with a score of 0.073 and Yemen ranked 170 with a score of 0.820 indicating highest GII and a least equal society based on gender. There appears to be positive correlation with GII and HDI. High HDI countries had a lower GII score and vice versa. The following table shows the GII for the four groups of countries classified on the basis of HDI. You will notice that the very high HDI countries had the lowest Gender Inequality Index averaging 0.155 indicating that women in these countries experienced higher gender equality as compared to countries classified lower on the HDI scale and the low HDI countries had the highest GII of 0.577 indicating that women in these countries experienced least gender equality. India being a developing country with a medium human development index and a GII of 0.490 clearly matches with the GII of developing countries.

Table 1.9 - Relationship between HDI and GII		
SNO	**HDI Classification of Countries**	**Gender Inequality Index (GII)**
1.	Very High Human Development	0.155
2.	High Human Development	0.329
3.	Medium Human Development	0.494
4.	Low Human Development	0.577
5.	Developing Countries	0.487
6.	India's GII for the year 2021	0.490

Gender Development Index : The GDI is the ratio of female to male HDI values. Countries are divided into five groups by absolute deviation from gender parity in HDI values. Group 1 comprises countries with high equality in HDI achievements between women and men (absolute deviation of less than 2.5 percent), group 2 comprises countries with medium to high equality in HDI achievements between women and men (absolute deviation of 2.5–5 percent), group 3 comprises countries with medium equality in HDI achievements between women and men (absolute deviation of 5–7.5 percent), group 4 comprises countries with medium to low equality in HDI achievements between women and men (absolute deviation of 7.5–10 percent) and group 5 comprises countries with low equality in HDI achievements between women and men (absolute deviation from gender parity of more than 10 percent).

Table 1.10 - Gender Development Index (GDI)		
SNO	**HDI Classification of Countries**	**GDI**
1.	Very High Human Development	0.986
2.	High Human Development	0.973
3.	Medium Human Development	0.880
4.	Low Human Development	0.864
5.	Developing Countries	0.937
6.	India's GDI for the year 2021	0.849
7.	Arab States	0.871
8.	South Asia	0.852
9.	Least Developed Countries	0.894
10.	World	0.958

The GDI of India for the year 2021 according to HDR 2021-22 was 0.849. The female HDI was 0.567 and the male HDI was 0.668. The HDI values for both males and females would be equal if there is gender parity. The GDI value is the ratio of female to male HDI values i.e. 0.567/0.668 = 0.849. The female HDI score poorly as compared to male HDI because of two important factors. They are the mean years of schooling and per capita income. The mean years of schooling for females in the year 2021 was 6.3 as against 7.2 for males and the PPP GDP per capita for women was only USD 2277 against 10,633 for men. The HDI is the average of life expectancy index, education index and the income index. While the

life expectancy of females is higher than the males, the women in India scores poorly on the education index and there is a wide gulf in the income index of both the sexes. The GDI values for the four groups of HDI countries for the year 2021 were as given in the following table. Although India happens to be a medium HDI country but when it comes to GDI, she can be compared only to low HDI countries and the Arab States or for that matter, South Asia as a whole. Clearly the Indian GDI score fares poorly when compared to the world average of 0.958 and even the developing countries with a GDI score of 0.937.

7. **Use of Poor Technology**. Productivity in both the agricultural as well as the industrial sectors in India is relatively far poor as compared to the advanced countries of the world. Low productivity levels can be clearly attributed to the use of low level of technology. The productivity of human capital in India compares poorly with the rest of the world because of the low levels of skill development in India. While the National Education Policy 2020 has emphasized on multi-disciplinary and skill based education beginning from the lower secondary level so that the educated workforce in India becomes employable and has recommended 6% of the GDP to be spent on education, the Government of India has spent only 2.9% of the GDP on education in the year 2022-23. The clamor for raising the education budget to 6% of the GDP has been there for a long time, governments one after another had chosen to ignore the education sector to the detriment of productivity: both industrial and agricultural. Important reasons leading to low agricultural productivity are decreasing sizes of agricultural land holdings on account of sub-division, continued dependence on the monsoon, inadequate access to irrigation, imbalanced use of soil nutrients resulting in loss of fertility of soil, unequal access to modern technology in different parts of the country, lack of access to formal agricultural credit, limited procurement of food grains by government agencies, and failure to provide remunerative prices to farmers. India's productivity has grown at a slower rate as compared to other competing countries. For instance, while Brazil's yield for rice increased from 1.3 tonne/ha in 1981 to 4.9 tonne/ha in 2011, India's yield increased from 2.0 to 3.6 during the same period. What is true in terms of rice is also true in case of other crops such as wheat, cereals and pulses. Brazil, China and USA have far more per hectare agricultural productivity than India. In 2021, 43.96% of the labor force was employed in agriculture and its contribution to the GDP was only 17.33%. The share of the industrial sector in the GDP has stagnated for a long time indicating no improvement in the industrial productivity. According to the World Competitiveness Report 2023, Denmark ranked number one with a score of 100, India ranked 40 amongst 64 countries and China was placed at number 21. In the year 2022, India was placed at 37 with a constant rank of 43 in the three years before 2022. The IMD World Competitiveness Center ranks the 64 selected countries of which India is one, on four parameters: economic performance, government efficiency, business efficiency and infrastructure.

The Human Development Index (HDI). According to the HDR 2021-22, India continued to be a medium HDI country with a HDI score of 0.633 and ranked 132 amongst 191 countries. In 2021, Switzerland held first position with a HDI score of 0.962. The HDI scores of HDI groups and other relevant details are given in the following table.

Table 1.11 - Human Development Index (HDI)

SNO	HDI Classification of Countries	GDI
1.	Very High Human Development	0.896
2.	High Human Development	0.754
3.	Medium Human Development	0.636
4.	Low Human Development	0.518
5.	Developing Countries	0.685
6.	India's HDI for the year 2021	**0.633**
7.	Arab States	0.708
8.	South Asia	0.632
9.	Least Developed Countries	0.540
10.	World	0.732

Between 1990 and 2021, the HDI for India improved from a low of 0.434 to 0.633 i.e., about fifty per cent improvement over a 30 year period. India entered the medium HDI group in the year 2010 with a HDI score of 0.575. Notably, the HDI scores for 2018, 2019 and 2020 were 0.645, 0.645 and 0.642. The fall in the HDI score in the years 2020 and 2021 can be clearly attributed to the pandemic and most countries of the world had similar experience with some exceptions like Bangladesh whose HDI score went up in these years from 0.635 in 2018 to 0.644 in 2019 and to 0.655 in 2020 to 0.661 in the year 2021.

1.2 DEMOGRAPHIC FEATURES OF INDIA

In the year 2024, India became the country with the largest population in the world by displacing China. The population of India in the year 2024 was 1441.72 million and that of China was 1410.78. China reached her population peak in the year 2020 and the decline had already begun. India will peak in the year 2064 with a population of 1696.962 million and the decline will begin only thereafter. India has achieved the replacement level fertility rate of 2.1 in the year 2024, however, the total population will start declining only when the birth rate falls below the death rate and this is going to happen only in the late 2060s and hence the peak population year is 2064. In the year 2100, the population of India will mirror the 2030s population of 1529.850 million. The death rate will continue to be higher than the birth rate from the 2060s and thereafter with the fertility falling to 1.71 in the year 2081 and remaining constant for the rest of the century.

The data on population becomes relevant only after 1950 because the country was partitioned in 1947 and a substantial population migrated to

the new found country of Pakistan. Table 1.1 shows that the growth rate of population remained above the two per cent mark between 1951 and 1991 i.e. for four decades the population of India grew at an average annual growth rate of more than two per cent and it was only in the year 1997 that the population growth rate was 1.97%. The figures for decadal growth rate also shows the fact that these numbers were more than 20 per cent till the year 2001. The annual growth rate fell below the one per cent mark only after 2011. India therefore has solved the population problem at a theoretical level by achieving the replacement level fertility rate. However, the population data coming from the different states of India has a different story to tell. There are therefore states with already declining population with fertility rates falling below the replacement level and there are states with rising population with higher fertility rates.

The data put forward by the Census of India as projections for the years 2011-2036 assumes significance in terms of analysis of the demographics of India. The salient features of the population projections at the national level are as follows:

1. **Rising Population and Declining Growth Rate.** The population of India is expected to increase from 121.1 crores to 152.2 crores during the period 2011-2036. During the 25 year period, the population of India will increase by 25.7 percent and the annual growth rate will be 1.0 percent. The density of population will increase from 368 to 463 persons per square kilometer during this period.

2. **Falling Birth Rate and Marginal Rise in the Death Rate.** The crude birth rate will decline from 20.1 during 2011-15 to 13.1 during 2031-35 due to declining total fertility rate. However, the crude death rate is expected to increase marginally due to changing age structure of the population with the rising median age as a result of continuing decline in fertility and increase in the expectation of life at birth. It will increase from 7.2 during 2011-15 to 7.3 during 2031-35. Because of declining fertility level in all the states, the crude birth rates (CBR) will also be declining. By 2031-35, except Bihar, no state is expected to have a crude birth rate of more than 20. The highest CBR of 19.6 per thousand is expected to be in Bihar followed by Jharkhand (15.6) and Madhya Pradesh (15.4) during 2031-35. Assam, Chhattisgarh, Jharkhand, Jammu & Kashmir (UT), Rajasthan, Odisha, Haryana, Uttar Pradesh and Gujarat are expected to have CBRs in the range of 12.1 to 15.3, close to the projected national level of 13.1. In most of the other states, the CBRs will be in the range 9.9 and 12.1. Three states, Tamil Nadu, Punjab and Andhra Pradesh are expected to have the lowest CBR of 9.9 followed by Himachal Pradesh (10.0) during 2031-35. In contrast to the CBRs, the situation is expected to be different in case of crude death rates (CDR). Because of ageing of the population, the crude death rates are likely to increase in 19 major states, except Madhya Pradesh, Uttar Pradesh, and Chhattisgarh during 2031-35.

3. **Potential Population Dividend & Changing Age Structure**. Due to declining TFR, the under-15 year age population is projected to decline from 30.9 to 20.1 percent. The working age population (15-59 years) and the elderly population (60 years and above) are expected to increase substantially. The number of elderly persons in the population is expected to increase from 10 crores in 2011 to 23 crores in 2036 and their share in the total population will increase from 8.4 to 14.9 percent. The working age-group (15-59 years) population is expected to increase from 60.7 percent in 2011 to 64.9 percent in 2036. The youth population in the age-group (15-24) years is expected to increase from 23.3 crores in 2011 to 25.1 crores in 2021 and then decrease to 22.9 crores in 2036. The share of youth population is expected to fall from 19.3 percent in 2011 to 15.1 percent in 2036. In 2011, 50.2 percent of the population was aged 24 years and below. In 2036, this percentage will go down to 35.3 percent. The median age of the population is expected to be 34.5 years in 2036 as compared to 24.9 years in 2011. A potential population dividend on the one hand and increase in allocation for old-age care on the other would be the consequences of this demographic change.

4. **Substantial Decline in the School-going Age Population**. Due to declining TFR, the population in the school-going age of (5-14 years) is expected to decline from 25.4 crores in 2011 to 20.9 crores in 2036. The share of the population aged 5-14 years to total population of all ages is expected to decrease by 7.2 percentage points from 21.0 percent in 2011 to 13.8 percent in 2036. Over the 25 year period, the share of school going age population in the total population will decline by 32%.

5. **Expanding Labor Force**. Out of the total population increase of 31.1 crores between 2011 and 2036, the share of the working age population (15-59) years will be 81.4 percent. Labor force is therefore set to expand and employment generation will assume greater importance in the immediate future.

6. **Marginal Improvement in the Sex Ratio.** The sex ratio (females per 1000 males) is expected to increase from 943 in 2011 to 952 in 2036. On the whole, India is expected to continue to be patriarchal with a premium on the male child. The projected sex ration for India and selected states is given in the following table.

Table 1.12
Projected Sex Ratio 2011-36 – India & Selected States

S.No.	State	2011	2036
1.	Kerala	1084	1079
2.	Tamil Nadu	996	1015
3.	Andhra Pradesh	997	1007
4.	Odisha	979	998
5.	Telangana	988	996
6.	Chattisgarh	991	996

7.	West Bengal	950	976
8.	Assam	958	976
9.	Himachal Pradesh	972	973
10.	Karnataka	973	972
11.	Rajasthan	928	967
12.	Jharkhand	948	967
13.	Uttarakhand	947	963
14.	Madhya Pradesh	931	953
15.	Bihar	918	935
16.	Uttar Pradesh	912	931
17.	Jammu & Kashmir	889	929
18.	Maharashtra	929	921
19.	Punjab	895	915
20.	Haryana	879	908
21.	Gujarat	919	900
22.	NCT of Delhi	868	899
23.	**INDIA**	**943**	**952**

The sex ratio in Kerala is projected to fall marginally from 1084 to 1079 and the State of Kerala continues to have not only a favorable sex ratio but also the highest sex ratio in the country. Further, the TFR is expected to fall to 1.10 in Kerala by the year 2036 which means 90% of the women in the child-bearing age will have only one child or 90% of the families in Kerala will be one child families. The social relations in Kerala are therefore expected to change in the next 25 years. Most of the states will experience a marginal improvement in the sex ratio from their 2011 figures but they will remain below the 1000 mark indicating that there will be fewer women to every 1000 men in the Indian society. The overall sex ratio improves from 943 to 952 which is again a marginal change.

7. **Declining in TFR and Rise in Women with One Child.** The TFR is expected to decline from 2.37 during 2011-2015 to 1.73 during 2031-35. It means, in the year 2036 27 per cent of the women in the child-bearing age will have only one child and 73% will have two children each. The share of women with one-child will only increase in the later years.

8. **Turtle-paced Urbanization in India and the Kerala Bunny.** The urban population in the country, which was 31.8 percent in 2011, is expected to increase to 38.2 percent by 2036. The urban growth would account for 73 percent of total population increase by 2036. Out of the total population increase of 31.1 crores during 2011-2036 in the country, the share of increase in urban population is expected to be 21.8 crores. It also implies that the increase in urban population will be largely due to the natural increase in population of existing cities and not many new cities will be added to the existing number.

In terms of urbanization, Kerala is the only exception with 92.8 % urban population in the year 2036 with 80% rise in urbanization. Kerala therefore will be a predominantly urban state in the year 2036. Tamil Nadu, Telangana, Gujarat and Maharashtra will have a little more than 50% urban population and the rate of urbanization will be in the range of 12 and 33% over the period under reference. Urbanization in Telangana will be up by 33% and in Maharashtra it will go up only by 12% in the 25 year period. In seven states, urbanization will be below the 30% mark with Himachal Pradesh being the least urbanized State followed by Bihar, Assam, Odisha, Uttar Pradesh, Jharkhand and Rajasthan. These states are likely to contribute the maximum to inter-State migration in India in the 25 years period. With 38.2% urban population, India will continue to be predominantly rural and therefore agricultural in 2036.

Table 1.13
Projected Urban Population 2011-36 – India & Selected States
(As per cent of total population)

S.No.	State	2011	2036
1.	NCT of DELHI	98	100
2.	Kerala	52.5	92.8
3.	Tamil Nadu	49.3	58.2
4.	Telangana	40.3	55.0
5.	Gujarat	43.6	53.6
6.	Maharashtra	45.8	51.3
7.	Karnataka	39.6	49.3
8.	Haryana	36.1	47.9
9.	Punjab	38.2	45.5
10.	Andhra Pradesh	30.6	42.8
11.	West Bengal	32.7	41.1
12.	Uttarakhand	31.2	40.6
13.	J&K	27.9	33.3
14.	Chattisgarh	23.9	30.3
15.	Madhya Pradesh	27.9	30.1
16.	Rajasthan	25.2	28.0
17.	Jharkhand	24.4	27.9
18.	Uttar Pradesh	22.6	25.5
19.	Odisha	17.0	20.7
20.	Assam	14.3	16.8
21.	Bihar	11.5	13.1
22.	Himachal Pradesh	10.1	10.5
23.	**INDIA**	**31.8**	**38.2**

Table 1.14 Percentage Share of States in Projected Total Population increase by 2036		
S.No.	**State**	**2036**
1.	Uttar Pradesh	19.2
2.	Bihar	14.5
3.	Madhya Pradesh	8.2
4.	Maharashtra	7.9
5.	Rajasthan	7.2
6.	Gujarat	6.8
7.	Jharkhand	4.0
8.	West Bengal	3.8
9.	Haryana	3.0
10.	Karnataka	3.5
11.	NCT of Delhi	3.2
12.	Chattisgarh	2.8
13.	Assam	2.7
14.	Tamil Nadu	1.9
15.	Punjab	1.6
16.	Andhra Pradesh	1.5
17.	Telangana	1.5
18.	Kerala	1.2
19.	Odisha	1.0
20.	Uttarakhand	0.9
21.	Other States & Union Territories	3.8
22.	**INDIA**	**100.0**

9. **BIMARU States and the Population Juggernaut**. Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh are the four largest contributors to the population of India from the northern part with a share of 49.7% in the total projected increase. While the share of Maharashtra will be 7.83% and that of Rajasthan will be 7.2% in the year 2036, Maharashtra as a State will have urbanization of 51% and Rajasthan will have only 28% people living in the urban areas. Maharashtra therefore has the capacity to absorb the increase in population and this cannot be said of Rajasthan. Unlike Rajasthan, the share of population of Maharashtra in the total population of India is showing a declining trend. A population policy targeted at the BIMARU states is the need of the hour because these states are known in the country for all the wrong reasons. Low per capita income, poor sex ratio, high unemployment rate, low literacy rate, low life expectancy, high infant mortality rate, high birth rate, high death rate, low level of urbanization and therefore low level of industrialization etc. The human development indicators of these states need attention and also needs to be improved rapidly before the excess population from these states swarms the rest of the country.

10. Declining Share of the South in the Total Population. The share of BIMARU states in the total population of India is showing an increasing trend. All other states are showing a declining trend. Between 2031 and 2036, the share of Uttar Pradesh has marginally declined from 17.04 to 17.01%, however, between 2011 and 2031, the share of the population had increased from 16.50 to 16.94 and17.04. The share of the population of the southern states in the total population of India consisting of Kerala, Tamil Nadu, Andhra Pradesh, Karnataka and Telangana is showing a consistent and sustained decline.

Table 1.15
Projected Total Population of India and States as on 01st March (2011-36) in ₹000s.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11
S. No	**Name**	**2011**	**Share**	**2021**	**Share**	**2031**	**Share**	**2036**	**Share**	**Total Increase+**
	India	**12,10,855**	**100**	**13,63,006**	**100**	**14,78,775**	**100**	**15,22,288**	**100**	**25.72**
1.	Jammu & Kashmir*	12,267	1.01	13,408	0.98	14,361	0.97	14,747	0.97	
2.	Himachal Pradesh	6,865		7,394		7,712		7,785	0.52	
3.	Punjab	27,743	2.29	30,339	2.22	32,087	2.16	32,658	2.14	
4.	Chandigarh*	1,056		1,208		1,318		1,360	0.09	
5.	Uttarancha l	10,086		11,399		12,524		12,974	0.85	
6.	Haryana	25,351	2.09	29,483	2.16	32,946	2.22	34,469	2.26	
7.	NCT of Delhi*	16,788		20,571		24,552		26,591	1.75	
8.	Rajasthan	68,548	5.66	79,281	5.82	87,198	5.90	90,563	5.95	7.06
9.	Uttar Pradesh	199,812	16.50	230,907	16.94	251,963	17.04	258,990	17.01	19.0
10.	Bihar	104,099	8.60	123,083	9.03	141,041	9.54	148,576	9.76	14.3
11.	Sikkim	611		677		736		758	0.05	
12.	Arunachal Pradesh	1,384		1,533		1,668		1,719	0.11	
13.	Nagaland	1,979		2,192		2,385		2,458	0.16	
14.	Manipur	2,856		3,165		3,444		3,549	0.23	
15.	Mizoram	1,097		1,216		1,323		1,363	0.09	
16.	Tripura	3,674		4,071		4,430		4,565	0.30	
17.	Meghalaya	2,967		3,288		3,578		3,687	0.24	
18.	Assam	31,206	2.57	35,043	2.57	38,196	2.58	39,399	2.59	
19.	West Bengal	91,276	7.54	98,125	7.20	102,167	6.91	102,931	6.76	
20.	Jharkhand	32,988	2.72	38,471	2.82	43,209	2.92	45,155	**2.97**	
21.	Odisha	41,974	3.47	45,696	3.35	48,260	3.26	49,026	3.22	
22.	Chattisgar h	25,545	2.10	29,493	2.16	32,719	2.21	34,081	2.24	
23.	Madhya Pradesh	72,627	6.0	84,516	6.20	94,057	6.36	97,804	6.42	8.08
24.	Gujarat	60,440	5.0	69,788	5.12	77,931	5.27	81,316	5.34	
25.	Dadra, Nagar Haveli*	344		608		1,178		1,702	0.11	
26.	Maharasht ra	112,374	9.29	124,437	9.13	133,451	9.02	136,764	8.99	7.83
27.	Andhra Pradesh	49,577	4.09	52,787	3.87	54,175	3.66	54,252	3.56	
28.	Karnataka	61,095	5.04	66,845	4.90	70,652	4.77	71,948	4.72	
29.	Goa	1,458		1,559		1,634		1,663	0.11	

30.	Daman & Diu*	243		470		1,137		1,663	0.11	
31.	Lakshwadeep*	64		68		70		72	0.005	
32.	Kerala	33,406	2.76	35,489	2.60	36,695	2.48	36,949	2.43	
33.	Tamil Nadu	72,147	5.96	76,402	5.60	78,082	5.28	78,067	5.13	
34.	Puducherry*	1,248		1,572		1,961		2,184	0.14	
35.	Andaman & Nicobar Islands*	381		400		411		414	0.027	
36.	Telangana	35,004	2.90	37,725	2.77	39,207	2.65	39,467	2.60	
37.	Ladakh*	274		297		312		316	0.021	

*Union Territory.
+Percentage increase in 2036 over 2011 and Selected States' share in the total increase in population.

11. Population Ageing. The State of Kerala, where lower fertility and mortality rates have been achieved earlier than the other states, the proportion of older persons aged 60 years and above is expected to increase from 13 percent in 2011 to 23 percent in 2036. Thus, almost every fourth person in Kerala is expected to be a senior citizen by 2036. The median age of population in Kerala is expected to go up from 31.9 years in 2011 to 39.6 years in 2036.

12. Declining Infant Mortality Rate. The infant mortality rate (IMR) is expected to decline in all the states during 2011-35. The IMR, which was highest in Madhya Pradesh at 58 followed by 57 in Uttar Pradesh in 2011-15 is expected to come down to 37 in Madhya Pradesh, followed by Uttar Pradesh (38) in 2031-35. Other states, where IMRs are expected to be in the range of 30-40 during 2031-35 are Rajasthan, Assam, Odisha, Chhattisgarh, Madhya Pradesh and Uttar Pradesh. The lowest IMR is expected to be in Kerala at 9 in 2031-35. It will be followed by Tamil Nadu with IMR declining from 22 in 2011-15 to 16 during 2031-35. The infant mortality rate of India was 46 in 2010 and is expected to reduce to 30 by the end of the period 2031-35. An important factor in contributing to the declining TFR is the declining IMR.

1.3 THE NATIONAL INCOME TRENDS (NNP)

Average Annual Growth Rates

The national and per capita income figures are computed at current prices but these figures do not give a real picture of the performance of the national economy because current prices includes rise in prices or inflation. In order to find the real changes in national and per capita income, the figures are computed at constant prices. The growth of net national product at constant prices is indicative of the rate of growth of goods and services in the economy and the growth of per capita income at constant prices is an indicator of the changes in the economic welfare of the people. According to the Central Statistical Organization, the Net

National Product of India (at 1993-94 prices) was Rs.1, 32,379 crore in 1950-51. The average annual growth rate in NNP for the period 1950-51 to 1980-81 is 3.4 percent. At current prices the average growth rate turns out to be 8.9 per cent. The decadal growth rates reveal that during the first decade, the annual growth rate was 3.8 per cent, followed by 3.5 and 3 per cent in the succeeding decades. It may be noted that the growth performance of the Indian economy was on a steady decline in the first three decades. However, since the 1980s, there has been a continuous improvement. The annual growth rate was 5.4 per cent in the decade 1980-81 to 1990-91 and thereafter in the 1990s, it was 5.5 per cent. The first seven years of the 21st century has shown a remarkable improvement in the growth rate. The average annual growth rate for the first five years (2001-05) was 6.7 per cent. With the annual growth rate crossing the nine per cent mark in the year 2006-07 to be 9.7 and 8.7 in the year 2007-08, the first decade of the 21st century is expected to show some spectacular growth rate in national income. In the year 2007-08, the national income of India (GNP) stood at Rs. 31,02,000 crore at 1999-2000 prices and at current prices it was Rs.42,63,000 crore.

Growth of Real Income (1950-51 to 1980-81)

The targeted growth rate in national income and the growth rates actually achieved during the first thirty years of economic planning are given in Table 1.1. In the first five year plan, the targeted growth rate was only 2.1 percent per annum. The country achieved a compound growth rate of 3.6 percent per annum during the first plan. In the second plan a target of 4.5 percent was laid down and the actual growth rate achieved fell short of the target by 0.3 percent. The third plan targeted a growth rate of 5.6 percent per annum. The third plan turned out to be a disaster as the total growth achieved during the plan was a mere 13.6 giving a compounded growth rate of 2.7 percent per annum. The fourth plan laid down a target of 5.7 percent growth rate but achieved only 2.1 percent. The fifth plan had lowered down the targeted growth rate to 4.4 percent per annum and this time the country was able to cross the target to achieve 4.8 percent per annum growth rate. However, in the year 1979-80, the national income contracted by six percent thereby pulling down the average growth rate during the six year period 1974-75 to 1979-80 to a low of three percent.

Growth Rate since 1980s

The sixth plan set a target of 5.2 percent per annum and achievement was 5.5 percent per annum. In order to paint a rosy picture of the economy, the planners adopted 1979-80 as the base year which was a year of negative growth rate. Factoring for the negative rate of six percent in the national income, the sixth plan average growth rate turns out to be only 3.4 percent. During the 7th plan, the growth rate targeted was 5 percent. The 7th plan performance was very good as the country was able to achieve an annual growth rate of six percent. During the 8th plan (1992-93 to 1996-97), the Indian economy achieved a growth rate of 6.7 percent per annum. After the foreign exchange crisis of 1991, India adopted a program of economic reforms. Liberalization, privatization and

globalization were the three cornerstones of this program. Impressive growth in the post reforms period was due to the program of economic reforms. During the 9th plan (1997-2002), the estimated average annual growth rate was 5.5 percent against the targeted growth rate of 6.5 percent. The 10th plan (2002 to 2007) laid down a target of eight percent growth and achieved 7.8 per cent. The 11th and 12th five year plans posted an annual average growth rate of 6.06 and 6.84 which has been by far an impressive growth story. The 12th Five Year Plan was the last of the series of planned economic development in India. The government of the day abandoned the planning commission of India and replaced it with NITI Aayog. The economic growth rate continued with the six per cent and more figure in the years 2018-19 and 2019-20. The Corona Pandemic struck the shores of India in the year 2020 and the economic growth rate plummeted downwards to a negative figure of minus 7.4. Nevertheless, the Indian economy quickly recovered in the subsequent year and posted an impressive growth rate of 9.5 per cent in the year 2021-22.

Salient Features of Growth in National Income

The trend in growth of national income over the last 70 years of planned economic growth reveals the following salient features:

1. **Fluctuating Growth Rates** - The growth rate in national income over the last sixty years reveals a fluctuating pattern. In about 13 years, the rate of growth of national income is found to have reduced. In certain years, the per capita income has fallen due to the rate of growth in national income falling below the rate of growth of population. In five years, the national income had actually shrunk due to negative growth rate. Thus the trend in the growth rate of national income reveals a fluctuating pattern and the objective of achieving sustained economic growth over the last many decades has not been achieved.

2. **Fluctuating Agricultural Fortunes and Fluctuating Growth Rate** - With only one third of the cultivated land receiving irrigation facility, agriculture continues to be a gamble in the monsoons. When the rains fail, agriculture fails and when agriculture fails, Indian economy fails. With the agricultural sector contributing 20% to the national income, a one percent decline in the growth rate of agricultural output reduces the rate of growth of national income by 0.2 percent. Fluctuating agricultural fortunes is an important cause of fluctuating growth rate of national income.

Table 1.16 – NNP at Factor Cost and Per Capita NNP.

Year	NNP (Rs. Crore)	Per Capita NNP (Rs.)	NNP (Rs. Crore)	Per Capita NNP (Rs.)
	(at 1993-94 Prices)		(at current prices)	
1950-51	1,32,367	3,687.0	9,142	255.0
1960-61	1,92,235	4,430.0	15,204	350.0
1970-71	2,70,597	5,002.0	38,968	720.0
1980-81	3,63,417	5,352.0	1,18,236	1,741.0
1990-91	6,14,206	7,321.0	4,50,145	5,365.0
1995-96	7,87,809	8,489.0	9,41,861	10,150.0

2000-01	10,44,915	10,253.0	16,79,962	16,487.0
	***(at 1999-2000 Prices)**		**(at current prices)**	
2000-01	16,53,087	16,223.0	17,04,719	16,729.0
2001-02	17,55,280	16,910.0	18,56,217	17,883.0
2002-03	18,23,126	17,281.0	20,03,282	18,988.0
2003-04	19,86,858	18,517.0	22,68,576	21,142.0
2004-05	21,41,776	19,649.0	25,31,223	23,222.0
2005-06	22,95,243	20,734.0	28,46,762	25,716.0
2006-07	25,30,494	22,553.0	33,25,817	29,642.0
2007-08	31,02000	27,210.0	42,63000	37,395.0
	(at 2011-12 prices)		**(at current prices)**	
2010-11	73,73384	62,170	67,56,720	56,971
2011-12	77,42330	63,462	77,42330	63,462
2012-13	80,94001	65,538	87,66345	70,983
2013-14	85,78417	68,572	98,97663	79,118
2014-15	92,24343	72,805	109,78238	86,647
2015-16	99,63681	77,659	121,62398	94,797
2016-17	107,82092	83,003	136,23936	1,04880
2017-18	115,08774	87,586	151,40418	1,15224
2018-19	122,40380	92,241	167,04465	1,25883
2019-20	126,81246	94,566	179,94301	1,34186
2020-21	117,45872	86,659	174,61759	1,28829
2021-22	128,61032	93,973	205,73371	1,50326
Average Annual Growth Rates During Five Year Plans (Percent at 2011-12 prices)				
1951-56	4.8	2.9	2.2	0.4
1956-61	4.2	2.1	9.7	7.6
1961-66	3.4	1.1	9.9	7.6
1969-74	3.1	0.8	10.96	8.5
1974-79	5.1	2.8	10.76	8.4
1980-85	5.4	3.1	15.1	12.7
1985-90	5.8	3.6	14.0	11.6
1992-97	6.5	4.4	16.3	14.04
1997-02	5.4	3.4	10.6	8.5
2002-07	7.02	5.4	13.02	11.3
2007-12	6.06	4.3	15.40	13.5
2012-17	6.84	5.5	11.96	10.6
2017-18	6.7	5.5	11.01	9.9
2018-19	6.4	5.3	10.30	9.3
2019-20	3.6	2.5	7.7	6.6
2020-21	-7.4	-8.4	-3.0	-4.0
2021-22	9.5	8.4	17.8	16.7
Source IES 2002-03 & 2006-07. *CSO, NAS 2004 and 2021-22				

3. **Acceleration in the Growth Rate.** The average annual growth rate in national income during the first three decades was 3.4 percent. From 1980 onwards, this rate went up to 5.6 percent per annum and 5.96 per cent in the 1990s. The growth rate in the 2000s for the period 2001-02 to 2007-08 has been 6.92 per cent per annum. The growth rate in the national income in the 2000s and thereafter has been the highest in the history of planned economic development in India. The Corona Pandemic struck in the beginning of 2020s and in the year 2020-21, the growth rate was negative. However, the Indian economy recovered from the slump and registered a growth rate of 9.5% in the year 2021-22.

1.3.1 PER CAPITA NATIONAL INCOME TRENDS

According to the CSO, in 1950-51 India's PCI at 1993-94 prices was Rs.3687.40 and in 1980-81, this figure rose to Rs.5, 353. During the period 1950-51 to 1980-81, the average annual growth rate was only 1.2 per cent. In the first three decades, the growth rate in per capita income steadily declined from 1.8 to 1.2 and to 0.7 per cent. However, since the 1980s, the growth rate has improved from 3.1 to 3.5 and then to 4.9 per cent in the first five years of the 2000s. Thus the Indian economy has improved her performance since the 1980s. The growth in per capita net national product reflects the trends in the growth of NNP in India. Since the growth of NNP was very low, the growth in per capita income was also very low. The difference between the rate of growth of national income and the population growth rate is the rate of growth in per capita income. In fact, the growth in per capita income in the first thirty years was 1.20 per cent per annum as the growth of population was in the range of 2.5 to 2 percent per annum. The population growth rate began declining since the 1980s. Further there was improvement in the economic growth rate in the 80s and particularly in the 90s and thereafter. Hence, during the period 1980-81 and 2000-01, the rate of growth in per capita income was 3.3 per cent per annum. During the period 2000-01 to 2004-05, the growth rate in per capita income is 4.9 per cent at 1999-2000 prices. This shows a further improvement in the growth of per capita income in India and indicates a healthy development in growth performance of the economy.

The growth in per capita income measured at 2011-12 prices also shows a fairly good growth rate during the 10^{th}, 11^{th} and 12^{th} Five Year plan periods. These rates were 5.4, 4.3 and 5.5 per annum during the fifteen year period. The PCI figures showed a fairly good rate of growth of 5.5 and 5.3 per cent in the years 2017-18 and 2018-19. Thereafter, the figure slumped down to 2.5 % in the year 2019-20 and in the year 2020-21, the figure turned out to be negative at minus 8.4%. The slump and the negative figure can be clearly attributed to the corona pandemic which began in January 2020. The Indian economy made a sharp recovery in the year 2021-22 and posted a growth rate of 8.4 per cent in the per capita income.

International Comparison

On the basis of GNP per capita, countries of the world are classified by the World Bank into the following four income groups: low income, low middle income, upper middle income and high income. Countries with GNI per capita of less than USD 1135 are categorized as low income countries (LICs), those with between USD 1136 and USD 4465 are known as lower middle income countries (LMCs), those with between USD 4466 and USD 13845 are called upper middle income countries (UMCs) and those with incomes above USD 13845 are called high income countries (HICs).

Table 1.17: Classification of Countries by Income Group

(Year 2022-23)

Sr. No	Income Group by Per Capita GNP	Per Capita GNP (in US $)
1.	High Income countries	$13845 and above
2.	Upper Middle Income Countries	$4466 to $13845
3.	Lower Middle Income Countries	$ 1136 to $4465
4.	Low Income Countries	$1135 and below

With India's per capita GNP going a little above US $2850 in 2024, India remains in the category of a lower middle income country. With a sustained GNP growth rate of more than 7 percent per annum over the next 5 to 6 years, India will be able to enter the group of upper middle income countries. In the year 2022, India ranked 120 in terms of per capita GDP in US Dollars in a list containing 179 countries.

Table 1.18 – International Comparison	
Country	GNP Per Capita US $ 2022 (Nominal)
HIGH INCOME COUNTRIES	
United States of America	75, 269
Japan	34, 135
United Kingdom	45, 485
Netherlands	56, 429
Germany	48, 845
France	43, 061
Italy	34, 053
South Korea	32, 138
UPPER MIDDLE INCOME COUNTRIES	
Mexico	11, 091
Malaysia	11,972
Argentina	13,904
Brazil	8,918

LOW MIDDLE INCOME COUNTRIES	
South Africa	6,776
Indonesia	4,788
Sri Lanka	3,408
Bangladesh	2,688
India	2,389
Pakistan	1,597
Nepal	1,337
LOW INCOME COUNTRIES	
Zimbabwe	1267
Ethiopia	1028
Rwanda	966
Burkina Faso	833
Source: worldometer	

STRUCTUAL CHANGE

The study of distribution of national income by industry of origin helps us to understand the relative performance of the different sectors and sub-sectors of the economy and the structural changes that may have occurred as a result of different growth rates achieved by these sectors. In 1950-51, the primary sector dominated the Indian economy and its dominance continued until 1990-91. Presently, the service sector dominates the Indian economy with the share of the services sector in 2022 being 55 percent. The trends in the composition of GDP by industry of origin are shown in Table. The major trends as seen in Table are as follows:

1. **Declining Dominance of the Primary Sector:** The share of the primary sector (agriculture, forestry and fishery, quarrying & mining) has gone down from 57.7 percent of GDP in 1950-51 to 16.73 percent in 2022. In the normal course of economic growth and development, it is normal to see a declining share of the primary sector and a rising share of the manufacturing and the services sector. While this change happens in the economy, structural change takes place. After 1990-91, the share of the primary sector saw a substantial decline from 43% to 17.35 percent. In the first four decades, the share of the primary sector declined by about 14 percentage points or by about 24 percent. However, after the program of economic reforms announced in the year 1991, the share of the primary sector rapidly declined in the next three decades by about 27 percentage points or by more than 60%.

2. **Structural Changes in the Secondary Sector:** The share of the secondary sector consisting of mining, manufacturing, construction, electricity, gas and water supply has steadily increased from 13.85 percent of GDP in 1950-51 to 27.69 percent in 2022-23. During the period 1950-51 to 2022-23 i.e. in the 72 year period, the share of the secondary sector merely doubled. The manufacturing sector is therefore a sad story of the Indian economy.

3. **Changes in the Tertiary Sector:** The tertiary sector includes transport, communication, trade, finance, real estate, community and personal services. The domination of the tertiary sector in the national economy is the logical consequence of economic growth and development. The share of this sector grew from 25.74 percent in 1950-51 to 55 percent in 2022-23. The share of transport, communications and trade improved from 6.95% to 18.68% during the period. Finance and real estate also grew substantially from 11.76% to 22.62 percent and this sector dominates amongst the sub-sectors of the service sector. The share of Public Administration, Defense and Other services increased from 7.03 percent to 13.66 percent during the period under reference.

Table 1.19 - Estimates of GDP by Industry of Origin (2011-12 prices)

	Industry Group	INR Crores			Percentage Share		
		1950-51	1990-91	*2022-23	1950-51	1990-91	2022-23
1.	Agriculture, forestry, fishing, mining and quarrying.	309778	939527	518392	60.41	43.07	17.35
2.	Manufacturing, construction, electricity, gas and water supply.	71025	577004	4020341	13.85	26.45	27.69
3.	Trade, Hotels, Transport and Communication.	35646	276949	2712235	06.95	12.70	18.68
4.	Financing, Real Estate and Professional Services	60308	362985	3284130	11.76	16.65	22.62
5.	Public Administration, Defense and Other Services	36061	24499	1983575	07.03	01.13	13.66
	GVA at Basic Prices (1 to 5)	**5,12,818**	**21,80,964**	**14518673**	**100**	**100**	**100**

Source: IES 2022-23, Table 1.3

1.4 QUESTIONS

1. Explain the characteristics of Indian economy.
2. Comment on the development indicators of the Indian economy.
3. Comment on the unemployment situation in India.
4. Explain the demographic features of India.
5. Explain the trends in national income of India.
6. Explain the trends in per capita income of India.
7. Will India be able to enter the club of Upper Middle Income Countries by 2030? Substantiate your answer.
8. Explain the changes in the structure of Indian economy.

✞✞✞✞

2

POVERTY & INCOME INEQUALITY IN INDIA

Unit Structure :

2.0 Objectives

2.1 Poverty in India

2.2 Income Inequality in India

2.3 Questions

2.0 OBJECTIVES

- To understand the concepts of poverty and income inequality in India
- To study how to measure poverty
- To study types and incidence of poverty
- To study measures adopted to eradicate poverty
- To study measurement of poverty
- To understand the relation between economic growth and income inequality
- To study measures to alleviate poverty

2.1 INTRODUCTION: POVERTY IN INDIA

The World Bank (WDR 1990) defines poverty as **"the inability of people to attain a minimum standard of living."** The UNDP, taking inspiration from Prof. Amartya Sen, defined Poverty in the 1990s as, **"the denial of opportunities and choices…to lead a long, healthy creative life and to enjoy a decent standard of living, freedom, dignity, self-esteem and the respect of others…"** Looking at poverty as an economic phenomenon, the minimum standard of living definition is more acceptable because economic poverty is at the bottom of all other forms of poverty and that it can be clearly measured in terms of money. The World Bank measure of $ 1.25 (PPP) per person per day measures poverty across the world and all those who earn less than $ 1.25 (at 2005 prices) are considered to be living below the poverty line. **The World Bank measure is also known as the International Poverty Line (IPL).**

In 2005, an estimated 1.4 billion people, or one quarter of the population of the developing world, lived below the international line of $1.25 a day in 2005 prices. In 1980, there were 1.9 billion poor, or one half of the population. Progress was uneven across regions. The poverty rate in East

Asia fell from almost 80 percent to under 20 percent over this period. By contrast it stayed at around 50 percent in Sub-Saharan Africa, though with signs of progress since the mid 1990s.

According to the World Bank, in 2004-05, 41.6% of India's population was considered to be living below the IPL and the poverty gap was measured at USD PPP 10.8. At USD (PPP) 2 a day, **75.6** per cent of the population in India is found to be below the poverty line. According to the Planning Commission, Government of India, the rural poverty line was measured to be Rs.356.30 per month and 28.30% were found to be BPL. The urban poverty line was measured to be Rs.538.60 per month and 25.70% were found to be BPL. **In India as a whole, 27.50% or 30.172 Crore people were below the national poverty line in the year 2004-05**.

The World Bank figures for the same year are much higher because the IPL of USD 1.25 (PPP) per day translates to USD 38.02 (PPP) per month (USD 1.25 × 365 ÷ 12 = 38.02). The Rupee USD (PPP) exchange rate for the same year was Rs.16.20 per USD and therefore 38.02 × 16.20 = Rs.615.92). Thus one will be able to notice the obvious gap between the IPL and the national urban poverty line which accounts for the difference in the percentage of people living below the poverty line.

The International Poverty Line is periodically revised to account for inflation. In terms of 2017 PPP rates, the IPL was set at USD 2.15 per day per capita which translates into INR 48.90 which means the PPP USD/INR exchange rate was One USD = 22.75 INR. Accordingly in the year 2021, 11.9 per cent of India's population lived below the IPL. However, India is a low middle income country (LMC) and the World Bank has determined USD PPP 3.65 as the IPL for a LMC which translates into INR 83.10. The relevant IPL for India therefore should be the LMC IPL and accordingly the World Bank reports that in the year 2021, 46.5% of India's population lived below the international poverty line. In the next five to six years time, India is poised to enter the Upper Middle Income Country club (USD 4416 to 13845) with her per capita GDP being USD 2850 in the year 2024. The IPL for the UMCs is PPP USD 6.85 or INR 155.90. Since India is yet to achieve the milestone, the UMC IPL becomes irrelevant for now. The following table shows some of the poverty measures and the state of poverty in India as brought out by the World Bank Poverty and Equity Brief for South Asia – India October 2023.

By international standards, India has been successful in bringing down the poverty ratio from 41.6% in 2005 to 11.9 % in the year 2021. Poverty had briefly increased during the pandemic to 14.7% but declined post-pandemic to 11.3 % in the year 2023. Income inequality as measured by the consumption based Gini Index remained constant at about 35 during the period 2011 to 2021 which means there has been practically no change in the income distribution in the country over the last one decade.

India's continued progress in reducing poverty shows sustained economic growth and expansion in social welfare schemes such as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and the National Food Security Act (NFSA). Poverty reduction between 2011 and 2019 was due to growth in household consumption, driven by increases in social transfers and labor income. During the pandemic workfare and food entitlements were expanded to cushion the adverse impact on rural poverty. However, the speed of extreme poverty reduction was much slower in urban areas in India, where the workforce is concentrated. While in rural areas, poverty declined from 16.0 percent to 12.7 percent between the two years 2021 and 2022, in urban India, poverty fell from 12.3 percent to 10.5 percent.

Table 2.1 – International Poverty Line and India

	Poverty	Number of Poor (millions)	Rate (%)	Year
1.	National Poverty Line	275.5	21.9	2011
2.	International Poverty Line INR 20.25 (2005) or US$ 1.25 (2005 PPP)	480.3	41.6	2005
3.	International Poverty Line 48.9 in INR (2021) or US$2.15 (2017 PPP) per day per capita	167.5	11.9	2021
4.	LMIC International Poverty Line 83.1 in INR (2021) or US$3.65 (2017 PPP) per day per capita	655.1	46.5	2021
5.	Gini Index		34.2	2021
6.	Annualized GDP per capita growth		2.89	2016 to 2021

Source: World Bank Group Poverty & Equity Brief for South Asia – India October 2023

2.1.1 MEASUREMENT OF POVERTY

Absolute poverty is defined as the number of people who are unable to command sufficient resources to satisfy basic needs. They are counted as the total number living below a specified minimum level of real income (international poverty line). The IPL is an international standard measure of poverty and measures poverty as any person living on less than USD 2.15 (PPP) per day. Absolute poverty exists all over the world in varying magnitudes**.**

The Headcount Index : Absolute poverty may be measured by the number or 'headcount' **(H)** of those whose incomes fall below the absolute poverty line $\mathbf{Y_p}$**.** When the headcount is taken as a fraction of the total population **(N)**, then we can define the **headcount index as H/N.** The poverty line is set at constant prices so that inter-temporal study can be undertaken. However, the absolute poverty line does not explain poverty gap of the people living below the poverty line. For instance, the IPL or the international absolute poverty line will consider all those who

earn less than $ 2.15 per day as living below the poverty line and will make no distinction between those who earn nothing to those who earn $ 2.15 per day. Economists therefore calculate a poverty gap. **The POVERTY GAP measures the total amount of income necessary to raise everyone who is below the poverty line up to that line.** This measure reflects the depth of poverty as well as its incidence.

The poverty gap of two countries (A) and (B) is shown in Figure 1 below. **The area between the poverty line PV and the line that measures the annual income profile of the population measures the poverty gap.** Notice that in both the countries 50 per cent of the population is living below the poverty line but in Country 'A', the poverty gap is greater than country 'B'. It indicates that it will take more effort to eliminate absolute poverty in country 'A'. **The extent to which incomes of the poor lie below the poverty line is measured by Total Poverty Gap (TPG)** which is defined as follows:

$$TPG = \sum_{i=1}^{H} (Y_p - Y_i)$$

Where Y_p is the poverty line income and Y_i is the income of the household or the individual (i). In simple terms, TPG is the amount of money per day required to bring every poor person in the country up to the poverty line standard. For instance, if the income of a person is $ 1.00 per day, then the poverty gap is $ 0.25 per person and if the value of H = 100, then the TPG would be USD 25. On a per capita basis, the average poverty gap or the average income shortfall (APG) can be calculated as: **APG = TPG/H.** Assuming the value of H to be 100, the APG in our example will be 25/100 = 0.25. The income shortfall can be measured with the Normalized Poverty Gap (NPG) = APG/Y_p. The value of NPG lies between zero and one. One indicates that the APG is equal to the poverty line and hence USD 125 will be required to lift the hundred people above the poverty line. Zero indicates poverty ratio is zero in the country. For instance, if the APG is 0.25, then the NPG will be 0.25/1.25 = 0.2. It indicates that if 20% of the poverty line income is spent for poverty alleviation of 100 persons, then the entire head count of 100 can be brought on par with the poverty line. If the APG is 1.25, then the NPG is equal to one i.e. 1.25/1.25 = 1. It shows that 100 per cent of the poverty line income will have to be spent on 100 persons to bring on par with the poverty line. The NPG helps easy cross country comparison and across time.

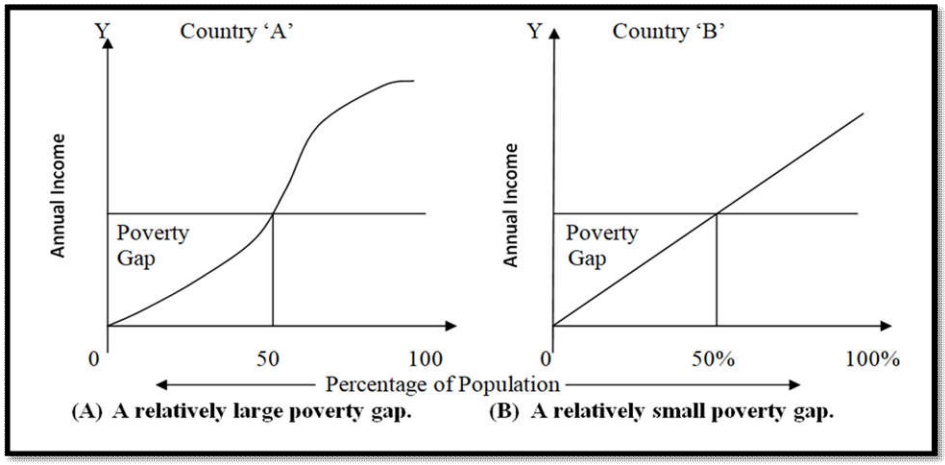

Fig. 2.1 Measurement of Poverty Gap

Relative Poverty is measured by estimating income distribution of the population in different fractile groups and comparing the levels of living of the top five to 10 per cent with the bottom five to 10 per cent of the population. Such comparison reflects the relative standard of living in a country. For instance, in India, the lowest 20 per cent of the households received 8.1 per cent of the total income whereas the top 20 per cent received 46.1 per cent of the total income in the year 1997 according to WDR 2000-01. The ratio of the highest 20 per cent to the lowest 20 per cent in 1997 was 5.69. In terms of income equality, according to the **World Inequality Report 2022**, the top 10% Indians had a 57% share in the national income and the bottom 50% Indians had only a 13% share in the national income in the year 2021. The income gap between the top 10% and the bottom 50% was 22 times. The top one per cent had a 22% share in the national income.

THE CONCEPT OF POVERTY LINE

Poverty in defined has been defined since independence on the basis of food requirements or calorie intake per person per day. It was 2400 Kilo Calories for rural area and 2100 for urban areas. Based on calorie consumption, the all India poverty line in 1973-74 was Rs.49.63 for rural areas and Rs. 56.64 for urban areas per person per month. The same was adjusted for prices in 2004-05 and the figures were Rs.356.30 for rural areas and Rs.538.60 for urban areas. In the year 2009-10, the poverty line figures were revised to read as Rs.672.80 in rural areas and Rs.859.60 in urban areas.

INCIDENCE OF POVERTY IN INDIA

Estimates of persons living below the poverty line in various years in India are presented in Table 2.2.

Table 2.2 - Population Below the Poverty Line

Year	Rural/Urban Poverty Line	Rural	Urban	Total
1973-74	49.63/56.64	56.4	49.0	54.9

1983-84	89.50/115.65	45.7	40.8	44.5
1993-94	205.84/281.35	37.3	32.4	36.0
1993-94*		50.1	31.8	45.3
1999-2000	327.56/454.11	27.09	23.62	26.1
2004-05		28.3	25.7	27.5
2004-05*	446.68/578.80	41.8	25.7	37.2
2009-10	672.80/859.60	33.8	20.9	29.8
2020-21	Niti Aayog's MPI (H&A)	25.01%	47.13%	0.118

The Suresh Tendulkar Committee on Poverty Line set up by the Planning Commission submitted its report in the year 2009. For the first time, poverty estimates in India included expenditure on health and education in a more appropriate manner. The poverty estimates for the years 2004-05 and 1993-94 are by the Tendulkar Committee.

2.1.2 MULTIDIMENSIONAL POVERTY INDEX

The Human Development Report 1997 introduced the concept of Human Poverty Index (HPI). The report focused on the deprivation in the three important aspects of life: longevity, knowledge and a decent standard of living. The HPI for India was 28 per cent.

In the year 2010, the HDR introduced the concept of MPI to replace the HPI. The MPI is the product of multidimensional poverty head count (H) and the intensity of poverty (A) i.e. MPI = H.A. The Headcount is the percentage of people who are multi-dimensionally poor. The intensity of poverty (A) measures the average number of deprivations each multi-dimensionally poor household experiences. It has three dimensions: health, education and living standards and these dimensions are reflected in 10 indicators. The maximum score is 100% with each dimension with an equal weight of 33.33%. The education and health dimensions have two indicators each with weights of 16.7 per cent or 5/3. The standard of living dimension has six indicators with each indicator having a weight of 5.6 per cent (33.33/6 = 5.6) or 5/9.

The two indicators for the education dimension are:

1. No one has completed 05 years of schooling, and
2. At least one school age child (up to grade 08) who is not enrolled in school.

The two indicators for the health dimension are:

1. At least one member is malnourished, and
2. One or more children have died.

The six indicators for the standard of living dimension are:

1. No electricity.
2. No access to clean drinking water.
3. No access to adequate sanitation.
4. House has dirt floor.
5. Household uses dirty cooking fuel (dung, wood or charcoal), and
6. Household has no car or similar motorized vehicle and owns at most one of these assets: bicycle, motorcycle, radio, refrigerator, telephone or television.

Identifying the Multi-dimensionally Poor

The deprivation scores for each household are added to obtain the household deprivation 'c'. A cut-off of 33.33 per cent of the weighted indicators is used to distinguish between the poor and the non-poor. Accordingly we have three categories of multi-dimensionally poor households:

1. If 'c' or the deprivation is 33.3 per cent or greater, that household is multi-dimensionally poor.
2. If 'c' is greater than or equal to 20 per cent but less than 33.3 per cent, that household is vulnerable to or at risk of becoming multi-dimensionally poor.
3. If 'c' is 50 per cent or higher, that household is severely multi-dimensionally poor.

The headcount ratio (H) is the percentage of population who are multi-dimensionally poor:

$$H = \frac{q}{n}$$

where 'q' is the number of people who are multi-dimensionally poor and 'n' is the total population.

The intensity of poverty (A) reflects the percentage of the weighted component indicators in which, on an average, poor people are deprived. Only for the poor households, the deprivation scores are added and divided by the total number of poor persons:

$$A = \sum_i^q c/q$$

Where 'c' is the deprivation score that the poor experience.

MPI = H.A.

The MPI value ranges between 0 and 1 with zero indicating absence of poverty and 01 indicates 100 per cent poverty in the country.

INDIA MPI 2021

According to the Global MPI 2021, India's rank was **66 out of 109 countries**. According to the National Multi-dimensional Poverty Index 2021 Baseline Report by Niti Aayog, the Head Count ratio (H) for India was 25.01% and the intensity of poverty (A) was 47.13%. The MPI was therefore:

25.01% × 47.13% = 0.118

This means 11.8% of India's population was multi-dimensionally poor in the year 2021. Bihar had the highest percentage of multi-dimensionally poor with 26.5 per cent whereas Kerala had only 0.3% of the population categorized as multi-dimensionally poor. The MPI for Kerala was 0.71% × 39.02% = 0.003.

The figures for Bihar were 51.91% × 51.02% = 0.265. It means 26.5 % of the population of Bihar experienced intense poverty whereas 51.91 % of the population was under the income poverty line.

2.1.3 SOME RECENT ESTIMATES OF POVERTY IN INDIA

Poverty estimates for the decade 2011-20 swings widely between a low of 2.9 by Bhalla, Bhasin and Virmani to 35.1% by Subramanian. Mehrotra and Parida estimated poverty to be 25.9 % for the year 2019-20. Roy and Weide estimated a figure of 13.6 %. For the year 2017-18, we have a low of 2.9, a high of 35.1 and an in between figure of 13.6 %. Even if we consider Subramanian's figure as an outlier, poverty estimates by Bhalla et al and Roy & Weide are miles apart from each other. A wide variety of estimates of poverty in India during a given period can be easily attributed to the methodology and indicators used by the researchers and of course the data that is being put to use. Another important factor is the placement of the researcher on the political divide or the political scale. The Government of India is yet to come out with an official estimate of poverty figures for India. As a result, the picture of poverty is not clear and remains hazy.

2.1.4 POVERTY ERADICATION PROGRAMS AND MEASURES

We began poverty eradication in the 1970s with the Central Government designing and implementing programs such as Small Farmers Development Agency (SFDA), Marginal Farmers and Agricultural Development Agency (MFALDA), Drought Prone Area Program (DPAP), Crash Scheme for Rural Employment (CSRE), Food for Work Program (FWP). These programs focused on the rural areas because in the 1970s we were a predominantly agricultural country. However, these programs were not comprehensive enough to cover the entire rural population of India.

In the late 1970s, the Central Government designed the Integrated Rural Development Program (IRDP), National Rural Employment Program (NREP) and the Rural Landless Employment Guarantee Program. In the

year 1989, all these programs were merged to form the Jawahar Rozgar Yojana (JRY). Skill development program such as Training of Rural Youth for Self Employment (TRYSEM) was also initiated. The IRDP was rechristened as Swarnajayanti Gram Swarozgar Yojana (SGSY) and TRYSEM was merged into it. The Employment Assurance Scheme was merged into Sampoorna Grameen Rozgar Yojana (SGRY) in 2001 which provided 100 days of unskilled work to the rural poor seeking employment. In the year 2006, we introduced the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) which provides 100 days of guaranteed employment every year to every household in rural India.

ASSESSMENT OF THE PROGRAMS

Setting aside the variety of estimates of poverty by individual researchers and taking the Niti Ayog's MPI figures on poverty as benchmark, it can be safely concluded that poverty continues to be widespread in the country even today. From a high of 50 per cent and above to about 25 per cent now, it only means that five decades of poverty eradication programs have only yielded a 50 per cent reduction in poverty.

In India today, every fourth person is living below the nationally defined poverty line and every 10^{th} person is living in abject poverty or is multi-dimensionally poor. For the average onlooker, poverty is clearly visible in the slums and shanties that occupy more than 50 percent of the urban landscape in the small and big cities of the country. It is clearly visible in the road side makeshift and open shelters found in all cities and towns of the country. It is clearly visible in the encroachments over the foot paths, water bodies and hills and terrain in the cities of our country. Thus poverty is a problem that is far from being resolved in India.

2.2 MEASUREMENT OF INCOME INEQUALITY

The study of income distribution and income inequalities all over the world suggests that fruits of economic growth and development are not shared equally by all income classes in a society. Different sections of the society and different classes will have different abilities to earn and therefore income inequalities will always remain as a natural facet of all societies. However, it is not income inequality per se but the extent and degree of income inequalities that all societies are plagued with, is a matter of concern. Greater the income inequalities lesser will be the economic welfare of the lower classes of the society. Apart from the ability to earn, there are a number of socio-economic factors that determines income distribution in general and the ability to earn in particular. If incomes were equally distributed there would be no different economic classes i.e. there would be absolute economic equality or it would be a classless society. A classless society is not conducive to economic growth and development and hence a certain degree of economic inequality as ingrained by nature is essential to fuel the economic engine. **However, if the income inequalities are wide and pervasive, the socio-economic scene would be one of plenty and**

poverty existing side by side as is the case of India and other less developed economies of Asia, Africa and Latin America. The seeds of social upheaval and mutiny are sown by extreme inequalities of income and wealth. **In India, the lowest fifth with 20 per cent of the households received 8.1 per cent of the total income whereas the top 20 per cent of the households received 46.1 per cent of the total income in the year 1997 (Ref. WDR 2000/2001). The degree of economic inequality can be shown with the help of a Lorenz Curve.**

2.2.1 The Lorenz Curve

The Lorenz curve is an economic tool used to analyze income and wealth inequality. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients starting with the poorest individual or household. The Gini index measure the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution. This index measures the degree of inequality in the distribution of family income in a country. The index is calculated from the Lorenz curve, in which cumulative family income is plotted against the number of families arranged from the poorest to the richest. The index is the ratio of (a) the area between a country's Lorenz curve and the 45 degree helping line to (b) the entire triangular area under the 45 degree line. The more nearly equal a country's income distribution, the closer its Lorenz curve to the 45 degree line and the lower its Gini index, e.g., a Scandinavian country with an index of 25. **The more unequal a country's income distribution, the farther its Lorenz curve from the 45 degree line and the higher its Gini index, e.g., a Sub-Saharan country with an index of 50. If income were distributed with perfect equality, the Lorenz curve would coincide with the 45 degree line and the index would be zero; if income were distributed with perfect inequality, the Lorenz curve would coincide with the horizontal axis and the right vertical axis and the index would be 100.**

Percentage share of income or consumption is the share that accrues to sub groups of population indicated by deciles or quintiles. **Inequality in the distribution of income is reflected in the percentage share of income or consumption accruing to segments of the population ranked by income or consumption levels.** The segments ranked lowest by household income typically receive the smallest share of total income. Fig. 2.2 shows the extent of inequality as listed in Table 2.3. It shows the pattern of absolute equality, absolute inequality and actual inequalities of income in India for the year 1997. **There has been practically no change in the distribution of income of the poorest quintile because according to WDR 2011, the share of the poorest quintile in India has remained 8.1 per cent during the period 1995-2008.**

Absolute equality is shown by column (4) in Table 2.3. When the numbers in column (4) are plotted in Fig. 2.3, a diagonal line is derived which is the line of absolute equality. Absolute inequality is shown in column (5) of the table and by the dashed right angled line in the figure.

Both the lines of absolute equality and absolute inequality are hypothetical in nature. Actual income distribution as shown in column (6) will fall between the extremes of absolute equality and absolute inequality. The data in column (6) is derived from column (2) to plot the Lorenz curve. **The actual Lorenz cure is depicted as the non-linear intermediate curve in the figure. This area between the line of absolute equality and the Lorenz curve indicates the deviation from absolute equality and thus shows the measure of degree of inequality of income distribution.**

Table – 2.3 : Actual and Polar cases of Income Inequality in India for the year 1997.

Income Class of Households	Percentage of total income received by households in this class	Percentage of households in this class and lower ones	Percentage of Income received by this class and lower ones.		
			Absolute Equality	Absolute Inequality	Actual Distribution
(1)	(2)	(3)	(4)	(5)	(6)
Lowest fifth	8.1	20	20	0	8.1
Second fifth	11.6	40	40	0	19.7
Third fifth	15.0	60	60	0	34.7
Fourth fifth	19.3	80	80	0	54.0
Highest fifth	**46.0**	**100**	**100**	**100**	**100.0**
Source: Data in column (2) is obtained from WDR 2000/2001, P.282.					

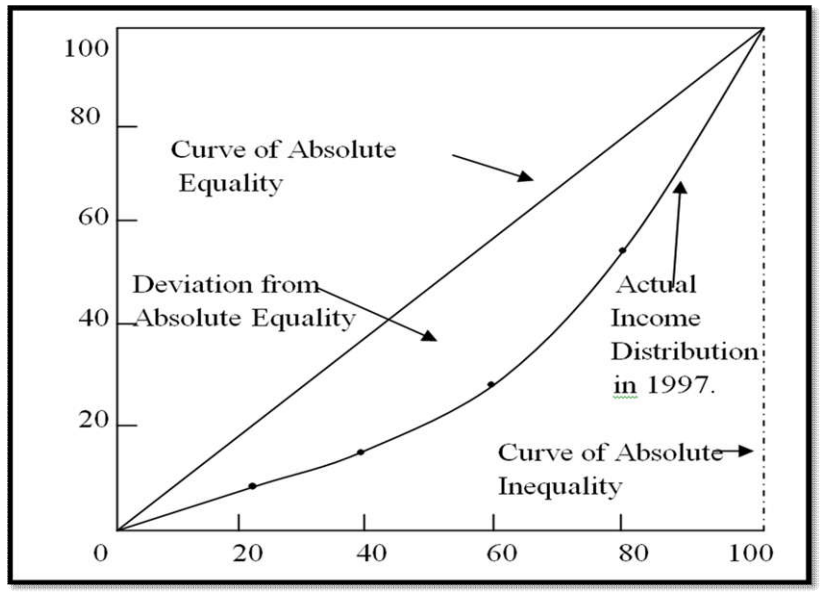

Fig. 2.2 Lorenz Curve Showing Income Inequality in India (1997)

2.2.2 ECONOMIC GROWTH AND INCOME INEQUALITY

The World Bank estimates for 1983, 1989-90, 1992, 1994, 1997 and 2004-05 presented in Table 1.3 below relate to distribution of household expenditure. Table 4.2 reveals that the share of the lowest 20 per cent of the households has improved from 1983 to 1989-90 from 8.1 to 8.8. In 1992, it came down to 8.5 per cent and again went up to an all time of 9.2

per cent in 1994. However, thereafter, it had remained constant in 1997 and 2004-05. The share of the second quintile had practically remained constant during the period 1983 to 1992. It went up marginally to 13.0 per cent in 1994. However, thereafter it declined to an all time low of 11.3 in 2004-05. The third quintile similarly experienced a decline in their share from 16.3 to 15.8 between 1983 and 1992. It went up marginally to 16.8 in 1994 only to decline to an all time low of 14.9 per cent in 2004-05. The fourth quintile also experienced a decline during the entire period from 22 per cent in 1983 to 20.4 per cent in 2004-05. While the bottom 80% of the population experienced a decline in their incomes during the entire period, the top 20% of the households experienced gains during the entire period. Table 2.4 clearly indicates that income inequalities during this period have only worsened. The program of economic reforms and the new economic policy have only helped the top 20% to prosper at the expense of the bottom of the 80 per cent. The ratio of the highest 20 per cent to the lowest 20 per cent has remained above 5:1 with the only exception of 1983 and 1994 when the ratio went down below five.

Table 2.4 : Trends in the Distribution of Household Expenditure (1983 to 2004-05)

SNo.	Percentile Groups of Households	Percentage Share of Household Expenditure					
		1983	1989-90	1992	1994	1997	2004-05
1.	Lowest 20 per cent	8.1	8.8	8.5	9.2	8.1	8.1
2.	Second quintile	12.3	12.5	12.1	13.0	11.6	11.3
3.	Third quintile	16.3	16.2	15.8	16.8	15.0	14.9
4.	Fourth quintile	22.0	21.3	21.1	21.7	19.3	20.4
5.	Highest 20 per cent	41.4	41.3	42.6	39.3	46.1	45.3
6.	Highest 10 per cent	26.7	27.1	28.4	25.0	33.5	31.1
7.	Ratio of the highest 20 to the lowest 20 percent.	5.11	4.69	5.01	4.27	5.69	5.59
8.	**Gini Index**	-	-	**33.8**	**29.7**	**37.8**	**36.8**
Source: WDRs 1988, 1992, 1993, 1997, 1998-99, 1999-2000, 2000-01 and 2007.							

The Gini indices for the years 1992, 1994, 1997 and 2004-05 had remained high with an exception of 29.7 in 1994. This indicates, income inequality in household expenditure had increased over the entire period with a marginal decline in 2004-05. Rising income inequality indicates that the fruits of economic growth are disproportionately shared by the top 20 per cent at the expense of the bottom 80 per cent of the population. Further, when the Gini index of India is compared with USA which was 40.8 in the year 2000, it can be safely concluded that economic growth takes place, the income inequalities in developing countries approach closer to the income inequalities in developed countries.

A study on the extent of inequality was conducted by the World Bank and University of Sussex, England. The study classified the extent of inequality into three broad categories namely: high, moderate and low

inequality. The degree of inequality was measured on the basis of the share of the lowest 40 per cent of the population. The classification is given in Table 2.5.

Table 2.5 – Classification of Income Inequality

S.No.	Share of the Lowest 40% of population	Income Inequality
1.	Less than 12 per cent.	High
2.	Less than 17 per cent but more than 12 per cent.	Moderate
3.	More than 17 per cent.	Low

According to Human Development Report 2021, the Gini Index for India for the period 2010-21 was 35.7, showing a marginal fall from the 2004-05 Gini Index of 36.8. The share of the bottom 40% of the population in the national income was 19.8 % during the period 2010-21 as against a share of 30% by the richest 10% of the population. The top one per cent had a share of 21.7 percent in the year 2021.

According to the **State of Food Security and Nutrition in the World 2023**, 74% of Indians could not afford a healthy diet. According to the **Global Hunger Index 2023**, India's GHI score was 28.7 and was placed at Number 111/125 countries. The world GHI score was 18.3 considered moderate in 2023. In the year 2022, India was placed at 107/125. The GHI ranks countries on a 100 point scale with zero indicating absence of hunger and 100 indicating all pervasive hunger. The severity scale of GHI is as follows:

Table 2.6 - Global Hunger Index 2023 (Severity Scale)		
Classification	**Score**	**India's Score & Rank**
Low	≤ 9.9	
Moderate	10 – 19.9	
Serious	20 – 34.9	GHI Score = 28.7
Alarming	35 – 49.9	Rank = 111/125
Extremely Alarming	≥ 50	

The GHI score is based on four indicators representing under-nutrition and malnutrition. These indicators are Under-nourishment (below par calorie intake), Child stunting (below par height of children under age five), Child wasting (below par weight of children under age five) and Child Mortality (death rate of children under age five).

2.2.3 POLICY OPTIONS FOR ALLEVIATING POVERTY

The policy approach and options for alleviating poverty has undergone change over the last six decades. In the 50s and 60s, it was believed that investment in physical capital and infrastructure would bring about economic growth and poverty will be reduced through the trickling down of growth. In the 1970s, it was found that trickle down was not taking place and hence the effort shifted towards investment in human capital. The World Development Report in 1990 advocated a two pronged strategy in terms of promoting labor intensive growth through economic openness and investment in infrastructure and providing basic services to poor in health and education. In the 1990s, the issue of poverty alleviation assumed great importance. The WDR 2000/01 proposed a three pronged strategy to reduce poverty in terms of promoting opportunity, facilitating empowerment and enhancing security. Opportunities were sought to be promoted by increasing jobs, credit, roads, electricity, schools, availability of water supply, sanitation and health services. Creation of sound and responsive institutions for the benefit of the poor was sought to facilitate empowerment. Security was sought to be enhanced by reducing vulnerability to economic shocks, natural disasters, ill health, disability and personal violence. Important policy options available for alleviating poverty are as follows:

1. Raising Productivity of Small Scale Agriculture

The percentage of people dependent on agriculture in developing countries is in the range of 60 to 70 per cent. Growth in agricultural productivity in small size agricultural holdings was an important factor that helped reduction of poverty in China during the period 1975-85, in Malaysia and Indonesia in 1970-80 and in Japan, South Korea and Taiwan in the 50s and 60s. Provision of improved technologies to the farmers and other agricultural inputs at cheap rates, better social services, improved infrastructural facilities and agricultural research can help reduction in poverty in developing countries.

2. Land Reforms and Redistribution of Land.

The basic cause of poverty in the rural sector of developing countries is the extreme inequality in land ownership. Hence, extensive land reforms and land redistribution measures can help in reducing income inequalities and poverty. A study conducted by Marvin Sternberg for nine countries experienced major agrarian reforms (Japan, Taiwan, Egypt, Iran, Iraq, Kenya, Mexico, Cuba and Chile) concluded that the effect on income distribution was positive except in the case of Iraq. Another study by William Cline showed that land redistribution is the policy likely to achieve both production increases and reduce income inequalities. The WDR 2006 pointed out that access to land can give the poor give more voice in the political arena and can lead to higher investments in children's education, arresting the intergenerational transmission of poverty.

3. Employment Programs.

In order to increase employment opportunities in the urban areas, the Governments in UDCs can raise the volume of investment and also improve the investment income ratio. The government may also provide assistance for self employment by providing training in small scale entrepreneurship, financial assistance, supply of raw material at low rates, marketing facilities etc. In order to reduce rural unemployment, the government can provide credit, marketing facilities and agricultural inputs to the farmers.

Disguised unemployment is a major problem in UDCs. Programs of large scale labor intensive industrialization can attract surplus labor from the rural areas to urban areas. Capital intensive industrialization programs in UDCs like India and Brazil have proved that such programs bring little benefit to the disguisedly unemployed in the rural areas.

4. Promoting Small Scale and Informal Sector Industries.

Micro enterprises are the answer to the problem of employment generation in UDCs. East Asian economies reduced poverty through agricultural development and through the development of labor intensive industries. For instance, 50 per cent of the workers in the urban areas are either self employed or work in small and medium size industries employing less than 100 people in Japan. **Developing countries must recognize the valuable contributions of the informal sector to employment and encourage its expansion.**

5. Encouraging Labor Intensive Industrialization.

The Human Development Report, 1996 have shown that a number of UDCs have had growth but have generated little employment. In Pakistan from 1975 to 1992, real GDP grew by 6.3 per cent annually but employment by only 2.4 per cent. In India from 1975 to 1989, yearly GDP growth was 5 per cent but employment growth was only 2 per cent. During 1977-90, annual increase in employment in Egypt was 2 per cent whereas GDP growth was 6.6 per cent. **In contrast, East Asian Economies focused on labor intensive activities such as textiles, clothing, electronics and intensifying small scale agriculture and this helped them to achieve high growth, full employment and rising wages.**

6. Programs for the Development of the Rural Poor.

In order to bring about a direct reduction in poverty, many UDCs have launched programs for the development of the rural poor. These programs include: Resource and income development programs, Special Area Development Programs and Works programs for creation of supplementary employment opportunities. For example, the Government of India introduced a number of programs aimed at creating employment opportunities. These include the Small Farmers Development Agency, Marginal Farmers and Agricultural Laborers Development Agency, the

National Rural Employment Program, Rural Landless Employment Guarantee Program, the Integrated Rural Development Program, Jawahar Rozgar Yojana, Swarna Jayanti Shahari Rozgar Yojana, Prime Ministers Rozgar Yojana, the National Rural Employment Guarantee Scheme, now known as Mahatma Gandhi National Rural Employment Guarantee Program.

7. Fiscal Policy.

The governments in developing countries can use Fiscal Policy to reduce income inequalities and poverty. The progressive taxation system can be steeply graded and the marginal rate of taxation can be increased to realize greater tax revenues. The governments can plug tax evasion by the richer sections of the society by improving the tax administration system. The World Development Report, 2006 has made two suggestions for raising tax revenues in developing countries. These are: levying of inheritance tax and levying of more property taxes as they constitute a negligible part of the tax revenue.

8. Human Development.

High employment countries have invested heavily in human development in the areas of education, health and skills. They have also upgraded technical skills to enable workers to adapt to changing international conditions. South Korea invested $ 160 per person per year in health and education and Malaysia invested $ 150. India invested only $ 14 followed by Pakistan investing $ 10 and Bangladesh $ 5 in human development. More education gives the worker a wider range of self employment options and allows the person to choose more profitable alternatives. Investment in health and nutrition also contributes to reduction in poverty.

9. Subsidizing Goods and Services.

Developing countries can subsidize food, housing and other basic necessities for the benefit of the poor. The public distribution system can distribute all basic necessities to the poor at highly subsidized rates. The PDS can be used as an instrument for redistributing income in favor of the poor and also incentivize the farmers to produce more so that the entire population of poor can be covered by the system. The governments of UDCs must provide subsidized housing to the poor particularly to the landless laborers in rural areas and to the slum dwellers in urban areas. The governments can and must undertake steps to ensure the environmental improvement in slums by providing sewerage, surface drainage, public latrines, garbage clearance arrangements etc.

10. Providing Infrastructure.

Infrastructure investments increase opportunities for people by integrating them into regional and national systems of production and commerce and by improving their access to public services. According to a study conducted by Leipziger and others (2003) based on a sample of 73 countries (WDR 2006), a ten per cent improvement in the country's

infrastructure index leads to a five per cent reduction in child mortality, a 3.5 per cent reduction in infant mortality and a 7.8 per cent reduction in maternal mortality. Better rural transport infrastructure can reduce transaction costs, expand access to markets and improve rural incomes. Investment in basic water and energy infrastructure can improve gender equity.

11. Social Security System.

Social security measures such as unemployment allowance, old age pension, free medical care to the poorer sections of the society can not only contribute to health and life expectancy but also increase the income earning capacity of the people. Hence, social security measures which are scantily provided in UDCs must be extended to the entire mass of poor population to bring about reduction in poverty.

2.3 QUESTIONS

1. Comment on the incidence of poverty in India according to various measures of poverty.
2. What is MPI? Explain the incidence of poverty in India according to the MPI.
3. What policy options are available to reduce the incidence of poverty?
4. Explain how income inequality is measured and explain the extent of income inequality in India?

✞✞✞✞

Module 2

3

INFRASTRUCTURE AND HUMAN DEVELOPMENT

Unit Structure :

3.0 Objectives

3.1 Conventional Sources of Energy Development in India

3.2 Non- Conventional Energy Development in India

3.3 Energy Policy in India

3.4 Summary

3.5 Questions

3.0 OBJECTIVES

1) To study the Conventional Sources of Energy Development in India.
2) To study the Non-Conventional Sources of Energy Development in India.
3) To analyze the Energy Policy in India

3.1 CONVENTIONAL SOURCES OF ENERGY DEVELOPMENT IN INDIA

3.1.1 Overview of the conventional sources of energy in India

Development of infrastructure is the base of economic development of country. Development of agriculture and industry depends on the development of electricity, transport and communication. Keeping this in mind, India has focused on expansion of infrastructure facilities.

Sources and Demand for energy: With a population of 1.3 billion, India is the second most populous country in the world and the third-largest economy, measured by purchasing power parity (PPP). India has seen strong economic performance in recent decades. India's sustained economic growth is placing an enormous demand on its energy resources, energy systems and infrastructure.

Over the past decades energy demand has steadily increased across all sectors, including agriculture, industry, commercial and residential, and is expected to continue to grow. Nonetheless, India's per capita energy consumption stands at 30% of the world's average. India's energy system is largely based on the use of coal for power generation, oil for transport

and industry, and biomass for residential heating and cooking .Bioenergy and most coal supply are produced in the country, while oil and natural gas are mainly imported. India has been able to meet the gap between demand for and domestic supply of energy while addressing the environmental externalities associated with energy use.

Table 3.1: Installed Electricity Generation Capacity in India

Year	Thermal	Hydro	Nuclear	RES	Total
2008-09	93.73	36.88	4.12	13.24	147.97
2016-17	218.33	44.48	6.78	57.24	326.83
2022-23	237.27	46.85	6.78	125.16	416.06

Source: CEA, Growth of Electricity Sector in India, various issues.Report on Short-term Power Market in India, 2022-23.

As may be observed from table 3.1 , thermal is a major source of electricity generation in India, contributing 57% of the total capacity of generation in 2022-23, followed by renewable energy sources (RES) (30.1%), hydro (11.3%) and nuclear (1.6%). However, the share of thermal-based generation capacity in the total installed capacity has gradually come down from 63.3% in 2008-09 to 57% in 2022-23. During this period, the share of hydro-based generation capacity also decreased from 24.9% to 11.3%, whereas renewables-based generation capacity witnessed an increase from 8.9% to 30.1%.

3.1.2 Power and Electricity

Electricity and power generation plays a significant role in economic development of the country. Electricity is the most versatile form of energy and provides an important infrastructure for the growth of the country. It is a vital input for agricultural and industrial development and is of particular importance for service sector like Information technology. All sectors of the economy depends on electricity for their common needs of water supply, transport and communication. The future development of the country therefore depends upon the rapid growth of power generation capacity.The Indian power sector is one of the most diversified in the world. The entire electricity supply chain has undergone a phase of transformation in the process of advancing reforms in the sector.

Expansion of Generation Capacity

There has been considerable expansion in generation capacity during the period of planning as would be clear from the fact that the total installed generating capacity in the country has risen over time.There has been corresponding expansion of transmission and distribution networks. In order to facilitate grid operations and transfer of power from surplus to deficit areas, construction of inter-state and inter-regional lines has been undertaken.

The Electricity Act of 2003 liberalised the process of electricity generation by shifting towards a license-free regime. This has resulted in increased competition in the generation segment and the share of private players witnessed a significant increase in the total electricity generation. The players in the electricity generation segment can be divided into three types based on ownership and operations. These are: (i) Central public sector undertakings, (ii) State public sector undertakings/State Electricity Boards, and (iii) Private sector companies. Gross electricity generation in India has increased from 747.07 BU in 2008-09 to 1624.47 BU in 2022-23, at a CAGR of about 5.7%.

Sources of Electricity

1) **Hydro-electricity or Hydel power :** The share of hydel generation in the total energy generated in the country was 46.8 % in 1980-81. Since then it steadily declined and was 12.5% in 2022-23. The hydel power resources are concentrated in states like Punjab, Himachal Pradesh, Jammu and Kashmir, Kerala while states like Bihar, Rajasthan have very little hydel power potential. The development and distribution of hydel power depends on supply of water in rivers, lakes, reservoirs, dams etc. Rainfall and snow are the major source of water in the rivers of this country. Since massive investments is required to build dams and powerhouses and for their maintenance, these power projects have been undertaken in the public sector.

2) **Thermal Power :** The development of thermal power plants which use coal, oil or natural gas to generate electricity is common where these fuels are available. The generation of thermal power causes pollution. Further, the fuels used to generate thermal power are exhaustible. In India, thermal power has been developed on an extensive scale. In India, since oil reserves are rather limited, the main source of thermal power is coal which is the most polluting fuel. At present, about three-fourths of coal production is used for power generation. Thermal is a major source of electricity generation in India, contributing 57% of the total capacity of generation in 2022-23, followed by renewable energy sources (RES) (30.1%), hydro (11.3%) and nuclear (1.6%). However, the share of thermal-based generation capacity in the total installed capacity has gradually come down from 63.3% in 2008-09 to 57% in 2022-23. During this period, the share of hydro-based generation capacity also decreased from 24.9% to 11.3%, whereas renewables-based generation capacity witnessed an increase from 8.9% to 30.1%. Of all the sources, electricity generation from thermal (mainly coal) continues to play a dominant role in the energy mix of the country, with a share of about 74% in 2022-23. Though its relative share continues to be the highest, it has shown a declining trend over the last few years, mainly because of increasing emphasis on renewable energy sources.

3) **Nuclear power :** The share of nuclear power in total power generation is presently very little. In 2022-23, year, the share of nuclear power in total power generated is 1.6%.

3.1.3 Coal

Coal is the most important and abundant fossil fuel in India. It accounts for 55% of the country's energy need. The country's industrial heritage was built upon indigenous coal.Commercial primary energy consumption in India has grown by about 700% in the last four decades. The current per capita commercial primary energy consumption in India is about 350 kgoe/year which is well below that of developed countries. Driven by the rising population, expanding economy and a quest for improved quality of life, energy usage in India is expected to rise. Considering the limited reserve potentiality of petroleum & natural gas, eco-conservation restriction on hydel project and geo-political perception of nuclear power, coal will continue to occupy centre-stage of India's energy scenario.Indian coal offers a unique ecofriendly fuel source to domestic energy market for the next century and beyond. Hard coal deposit spread over 27 major coalfields, are mainly confined to eastern and south central parts of the country.The lignite reserves stand at a level around 36 billion tonnes, of which 90 % occur in the southern State of Tamil Nadu.Coal has been considered as a major source of energy in India. Keeping in mind the important role of coal, emphasis has been given on scientific development of coal industry. Various measures have been introduced to improve mining techniques, promote conservation, optimize utilization and stimulate research and development.

3.1.4 Oil and Gas

Over the year'sdependence on oil and gas reserve as a source of energy has increased. This is due to industrialization and development of transport system. Like coal, petroleum is also derived from plants and also from dead animals that lived in remotepast. Natural gas has also been produced in the Earth's curst by the similar process as petroleumand this is also a combustible fuel.

The exploitation of oil on a large scale started after 1960, the year when the first commercialwell is reported to have come into existence. In India, efforts made by the Oil and Natural GasCorporation since the late 1950s have led to the identification of a number of oil and gas depositsboth offshore and onshore.

The onshore fields were mainly discovered in the Mumbai, Gujarat, Assam and ArunachalPradesh and the offshore fields in the sea are the notably Mumbai High fields such as North andSouth Basin and South Tapti. Oil and natural gas has also been discovered in the Godavari Basinon the East Coast and the Barmer district of Rajasthan. The new exploration strategy has beendeveloped which places emphasis on intensive exploration, survey and drilling in order to add topetroleum reserves and to argument production.Natural gas is also emerging as an important source of energy in India's commercial energyscene in view of large reserves of gas that have been established in the country, particularly, inSouth Bassein off west coast of India. Natural gas in

also making significant contribution to the household sector.About 30% of the country's output of LPG comes from this source. About three- fourths as thetotal gas comes from Mumbai high and rest is obtained from Gujarat, Andhra Pradesh, Assam Tamil Nadu and Rajasthan. The Oil and Natural Gas Corporation has made a significant hydrocarbon finding and Reliance Industries struck gas off the Orissa coast in Bay of Bengal.

3.2 NON-CONVENTIONAL SOURCES OF ENERGY DEVELOPMENT IN INDIA

The Government has accorded a high priorityto promotion and utilisation of renewable resources of energy to supplement conventional sources of energy. These non-conventional sources of energy are important to meet the demand in rural sector. These resources are in the process of development over the past few years. It includes solar, wind, tidal, biogas, and biomass, geothermal. These resources are inexhaustible. They are generally pollution free. They are also considered less expensive due to local use and easy to maintain.

Solar Energy : In is a tropical country like India , solar energy should receive special attention as it is a renewable source of energy. However, a major problem in harnessing solar energy is that it is not available in a concentrated form. Solar energy can be effectively utilised for such low heat application in which large variations in energy output are not critical. Among solar applications, heating and cooling systems, power plants and desalination have been given priority. Low-grade solar thermal devices are used in solar water heaters, air-heaters, solar cookers and solar dryers for domestic and industrial applications.In future, it is expected that solar energy can be utilised for community lighting, minor irrigation, pumping of drinking water, educational radio and TV sets, and communication equipment.

Wind energy : Wind energy is basically harnessing of wind power to produce electricity. In the past when development of electricity was very much limited, wind power was generated through windmills and was effectively used for minor irrigation, agricultural operations and cutting of wood in remote areas. Some recent studies have revealed in several parts of India, even though the average wind speeds may be too low to run wind operated devices, wind speeds are quite high in those months of the year when supplementary irrigation is required. Wind power is not a new development as this power, in the form of traditional windmills -for grinding corn, pumping water, sailing ships - have been used for centuries. Now wind power is harnessed to generate electricity in a larger scale with better technology.

Biogas : The technology for conversion of animal wastes into biogas is well developed and biogas plants are already in operation.Its advantage is that it can be used to generate electricity with the same equipment that is now being used for burning fossil fuels. Biogas is an important source of energy and the most important fuel worldwide after coal, oil and natural gas. Bio-energy, in the form of biogas, which is derived from biomass, is

expected to become one of the key energy resources for global sustainable development. Pioneering work in this field was done by the Khadi and Village Industries Commission. The biogas programme by providing much needed energy to the rural households reduces the pressure on firewood. It also improves the environmental health in the rural areas and yields valuable organic manure. Since this programme offers substantial scope for developing local sources of energy supply, an ambitious plan to instal biogas plants have been implemented over the years. For popularising the biogas plants in rural areas, the government has given subsidy as well.

Tidal and Ocean Energy : Tidal electricity generation involves the construction of a barrage across an estuary to block the incoming and outgoing tide. The head of water is then used to drive turbines to generate electricity from the elevated water in the basin as in hydroelectric dams. Oceans cover more than 70% of Earth's surface, making them the world's largest solar collectors. Ocean energy draws on the energy of ocean waves, tides, or on the thermal energy (heat) stored in the ocean. Ocean thermal energy is used for many applications, including electricity generation. In India, the Gulf of Kuchch provides ideal conditions for utilising tidal energy. A 900 mw tidal energy power plant is set up here by the National Hydropower Corporation.

Geo Thermal Energy : Geothermal energy refers to the heat and electricity produced by using the heat from the interior of the Earth. Geothermal energy exists because; the Earth grows progressively hotter with increasing depth. Where the geothermal gradient is high, high temperatures are found at shallow depths. Groundwater in such areas absorbs heat from the rocks and becomes hot. It is so hot that when it rises to the earth’s surface, it turns into steam. This steam is used to drive turbines and generate electricity.There are several hundred hot springs in India, which could be used to generate electricity. Two experimental projects have been set up in India to harness geothermal energy. One is located in the Parvati valley near Manikarn in Himachal Pradesh and the other is located in the Puga Valley, Ladakh.

3.3 ENERGY POLICY IN INDIA

Energy consumption: India’s energy consumption has increased by 50% in the last few decades, with significant growth across all sectors. Half of the growth came from the industrial sector, which accounted for 42% of total energy consumption, including non-energy consumption. Industry consumes a mix of coal, oil, natural gas, electricity and biofuels, with fossil fuels together representing 56% of total consumption. The residential sector is the second biggest energy consumer at 29%. Traditional use of biomass for heating and cooking accounts for the largest share of residential energy consumption. The transport sector is the third-largest energy consumer at 17% dominated by oil fuels. Transport energy demand has more than doubled in a decade, accounting for one-quarter of TFC growth. Finally, the service sector including agriculture consumed 12% with electricity accounting for more than half.

Primary energy supply : Coal met 44% of demand for energy and accounted for over half of the total growth in energy supply in the past decade. Oil is the second-largest primary energy source, providing 25% of supply. Natural gas, by contrast, was not able to satisfy growing demand and its share of power generation has decreased in the past few years. Bioenergy is the third-largest primary energy source in India. Hydropower supply has also been relatively stable, with around 10% growth in the past decade. Wind and solar, in contrast, have increased very rapidly, but from much lower levels. India also has a nuclear power fleet, which contributes around 1% to energy supply.

Electricity sector : Under the Electricity Act 2003 the Central Energy Regulatory Commission (CERC) is responsible for: fixing tariffs (regulated tariff and the tariff discovered through competitive bidding); licensing of transmission and trading; market development (facilitating open access, licensed traders, power exchanges); grid security (grid code, deviation settlement mechanism, ancillary services); regulating the interstate transmission system; adjudication of disputes; promotion of renewable energy sources; consumer protection; among other matters. The State Electricity Regulatory Commissions (SERCs) collaborate through the Forum of Regulators (FoR). India has several electricity transmission operators in the country. Powergrid owns and operates the majority of the interstate transmission lines, while intrastate lines are owned by the state transmission utilities. As recent reforms opened the sector to private or merchant investment, private-sector entities also build, own and operate interstate transmission lines.

Coal sector : The MoPNG is in charge of policies relating to the petroleum and natural gas sectors. The ministry co-ordinates the upstream regulator, the Directorate General of Hydrocarbons (DGH), and downstream regulator, the Petroleum and Natural Gas Regulatory Board (PNGRB).The ministry also co-ordinates hydrocarbon data collection (Petroleum Planning and Analysis Cell) and investment through the Oil Industry Development Board. Most of the oil and gas companies in the country are PSUs, which are organised through the MoPNG. These include the county's largest oil and gas producer Oil and Natural Gas Corporation (ONGC), the largest refiner and retailer Indian Oil Corporation Limited (IOCL), and India's largest state-owned natural gas company GAIL, with activities in production, transmission, distribution and sales.

Energy and climate policy : With regard to energy, the GoI set out high-level national targets for the year 2022, the anniversary of India's independence. The GoI aims to achieve 100 smart cities, LPG connections to all housing, universal electricity access and 175 GW of renewable electricity capacity. India's 2008 National Action Plan on Climate Change (NAPCC) set out eight national missions to promote India's sustainable development objectives, which are as follows:

- National Solar Mission
- National Mission for Enhanced Energy Efficiency
- National Mission on Sustainable Habitat
- National Water Mission
- National Mission for Sustaining the Himalayan Ecosystem
- National Mission for a Green India
- National Mission for Sustainable Agriculture
- National Mission on Strategic Knowledge for Climate Change.

Market Transformation for Energy Efficiency (MTEE): MTEE is India's principal initiative aimed at accelerating the adoption of energy-efficient appliances through the Bachat Lamp Yojana – the roll-out of energy-efficiency compact fluorescent lamps (CFLs) at the same price as incandescent bulbs.

The way towards a national energy policy : NITI Aayog is also preparing national energy policy strategies, the so-called National Energy Policy (NEP), in collaboration with all ministries across the Government of India. Building on the earlier energy policy overviews prepared by the Planning Commission, in 2017 NITI Aayog initiated the NEP as an overarching energy policy document. The NEP aims to devise an "omnibus energy policy" to meet the four interrelated goals of achieving energy access at affordable prices, ensuring economic development of India's manufacturing capacity, improving energy security and independence, and meeting the goals of greater sustainability. The NEP sets specific targets, policies and governance/institutional arrangements on how to meet these four key objectives, notably through energy efficiency, decarbonisation measures on the demand side, and the installation, generation and distribution of renewable energy. The NEP is under consultation in 2019.

3.4 SUMMARY

In this unit, we have seen the conventional sources of energy in India. Electricity and power generation plays a significant role in economic development of the country. Electricity is the most versatile form of energy and provides an important infrastructure for the growth of the country.Sources of Electricity include Hydro power, Thermal and Nuclear. Coal is the most important and abundant fossil fuel in India. It accounts for 55% of the country's energy requirement. Over the year's India's dependence on oil and gas reserve as a source of energy has increased. The major form of non-conventional sources of energy includes solar, wind , biogas , ocean waves and geo thermal. The energy policy of India focusses on energy access at affordable prices, ensuring economic development of India's manufacturing capacity, improving energy security and independence, and meeting the goals of greater sustainability.

3.5 QUESTIONS

a) Select the correct option and rewrite the answer:

i) ___ is a source of conventional electricity generation.
   a) Hydel Power
   b) Biogas
   c) Wind
   d) Solar

ii) _____ is a source of Non-conventional electricity generation.
   a) Hydel Power
   b) Coal
   c) Wind energy
   d) Nuclear

iii) The share of _____in total power generation is presently very little.
   a) Coal
   b) Nuclear
   c) Hydro power
   d) Thermal

iv) Non- conventional sources of energy are considered _____.
   a) Exhaustible
   b) Non -exhaustible
   c) Limited
   d) Fixed

v) _____ is the major source of energy in India.
   a) Biogas
   b) Nuclear
   c) Coal
   d) Solar

b) Answer in brief:

1) Explain briefly the conventional sources of energy in India.
2) What are the Non- conventional sources of energy in India?
3) Explain briefly the conventional and non-conventional sources of energy in India.
4) Describe the main features of the energy policy of India.

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4

SOCIAL INFRASTRUCTURE DEVELOPMENT

Unit Structure :

4.0 Objectives

4.1 Social Infrastructure Development

4.2 Social Infrastructure Development with reference to Education

4.3 Social Infrastructure Development with reference to Health

4.4 Human Development in India: Concept and Measurement

4.5 Summary

4.6 Questions

4.0 OBJECTIVES

1) To understand the role of Social Development in India
2) To analyze the measures introduced for development of Education in India
3) To analyze the measures introduced for development of Health in India
4) To understand the concept of Human Development.

4.1 SOCIAL INFRASTRUCTURE DEVELOPMENT

Social infrastructure helps in the development of human resource in the country. Social Infrastructure is vital for the smooth functioning of the economy. They contribute to improvement in factor productivity and by providing amenities that enhance the quality of life. Social infrastructure refers to basic services such as health, education, skill formation and training that contribute to human development and helps in developing its quality. It also includes sanitation, drinking water, housing etc. Social infrastructure like education and health supports the economic development of the country as they contribute to productivity improvements. Besides meeting some social objectives, the social infrastructure supports growth in the long run. For example, expenditure on health and education not only have positive impact on economic activities like production and distribution of goods, but indirectly helps in the economic development of the country by producing the skill and knowledge sets in the form of scientists, technologists and engineers, who contribute to economic activity. Social infrastructure enhances social well-being and furthers economic growth by providing basic services and facilities which allow businesses to develop and flourish.

Table 4.1: Trends in Social Sector Expenditure (as a Percentage of GDP)

Item	2015-16	2022-23BE
Expenditure on Social Services of which:	6.6	8.3
i) Education	2.8	2.9
ii) Health	1.3	2.1
iii) Others	2.5	3.2

Source: Economic Survey 2022-23

Table 4.1 shows that the expenditure on social infrastructure has increased from 6.6% of GDP in 2015-16 to 8.3% of GDP in 2022-23. The expenditure on education has increased marginally from 2.8 % to 2.9%. The expenditure on health has increased from 1.3% to 2.1%. Overall the expenditure on social infrastructure is well below that spent by developed countries.

Importance of social infrastructure:

a) Human development is the process of widening people's choices. It helps in improving an individual's quality of life. Education and health are important tools to achieve human development in the country.
b) Human development through education is important for creating employable workforce in the economy. It helps an individual to gain sustainable livelihood.
c) Availability of adequate basic facilities like safe drinking water, health care facilities, family planning measures, education infrastructure increases productive efficiency among the people.
d) Effective Utilization of resources available in the economy depends on the capability of human resources. Human development promotes research and development and better utilization of country's resources.
e) Utilization of resources available in the community depends on the capability of human resources. Better education helps in developing technologies which utilize the natural resources available in the country.

4.2 SOCIAL INFRASTRUCTURE DEVELOPMENT WITH REFERENCE TO EDUCATION

India holds an important place in the global education industry. By 2030, India is set to have the largest working age population in the world. Not only do they need literacy but they need both job and life skills. This provides a great opportunity for the education sector. India's educational system broadly comprises school education (elementary, secondary and higher secondary), higher education (general and professional) and vocational education. The Ministry of Education is the nodal ministry for the sector. Expenditure in education sector as percentage of GDP stands at 2.9% in the year 2022-23.

India has seen a rapid expansion in the higher education sector since 2001. There has been a dramatic rise in the number of higher education

institutions (HEIs) and enrolment has increased fourfold. The Indian higher education system is now one of the largest in the world, with 1,255 Universities, 50,524 Colleges and 13,116 Stand Alone Institutions. Despite the increased access to higher education in India, challenges remain. Low employability of graduates, poor quality of teaching, weak governance, insufficient funding, and complex regulatory norms continue to plague the sector. India's gross enrolment ratio (GER) currently is 28.4 per cent but still far from meeting the Government's target of achieving 50 per cent GER by 2035.

The following are some of the measures adopted by the Government for development of education in India.

1) **SarvaSahikshaAbhiyan (SSA):** It was launched in 2001-02 and it is one of India's flagship programmes for universalisation of elementary education. It is a part of RTE Act 2009 andprovides free education for all in the age group of 6-14 years. It aims at reducing gender and social gaps at primary and elementary levels of education. Objectives of SSA include enrolment of all children in school, retention of all children till the upper primary level and improving the learning achievement levels of children.

2) **National program for education of girls at elementary level (NPEGEL):** It was launched in July 2003. The aim of the programme is to make education equitable .It supports education for the underprivileged disadvantaged girls at the elementary level. It provides for setting up a model school in every cluster with emphasis on community mobilization and supervision of girl's enrolment in schools.

3) National Programme of Mid-Day-Meal in Schools (MDMS) is a flagship programme of the Government of India aiming at enhancing enrolment, retention and attendance and simultaneously improving nutritional levels among children studying in primary and upper primary schools across the country. The main objectives of the Mid-Day-Meal scheme is to Improve the nutritional status of children in classes one to five in Government and Government aided schools and to encourage children from disadvantaged background to attend school regularly and help them to concentrate in school activities.

4) **Rashtriya Madhyamik shikha Abhiyan (RMSA):** It was launched in 2009. It is a centrally sponsored scheme for the development of secondary education throughout India. It aims to provide universal education for all children between 15-16 years of age.The objective of the scheme are to achieve an enrolment ratio of 75 per cent for class IX-X by providing a secondary school within reasonable distance and to improve the quality of education imparted at secondary level.

5) **Saakshar Bharat/Adult education:** It aims at creating a literate society through a variety of teaching learning programme for non-literate and neo-literate of 15 years and above. It also aims at

continuing education programme for lifelong education at the community level.

6) **Rastriya Uchchatar Shiksha Abhiyan (RUSA) :** It was launched in 2013. It aims at holistic development of higher education in India. The centrally sponsored scheme aims at providing strategic funding to higher educational institutions throughout the country.

7) **National Education Policy 2020 :** The National Education Policy (NEP), 2020 – approved by the Union Cabinet on 29th July 2020 to make way for large scale, transformational reforms in both school and higher education sectors – is built on the foundational pillars of Access, Equity, Quality, Affordability and Accountability. Key highlights of the policy include:

- Ensuring Universal Access at all levels of school education;
- Early Childhood Care and Education with new Curricular and Pedagogical Structure;
- Reforms in school curricula and pedagogy;
- Emphasis on promoting multilingualism and Indian languages;
- Assessment reforms;
- Equitable and inclusive education;
- Robust and transparent processes for recruitment of teachers and merit based performance;
- Exposure of vocational education in school and higher education system;
- Increasing GER in higher education to 50 per cent by 2035;
- Holistic Multidisciplinary Education with multiple entry/exit options;
- Expansion of open and distance learning to increase GER.

4.3 SOCIAL INFRASTRUCTURE DEVELOPMENT WITH REFERENCE TO HEALTH

Depending on the level of care required, healthcare in India is broadly classified into three types. This classification includes primary care (provided at primary health centres), secondary care (provided at district hospitals), and tertiary care institutions (provided at specialised hospitals like AIIMS). Primary health care infrastructure provides the first level of contact between health professionals and the population. Broadly, based on the population served and the type of services provided, primary health infrastructure in rural areas consists of a threetier system. This includes Sub-Centres (SCs), Primary Health Centres (PHCs), and Community Health Centres (CHCs). A similar set up is maintained in urban areas.

1) **Ayushman Bharat Yojana:** Ayushman Bharat or "Healthy India" is a national initiative launched by the Government as the part of National Health Policy 2017, in order to achieve the objective of Universal Health Coverage (UHC). This initiative has been designed on the lines as to meet Sustainable Development Goals and its underlining

commitment, which is "leave no one behind".Ayushman Bharat aims to undertake path breaking interventions to holistically address health at primary, secondary and tertiary level.

Ayushman Bharat consists of two inter-related components, which are –

1) **Establishment of Health and Wellness Centres :** The first component, pertains to creation of 1,50,000 Health and Wellness Centres which will bring health care closer to the homes of the people. These centres will provide Comprehensive Primary Health Care (CPHC), covering both maternal and child health services and non-communicable diseases, including free essential drugs and diagnostic services.

2) **Pradhan Mantri Jan Arogya Yojana (PM-JAY) :** PM-JAY is one significant step towards achievement of Universal Health Coverage (UHC) and SustainableDevelopment Goal - 3 (SDG3).It aims to provide free access to health insurance coverage for low income earners in the country. Roughly, the bottom 50% of the country qualifies for this scheme. People using the program access their own primary care services from a family doctor and when anyone needs additional care, PM-JAY provides free secondary health care for those needing specialist treatment and tertiary health care for those requiring hospitalization.

2) **Pradhan MantriSwasthya Suraksha Yojana (PMSSY)** : The Pradhan MantriSwasthya Suraksha Yojana (PMSSY) aims at correcting the imbalances in the availability of affordable healthcare facilities in the different parts of the country in general, and augmenting facilities for quality medical education in the under-served States in particular. The scheme was approved in March 2006. It has been decided to set up 6 AIIMS-like institutions, one each in the States of Bihar (Patna), Chattisgarh (Raipur), Madhya Pradesh (Bhopal), Orissa (Bhubaneswar), Rajasthan (Jodhpur) and Uttaranchal (Rishikesh). Further, 16 AIIMS have been approved by the Government.

3) **Janani Suraksha Yojana(JSY) :** Janani Suraksha Yojana is a safe motherhood intervention scheme being implemented with the objective of reducing maternal and neo-natal mortality by promoting institutional delivery amongst the poor pregnant women. The scheme integrates cash assistance with delivery and post-delivery care.

4) **Integrated Disease Surveillance Program (IDSP) :** The Integrated Disease Surveillance Program (IDSP) was initiated in assistance with World bank, in the year 2004. The scheme aimed to strengthen disease surveillance for infectious diseases to detect and respond to outbreaks immediately. The objective of this programme isto maintain decentralized laboratory-based IT enabled disease surveillance system for epidemic-prone diseases to monitor disease trends and to detect

and respond to outbreaks in early rising phase through trained Rapid Response Team (RRTs).

5) **Pulse Polio Programme :** Pulse Polio Immunization programme was launched in India in 1995. Children in the age group of 0-5 years administered polio drops during immunization rounds (in high risk areas) every year. The Pulse Polio Initiative was started with an objective of achieving hundred per cent coverage under Oral Polio Vaccine. It aimed to immunize children through improved social mobilization, plan mop-up operations in areas where poliovirus has almost disappeared and maintain high level of morale among the public. WHO on 24th February 2012 removed India from the list of countries with active endemic wild polio virus transmission.

6) **National Programme for Health Care of the Elderly (NPHCE) :** With a comparatively young population, India is still poised to become home to the second largest number of older persons in the world. Projection studies indicate that the number of 60+ in India will increase from 100 million in 2013 and to 198 million by 2030. To overcome the medical expenses for elderly whose income decreases post retirement, Ministry of Health and Family Welfare launched The National Programme for Health Care for the Elderly (NPHCE). The interventions are designed to capture the Preventive, Curative and rehabilitative aspects in the geriatric field.

7) **National Health mission :** National Health Mission (NHM) was launched by the government of India in 2013 subsuming the National Rural Health Mission and National Urban Health Mission. It was further extended in March 2018, to continue till March 2020. The main components include Health System Strengthening in rural and urban areas for - Reproductive-Maternal- Neonatal-Child and Adolescent Health (RMNCH+A), and Communicable and Non-Communicable Diseases. The NHM envisages achievement of universal access to equitable, affordable & quality health care services that are accountable and responsive to people's needs.

The National Health Mission seeks to ensure the achievement of the following indicators: -

- Reduce Maternal Mortality Ratio to 1/1000 live births
- Reduce Infant Mortality Rate to 25/1000 live births
- Reduce Total Fertility Rate to 2.1
- Prevention and reduction of anemia in women aged 15–49 years
- Prevent and reduce mortality & morbidity from communicable, non-communicable; injuries and emerging diseases
- Reduce household out-of-pocket expenditure on total health care expenditure

4.4 HUMAN DEVELOPMENT IN INDIA: CONCEPT AND MEASUREMENT

4.4.1 Meaning and importance of Human Development

In recent years, the search for an alternative to GNP as a measure of economic development has led to the computation of Human Development Index. The United Nations Development Programme (UNDP) introduced the HDI in its first Human development report.Since its launch in 1990, the Human Development is defined as the process of enlarging people's choices. It is a process of widening people's choices as well as raising the level of well- being achieved.

Importance of Human Development

According to Paul Streeten, human development is necessary on account of the following reasons

1. Human development is the end while economic growth is only a means to this end. The ultimate purpose of the entire exercise of development is to treat men, women and children -present and future generations -as ends, to improve the human condition, to enlarge people's choices.

2. Human Development is a means to higher productivity. A well-nourished healthy, educated, skilled labour force is the most important productive asset. Thus investment in nutrition, health services and education are justified on grounds of productivity.

3. It helps in lowering the family size. It is the experience of all developed countries that improvement in education levels, better health facilities, and reduction in infant mortality rates lead to lowering of birth rates. Improved education facilities makes people aware of the benefits of a small family.

4. Human development is good for physical environment. Deforestation, soil erosion decline when poverty declines. How population growth and population density affect the environment is a subject of controversy. Human development is good for soil and forest conservation.

5. Human development and reduced poverty contributes to a healthy civil society, increased democracy and greater social stability. Human development can help in reducing civil disturbances in a society and in increasing political stability.

4.4.2 Concept of Human Development Index

The Human Development Index (HDI) is a statistic developed and compiled by the United Nations since 1990 to measure various countries' levels of social and economic development. It is composed of four

principal areas of interest: mean years of schooling, expected years of schooling, life expectancy at birth, and gross national income (GNI) per capita.This index is a tool used to follow changes in development levels over time and compare the development levels of different countries.

The HDI is a summary measurement of basic achievement levels in human development. The computed HDI of a country is an average of indexes of each of the life aspects that are examined: knowledge and understanding, a long and healthy life, and an acceptable standard of living. Each of the components is normalized to scale between 0 and 1, and then the geometric mean of the three components is calculated.

The **health** aspect of the HDI is measured by the life expectancy, as calculated at the time of birth, in each country, and normalized so that this component is equal to 0 when life expectancy is 20 and equal to 1 when life expectancy is 85.

Education is measured on two levels: the mean years of schooling for residents of a country, and the expected years of schooling that a child has at the average age for starting school. These are each separately normalized so that both 15 mean years of schooling and 18 years of expected schooling equal 1, and a simple mean of the two is calculated.

The **economic metric** chosen to represent the standard of living is GNI per capita based on purchasing power parity (PPP), a common metric used to reflect average income. The standard of living is normalized so that it is equal to 1 when GNI per capita is $75,000 and equal to 0 when GNI per capita is $100.

The final HDI score for each country is calculated as a geometric mean of the three components by taking the cube root of the product of the normalized component scores.

Figure 1: HDI Index

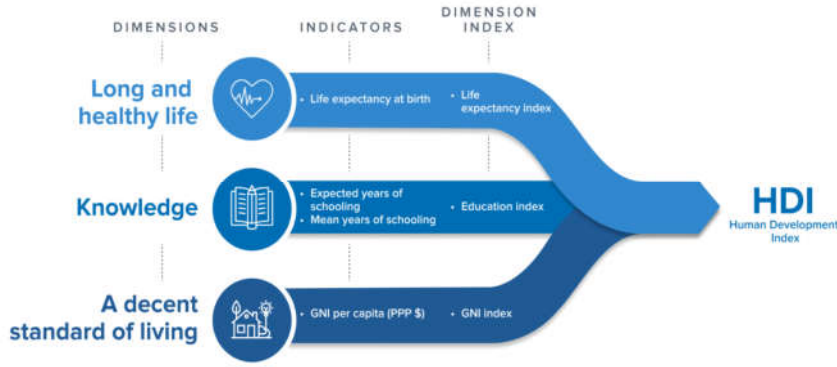

Table No 4.2: Classification of Countries

Classification	HDI Value
Very High Human Development	0.800 and above
High Human Development	0.700-0.799
Medium Human Development	0.550-0.699
Low Human Development	Below 0.550

Countries with HDI values above 0.8 are considered as countries with very high human development. Countries with values between 0.7 to 0.7999 are countries with high human development. Countries with HDI values between 0.550 to 0.699 are classified as medium human development and countries with HDI values below 0.550 are considered as countries with low human development.

Table 4.3: HDI Rank and HDI Value based on HDR 2022

Country	HDI Rank	HDI Value
Switzerland	1	0.962
Norway	2	0.961
Iceland	3	0.959
China	79	0.768
India	132	0.633
South Sudan	191	0.385

Based on the HDR 2022, Switzerland is ranked first with HDI value of 0.962 followed by Norway with a HDI of 0.961. China has a rank of 79 with HDI value of 0.768. India ranks 132 with HDI value of 0.633.

Limitations of HDI: While the HDI is a useful measure of a country's development level, it does have some limitations. For example, it does not take into account income inequality within a country, nor does it measure other important aspects of human development such as political freedom, environmental sustainability, or gender equality.The HDI is calculated from only three factors of human well-being. It fails to take into account other measures of development and well-being such as inequality, poverty, security, and gender or ethnic disparities.

The values of the factors that make up the HDI are bound between 0 and 1. This means that certain countries that already have high GNIs, for example, have little room to improve in terms of GNI score even if their GNI continues to grow and improve. This same parameter affects the logic of the life expectancy score.As a measurement of human development and well-being, it does not fully capture all the factors that influence the prosperity of either a country as a whole or the individuals within it.

4.5 SUMMARY

In this unit, we first study the concept of social infrastructure and its importance. Social Infrastructure is vital for the smooth functioning of the economy. They contribute to improvement in factor productivity and by providing amenities that enhance the quality of life. This is followed by understanding the efforts that India has made in the area of education and health. Various schemes have been launched by Government for improving the education level in the country. Similarly, various schemes have been launched for health sector in India. The Human Development Index (HDI) is a statistic developed and compiled by the United Nations since 1990 to measure various countries' levels of social and economic development.HDI is useful to track changes in development levels over time and compare the development levels of different countries.

4.6 QUESTIONS

a) Select the correct option and rewrite the answer:

i) The social infrastructure of a country includes_____.
   a) Airport
   b) Education
   c) Ports
   d) Power

ii) SarvaSahikshaAbhiyan aims at the following.
   a) Universalization of elementary education
   b) Universalization of Higher education
   c) Universalization of secondary education
   d) Universalization of professional education

iii) Currently, India is spending _____ as % of GDP on health care.
   a) 3
   b) 2.1
   c) 3.1
   d) 5

iv) The objective of Janani Suraksha Yojana is to_____.
   a) Increase employability among females
   b) Reduce maternal Mortality
   c) Reduce cases of pulse polio
   d) Reduce total fertility rate

v) The **health** aspect of the HDI is measured by _____.
   i) The life expectancy
   ii) The GNP
   iii) Mean years of schooling
   iv) Climatic change

b) Answer in brief:

1) Discuss the social infrastructure development in India with reference to education.

2) Discuss the social infrastructure development in India with reference to health.

3) Explain the role of social infrastructure.

4) Discuss the concept of HDI and the variable included in it.

5) Explain the concept and measurement of HDI.

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Module 3

5

INDUSTRY AND FDI-I

Unit Structure :

5.0 Objectives

5.1 Industrial Profile of India

5.2 The Private Sector In India

5.3 Role of Public Sector In The Indian Economy

5.4 Micro, Small Amd Medium Enterprises (Msmed) Act, 2006

5.5 Small & Medium Enterprises in India

5.6 Recent trends in Industrial Growth

5.7 Industrial Sickness

5.8 Impact of Globalization on Indian Industry

5.9 Conclusion

5.10 Questions

5.0 OBJECTIVES

- To understand Industrial profile of India
- To study Private sector in India
- To study Public sector in India and understand its role and problems
- To study Small scale and Cottage industries in India
- To study Small and medium enterprises in India
- To understand recent trends in Industrial growth in India
- To understand industrial sickness, Exit policy, Role of BIFR in India
- To study the impact of Globalization on Indian Industry

5.1 INDUSTRIAL PROFILE OF INDIA

The industrial sector is one in which finished products are manufactured from natural materials produced in the primary sector. Industrial production, cotton fabric, sugar cane production etc. activities comes under this sector. This sector manufactures goods in various stages of production. India's industrial sector consists of eight core industries consisting of electricity, steel, refinery products, crude oil, coal, cement,

natural gas and fertilizers.Information technology, telecom, healthcare, infrastructure, retail, food processing and fisheries constitute the sunrise industry in India. It is so called because it has the potential for rapid growth. It is characterized by high growth rates, high degree of innovation.

Industries constitute the secondary sector of the Indian economy. It is also known as the manufacturing sector. Industries in India are classified on several bases. On the basis of size, capital investment, and labor force employed, industries are classified as large, medium, small scale, and cottage industries.On the basis of ownership, industries come under public sector, private sector, joint, and cooperative sector.Industries of strategic and national importance are usually in the public sector.Industries are also classified on the basis of the use of their products such as basic goods industries, capital goods industries, intermediate goods industries, and consumer goods industries.On the basis of raw materials used by the industries − industries are categorized as agriculture-based industries, forest-based industries, mineral-based industries, and industrially processed raw material-based industries.

Location of industries is influenced by several factors like access to raw materials, power, market, capital, transport, and labor, backward area development in the case of public sector industries, political decisions etc. For instance, the establishment of iron and steel factories in Bhilai (Chhattisgarh) and Rourkela (Odisha) were based on decision to develop backward tribal areas of the country. India has eight major industrial regions. They are as follows:

1. Mumbai-Pune Region.
2. Hugli Region.
3. Bengaluru-Tamil Nadu Region.
4. Gujarat Region.
5. Chhotanagpur Region.
6. Vishakhapatnam-Guntur Region.
7. Gurgaon-Delhi-Meerut Region, and
8. Kollam-Thiruvananthapuram Region.

The industrial sector also known as the manufacturing sector had 26% share in the GDP of India in the year 2023. Some of the major industries in India are briefly described below.

Iron and Steel Industry

The major raw materials for the iron and steel industries are iron ore, coking coal, limestone, dolomite, manganese, and fire clay. The Bengal Iron Works Company was set up in 1870 at Kulti, Jharia in West Bengal was the first steel factory in India.The major iron and steel factories in India are:

1. The Tata Iron and Steel plant (TISCO) was established in Jamshedpur in 1907.

2. The Indian Iron and Steel Company (IISCO) was established at Burnpur in 1919.
3. The Visvesvaraiya Iron and Steel Works Ltd. (VISL) at Bhadravati in Karnataka.
4. The Rourkela Steel Plant was set up in the year 1959 in the Sundargarh district of Odisha with German collaboration.
5. The Bhilai Steel Plant was established in 1959 with Russian collaboration in Durg District of Chhattisgarh.
6. The Durgapur Steel Plant was established in 1962 in West Bengal in collaboration with the government of the United Kingdom.
7. The Bokaro Steel Plant was set up in 1964 at Bokaro with Russian collaboration.
8. The Vizag Steel Plant in Vishakhapatnam in Andhra Pradesh is the first port based plant which started operating in 1992.
9. The Vijaynagar Steel Plant at Hosapete in Karnataka was developed by using indigenous technology.
10. The Salem Steel Plant in Tamil Nadu was commissioned in 1982.

The Steel Authority of India Ltd (SAIL) was established in 1974 and was made responsible for the development of the steel industry. At present, India is the eighth largest steel producing country in the world.

Jute Industry

The Jute industry is an important industry for a country like India, because not only it earns foreign exchange but also provides substantial employment opportunities in agriculture and industrial sectors. The first modernized industrial unit was established at Reshra in West Bengal in 1855. The jute industry in the country is traditionally export oriented. India ranks number one in the production of raw jute and jute goods and number two in the export of jute goods in the world and accounts for 70% of the world production of jute goods. The industry employs about 3.5 lakh workers and is spread over the states of West Bengal, Assam, Bihar, Odisha and Andhra Pradesh. About ninety per cent of the production is domestically consumed and ten per cent is exported. India exports jute and jute products to USA, UK, Australia, Belgium, Italy, Germany, Egypt, Japan, Saudi Arabia and Turkey.

Cotton Textile Industry

The cotton textile industry is the oldest industry of India, and employs highest number of workers. It is the largest organized and broad-based industry which accounts for 4% of GDP, 20% of manufacturing value-added and one third of total export earnings. The Indian cotton textile industry is the largest in the world. The first Indian modernized cotton cloth mill was established in 1818 at Fort Gloster near Calcutta but this mill was not successful. The second mill named Bombay Spinning and Weaving Company was established in 1854 at Bombay by KGN Daber.India was famous worldwide for the production of muslin, a very fine variety of cotton cloth, calicos, chintz, and other different varieties of fine cotton cloth.At present, the major centers of the cotton textile industry

are Ahmedabad, Bhiwandi, Solapur, Kolhapur, Nagpur, Indore, and Ujjain.Tamil Nadu has the largest number of mills; however, most of them produce yarn rather than cloth. Ahmedabad is known as the Manchester of India for producing cotton textiles. Maharashtra, Gujarat, Telangana and Andhra Pradesh are known as the Cotton Basket of India because 66% of the cotton production in India comes from these four states.

The cotton industry in India leans towards apparel exports, contributing approximately 51% to overall apparel exports. Approximately 74% of the apparel exported from India is made of cotton. Cotton is freely exportable from India, with major export destinations being the US, Bangladesh, China, Vietnam, Pakistan, Indonesia, Taiwan, and Thailand, among others. The Government of India along with the Export Promotion Council has set a long-term target of US$ 100 billion for textiles industry exports by 2025-26 and growing productivity from the current level of around 450 Kg lint per hectare to at least 800-900 Kg lint per hectare.

Sugar Industry

Sugar industry is the second largest industry after cotton textile industry among agriculture-based industries in India. India is now the largest producer and consumer of sugar in the world. Maharashtra contributes over one third of the total sugar output, followed by Uttar Pradesh. There are 50 million sugar farmers and about five lakh workers working in the sugar mills of India. India produced 35.8 million tonnes of sugar in the year 2021-22.

Fertilizer Industry

The fertilizer industry in India is made up of several government and private sector companies that manufacture a range of different fertilizer types. The Indian Farmers Fertilizer Cooperative Limited (IFFCO) is a multi-state cooperative society based in New Delhi and one of largest fertilizer producers in India, having produced 9.6 million metric tons of fertilizers in the year 2023. As one of India's leading phosphatic fertilizer manufacturers, Coromandel International Limited had a production volume of about 2.8 million metric tons in fiscal year 2021. The company manufactures a wide range of fertilizers, pesticides, and specialty nutrients and is a leading agricultural solutions provider. India is the third largest producer of nitrogenous fertilizers in the world. In the year 2022, the fertilizer production in India stood at 42.6 million metric tonnes. Chhattisgarh is the leading organic fertilizer producing state of India.

Paper Industry

India has a five per cent share in the world production of paper and paper products. The per capita consumption of paper in India is 15kg, much less than the global average of 57kg. The estimated annual turnover of the paper industry in India is INR 70,000 crore, with a domestic market size of INR 80,000 crores.The first paper mill established in India was at Serampore in West Bengal in the year 1812. The second paper mill was set up in 1870 at Ballygunj, and this led to the birth of the core paper

Industry in India. Maharashtra is the major paper producing state. Maharashtra consists of the largest number of paper mills and is the leading producer of paper in India. The Indian paper industry's annual turnover is INR 700 billion and employs five lakh workers. The overall consumption of paper is expected to be 24 million tonnes in 2024-25. In the past 5 to 7 years, more than USD 5 billion investment has been made in the paper industry for setting up state of the art infrastructure. The Indian paper industry is ranked 15th in the world.

Silk Industry

India is the second-largest producer of natural silk in the world. At present, India produces about 16% of the silk output of the world. India has the distinction of being the only country producing all the five known commercial varieties of silk namely: Mulberry, Tropical Tassar, Oak Tassar, Eri and Muga silk. India produces silk garments, yarns, carpets, shawls, scarves, cushion covers and accessories. The total silk production in India in the year 2022-23 was 36582 million tonnes. The major silk producing states in India are Andhra Pradesh, Assam, Gujarat, Jammu and Kashmir, Karnataka, Chhattisgarh, Uttar Pradesh, Maharashtra, Tamil Nadu and West Bengal. Karnataka is the leading producer of silk in India. India exports silk and silk products to more than 30 countries. USA is the leading importer of silk and silk products from India with a 29 per cent share. In the year 2022-23, the silk industry in India employed 9.2 million workers. In the year 2022-23, silk exports earned USD 276.8 million.

THE PETROCHEMICAL INDUSTRY

The first successful Oil-well was dug in India in 1889 at Digboi, Assam. At present, a number of regions having oil reserves have been identified and oil is being extracted in these regions.The Oil and Natural Gas Commission (ONGC) of India was established in 1956 at Dehradun, Uttarakhand. Many items are derived from crude petroleum, which provide raw materials for many new industries; hence, these are collectively known as petrochemical industries.Petrochemical industries are categorized as polymers, synthetic fibers, elastomers, and surfactant intermediate industries.Mumbai is the hub of petrochemical industries. The three organizationsoperating in the petrochemical sector under the administrative control of the Department of Chemicals and Petrochemicals are : The Indian Petrochemical Corporation Limited (IPCL), The Petrofils Cooperative Limited (PCL) and The Central Institute of Plastic Engineering and Technology (CIPET).The National Organic Chemicals Industries Limited (NOCIL) was established in the private sector in the year 1961.

The industry is worth USD 190 billion and poised to reach USD 300 billion by 2025. Reliance is the largest integrated petrochemical producer in India and is the world's largest petrochemical polyester producer. India ranks sixth in terms of size in the world petrochemical industry and fourth in Asia and exports petrochemical products to 175 countries in the world and has a 13% share in total export revenue of India. Synthetic fibers,

polymers, synthetic rubber elastonomers, synthetic detergent intermediates and performance plastics are the petrochemical products produced in India. The demand for chemicals and petrochemicals in India is predicted to nearly triple and reach US$ 1 trillion by 2040.

THE INFORMATION TECHNOLOGY INDUSTRY

The information technology (I.T.) industry in India consists of information technology services and business process outsourcing. The share of the IT-BPM sector in the GDP of India was 7.4% in the year 2022. The IT and BPM industries' revenue is estimated at US$ 245 billion in the year 2023. The domestic revenue of the IT industry is estimated at $51 billion, and export revenue is estimated at $194 billion in the year 2023. In March 2023, the IT-BPM-sector employed 5.4 million people. The top six Indian IT Services providers are Tata Consultancy Services, Infosys, Wipro, LTI Mindtree, Tech Mahindra, and HCL Technologies.

Karnataka is the leader in IT export revenues with USD 65 billion, followed by Maharashtra with USD 33 billion, Telangana USD 32 billion and Tamil Nadu with USD 22 billion. The major IT hubs of India are Bangalore, Hyderabad, Chennai, Pune, Delhi NCR and Kolkata.

5.2 THE PRIVATE SECTOR IN INDIA

The Private Sector played a residual role in the Indian Economy since independence until the introduction of the New Economic Policy of 1991. The New Industrial Policy of 1991 assigned the commanding heights of the economy to the private sector and aimed at converting the Indian Economy into the largest free market economy in the world by the turn of the century. The century has turned and the aim remains to be achieved. However, one can safely say today that India is the largest free market economy in the world given her numbers in population. In terms of production or GDP, it will take many more decades before India becomes the largest free market economy in the world.

The role, performance and problems of the private sector in the Indian economy must therefore assessed in the context of the New Economic Policy of 1991 and thereafter.

5.2.1 THE ROLE OF THE PRIVATE SECTOR IN THE INDIAN ECONOMY

The role of the private sector in the Indian economy can be explained as follows:

1. **The Private Sector is the Dominant Sector of the Economy :** Private sector companies outnumbered public sector companies in the year 2009-10. The number of private sector companies in the year 2009-10 was 1,38,300 out of 1,58,877 companies in India. In percentage terms, 87 % of the companies were private sector companies in the year 2009-10. Public sector companies accounted for 9.4 per cent of the total whereas cooperative and other companies

accounted for the balance 3.6 per cent. However, in terms of fixed capital, the share of the private sector was only 25.3 %. The share in gross output was 37.3 per cent and its share in value added was 34.9 per cent. Private sector employment was 60.4 per cent against public sector employment of 36.5 per cent. In 2023, public sector employment as a percentage of organized sector employment dominated the Indian economy with a share of 68.75% with the balance 31.2 going to the organized private sector. The average compensation to employees in the public sector is far greater than the private sector and hence in matters of labor and employment, the public sector continues its role as the conscience keeper of the nation.

2. **The Private Sector is the Modern Industrial Sector of the Economy :** All consumer goods industries are established in the private sector. Cotton textile, sugar, paper and edible oil industry is predominantly in the private sector. Cosmetics, pharmaceutical and chemical industries are largely in the private sector. The Information Technology industry which dominates in earning export revenues is entirely in the private sector. Industries manufacturing machine tools, machinery and plants, ferrous and non-ferrous metals, rubber etc have been established in the private sector. The automobile industry is also dominated by the private sector. The small and cottage industries are also a part of the private sector and have an important role to play in the Indian economy in terms gross value added and in terms of employment generation.

5.2.2 PERFORMANCE OF THE PRIVATE SECTOR

After the introduction of the New Industrial Policy of 1991, the Indian Economy was exposed to not only domestic but also foreign competition. As a result, both the public and more particularly the private sector has gone through a process of restructuring through mergers, acquisitions and consolidation. The performance of the private sector is explained below in terms of profits and market capitalization.

1. **The Top Ten Most Profitable Private Companies :** Tata Consultancy Services (TCS) is an Indian multinational information technology (IT) services and consulting company, headquartered in Mumbai. As of May 2021, TCS was the largest company in the IT sector in the world by market capitalization of $169.2 billion. It is a subsidiary of the Tata Group and operates in 149 locations across 46 countries. In the year 2022, the total profit of TCS was Rs.38187 Crores and its market capitalization Rs. 114482.3 Crores. The Reliance Industries Limited scored the first place in the year 2022 with profits of Rs.39084 Crores and a market capitalization of Rs.1756046.1 Crores. HDFC Bank came third with a profit of Rs.36961.30 Crores and a market capitalization of Rs.829039.7 Crores. Other companies who succeeded the top three were Tata Steel, SBI, ICICI Bank, Infosys, Vedanta, JSW Steel and ITC (Table 1).

2. **Ranking in Terms of Market Capitalization :** Market capitalization refers to the market value of the outstanding shares of a company. The market capitalization of the top ten private sector companies is given in Table 2. Reliance Industries tops the list with consistent performance between 2011-12 and 2023-24. The three IT companies of India, namely: Infosys, TCS and Wipro were among the top ten companies in terms of market capitalization in the year 2011-12. However, in 2023-24, Wipro was displaced by LIC of India and Larsen and Toubro was replaced by Hindustan Unilever Limited. The market capitalization growth of Reliance Industries over the period is seen to be more than 600%. Tata Consultancy Services was placed second consistently and the market capitalization also went up by more than 600% from 274208 Crores to Rs.1491000 Crores. The other companies in the league were HDFC Bank on the third position, Tata Steel on the 4th position, SBI on the 5th position, ICICI Bank on the 6th and ITC on the 10th position. The market capitalization of all the top 10 companies in India went up in the range of 10 to 15 times in the year 2023 that these companies had in the year 2009-10. For instance, the market cap of HDFC Bank had gone up by 15.57 times or by 1557%.

3. **Registered Private Sector Companies in India :** In the year 2022, across various sub-sectors of the private sector in India, the number of companies registered was 1,421012. Business Services are services which are used by other companies to conduct their businesses such as financial and accounting services, engineering services, legal services, Logistics, Marketing, Information Technology, and Security Services. Manufacturing refers to the processing of raw materialsor parts into finished goods through the use of tools, human labor, machinery, and chemical processing. Trading refers to buying and selling of financial instruments and commodities for a short period to make profits. Community, Personal and Social Services consists of public administration and defense and other services. The Construction Industry consists of companies in the business of constructing residential and non-residential buildings, roads and bridges, railways, dams, canals etc. The Real Estate and Rental and Leasing sector consists of companies engaged in renting, leasing, and allowing the use of tangible and intangible assets, and establishments providing related services. The Agricultural sector is the largest sector in the private sector of India. It is also known as the primary sector which is involved in the farming of food crops, fruits, vegetables etc. Horticulture, Floriculture, Seri culture, Animal husbandry, Poultry, Dairy Farming etc. The transport, storage and communication sector consists of air, water, road and rail transportation companies, storage and warehousing companies and telephone companies. The financial sector consists of companies involved in banking and financial services. Electricity, gas and water companies are also known as utility companies. The mining and quarrying industry is dominated by the public sector but there are many private sector companies in this

sector. The insurance sector consists of general and life insurance companies. The number of private sector companies across the sub-sectors is shown in the following table. You will notice that the business service sector dominates the private sector in India, followed by manufacturing, trading, CPSS and construction. In 2022, there were about 1.5 million registered private sector companies in India (Table 5.1).

Table 5.1
Top 10 Private Sector Companies by Profit and Market Capitalization (2022)

Rank	Company	Total Profits (in crores)	Market Capitalization
1.	Reliance Industries	39084.00	1756046.1
2.	TCS	38187.00	1144862.3
3.	HDFC Bank	36961.30	829039.7
4.	Tata Steel	33011.20	132684.8
5.	SBI	31676.00	479921.0
6.	ICICI Bank	23339.50	615532.4
7.	Infosys	21235.00	612375.4
8.	Vedanta	17245.00	98078.30
9.	JSW Steel	16702.00	165446.7
10.	ITC	15057.80	405433.4
Business Today, Sept 2022.			

Table 5.2 –Market Capitalization of Ten Private Sector Companies (in Rs.Crore)

Rank	**Company**	**2011-12**	**2010-11**	**2009-10**	**2023-24**
1.	Reliance Industries	2,74,208	3,34,720	3,28,899	19,90,000
2.	Tata Consultancy Services	2,20,605	1,86,053	1,11,329	14,91,000
3.	Infosys	1,57,404	1,69,302	1,23,247	6,92,000
4.	Indian Tobacco Company	1,55,683	1,22,170	87,581	5,05000
5.	Bharti Airtel	1,41,413	1,21,171	1,35,152	6,25,000
6.	HDFC Bank	1,11,204	99,092	67,757	10,55,000
7.	ICICI Bank	1,06,248	1,15,398	86,777	7,08000
8.	WIPRO (LIC 2023-24)	98,882	1,05,037	79,598	6,31,000
9.	State Bank of India (SBI)				6,30,000
10.	L&T (HUL 2023-24)	89,631	1,08,714	87,867	5,63,000

Table 5.3 – Number of Private Sector Companies

SNO	**SECTOR**	**2022**	**2023**	**2024**
1.	Business Services	4,38,691	4,53,000	4,71,816
2.	Manufacturing	2,90,370	3,13,255	3,35,512
3.	Trading	1,83,255	1,91,379	2,15,201
4.	Community, Personal & Social Services	1,29,603	1,37,730	1,87,675
5.	Construction	1,12,860	1,18,746	1,27,357

6.	Real Estate and Renting	73,567	77,291	83,426
7.	Agriculture	62,878	68,055	78,991
8.	Transport, Storage and Communication	46,375	48,739	58,443
9.	Finance	43,660	63,787	68,866
10.	Electricity, Gas and Water Companies	19,914	16,961	19,481
11.	Mining and Quarrying	12,413	13,292	14,035
12.	Insurance	1,160	1,311	1,444
13.	Others	11,266	13,462	3,191
	Total	**14,21,012**	**24,61,937**	**26,28,865**
MCA, GOI Monthly Information Bulletin January 2022, 2023 & 2024.				

In January 2023, there were 24, 61,937 registered companies in India. Out of these, 15, 17,008 or 62% were active. There is an increase of 1% in the total number of active companies as compared to December 2022. Private limited companies accounted for 95% of the total companies with 37% of the total Paid-up Capital. In comparison, Public Limited companies were smaller in number (5%) but had a 64% share in the total Paid-up Capital. On 31st January 2023, there were 45,360 one person active companies with a paid up capital of Rs.612.25 crores.

A total number of 26,28,865 companies were registered in the country as on 31st January 2024, of which 63% (16, 65,438) companies were active. Private limited companies account for 96% of the total companies with 37% of the total Paid-up Capital. In comparison, Public Limited companies are smaller in number (4%) but account for 63% of the total Paid-up Capital.

The Business Services sector has the highest percentage of active companies (28%) followed by Manufacturing (20%), Trading (13%) and Community, Personal and Social Services (11%). It is observed that Service Sector saw the maximum increase in the total number of Active Companies, followed by Industry and the Agriculture Sector. In the Service Sector, Community, personal & Social Services Sector showed the maximum rise in the number of Active Companies.

Amongst the 37 States and UTs, Maharashtra (19%) continues to be the state with highest number of Active Companies followed by Delhi (14%) and West Bengal (9%). An increase in the number of Active Companies is witnessed in the states of Maharashtra, Uttar Pradesh and Delhi as compared to December 2023. Among the Union territories, Jammu & Kashmir showed a rise of 119 companies in contrast to December 2023.

5.2.3 PROBLEMS OF THE PRIVATE SECTOR

The private sector in India is suffering from the following problems:

1. **Fall in Net Value Added to total Output** : The net value added is defined as the amount generated above the cost of raw materials and

depreciation charges. Many industries in the private sector have reported a fall in the share of net value added in output in the last few years. Fall in the net value added is an indicator of falling efficiency of the private sector.

2. **Infrastructure Problems :** Capacity short falls, poor quality and high cost of infrastructure are the major constraints of the private sector. Acute power shortage, power cuts, power fluctuation and high industrial energy costs are other problems. These problems affect the competitiveness and performance of the private sector. A World bank-CII survey conducted in 2002 found that 69 per cent of the manufacturing firms in India had their own power generator against 30 per cent in China. India has no inter-State expressways linking the major economic centers. Poor riding quality and congestion reduces the transport speed to 30 to 40 KMs per hour which is 50 % of the expected average speed. However, in the last decade, both intra-state and inter-state rail and road expressways are coming up and the quality of infrastructure is also improving.

3. **Industrial Sickness.** In the year 2008, the total number of sick units in the portfolio of scheduled commercial banks stood at 89,641 involving a bank credit of Rs.35,366 crore. Sick industrial units are a big drain on the financial resources available for investment. Investible resources are locked up and they are not available for investment.

4. **Finance and Credit Problems** : The money and capital markets in India are under-developed. Inflationary tendencies in the Indian economy since the second five year plan have always kept the interest rates high. Both long and term and working capital requirements of the private sector are not adequately met. High interest rates and seasonal shortage of funds limits the growth of the private sector in India.

5. **Foreign Competition** : Since the adoption of the New Economic Policy of 1991, competition in the private sector of India has been increasing due to progressive liberalization of the Indian economy. The MNCs have arrived in India and they have made their presence felt in both the industrial and service sectors of the economy. The Indian firms pose no challenge to the might of the MNCs. In order to stay competitive in the market, the Indian firms need to spend more and more on research and development, promotion and marketing of their products. Additional costs leads to lower profits and slower growth.

6. **Industrial Disputes :** Between 2007 and 2010, the number of industrial disputes has gone up from 389 to 427. A great part of these disputes occur in the private sector. In 2007, man-days lost due to industrial disputes were of the order of 427 thousand as against 389 thousand in 2007 and the loss of production amounted to Rs.267 crores

in 2007 to Rs.140 crores in 2010. Industrial disputes lead to strikes, lockouts and go-slow activities leading to loss of man-days and production. For instance, in the year 2009, there were 205 strikes and 187 lockouts throughout the country.

5.3 ROLE OF PUBLIC SECTOR IN THE INDIAN ECONOMY

India adopted a mixed economic system in which the public sector was given a dominating role after independence. Planned economic development of the country was sought to be achieved through various five year plans beginning from 1951. The planners decided to establish a socialistic pattern of society in which the public sector will assume commanding heights of the economy. Accordingly, major investments were made by the government of India in the infrastructure industries as well as basic and heavy industries such as iron and steel, shipping, oil exploration, electrical, engineering, aeronautical, mining etc and large number of public enterprises both Central and State were set up. By the early eighties, the public enterprises dominated the Industrial Sector in India. However, in the early nineties, the Government of India adopted a program of economic reforms under the aegis of the IMF World Bank conditional aid program. Three important pillars of the IMF World Bank conditions were liberalization, privatization and globalization. The policy of privatization led to the gradual phasing out of the public sector in India through a process of disinvestments. The disinvestments program in India is an ongoing program and will end only with the complete phasing out of the public sector.

Although the public sector has been criticized for its inefficiency, it has played a historic role in setting up an industrial base in India during the period 1951 – 1991. The public sector has played a significant role in the Indian economy during the days of its glorious forty years. It contributed significantly to capital formation, development of infrastructure, created a strong industrial base and checked concentration of economic power in the Indian economy. The role of the public sector in the Indian economy is discussed in more details below.

Capital Formation : During the first two plans, public sector investment was 54 per cent of the total investment in India. It rose to 60 per cent in the third plan. The fifth, sixth and seventh plan had 43.3, 47.8 and 45.7 per cent respectively. The eighth plan made an actual investment of 34.3 per cent with 29.5 per cent in the ninth plan. The government financial institutions played an important role in mobilizing savings for investments in the public sector. The eighth and ninth five year plans (1992-97 and 1997-2002) falls in the post reform era and that is why public sector investment has been the lowest as a percentage of total investment. The share of the public sector in GDCF (gross domestic capital formation) was 44.6 per cent in the Sixth Plan. In the 8^{th} Plan, it fell down to 31.7 % and further down to 27.3 and 22.2 % in the 9^{th} and 10^{th} Plans. From the

figures, it will be clear that the public sector had played a dominating role in the process of capital formation in India in the first forty years.

Development of Infrastructure : In a developing country, infrastructure needs to develop at a rapid pace. Expansion of irrigation facilities, power and energy are required for agricultural development. Similarly, development of transport and communication facilities, fuel and energy, basic and heavy industries are required to speed up industrialization. The private sector in India was small and incapable of developing the required infrastructure. Hence, huge investments in the public sector were made for the development of social and economic infrastructure.

Strong Industrial Base : The share of the industrial sector grew from 13.3 per cent of the GDP at factor cost in 1950-51 to 25.4 per cent in 2012-13, while the share of agriculture came down from 59.2 per cent to 16.16 per cent in the same period. In the year 2024, the share of the secondary sector or the industrial sector had more or less remained stable at 26%. However, the economy during the period 2012-13 and 2022-23 has more than doubled and hence in absolute terms the industrial based of the country had doubled during this period. The industrial base of the Indian economy thus expanded considerably during the last 70 years. The government made heavy investments in iron and steel, heavy engineering, coal, heavy electrical machinery, petroleum and natural gas, chemicals and drugs, fertilizers etc. These industries were essential for the development of consumer goods industries.

Removal of Regional Disparities : In order to remove regional disparities in Industrial development, the government of India undertook a program of balanced industrial development. A major portion of public sector investment was made in the backward States. Until 1990-91, 35.5 percent of the total public sector investment was made in the four backward States of Bihar, Orissa, Madhya Pradesh and Uttar Pradesh and their share in public sector employment was 43 per cent. All the four major steel plants in the public sector, namely: Bhilai, Rourkela, Durgapur and Bokaro were set up in the backward States.

Import Substitution and Export Promotion : In order to overcome the problem of balance of payments, the Government of India initiated a program of import substitution and export promotion. Public sector enterprises such as Bharat Heavy Electricals Ltd, Bharat Electronics Ltd, Hindustan Antibiotics Ltd, Indian Oil Corporation, ONGC etc played an import role in the program of import substitution. Similarly, Hindustan Steel Limited, Hindustan Machine Tools Ltd, State Trading Corporations, Minerals and Metals Trading Corporation and Bharat Electronics Ltd played a significant role in export promotion activity.

Check Over Concentration of Economic Power : Keeping with the objective of developing a socialistic pattern of society, the public sector was assigned the commanding heights ofthe Indian economy. Accordingly, the private sector was assigned a secondary role so that concentration of economic power in the hands of a few industrialists does

not take place.Although the MRTP limits on the size of a company has gone, a strong and expanding public sector that India has is sufficient to limit the concentration of economic power in private hands.

5.3.1 PERFORMANCE OF THE PUBLIC SECTOR

The performance of the public sector in India can be studied with reference to the following aspects:

Expansion and Share in National Output

In 1951, there were only five central public sector enterprises with investment of RS.29 crore. By 2007, there were 247 public sector enterprises with an investment of over Rs.4.2 lakh crore. The turnover of PSUs was Rs.1.34 lakh crore in 1991-92 and by 2006-0, the turnover went up over Rs.9.4 lakh crore. Out of the total investment of Rs.4.2 lakh crore in the public sector as on 31st March 2007, 62.6 % of investment is in the industrial sector. The central public sector enterprises are key contributors to the production of coal, lignite, petroleum and non-ferrous metals like lead and zinc. Their contribution was 85.2 % to coal production, 85.87 % to crude oil production and 74.51 to petroleum refining in the year 2005-06. The number of CPSUs has gone up to 260 as on 31st March 2012.Between 2012 and 2020, there was significant increase in the number of CPSEs and the volume of investment. The number of CPSEs increased from 260 in 2012 to 389 in 2022. Similarly, the volume of financial investment too rose from 7.3 lakh crore to nearly 23 lakh core during the same time period. In terms of sectoral operation of CPSEs, while the number of CPSE in the agriculture and agro-based industries declined from 10 in 1980 to 3 in 2020, the number of CPSEs has increased considerably in services such as transport & logistics services, construction and technology consultancy services and financial services. The number of CPSEs in mining and exploration industries has remained almost stagnant. On the other hand, there has been decline in the number of CPSEs in manufacturing sector, especially in fertilizer, transport vehicle and equipment, and textiles (Table 5.4).

Table 5.4 – Sectoral Distribution of CPSEs (1980 to 2020)

Sectors	*1980*	*1990*	*2011*	*2020*
Agriculture and Agro based Industries	10	4	5	3
Mining and Exploration of Coal	5	8	10	8
Mining and Exploration of Crude Oil		8	3	5
Mining and Exploration of Other Minerals and Metals	12	12	12	11
Manufacturing, Processing and Generation of Steel	3	8	5	4
Manufacturing, Processing and Generation of Petroleum	11	14	8	6
Fertilisers	15	8	7	7
Chemicals and Pharmaceuticals	.	19	11	20
Heavy, Medium & light Engineering	31	38	32	36
Transport Vehicle and Equipment	9	13	8	1
Industrial and Consumer Goods	11	18	14	13
Textile	10	14	4	5
Power Generation		4	10	14
Services - Power Transmission		4	3	13
Trading and Marketing	19	20	20	20
Transport and Logistic Services	1	12	12	23
Contract & Construction, And Tech. Consultancy Services	7	12	30	46
Hotel & Tourists Services	2	8	9	6
Financial Services	3	7	17	21
Telecommunication and Information Technology	9	2	4	8
TOTAL Operational PSEs	158	233	224	270

Profitability of Public Sector Enterprises

The profit before interest and tax increased from Rs.13, 675 crore in 1991-92 to about Rs.1.43 lakh crore in 2006-07. The net profit increased from Rs.2356 crore to Rs.81, 550 crore during the same period. The ratio of net profit to turnover rose from 1.8 % to 8.4 % over the same period. The contribution to Central Exchequer rose from Rs.19, 951 crore to Rs.1, 47, 728 crore during the same period. The dependence of the public sector enterprises on budgetary resources came down and their gross internal resource generation increased. The gross internal resource generation in 1991-92 was Rs.12, 943 crore and in the year 2006-07, it was Rs.96, 551 crore.

It is noted that the number of profit making CPSEs has increased from 40 in 1970 to 180 in 2017-18. Between 2003 and 2018, number of profit making CPSEs increased considerably, from 120 to 180. Also the number of loss making CPSEs fell from 110 in 1990 to 60 in 2010. However, in recent years the number of loss making CPSEs has increased to 84 as on March 2020. Sector wise distribution of loss making CPSEs loss making CPSEs are more in Chemicals and Pharmaceuticals, Heavy & medium Engineering, Trading & Marketing, Transport & logistics Services, Contract Construction and tech Consultancy Services and Hotel Services. The number of profit making PSUs was throughout higher than the number of loss making PSUs and since 2002-03 there has been steep rise in the number of profit making PSUs together with steep fall in the number of loss making PSUs (Table 5.5).

Table 5.5 – Sectoral Distribution of Profit and Loss Making CPSEs

Cognate group	*Profit making CPSEs*	*Loss making CPSEs*
Agro Based Industries	1	1
Coal	6	2
Crude Oil	4	1
Other Minerals & Metals	9	2
Steel	3	1
Petroleum (Refinery & Marketing)	5	2
Fertilisers	6	1
Chemicals & Pharmaceuticals	6	10
Heavy & Medium Engineering	18	8
Transportation Vehicle & Equipment	1	0
Industrial and Consumer Goods	7	4
Textiles	0	5
Power Generation	12	0
Power Transmission	15	1
Trading & Marketing	10	8
Transport and Logistic Services	10	14
Contract Construction and Tech. Consultancy Services	35	9
Hotel and Tourist Services	1	5
Financial Services	21	1
Telecommunication & IT	6	2
Total	176	77

The share of public sector in GDP for the period 1951 to 1991 was 7.6 per cent and was low at 4.2% in the fifties. The average during the three decades of 1960 to 90 was 8.6%. The average for the period 1990-2019 was 7.98%. The share of public sector in GDP in 2019 was 7%. But the share of public sector in gross fixed capital formation increased from 26% in 1951 to 54.7% in 1987 and then shows a steep decline reaching the low point of 20% in 2014 and the share turns out to be 23% in 2019. Hence it is important to note that the public sector contributed significantly in investment demand in India in the pre-reforms period and its share in investment declined sharply during the reform era.

Investment and Employment in the Public Sector

An important reason of the decline of the Public Sector in India is the fall in investment in the post reforms period. During the 1950s, the average growth of gross capital formation was 15.7% which for the private corporate sector was as low as 3.05%. The growth of investment suffers a decline during the sixties until mid-seventies when the average growth of public sector investment came down to as low as 3%. This was also the period when industrial stagnation set in although the growth of investment in private corporate sector during the same one and half decade was about 6.5%. During the period 1976 to 1990 the growth of investment in the public sector enterprises and in the private corporate sector was more or less same 8.7% and 8.1%. In the post reforms period (1991-2018), the average growth of investment in the public sector came down to 4.8% while that in the private corporate sector it was on an average 8.3%.

The growth of investment in the pre-reforms period (1960-61 to 1990-91) in the utilities has declined from an average growth of 10% to 6.5% in the post-reforms period (1990-91 to 2018-19). During the same period, public sector investment in railways has increased from one per cent in the first period to 6.3% average in the second period. While in the case of manufacturing the growth of gross fixed capital increased from 5.3% in the three decades of pre-reforms period to an average of 6% in the post reforms period. During the period 2011-12 to 2018-19, the average share of public non-financial sector in total gross fixed capital formation was 11% while the share of private non-financial corporate sector was36.6% and the highest share was accounted for by the household sector at 39.4%. This indicates the low share of investment in public sector in recent period.

The public sector has not only been the greatest employment generator but also an ideal employer in India. Employment in the central public sector enterprises as on 31st march 2011was 17.54 million persons as against 11.45 million in the organized private sector. The average wage was also higher than the private sector. The public sector developed townships for the employees with facilities like schools, hospitals, shopping complexes etc. The employees enjoy medical facilities, subsidized canteen services, transport and educational facilities.

The CPSEs have been an important source of employment in India, though in recent decades the number persons employed in CPSEs has declined. The employment in CPSEs increased considerably between 1970 and 1990, from 6.6 lakhs to 22.2 lakhs. During the 1990s, the decline was gradual. However, during subsequent decades, there was a significant reduction in the employment figures, from nearly 20 lakhs in 2000 to 14.4 lakhs in 2010. The employment figures further fell to 10.9 lakhs in 2018. The growth of employment in CPSEs shows a decline since the beginning of mid-1970s although growth rate was positive. Since 1990s, during the last three decades, the employment growth shows a faster decline reaching negative rates since 2012-13.

Foreign Exchange Earnings

Capital goods, industrial machinery and other equipment which were imported before are now manufactured in India leading to savings in foreign exchange. The ONGC and Indian Oil have helped in reducing the dependence on foreign imports. The Hindustan Antibiotics Ltd and the Indian Drugs and Pharmaceuticals Limited have broken the monopoly of foreign firms in the pharmaceutical sector. The public sector earns foreign exchange by exporting goods and services and through trading and marketing services through which exports are canalized. The public sector accounted for 11.5 per cent of export income in the year 2006-07.

Financial Performance& Contribution to the Exchequer

One of the gross measures of return on capital is the gross turnover to capital employed which actually increased during the period 1993-94 to 2008-09 and then suffered a decline. The turnover ratio that explains how efficiently capital has been employed suggests that in recent years, output or turnover per unit of capital has declined considerably. The turnover per unit of capital employed declined significantly from 1.6 in 2008-09 to 0.8 in 2019-20.

The performance of the CPSEs in terms of profit and profitability has improved considerably during the 2000s, though profitability had dipped during the decade 2010. During 1968 and 2009, the profitability of CPSEs increased from 2.8% to 12.2%. During the subsequent years, their profitability declined to 4% in 2019-20 and 4.4% in 2020-21. On the other hand, net profit data shows significant improvement during 2000s and 2010s. Net profit of CPSEs which stood at Rs.13235 crore in 1998-98, increased to Rs.158339 crore in 2020-21.

The decline in profitability is largely due to the deteriorating performance of the CPSEs in the telecommunication and information technology and steel sector. The telecommunication and information technology sector that recorded net profit of Rs.15277 crore in 2005-06, registered a loss of Rs.9300crore in 2021-22. In terms of profit share, the CPSEs in the crude oil and refinery sector accounted to be the single largest source of profit, though its share has declined in recent decades. The other sectors with significant profit share include coal, other minerals and metals, power generation and transmission, and financial services.

In the recent period the decline in profitability of the public sector as a whole is driven by sectors such as steel petroleum refinery and marketing, crude oil, transportation vehicle and equipment, other minerals and metals. During the period 2003-04 to 2021-22 there has been a sharp fall in profitability in these sectors.The fall in profitability has been very drastic in the case of services such as telecommunication and information technology in which since 2009-10 profitability continued to be negative. In power generation and financial services also there have been steep decline in profitability during this period (Table 5.6).

It is however noteworthy that the contribution of CPSEs to the central exchequer has increased manifold in the past five decades from INR 997 crore in 1975 to nearly INR 5lakh crore in 2021. Contribution to exchequer increased rapidly post 2000s, mainly driven by excise duty and corporate income tax. The excise duty is found to be the single largest constituent of CPSE's contribution, followed by corporate tax. The share of dividends which stood at 2% in 1975 increased to 11% in 2000, 13% in 2013 and further to 19% in 2020. On the other side, the share of customs and other duties have witnessed drastic fall, from more than 50% in 1993 to nearly 7% in 2019.

It is also important to note that the public sector could attain higher profitability during the post-reform period despite the fact that the share of compensation to employees in value added was much higher compared to the private sector in almost all the sectors. In manufacturing the share of compensation to employees in value added in public sector in 2019-20 turns out to be 57.72% while in the private corporate sector for the same year corresponding share is recorded only 23.11%. The low share of compensation to employees in the private corporate sector perhaps explains high share on an average of operating surplus. The trend in operating surplus also shows that in both public and private sectors there is a declining trend in the last decade. It would be erroneous perhaps to ascertain the same efficiency criterion to public and private sectors.

Table 5.6 – Group-wise Net Profit (%)

Groups	*1981-90*	*1975-90*	*1991-2000*	*2001-2010*	*2011-2020*
Agro Based Industries	0.1	0.7	0.0	0.0	0.0
Coal	-4.5	60.3	8.5	8.4	20.2
Other Minerals & Metals	-4.3	0.6	8.5	5.0	20.1
Steel	-4.1	-8.3	-7.2	5.3	0.9
Fertilizers	-3.7	-2.7	-10.7	-3.9	1.6
Chemicals & Pharmaceuticals	7.8	23.0	0.8	-0.8	-0.2
Heavy & Medium Engineering	7.1	16.0	-2.5	0.9	4.5
Transportation Vehicle & Equipment	-0.6	2.1	-1.5	1.9	1.8
Industrial And Consumer Goods	-5.6	-1.6	-8.0	-1.1	0.3
Textiles	-9.9	-2.7	-10.3	-1.3	8.3
Power Generation	9.8	7.0	26.6	17.0	18.1
Power Transmission	0.0	0.0	0.0	1.3	5.1
Trading & Marketing	2.2	-8.9	3.0	0.5	0.3
Transport And Logistic Services	-2.7	-3.1	1.0	1.4	1.5
Contract & Construction And Tech. Consultancy Services	1.0	0.5	0.4	0.9	2.1
Hotel And Tourist Services	0.0	-0.9	0.1	0.0	0.1
Financial Services	1.5	-2.7	8.9	5.1	10.1
Telecommunication & Information Technology	3.9	2.8	12.8	12.1	-6.5
Crude Oil & Petroleum	93.9	6.8	69.3	47.9	36.2
Total	100	100	100	100	100

Historically public sector played a very important role in the evolving of the middle class in many developing countries including India and that is primarily because of the higher wages and entitlement provided in public sector compared to private sector. This not only contributed to higher consumption demand in the economy but also could set a reference of 'fair wage' on the basis of which workers in other sectors could claim higher wages. In other words, public sector exists as a counter weight to contain the free fall of wages in the private sector. For a private owner efficiency is judged by the profit maximizingpoint upon the production possibility frontier and higher the profit the more efficient it would be. This reduces performance to one-dimension because for the private individual or to a corporate owner performance should ultimately lead to higher profit. If the enterprise is publicly owned and if higher wages and entitlements for the employees reduce profit to an extent, it is not a conflicting trade-off similar to private enterprises. Higher wages to workers and owned by the public at large are returns to public in different ways. It is a choice of distribution of returns between the employees of the sector and the people at large who own the public sector and that is important in maintaining the legitimacy of the 'public' cause. Therefore, the parameters of performance cannot be same for public and private sectors. It is important although to have regulations in place that ensure increased transparency and autonomy.

The Indian Economic Survey 2022-23 and CPSEs

The IES 2022-23 reported that in the year 2020-21, there were 256 operating CPSEs against 225 in 2011-12. The gross turnover increased from Rs.1822049 crores in 2011-12 to Rs.2461712 crores in the year 2020-21. The net profit after tax was Rs.98245 crores in the year 2011-12 which declined marginally in 2020-21 to Rs.93084 crores. During this period, the profits of profit making CPSEs increased from Rs.125929 crores to Rs.138112 crores. At the same time, the losses of loss making CPSEs also increased from Rs.27683 crores to Rs.44817 crores. The dividend paid to the Government of India by the CPSEs increased from Rs.42627 crores to Rs.72136 crores.

Conclusion

Public sector in India played a significant role in capital formation and developing infrastructure both physical and human during the post-Independence period particularly when private capital was shy. The growth of investment in the public sector largely contributed to building industrial capacity particularly heavy industry, logistics and transport infrastructure. But the growth of capital investment in the public sector which was largely driven by channelizing consumption expenditure reached a limit as rising income inequality particularly in rural India created a barrier both for consumption goods as well in transferring surplus to industrial investment. This was one of the major reasons of industrial stagnation in India since mid-sixties that continued for a decade.

In the post-reform period with the increasing dependence on markets, public sector assumed declining importance. Competition was encouraged by allowing private investments in sectors erstwhile reserved for the public sector and exposure to financial markets was considered as a disciplining device in defining investment priorities. The decline in the public sector growth in the later part was because of declining growth of investment in the public sector as evidenced by its declining share in machinery and intellectual property products. Despite the fact that reforms could increase the financial performance of many public sector units and the number of profit making public enterprises have increased significantly, privatization of public enterprises seems to be driven by the need to transfer public assets to private hands in a market led regime rather than being determined by performance. In spite of the fact that institutional monitoring and transparency increased performance of many CPSEs in the recent past it is also important to device alternative criteria in evaluating performance of enterprises which are supposed to meet certain social welfare goals and do not have the autonomy of deciding prices similar to private enterprises.

The public sector contributed to the growth of a middle class by ensuring a living wage to all employees. The share of wages in value added is much higher in public sector compared to similar segments of the private sector. The most important fact is that competition enhances efficiency but it should not be at the cost of access particularly for countries such as India and more importantly there are natural monopolies where encouraging multiple providers is mostly impossible or involves massive waste of resources. In these cases, public monopolies are better than private monopolies as the returns are publicly owned and the economic goal of making profits would be somehow restrained by the goal of offering access to all for these services. India must maintain her mixed economy character and strengthen the public sector. The assets of the public sector are notionally owned by the public or the citizens of the country and a strong and growing public sector will only enhance the sense of ownership and pride amongst the citizens of the country.

5.3.2 PROBLEMS AND LIMITATIONS OF PUBLIC SECTOR ENTERPRISES

The profitability of public sector enterprises has been very low and this has been the most important problem. The important causes of low profitability are as follows:

Price Policy : The price policy of a public enterprise is determined by its objectives. Profit maximization may not be the objective in all cases. Many public sector monopolies like Steel Authority of India, Fertilizer Corporation of India and State Electricity Boards have social objectives and hence their price policy either incorporated losses or just covered the costs. For instance, the main objective behind the pricing policy of fertilizers and pesticides was to provide these products at low prices so that usage of these products by average farmers will lead to greater agricultural production and productivity. Hence Fertilizer Corporation of

India and Hindustan Insecticides kept their selling prices low. Until 1967, prices of steel were kept so low so much that Steel Authority of India Limited either incurred losses or made very low profits.

There are two approaches to the pricing policy of public enterprises. These are the public utility approach and the rate of return approach. The utility approach is based on no loss no profit and it was adopted by a large number of public enterprises for a very long period. Hence the profitability of public enterprises cannot be judged with the help of rate of return approach and consider them as inefficient and loss making enterprises. However, the utility approach needs to be balanced by adopting the rate of return approach in case of other public sector enterprises which were set up clearly with a profit motive.

Pricing policy of public sector enterprises have changed after the adoption of the new economic policy of 1991. The new pricing policy is determined market forces. Price controls on a number of consumer goods have been lifted. Cement and steel prices have been decontrolled. Except nitrogenous fertilizers, all other fertilizer prices have been decontrolled. The Government of India has adopted the Long Run Marginal Cost based prices for public enterprises. The administered pricing policy may continue only in case of public utilities, transportation services, coal and petroleum.

Under-utilization of Capacity : Under-utilization of installed capacity is an important cause of low profitability. A large number of public enterprises have operated at less than 50 per cent of installed capacity for many years. According to Vijay Kelkar, public investments were influenced by various other pressures and hence investments decisions were not made in the best interests of the country. Further a large number of private sector sick industries were taken over by the Government particular to protect employment. Between 1965 and 1980, the industrial sector in India experienced stagnation. Labor disputes, inefficient management and poor operations, political interference etc were the other causes of low utilization of installed capacity.

Problems of Planning and Construction of Projects : The following problems were experienced in case of planning and construction of projects:

1. Selection of site was not based on detailed soil investigation.
2. There were serious understatements and omissions of several aspects of the projects.
3. The actual cost of projects far exceeded the original estimates.
4. There were time overruns.
5. Projects often used unsuitable technology and chose wrong product mix.

According to Bhagwati and Desai, the site for Bharat Heavy Electricals Limited was chosen without calculating the cost of alternative locations and it was later changed when found unsuitable. Several projects were completed 18 months to 24 months behind schedule. Cost overruns were

about 15 to 90 per cent of the original estimate. According to Chaudhry, cost overruns were caused due to last minute changes in project design and time lags in starting and finishing the projects.

According to Krishnaswamy, because of the decision to locate large industrial projects in backward areas, cost and execution of the project depended upon the creation of adequate infrastructure facilities. Delays in completion also took place due to the interlinking of projects (for instance, the linking of steel plants with heavy engineering plants, coal mines and railway facilities). Further, large townships were constructed around many public enterprises to house the employees, thus increasing the costs.

Problems of Labor and Management : Political interference in the routine working of public enterprises was yet another big problem. Top managerial appointments were not made on the grounds of professional competence. The civil servants from the IAS cadre were appointed as the heads of public sector enterprises. These civil servants were experienced in general administration but public enterprises required professional experience. The work ethic of public enterprises was not in tune with profitability and growth. Over-staffing of unskilled labor, payment of higher wages and lack of incentives to hard working and enterprising personnelis one of the important causes of inefficiency. The management of public enterprises had no autonomy in routine decision making and also had no effective control over the workforce.

5.4 MICRO, SMALL AMD MEDIUM ENTERPRISES (MSMED) ACT, 2006

Definition

Under the Act, two categories of enterprises have been defined, namely, Industrial Enterprises and Service Enterprises. While enterprises engaged inmanufacture or production, processing or preservation of goods are classified as 'Industrial enterprises' or manufacturing enterprises,enterprises engaged in providing or rendering of services such as small road andwater transport operators, small business,professional & self employed persons,etc are 'Service Enterprises'. These enterprises are further classified as Micro, Small and Medium Enterprises (MSMEs) on the basis of original investment in plant and machinery in respect of Industrial Enterprises (original cost excluding land and building and certain specified items) and investment in equipments inrespect of Service Enterprises (originalcost excluding land and building andfurniture, fittings and otheritems not directly related tothe service rendered or asmay be notified under the MSMED Act 2006).

Detailed classification:

1. **Manufacturing Enterprises**:

a) A micro enterprise, where the investment in plant and machinery does not exceed Rs 25 Lakh.

b) A small enterprise, where the investment in plant and machinery is more than Rs 25 lakh but does not exceed Rs 5 crore.
c) A medium enterprise, where the investment in plant and machinery is more than Rs 5 crore but does not exceed Rs 10 crore.

2. Service Enterprises :

a) A micro enterprise, where the investment in equipment does not exceed Rs 10 lakh.
b) A small enterprise, where the investment in equipment is more than Rs.10 lakh but does not exceed Rs 2 crore.
c) A medium enterprise, where the investment in equipment is more than Rs 2 crore but does not exceed Rs 5 crore.

While calculating the investment in plant and machinery referred to above, the original price thereof (and not the value after depreciation), irrespective of whether the plant and machinery are new or second hand, shall be taken into account provided that in the case of imported machinery, the following shall be included in calculating the value, viz., Import duty (excluding miscellaneous expenses, such as transportation from the port to the site of the factory, demurrage paid at the port), Shipping charges, Customs clearance charges, and Sales tax or value added tax.

In the case of service enterprises "equipment" is defined as "all instruments, office machines and such other electro mechanical or electronic appliances thatare directly related to the service rendered but excluding furniture, fittings and other items not so related".

Retail trade with limit upto Rs.20 lakh hasbeen made eligible to be included as small service enterprise. The ceiling on Retail trade is subsequently enhanced to Rs.2.00 crore. Retail trade in essential commodities (fair price shops) and consumer co operative stores will be treated as small service enterprise, without any ceiling in limit and the classification will be based on investment in equipment.

Delayed payment to Micro and Small Enterprises

The earlier provisions of the Intereston Delayed Payment Act, 1998 to Small Scale and Ancillary Industrial Undertakings, have been strengthened under the MSMED Act as under:

The buyer should make payment on orbefore the date agreed upon between himand the supplier. The period agreed between seller and buyer shall not exceed45 days. If the buyer fails to make payment of the amount to the supplier, he shall be liableto pay compound interest with monthly rests to the supplier on the amount fromthe appointed day or, on the date agreed on, at three times the Bank Rate notified by the Reserve Bank of India.

For any goods supplied or services rendered by the supplier, the buyer shall be liable to pay the interest as advised above. In case of dispute with regard to anyamount due, a reference shall be made to the Micro and small

Enterprise FacilitationCouncil constituted by the respective State Government.

Memorandum of Small and Medium Enterprises

Unlike in the past, when all industries wererequired to get themselves registeredwith the District Industries Centre, the units now have been given discretionunder this Act to file / not file a 'Memorandum of small and medium enterprises'on the prescribed format tothe DIC. Rules regarding filing of memorandum areas under:

Any person who intends to establish a micro or small enterprise (both industrialand service) or a medium enterprise in service sector has been given discretionto file a 'Memorandum of Small and Medium Enterprises'. However, a medium enterprise engaged in the manufacture or production ofgoods is mandated to filethe memorandum of MSME.

An industry established before the commencementof MSMED Act, 2006 andhaving investment in plant and machinery of more than Rs.1 crore but not exceeding Rs.10 crore,was also required to filememorandum within 180 daysfrom the commencement (2nd October 2006) of the Act .As per the revised system the enterprisesin the micro, small and medium sector can file a memorandum before the District Industries Centre and the duty of the District Industries Centre officials is just to acknowledge the receipt of thememorandum. Those who propose to start an enterprise can file Part I of thememorandum (before starting production– earlier Provisional Registration concept) and can file Part II of the memorandum (after starting production – earlier Permanent Registration concept). In both cases, the DIC officials will giveacknowledgement. The acknowledgement given by DIC officials can beconsidered for power connection, other clearances, licenses, funding etc subjectto fulfilling other conditions, if any, for the agency and for the industry. Filing ofmemorandum is optional except for mediumenterprises in manufacturing sectorfor which it is mandatory. In view of the above, the SSI Registration Certificate is not in force now, hence cannot be demanded bybanks and other agencies for any purpose.

5.4.1 NATIONAL MANUFACTURING POLICY, 2011

Government of India decided to bring out the National Manufacturing Policy to bring about a quantitative and qualitative change with the following six objectives:

1. Increase manufacturing sector growth to 12-14% over the medium term to make it the engine of growth for the economy. The 2 to 4 % differential over the medium term growth rate of the overall economy will enable manufacturing to contribute at least 25% of the National GDP by 2022.

2. Increase the rate of job creation in manufacturing to create 100 million additional jobs by 2022.

3. Creation of appropriate skill sets among the rural migrant and urban poor to make growth inclusive.
4. Increase domestic value addition and technological 'depth' in manufacturing.
5. Enhance global competitiveness of Indian manufacturing through appropriate policy support.
6. Ensure sustainability of growth, particularly with regard to the environment including energy efficiency, optimal utilization of natural resources and restoration of damaged/ degraded eco-systems.

The following industry verticals will be given special attention:

1. Employment intensive industries:
2. Capital Goods:
3. Industries with strategic significance:
4. Industries where India enjoys a competitive advantage:
5. Small and Medium Enterprises
6. Public Sector Enterprises:

Specific policy instruments have been conceptualized to achieve the objectives stated above. These instruments cover the following areas:

1. Rationalization and simplification of business regulations;
2. Simple and expeditious exit mechanism for closure of sick units while protecting labor interests;
3. Financial and institutional mechanisms for technology development, including green technologies;
4. Industrial training and skill up gradation measures;
5. Incentives for SMEs;
6. Special Focus Sectors;
7. Leveraging infrastructure deficit and government procurement - including defense.
8. Clustering and aggregation: National Investment and Manufacturing Zones (NIMZs).
9. Trade Policy.

Rationalization and Simplification of Business Regulations: On an average, a manufacturing unit needs to comply with nearly 70 laws and regulations. Apart from facing multiple inspections, these units have to file sometime as many as 100 returns in a year. Several provisions of different acts may either be rationalized or implemented in cooperation with public

or private institutions under the overall control of statutory authorities to facilitate the entrepreneurs.

Exit Mechanism: The National Manufacturing Policy seeks to introduce policy measures to facilitate the expeditious redeployment of assets belonging to non viable units, while giving full protection to the interests of the employees. The job loss policy will enable units to pay suitable worker compensation in the eventuality of business losses/closure through insurance and thereby eliminate the charge on the assets. This compensation may be equivalent to twenty days' average pay for every completed year of continuous service or any part thereof in excess of six months. SPV will facilitate companies to buy this insurance.As an alternative to job loss policy, the SPV can opt for a sinking fund mechanism to be funded by contributions as decided by the SPV. The SPV may opt either for a job loss policy or a sinking fund or a combination of the two for example the SPV may buy a policy out of the sinking fund.

Technology Acquisition and Development: The National Manufacturing Policy will leverage the existing incentives/schemes of the Government of India and also introduce new mechanisms to promote green technologies. Objective criteria will be prescribed by a Committee called the Green Manufacturing Committee (GMAC) comprising representatives from the concerned Ministries/Departments of the Central Government and relevant sectoral experts from outside government. In order to promote acquisition and development of appropriate technology in the country, a Technology Acquisition and Development Fund (TADF) will be set up.

Industrial Training and Skill Up-gradation Measures

It is estimated that between 2007 and 2017, 85 million persons will be added to the labor force. The growth of total employment during this period, based on the assumptions about employment elasticity and sectoral GDP growth rates, is estimated at 116 million. Additional job opportunities in manufacturing alone are estimated at 24.5 million during 2006-2017. Since only 6% of the Indian workforce receives any form of vocational training currently, there is a pronounced 'skill gap' both in terms of quality and quantity. The National Manufacturing Policy proposes to create a three tier structure for skill development, namely:

1. Skill building among large number of minimally educated workforce;
2. Relevant vocational and skill training through establishment of ITIs in PPP mode;
3. Specialized skill development through establishment of Polytechnics;
4. Establishment of Instructor's Training Centre in each NIMZ.

Small and Medium Enterprises

The Small and Medium Enterprises (SME) contribute significantly to the manufacturing output, employment and exports of the country. It is estimated that, in terms of value, the sector accounts for about 45 per cent

of the manufacturing output and 40 per cent of the total exports of the country. The sector is estimated to employ about 59 million persons in over 26 million units throughout the country. Further, this sector has consistently registered a higher growth rate than the rest of the industrial sector. There are over 6000 products, ranging from traditional to high-tech items, which are being manufactured by the SMEs in India. The MSME sector provides the maximum opportunities for both self-employment and jobs after agriculture sector.There are a number of proposals for improving access to finance for SMEs in the manufacturing sector.

Special Focus Sectors. The priority sectors as identified in the Planning Commission and NMCC papers are: a) Employment intensive industries like textiles and garments; leather and footwear; gems and jewellery; and food processing. b) Capital goods like machine tools; heavy electronic equipment; heavy transport, earth moving and mining equipment; high technology equipment like telecom, power, ICT and electronic hardware. c) Strategic industries like aerospace; shipping; IT and electronic hardware; renewable energy; solar, wind etc; defense equipment. d) Industries where India enjoys a comparative advantage like automotive; pharmaceuticals. UNIDO has identified textiles; chemicals; basic metals; machinery and equipment and electrical machinery, as sectors in which India leads among developing countries.

Leveraging Infrastructure Deficit and Government Procurement : Government procurement with stipulation of local value addition will be used in areas where we can club Government procurement needs over a number of years to create the volumes and scales which would enable the development of domestic manufacturing capabilities; in particular, capabilities in critical technological areas like LED, solar energy equipment, IT hardware and IT based security systems and fuel efficient transport equipment such as hybrid and electric automobiles. Similar steps will be taken in respect of the infrastructure sectors where government agencies are importing equipment to a large extent.

Clustering and Aggregation: National Investment and Manufacturing Zones

The National Investment and Manufacturing Zones (NIMZs) will be developed as integrated industrial townships with state-of-the art infrastructure. These NIMZs would be managed by SPVs which would ensure master planning of the Zone. To enable the NIMZ to function as a self governing and autonomous body, it will be declared by the State Government as an Industrial Township under Art 243 Q(c) of the Constitution. In sum, the NIMZs would be large areas of developed land, with the requisite eco-system for promoting world class manufacturing activity. They would be different from SEZs in terms of size, level of infrastructure planning, and governance structures related to regulatory procedures and exit policies.

Trade Policy. The policy will take active measures to protect export of products and services from India from border taxes or other border

measures that may be imposed by partner countries on the grounds of protection of environment including those related to GHG emissions reduction. NMCC will be authorized to examine and make recommendations on duty structures and other measures to the extent that they impact the manufacturing sector in order to ensure that changes therein do not adversely affect the manufacturing sector.

5.5 SMALL & MEDIUM ENTERPRISES IN INDIA

Small scale industries are defined on the basis of the original value of plant and machinery. With changing price levels, this value has been revised several times. The Industrial Policy Statement of May 1990 increased the investment limit for small scale units to Rs.60 lakhs from Rs.35 lakhs and Rs.75 lakhs for ancillary units from 45 lakhs both fixed in 1985. The ancillary unit was defined as one which sells not less than 50 per cent of its manufactures to one or more industrial units. The investment limit on the tiny sector units was raised to Rs.5 lakhs from 2 lakhs. In 1997, the Government accepted the recommendation of the Abid Husain committee and raised the investment limit on plant and machinery for small units and ancillary units from Rs.60/75 lakhs to Rs.3 Crore and for tiny units to Rs.25 lakhs from 5 lakhs.

In the year 2000, the Government reduced the investment limit on plant and machinery from Rs.3 Crore to One Crore and retained the limit of Rs.25 lakh on tiny units.In 2007, the Government revised the investment limit in small scale units to Rs.1.5 Crore. Further to facilitate technology up gradation and increase competitiveness, the investment limit in plant and machinery has been raised to Rs.5 Crore in respect of 71 high tech/export oriented items in the hosiery/knitwear, hand tools, drugs and pharmaceuticals, stationery and sports goods sector. The small scale sector is now known as the Small Enterprises Sector because it also includes small scale services and business enterprises.

5.5.1 ROLE OF THE SMALL SECTOR IN THE INDIAN ECONOMY

The small scale enterprises have played an important role in the process of economic growth in India. It has also contributed significantly to employment generation. The number of small scale units went up from 16000 in 1951 to 33.7 lakh units in 2000-01. The small enterprises sector now produces sophisticated and precision products like electronics control systems, micro-wave components, electro-medical equipment, TV sets etc. The Government has been following a policy of reservation of items for the exclusive development of the small sector. By 1983, there were 872 items reserved list of small scale units. The policy of reservation of items was given up by the Government since the year 2000 and now only 239 items remain reserved for the small scale sector. According to the Third Census conducted in 2001-02, there were 13.75 lakh registered small scale units and 91.46 lakh unregistered units. The total number of units was thus 105.21 lakh in the small scale sector. According to the data given by the

Ministry of Small Scale Industries, the number of units had gone up to 110.1 lakh in 2002-03.

The role and performance of the small scale sector can be explained as follows:

1. **Expansion and Share in Industrial Output :** The number of small scale units went up from 110.1 lakh in 2000-01 to 123.42 lakh in 2005-06. The average annual growth rate during this period was about 4.1 per cent. The contribution of small scale sector to industrial output was Rs.1, 84,401 Crore in 2000-01 and this went up to Rs.2, 72,668 Crore in 2005-06 (at 1993-94 prices). The average annual growth rate of production during this period was 8.5 per cent. Thus both in terms of expansion and contribution to industrial output, the small scale sector have performed satisfactorily. The share of the MSME in the manufacturing output in the years 2019-20, 2020-2 and 2021-22 were 36.6, 366.9 and 36.2 % respectively. The share of the MSME sector in the Gross Value Added (GVA) was 29.3 % in 2018 and 30.5% in 2020. Post-pandemic the share came down to 26.8% in the year 2021 and rose to 29.2% in 2022.

2. **Employment Generation :** The small scale sector employed 24 million people in 2000-01. In 2005-06, the number of people employed increased to 29.49 million. Thus about 7.5 per cent of the workforce is employed in the small scale sector. The small scale sector is labor intensive and the income elasticity of employment is high. Further the output-capital ratio is also higher than the large scale industries. Thus both in terms of productivity of capital and employment generation, the small scale sector is better than the large scale sector. In August 2023, as per the Udyam Registration Portal of the Government of India, the MSME sector employed 12,36,15,681 persons or 123.6 million people.

3. **Exports :** In 2004-05, the small scale sector exported goods worth Rs.1, 24, 417 Crore which was 33 per cent of the total exports. An important feature of exports from this sector is that 93 per cent of their exports constitutes non-traditional items such as ready-made garments, sports goods, chemical and allied products, engineering goods, canned and processed fish, leather sandals and chappals, food products, hosiery and marine products. In the years 2020-21, 2021-22 and 2022-23, the share of MSME exports in the total exports from India was 49.4, 45 and 43.6% respectively.

4. **Equity :** The small scale sector contributes to a more equitable distribution of income and wealth by a greater spread of ownership and by creating more employment than the large scale industries. The income benefit of small enterprises is enjoyed by a large population and hence there is greater equality in income distribution. Further the industrial relations are more harmonious in small scale industries.

5. **Mobilization of Capital and Creation of an Entrepreneurial Class:** Since the capital requirement of setting up small scale units is low, these units can be set up by a large number of people. It helps in mobilizing the hoarded wealth in the country and effectively utilizes for productive purposes. It also creates the entrepreneurial zeal in large number of people and widens the base of entrepreneurial class in a country.

6. **Decentralized Growth of Industries :** The small scale sector contributes to the regional dispersal of industries and brings about a balanced regional development of industries in a country. Industrialization of the country can become complete only if it spreads into the different parts of the country. Decentralization of industrial enterprises also helps to use local resources such as raw materials, idle savings and also improves the standard of living of the people in the backward regions of the country. Decentralization helps in reducing congestion and overcrowding of the few industrial cities.

5.5.2 PROBLEMS OF SMALL SCALE INDUSTRIES

Small enterprises in India have to face a number of problems. Inequitable allocation system for scarce raw materials and imported components, lack of provision of credit and fiancé, low technical skill and managerial ability and lack of marketing contracts are some of the important problems faced by the small sector. Financial problem was the reason behind 35 per cent of the sick SSI units according to the report of the second All India Census of SSI units presented in the year 1992. Fourteen per cent of the sick units had marketing problems. Non-availability of raw materials was the reason behind 5.6 per cent of the sick units and only 2.2 per cent of the units were closed due to labor problems and the balance 19 per cent were closed due to other reasons. The percentage distribution of the causes of industrial sickness is given in Table 5.7.

Table 5.7: Causes of Closure of SSI Units (1980-88)

S. No.	Cause of Closure	%
1.	Financial problems	34.7
2.	Marketing problems	14.4
3.	Non-availability of Raw materials	5.6
4.	Labor problems	2.2
5.	Other reasons	19.4
6.	Disputes among owners	3.7
7.	Natural calamity	3.4
8.	More than one reasons combined	16.5

Source Ruddar Dutt & Sundaram, IE, P-671. (2006 Ed)

The number of sick SSI units at the end of March 2004 stood at 1.39 lakh. This number stood at 1.68 lakh units in 2003. The amount of bank credit blocked in these sick units in 2004 was of the order of Rs.5285 Crore.

Some of the important problems of the small scale units are discussed below.

1. **Credit and Finance :** The financial resources available to small scale units are very small and inadequate. This is particularly true of strenuous situations. Unstable profits and poor credit worthiness deters banks from giving unsecured loans to SSI units. The total amount of loans sanctioned to the SSI sector as a percentage of loans sanctioned for the industrial sector is very small. Loans given by public sector banks to the SSI sector amounted to Rs.38, 110 Crores in March 1998. In March 2002, this amount stood at Rs.49, 743 Crores. The percentage of SSI advances to net bank credit declined from 15.6 per cent in March 1998 to 12.5 per cent in March 2002. The Government of India has ordered the commercial banks to provide 40 per cent of their lending to the priority sector consisting of agriculture, small scale industry, small businesses etc. However, banks continue to lend little to the SSI sector due to low recovery rates and higher cost of lending to the small firms. Further, banks also insist on higher collaterals. Financial institutions in India should not judge the credit worthiness of the SSI units on the basis of their asset values but on the basis of profitability and also create a system of integrated credit whereby long term loan capital and short term credit are provided at a reasonable rate of interest.

2. **Marketing :** SSI Units have marketing problems because their products are not standardized. Branded and advertised products therefore prevail over the SSI products. In order to provide guarantee for sale the government gives preference up to 15 per cent on some of the products sold by SSI units. The national Small Industries Corporation assists small firms in obtaining a greater share of government and defense purchases but does not take marketing responsibility. The NSIC was set in February, 1955. Since then, it has helped the establishment of 21,384 SSI units. It has also obtained purchase orders for SSI units from the Director General of Supplies and Disposals. The Government had also reserved a number of items for the SSI sector to protect them from competition. However, recently a large number of items have been deserved under the wake of economic reforms in India. The number of reserved items for the SSI sector had come down from 872 in 1983 to 272 in the year 2000.

3. **Raw Materials, Imported components and Equipment :** The SSI sector does not have access to adequate supply of scarce raw materials. The Second International Team studied the problem of availability of raw materials, imported components for production and selected imported equipment to SSI units and found that they have limited access to the supply of raw materials. The Government of India granted priority in allocating raw materials to SSI sector. The Seventh Plan also emphasized the fact that the SSI units receive unfair treatment in the allocation and distribution of raw materials.

4. **Technical Assistance and Industrial Estates :** Low level of technology and lack of trained and experienced supervisory personnel hampers the development of SSI units. Further industrial estates in which the SSI units are located are not fully equipped to create an enabling environment for the success of SSI units. Wrong location, unsuitable sheds and inadequate space and occupation of factory sheds by government agencies are some of the serious problems of industrial estates which also become the problem of SSI units housed in these Estates.

5. **Infrastructure :** Most of the SSI units have to face infrastructure related problems. Power supply is irregular and inadequate. Transportation and communication problems are common to all SSI units in India. Water supply is found to be another major problem of SSI units. According to a study conducted by Sebastian Morris and others, 67 per cent of the SSI units face some kind of infrastructure related problem.

5.5.3 THE NEW SMALL ENTERPRISE POLICY 1991

The New Small Enterprise Policy of 1991 was announced by the Government of India in 06th August 1991. The important features of this policy were as follows:

1. **Investment Limit of Tiny Enterprises :** The investment limit in Tiny enterprises was increased from Rs.2 lakhs to Rs.5 lakhs irrespective of the location of the unit. All industry related service and business enterprises would be recognized as small scale industries and their investment ceilings would be equal to tiny enterprises. Thus the new policy widened the scope of the small sector by including service and business enterprises across the country and in a way transformed the small industry policy into small enterprise policy.

2. **Financial Support :** Emphasis will be placed on adequate flow and quality of credit on a normative basis for viable operations of the small sector. In order to provide access to the capital market and to encourage modernization and technological up-gradation, equity participation to the extent of 24 per cent of the total share holding by other industrial undertakings in the Small Enterprises will be allowed. This will provide encouragement to ancillarization and sub-contracting and will lead to more employment opportunities. In order to solve the problem of delayed payments, factoring services were set up through SIDBI. Under factoring services, SIDBI or any commercial bank will buy the manufacturer's invoices from small enterprise units and take the responsibility for collecting payments due to them by charging a commission.

3. **Infrastructure :** A Technology Development Cell would be set up in the Small Industries Development Organization to provide technology inputs to improve productivity and competitiveness of the products of the small sector. The TDC would co-ordinate the activities of the Tool Rooms, Process-cum-product Development Centers and would interact

with the other industrial research and development organizations to achieve its objectives. Adequate and equitable distribution of indigenous and imported raw materials would be ensured to the small and tiny sector.

4. **Marketing and Exports :** National Small Industries Corporation would concentrate on marketing of mass consumption items under common brand name and organic links between NSIC and SSIDCs would be established. The SIDO has been recognized as the nodal agency to support the small scale industries in export promotion.

5. **Modernization, Technology and Quality Up gradation :** Industry associations would be encouraged and supported to establish quality counseling and common testing facilities. Technology and markets would be established.

6. **Promotion to Entrepreneurship :** Government will continue to support first generation entrepreneur though training and will support their efforts. Large number of EDP trainers and motivators will be trained to significantly expand Entrepreneurship Development Programs; Industry Associations would be encouraged to participate in this venture. Women entrepreneurs will receive support through special training programs.

7. **Village Industries: Handloom Sector :** Handloom sector contributes about 30 percent of the total textile production in the country. The government will promote handloom to sustain employment in rural areas and to improve the living standards of handloom weavers. Funds will be provided for the modernization of looms, training, provision of better designs, provision of better dyes and chemicals and marketing assistance.

8. **Handicraft Sector :** Production and marketing are the important areas in the handicrafts sector that could increase the pace of rural industrialization. Scheme for training and design development and for production and marketing assistance will be given encouragement.

9. **Other Village Industries :** The scope of the Khadi and Village Industries Commission and the State Khadi and Village Industries Boards would be expanded and the organizations strengthened to discharge their responsibilities in a more effective manner. The programs of intensive development of KVI through area approach with tie up with DRDA, TRYSEM and ongoing developmental programs would be extended across the country.

5.5.4 COMPREHENSIVE POLICY PACKAGE 2000 AND OTHER POLICY MEASURES.

A comprehensive policy package for the small scale sector was announced on 30th August 2000 by the government. The main features of this package were as follows:

1. Conducting the third census of the small scale industries.
2. Raising the exemption for excise duty limit from Rs.50 lakh to Rs.1 Crore to improve the competitiveness of small scale sector.
3. Providing Credit linked capital subsidy of 12 per cent against loans for technology up gradation in specified industries.
4. Raising the limit of investment in industry related service and business enterprises from Rs.5 lakhs to Rs.10 lakhs.
5. Raising the limit of composite loans from Rs.10 lakh to Rs.25 lakh.
6. Encouraging SSI associations to develop and operate testing laboratories.
7. Constitution of group under the cabinet secretary to suggest and recommend streamlining of inspection and repeal of redundant laws and regulations applicable to the sector.
8. Increasing the coverage of integrated infrastructure development scheme to progressively cover all areas in the country with 50 per cent reservation for rural areas and 50 per cent of plots earmarked for tiny sector.

In addition to the above, the following steps have been taken by the Government of India in recent years to improve the conditions of the small enterprise sector in India:

1. **Raising the Investment Limit :** On February 28, 2007 the Finance Minister raised the investment limit for the SSI sector to Rs.1.5 crore from Rs.1 crore earlier. In case of hi-tech and export oriented units the investment limit has been raised to Rs.5 crore.
2. **Problem of Collaterals :** A Credit Guarantee Scheme has been launched to provide guarantee for loans up to Rs.25 lakhs extended by commercial banks, selected RRBs and other financial institutions without any collateral including third party guarantee. A Credit Guarantee Trust Fund has been created to implement the scheme.
3. **Scheme for Technology Upgradation :** In order to encourage technology up gradation, a Credit Linked Capital Subsidy Scheme for Technology Up gradation has been launched. Under this scheme, 15 per cent capital subsidy is admissible on loans up to Rs.1 core, advanced by scheduled commercial banks, State Finance Corporations, National Small Industries Corporation to small scale industries for technology up gradation.
4. **Extension of IID :** The Integrated Infrastructure Development scheme has been extended to cover the entire country with 50 per cent reservation for rural areas.
5. **Market Development Assistance :** A new scheme named Market Development Assistance was launched exclusively for the SSI sector.

6. **Dereservation :** The number of items reserved for the SSI sector came down from 836 to 114. This has been done to help the SSI units to upgrade their technology and improve the quality of their products.

7. **Credit Delivery to SSI Sector :** To ensure credit delivery to the SSI sector, following steps have been undertaken:

a) The composite loan limit has been raised from Rs.50 lakh to Rs.1 crore.

b) The limit of collateral free loans has been raised from Rs.5 lakh to Rs.15 lakh and up to Rs.25 lakh in case of SSI units with a good track record

c) Laghu Udyami Credit Card scheme has been liberalized by enhancing the credit limit from Rs.2 lakh to Rs.10 lakh for borrowers having a satisfactory track record.

d) The small and medium enterprises fund of Rs.10, 000 crore was operationalized by the SIDBI since April 2004. Eighty per cent of the lending from this Fund will be for SSI units at interest rate of 2 per cent below the prevailing PLR of the SIDBI.

8. **Enactment of the Micro, Small and Medium Enterprises Act, 2006 :** This Act provides a legal framework for e recognition of the concept of enterprise consisting of both manufacturing and services and integrating the tree tiers of these enterprises namely micro, small and medium into one. The Act provides for a statutory consultation mechanism at the national level with wide representation of all sections of stakeholders particularly three classes of enterprises and with a wide range of advisory functions. The other features of this Act are as follows:

a) Establishment of specific funds for the promotion, development enhancement of competitiveness of these enterprises.

b) Notification of schemes and programs for this purpose.

c) Progressive credit policies and practices.

d) Preference to government procurements to products and services of micro and mall enterprises.

e) More effective mechanisms for mitigating the problems of delayed payments to micro and small enterprises.

f) Simplification of the process of closure of business by all three categories of enterprises.

Government Measures for the MSME Sector

The Ministry of Micro, Small and Medium Enterprises implements various schemes for the growth and development of MSME sector in areas of credit support, new enterprise development, formalization,

technological assistance, infrastructure development, skill development and training and market assistance to MSMEs. The schemes/programs include Prime Minister's Employment Generation Program (PMEGP), Credit Guarantee Scheme for Micro and Small Enterprises (CGTMSE), Micro and Small Enterprises-Cluster Development Program (MSE-CDP), Entrepreneurship Skill Development Program (ESDP), Procurement and Marketing Support Scheme (PMS) and National SC/ST Hub (NSSH).

The Government has taken a number of initiatives recently to support MSMEs in the country which amongst other things include the following:

1. Rs. 5 lakh crore Emergency Credit Line Guarantee Scheme (ECLGS) for business, including MSMEs.
2. Rs. 50,000 crore equity infusion through MSME Self-Reliant India Fund.
3. New revised criteria for classification of MSMEs.
4. No global tenders for procurement up to Rs. 200 crores.
5. Launching of an online Portal "Champions" in June, 2020 to cover many aspects of e-governance including grievance redress and handholding of MSMEs.
6. Inclusion of Retail and Wholesale trades as MSMEs w.e.f. 02nd July, 2021.
7. Non-tax benefits extended for 3 years in case of an upward change in status of MSMEs.
8. Roll out of Raising and Accelerating MSME Performance (RAMP) program with an outlay of Rs. 6,000 crore over 5 years.
9. Launch of Udyam Assist Platform (UAP) on 11.01.2023 to bring the Informal Micro Enterprises (IMEs) under the formal ambit for availing the benefit under Priority Sector Lending (PSL).

5.6 RECENT TRENDS IN INDUSTRIAL GROWTH

Industrial development in India since 1991 was guided by the New Economic Policy adopted by the Government of India on 24th July, 1991. Liberalization, Privatization and Globalization were the three cornerstones of this new policy. Accordingly, the role of public and private sectors were reviewed. The private sector was sought to assume the commanding heights of the economy and the non-performing public sector was sought to be phased out. The Eighth Five Year Plan (1992-97) allocated a total investment of Rs.38, 083 crores for industry and mineral production. The performance of the industrial sector in the 8th plan is given in the accompanying Table.

Industrial Growth during the 8th Five Year Plan (1992-1997)

Industrial growth during the 8th plan progressively improved from the year 1992-93 from 2.3 per cent to 6 per cent and thereafter 9.1 and 13.1 per cent in the subsequent years. However, in 1996-97 i.e. in the final year of the 8th plan, the industrial growth rate slipped down to 6.1 per cent. As a result, the compounded annual growth rate during the 8th plan was only 7.3 per cent. The slow growth of the industrial sector is attributed to the

sudden opening up of the economy and exposure of Indian industry to foreign competition. Further decline in capital expenditure by the Government hit the capital goods industry. During the years 1991-92, 92-93 and 93-94, the capital goods industry recorded negative growth rates of 12.8 per cent, 0.1 per cent and 4.1 per cent respectively. A number of industries were not able to utilize their production capacities due to import competition. Insufficient power supply, inadequate transport system and shortage of handling facilities at ports affected industrial production. The targeted growth rate of electricity production was 7.8 per cent whereas the actual growth during the 8th plan was only 6.6 per cent. Although the actual growth rate of industry during the 8th plan was 7.3 per cent against the targeted growth rate of 7.4 per cent, some of the sub-sectors of the industrial sector were not able to fulfill their targets.

Industrial Growth during the 9th Five Year Plan (1997-2002).

The 9th Five Year Plan laid down a target growth rate of 8 per cent. However, the actual growth rate was only 5 per cent. All the sub-sectors failed miserably to achieve the targeted growth rates. The 9th Plan was therefore a failure as far as the industrial sector is concerned. Explaining the poor growth performance during the 9th plan, the 10th Five Year Plan document stated that:

"The industrial slow down is widespread, covering all broad sectors, e.g. manufacturing, electricity and mining and all end-use based groups such as capital goods, intermediate goods and consumer goods (both durables and non-durables). The slow-down in domestic and global demand appeared to be a major factor constraining industrial growth. Another major reason has been the decline in investment, noticeably by the private sector."

The slow growth of the world economy contributed to the slowing down manufacturing exports. Public sector investment declined during the 9th plan and the shortage was not compensated by the private sector. As a result, the 9th plan failed to achieve its targeted industrial growth rate.

The causes of poor performance of the industrial sector during the 9th five year plan can be attributed to demand and supply-side constraints on the one hand and structural factors on the other. Both investment and consumption demand was low during this period. There was stagnation in real investment due to political instability, growing fiscal deficit and high interest rates. The process of economic reforms took a beating in this period. Poor agricultural growth only exacerbated the industrial slow down. Global slow-down reduced the demand for exports. On the supply side, factors such as poor rural infrastructure, distorted pricing of important agricultural inputs, the Asian economic crisis of 1997-98, economic sanctions of 1998-99 and rising oil prices during the period 1999-2001 caused poor performance of the industrial sector. Structural factors such as increased competition, industrial combinations and the slow response of Indian industries to the macroeconomic changes that took place on account of the reforms program, poor transport and

communication systems, low industrial productivity, outdated technology and labor market rigidities contributed to the poor performance.

Industrial Growth during the 10th Five Year Plan (2002-2007)

The figures indicate a substantial improvement in the industrial growth rate as compared to the 9th Plan figures. The overall industrial growth rate during the 10th plan was 8.7 per cent against the targeted growth rate of 10 per cent. Industrial growth rate in the final year of the 10th plan was 12.9 per cent. This was the highest growth recorded since 1995-96. During the entire plan period, industrial growth rate picked up momentum and showed sustained improvement from 5.7 per cent in 2002-03 to 7 per cent in 2003-04 and 8.4 and 8.2 per cent in 2004-05 and 2005-06 respectively.

Good performance during the 10th plan period was due to the structural changes that took place in the Indian economy during this period. There was a sharp rise in the domestic savings rate from 23.5 per cent in 2000-01 to 37.7 per cent in 2007-08. As a result, the rate of investment also went up. The export sector performed well and the trade-plus invisible receipts to GDP ratio rose from 16.9 per cent in 2000-01 to 33.2 per cent 2007-08. There was financial deepening and this was reflected in the bank assets/GDP ratio which rose from 48 per cent to 80 per cent during the period under consideration. The inflation rate was well managed and as a result the rate of interest during this period was low. Low interest rates contributed to fiscal consolidation, industrial competitiveness and sharp rise in retail credit.

Industrial Growth in the 11th Five Year Plan (2007-12)

The 11th Five year plan (2007-2012) has set a target of 10 per cent annual growth rate. The targeted growth rate would be achievable only if infrastructural shortages were made good. Power production needed to be substantially improved to achieve high rates of industrial growth. Capacity expansion through investment was essential for accelerating industrial growth. With rising domestic saving rates and inflows of foreign direct investment, the required investment was expected to take place. Sustained economic growth, fiscal consolidation and an enabling environment was expected to provide incentive to capacity expansion in industry and sustained high growth.

During the 11th Five Year Plan period (2007-12), industrial growth in India widely fluctuated and the average growth rate was only 7.5 % against the targeted growth rate of 10 % per annum. This was clearly the consequence of the Global Financial Crisis of the year 2008-09. The growth rate of industry was 8.5 % in the year 2007-08 and in the subsequent year it cascaded down to 2.8 % in the year 2008-09. The industrial growth rate recovered to 10.4 % in 2009-10 and 8.2 % in the year 2010-11. However, it once again came down sharply to 2.9 % in the final year of the 11th plan. Weak economic recovery in the US and European countries and poor business confidence in India affected the growth of the industrial sector in the year 2011-12.

Industrial Growth in the 12th Five Year Plan (2012-17)

The 12th plan was conceived by the UPA2 government led by the Indian National Congress. The annual growth rate target was kept at 10 per cent and an outlay of Rs. 377,302 Crores was made in the 12th plan. Industrial development in India during the 12th plan period was a disaster. The year 2012-13 which was the first year of the 12th plan, registered a measly 1.12 per cent growth rate. The next year saw industrial contraction of 0.12 per cent and hence the year 2012-13 was a year of industrial depression. In the subsequent two years, industrial growth rates were only 2.85 and 2.37 per cent respectively. Thus during the four year period 2012-16, the annual rate of growth of industries was only 1.6 per cent against the targeted growth rate of 10 per cent per annum. In the year 2016-17 which was the final year of the 12th plan, the base year for constructing the index of industrial production changed to 2011-12. As a result of the base-effect, industrial growth rates for the 12th plan period saw a marginal improvement with 3.3 per cent in the first two years and four per cent in the third year, 3.3 per cent again in the fourth year and 4.62 per cent in the final year of the plan. As a result, the average growth during the 12th plan period found some improvement from 1.6 % based on the previous base year to 4.2 % according to the new base year figures. The difference was clearly cosmetic and the real growth rate figures were clearly very poor.

The INC lost the general elections of the year 2014 and the new government at the Center was formed by the National Democratic Alliance (NDA) led by Bhartiya Janata Party. The new government abandoned the idea of planned economic development and therefore the five year plans along with the Planning Commission of India. The PCI was replaced by the newly constituted NITI Aayog or National Institution for Transforming India Commission on 01st January 2015.

Table 5.8 Index of Industrial Production & Growth Rate in India 1991-92 to 2022-23

Year	Mining & Quarrying	Manufacturing	Electricity	General	Growth Rate (%)
Base Year 1980-81 = 100					
01	**02**	**03**	**04**	**05**	**06**
Weight	**11.46**	**77.11**	**11.43**	**100**	
1990-91	221.2	207.8	236.8	212.6	-
1991-92	222.5	206.2	257.0	213.9	0.62
1992-93	223.7	210.7	269.9	218.9	2.34
1993-94	231.5	223.5	290.0	232.0	5.99
Base Year 1993-94 = 100					
Weight	**10.47**	**79.36**	**10.17**	**100**	
1994-95	109.8	109.1	108.5	109.1	9.1
1995-96	120.5	124.5	117.3	123.3	13.02
1996-97	118.2	133.6	122.0	130.8	6.08
1997-98	126.4	142.5	130.0	139.5	6.65
1998-99	125.4	148.8	138.4	145.2	4.09

1999-2000	126.7	159.4	148.5	154.9	6.68
2000-01	130.3	167.9	154.4	162.5	4.90
2001-02	131.9	172.7	159.2	167.0	2.77
2002-03	139.6	183.1	164.3	176.6	5.75
2003-04	146.9	196.6	172.6	189.0	7.02
2004-05	153.4	222.5	181.5	211.1	11.70
Base Year 2004-05 = 100					
Weight	**14.16**	**75.53**	**10.32**	**100**	
2005-06	102.3	110.3	105.2	108.6	8.6
2006-07	107.6	126.8	112.8	122.6	12.9
2007-08	112.5	150.1	120.0	141.7	15.58
2008-09	115.4	153.8	123.3	145.2	2.47
2009-10	124.5	161.3	130.8	152.9	5.30
2010-11	131.0	175.7	138.0	165.5	8.24
2011-12	128.5	181.0	149.3	170.3	2.90
2012-13	125.5	183.3	155.2	172.2	1.12
2013-14	124.7	181.9	164.7	172.0	-0.12
2014-15	126.5	186.1	178.6	176.9	2.85
2015-16	129.3	189.8	188.7	181.1	2.37
Base Year 2011-12 = 100					
Weight	**14.37**	**77.63**	**7.99**	**100**	
2012-13	94.7	104.8	104.0	103.3	3.3
2013-14	94.6	108.6	110.3	106.7	3.3
2014-15	93.3	112.7	126.6	111.0	4.03
2015-16	97.3	115.9	133.8	114.7	3.33
2016-17	102.5	121.0	141.6	120.0	4.62
2017-18	104.9	126.6	149.2	125.3	4.42
2018-19	107.9	131.5	156.9	130.1	3.83
2019-20	109.6	129.6	158.4	129.0	-0.84
2020-21	101.0	117.2	157.6	118.1	-8.45
2021-22	113.3	131.0	170.1	131.6	11.43
2022-23	119.9	137.1	185.2	138.5	5.24

Source: T28, p69, Handbook of Statistics of Indian Economy, 2022-23, 25th Edition, Reserve Bank of India.
Column 6 has been computed from Column 5.

Industrial Growth during the period 2017-23

The industrial growth rate was 4.4 % in the year 2017-18 and 3.8 per cent in 2018-19. In the year 2019-20, industrial growth rate was negative 0.8% and in the wake of Covid-19 Pandemic, the industrial growth rate fell down to minus 8.4% in the year 2020-21. There was a sharp recovery in the year 2021-22 to 11.4 %. However, industrial growth in the year 2022-23 was only 5.5 %.

The government of India launched the Atmanirbhar Bharat campaign in three tranches. In the first tranche, the following measures were announced to revive industrial growth:

1. Relief and Credit Support to MSMEs. Rs. Three Trillion collateral-free automatic loans for businesses and MSMEs were announced. Rs.0.2 Trillion subordinate debt for stressed MSMEs. Rs.0.5 Trillion equity infusion through MSME Fund of Funds. Investment limit on MSME raised and distinction between manufacturing and service sector removed. Global tenders were disallowed in government procurement of goods and services of value less than Rs.200 crores to support the Make in India initiative and MSMEs. Income Tax refunds were issued to 8.2 lakh small businesses across the country. Interest subvention of 02 per cent was offered to MUDRA-Shishu loans. The Insolvency and Bankruptcy Code (IBC) was made favorable to MSMEs.
2. Rs. 0.9 Trillion liquidity injection for DISCOMs was announced.
3. The Real Estate sector was given relief under RERA to facilitate completion of real estate projects.
4. A new public sector enterprise policy for self-reliant India was announced.

In the second Tranche, Rs.0.25 Trillion as additional capital expenditure to the Ministry of Road Transport and the Ministry of Defense was provided. In the third Tranche, Rs.1.46 Trillion PLI scheme (productivity linked incentives) was announced for the manufacturing sector. Rs.0.18 Trillion were announced for PM Awaas Yojana. Rs.1.1 Trillion were allocated to Infra Debt financing.

While these measures were being announced and implemented during the year 2020-21 and beyond, all the sub-sectors of the Industry registered negative growth rate except electricity production. As a result, the industrial sector saw a negative growth of 8.4% in the year 2020-21. The effect of the aforesaid measures bore fruit only in the subsequent year and in the year 2021-22, the industrial sector bounced back with an impressive growth rate of 11.4 %.

Industrial growth rate fell down to a mere 5.24 % in the year 2022-23 in the wake of inflationary pressures released in the Indian economy by the Russia-Ukraine conflict. Prices of edible oil, crude oil, fertilizers and food grains rose sharply as a result of the war in Ukraine. High inflation and rising interest rates in the advanced economies contributed to decline in Industrial exports from India. The Indian Pharmaceutical industry played an important role in the revival of industrial growth in the post-pandemic years. The Indian Pharmaceutical industry is ranked third in the world in terms of production and 14^{th} in terms of value. It has a 20 per cent share in the global supply of generic medicines and has a 60 per cent market share in the supply of vaccines in the world. Pharmaceutical exports grew by 21 per cent in the year 2020-21 and the growth momentum was sustained in the first half of the year 2021-22 with 22 per cent growth. The industrial sector, however, was not able to sustain the growth rate achieved in the year 2022-23 for the reasons explained above and due to the base effect of the pandemic year.

PROGNOSIS

The fourth Industrial Revolution (Industry 4.0) is underway across the developed world and Indian industry is very much in the sway. Industry 4.0 integrates new technologies such as cloud computing, Internet of Things, machine learning, artificial learning and blockchain in the manufacturing process, contributing to efficiencies across the value chain. The Government of India is well aware of the fact and is attempting to create an enabling environment to integrate Industry 4.0 with the Indian industry. Government initiative such as SAMARTH (Smart Advanced Manufacturing & Rapid Transformation Hubs) Udyog Bharat 4.0 under the Ministry of Heavy Industries and Public Enterprises aims to encourage technological solutions to the manufacturing sector. The establishment of the Center for Fourth Industrial Revolution in India in the year 2018 is also a step in this direction.

With inflation rates likely to cool down in the United States and Europe and with the Fed giving the first signals of imminent quantitative easing, the industrial situation India is looking positive in spite of the continued war in Ukraine and the ongoing war in the Gaza strip between Israel and the Hamas. Rising capacity utilization in the manufacturing sector, falling international commodity prices and growing industrial credit augurs well for the industrial sector during the year 2023-24. The PLI scheme is expected to boost exports, reduce imports and generate employment. However, the pandemic situation is far from over, particularly in China and new variants of Covid-19 are raising their heads every now and then in India and other countries.

5.7 INDUSTRIAL SICKNESS

According to the Sick Industrial Companies (Special Provisions) Act, 1985, an industrial company was defined as sick if it was registered for at least seven years, it incurred cash losses for the current and the preceding year and its net worth was eroded. An industrial company was defined as incipiently sick if 50 per cent or more of its peak net worth is eroded during any of preceding five financial years. In 1991, public sector companies were also brought under the purview of the Act. In 1992, the Act was amended and the criterion of cash losses for two successive years was eliminated from the definition of sick industry.

A small scale unit is considered to be sick if it incurs a cash loss in the previous accounting year and is likely to continue with losses in the current accounting year and if 50 per cent or more its net worth is eroded in any of the last five years and/or the unit has continuously defaulted in meeting four consecutive installments of interest or two half yearly installments of principal on term loan and there were persistent irregularities in the operation of its credit limits with the bank.

5.7.1 CAUSES OF INDUSTRIAL SICKNESS IN INDIA

The causes of industrial sickness are divided into external and internal causes. External causes include factors such as power cuts, lack of demand, irregular supply of inputs, changing government policies etc. Internal causes are concerned with issues such as production, finance, management etc.

(A) EXTERNAL CAUSES

1. Power Cut

Production of power in India is way behind the demand for power. Power cut is therefore common in non-metro cities, towns and villages. Loss of production time due to regular power cuts is an important cause of industrial sickness in India. Production units cannot work in multiple shifts and even in a single shift they experience power cuts leading to loss of output.

2. Irregular Supply of Inputs

The supply of scarce raw materials is irregular. Units dependent on such raw materials will be affected if they are not available in the required quantity. Intermediate products imported from other countries may not reach in time or may not be available even if you have the money to buy. Transport bottlenecks can also upset the supply of essential inputs and affect the performance of industrial units.

3. Lack of Demand

In times of recession, the demand for industrial goods also falls and if the recession is longer, it will affect the performance of the industrial unit. Falling demand and increasing inventories can be a great cause of concern for the industrial units.

4. Lack of availability of Credit

Under inflationary conditions, the central bank may follow a dear monetary policy leading to hike in interest rates and reduction in the supply of credit. Interest rates on consumer credit may go up substantially thereby affecting the demand for consumer loans. The demand for consumer durables and motor cars greatly depend upon the cheap availability of consumer loans.

5. Changes in Government Policy

Unexpected changes in the government policy pertaining to imports, exports, taxation etc also affects the performance of industrial units.

(B) INTERNAL CAUSES.

1. Defective Planning

Wrong location of an industrial unit is an example of defective planning. If the inputs required for the unit is not easily available or the cost of production is high on account of high transport costs, labor costs and cost of raw materials, the unit will be less competitive. The market demand for the products to be produced should be analyzed in advance to ensure successful sale and profits. Absence of demand estimation is another example of defective planning. Defective planning can therefore lead to losses and eventual sickness.

2. Defective Plant and Machinery

If proven professionals are not employed in the company, the plant and machinery installed may run into problems. Some problems may be inbuilt and some may occur in the course of operation. This may result in prolonged down time and loss of output. Further, inappropriate choice of technology may also cause operational inefficiency and losses.

4. Financial Problems

Industrial units may run into financial problems such as raising of equity of capital either publicly or privately. They may also face the problem of raising working capital from the banks. If the institutional mechanism consisting of financial institutions and individuals who contribute to the equity capital of the firm are not supportive, it will be difficult for the firm to sustain its operations.

4. Entrepreneurial Limitations

Entrepreneurs are born and entrepreneurs are created. Not everybody can become successful entrepreneurs. Persons lacking entrepreneurial skills may set up firms and eventually fail on account of poor skills.

5. Management Problems

Managerial expertise and functional specialization is essential for succeeding in business. Sole proprietorship firms and partnership firms may not have professional managers employed in their firms. This will lead to problems of managerial inefficiency and losses.

6. Labor Problems

A firm needs to have harmonious labor management relations. In order to establish internal harmony, industrial relations and personnel management skills are essential. If these skills are lacking in the owners or in the management employed in the firm, the firm may face the problem of labor problems which may manifest in the form of strikes, go-slow etc. Industrial dispute is an important cause of industrial sickness in India.

5.7.2 MEASURES TO CONTROL INDUSTRIAL SICKNESS IN INDIA

The measures adopted to control industrial sickness in India are as follows:

a) The Industrial Investment Bank of India (IIBI)

In order to revive and rehabilitate the sick industrial units, the Government of India established the IRCI. The IRCI was mandated to provide financial, managerial and technical assistance to sick industrial units and to provide merchant banking services for amalgamation, merger etc of sick industrial organizations. In 1985, the IRCI was transformed into Industrial Reconstruction Bank of India (IRBI) and later in the year 1997, it was developed into a development financial institution and renamed as Indutrial Investment Bank of India Limited (IIBI).

b) The Board for Industrial and Financial Reconstruction (BIFR)

Under the Sick Industrial Companies (Special Provisions) Act (SICA), 1985, the Government set up the Board for Industrial and Financial Reconstruction in 1987 for determining the preventive, ameliorative, remedial and other measures which are required to be taken in respect of sick industrial units and for rapid enforcement of the measures determined. Industrial companies whose net worth is zero and those of which whose net worth has been eroded by 50 per cent or more are required to make a reference to the BIFR under Sections 15 and 23 of the Act respectively. References received under Section 15 are required to be inquired into. Public sector enterprises were brought under BIFR through an amendment of the SICA in December 1991. Until 2002, the BIFR has received 5675 references under SICA. Out of these, 552 rehabilitation schemes were sanctioned and 1057 companies were recommended to be wound up. The focus of the government has shifted from rehabilitation to liquidation in recent years.

c) Commercial Banks

The commercial banks granted many concessions to sick industrial units such as: grant of additional working capital facilities, recovery of interest at reduced rates, moratorium on payment of interest, freezing a portion of the outstanding in the accounts etc. They set up a sick industrial undertakings cell in the RBI to function as a clearing house for information relating to sick units and to act as a coordinating agency between the government, banks, financial institutions and other agencies. They also set up the State level inter-institutional committees at all the regional offices of the Department of Banking Operations and Development of the RBI for better coordination between the banks, State governments, Central and State level financial institutions and other agencies.

d) **Government Guidelines**

Under the guidelines of the government, the administrative ministries were given responsibility for prevention and remedial action in case of sickness in industrial sector within their charge. The ministers were required to monitor sickness and coordinate action for revival and rehabilitation of sick units. Certain concessions were provided by the government to assist revival of sick units without intervention. In 1982, a scheme for provision of margin money to sick units in the small scale sector was introduced to enable them to obtain funds from banks and financial institutions to implement revival schemes.

5.7.3 EXIT POLICY AND SAFETY NET FOR LABOR

Exit policy is a condition for the emergence of a competitive environment that there are no barriers to entry and exit of firms in the market. There should be free entry and free exit from the industry. Particularly, when a firm is making losses, it should have freedom to exit either partially or totally so that resources can be reallocated to their next best alternative use. According to **PD Hajela**, three broad circumstances could be relevant to an exit policy. A situation of sickness and lack of economic viability could be the first situation. A situation where modernization is the need of the hour could be the second situation. In the third situation, the firm could be in a position to bring about a marked improvement in technology and methods of production. In the second and third situations, the firm might restructure more than exit while in the third, it might exit rather than restructure. In all these situations, the exit of labor is inevitable, and the extent of exit would depend upon the type of restructuring. Exit of labor in the context of restructuring would assume different forms under different situations. It could be lay-off in which workers are not retrenched but rendered unemployed for short periods. It could retrenchment due to rationalization or technological up-gradation. It could be exit on account of closure of the industrial unit. In India, the exit policy is the result of a well-planned program of restructuring and hence there will be substantial exit of labor as a result of the implementation of the exit policy. (Ref. P-38-39, Labor Restructuring in India by PD Hajela, Common Wealth Publishers, 1998)

Exit policy as part of labor market reforms is demanded in India to make allowance for 'Hire and Fire' policy. There is overstaffing in public sector enterprises and government departments. In order to improve the profitability and efficiency of these enterprises, there is a need to reduce the staff strength. The proposal for introducing exit policy was made in September 1991. The World Bank and the International Monetary Fund have been putting pressure on governments to introduce labor market reforms to allow employers shift workers from one unit to another and to reduce excess labor. It is estimated that about 45 lakh workers are employed in sick units both in the public and private sectors. Out of these, 4.1 lakh workers are employed in the sick public sector units. The passage of exit policy will render these workers unemployed. A large number of companies have initiated voluntary retirement schemes. A

study by Business Standard Research Bureau shows that 23 manufacturing companies cut their workforce by 40,338 in 2000-01 over 1998-99. From 2, 50,079 in 1998-99, the employee strength in these companies fell to 2, 09,691 in 2000-01. The public sector enterprises reduced jobs by 1, 20,000 in a period of three years (1997-2000). Public sector banks also reduced employees by more than one lakh through voluntary retirement schemes.

The government policy has been to make the task of retrenchment of workers easier. For example, in his Budget speech for 2001-02, the Finance Minister announced that the threshold for hiring and firing employees without government permission under the provisions of the Industrial Disputes Act was proposed to be raised from units employing 100 persons to 1000 persons. If this proposal was accepted, it would have had serious consequences for labor because 75 per cent of the organized labor force is employed in units employing less than 1000 workers.

SAFETY NET FOR LABOR

The New Economic Policy of 1991 had adversely affected labor over the last 17 years. In order to provide a safety net for labor, the Government of India set up the National Renewal Fund in February 1992. The objectives of the National Renewal Fund were as follows:

1. To provide assistance to firms to cover the costs of retraining and redeployment of employees as a result of modernization and technological up-gradation of existing capacities and from industrial restructuring.

2. To provide funds for compensation to employees affected by restructuring or closure of industrial units both in the public and private sectors.

3. To provide funds for employment generation schemes in the organized and unorganized sectors in order to provide a social safety net for labor.

The NRF had three components. They are as follows:

1. The Employment Generation Fund **(EGF).**

2. The National Renewal Grant Fund **(NRGF),** and

3. The Insurance Fund for Employees **(IFE).**

The Employment Guarantee Fund was set up to provide resources for employment generation schemes in both organized and unorganized sectors. **The National Renewal Grant Fund** was set up to deal with payments under the Voluntary Retirement Scheme and compensation tow workers affected by closure/rationalization resulting from approved rehabilitation schemes in both the public and private sector enterprises. **The Insurance Fund** for Employees was set up to cater to the compensation needs of the employees in future. However, a great part of

the funds available under the National Renewal Fund was utilized for compensating the retrenched employees. There was very little retraining and redeployment under the fund. The VRS implemented in the public sector enterprises was not to the benefit of the enterprise but went to the benefit highly employable persons who took the money and joined private sector enterprises.

In the year 1998, the VRS package was made more attractive. The compensation benefit was increased from 15 days wages for every completed year of service to 45 days. For those who have completed 30 years of service, the compensation package consisted of 60 months of wages. Thus the Government was single mindedly pursuing the objective of reducing the staff strength in public sector enterprises without taking care of the other two important objectives of the NRF i.e. retraining and redeployment. Having realized the limitation of the scheme, the Government set up Employees' Resource Centers and Employees' Assistance Centers for the purpose of counseling, retraining and redeployment of retrenched workers in different parts of the country.

In the year 2000, the National Renewal Fund was abolished. Assistance for compensating the retrenched employees in central public sector undertakings is provided by the Administrative Ministries from April 2001 and the scheme of retraining and redeployment of employees of public sector undertakings is now handled by the Department of Public Enterprises.

Measures to Improve the Safety Net for Labor.

Some of the measures suggested by **Prof. PD Hajela** for expeditious action and to make the safety net for labor more effective are as follows:

1. Firms may be so restructured that increased productivity resulting from modernization and technological up-gradation is allowed to absorb the work force without commensurate increase in real wages.

2. **Re-training should be given top priority.** Both employers and the government should contribute generously to the re-training effort.

3. Retrenched employees should be given a **bigger compensation package** so that they can look after themselves during the intervening period between severance and re-employment. The Government may put the retrenchment funds in deposits with higher returns to take care of better compensation.

4. Extensive counseling for **self-employment** should be provided.

5. **Area development programs** could be undertaken in places where workers are retrenched so that redeployment takes place without much dislocation and the workers' location preferences are respected.

6. Workers should be trained in **participative management** so that not only their productivity goes up but also, they become competent entrepreneurs.

7. **Technological change and adaptation** through greater research effort in public and private sectors are important and should be an integral part of any exist policy in India.

5.8 IMPACT OF GLOBALIZATION ON INDIAN INDUSTRY

Globalization refers to the process of economic integration of the economies of the world. The World Trade Organization which came into existence on 01st January 1995 is the global institution which has been spearheading the process of globalization of the economies of the world. India has been a founder member of the WTO and a signatory to the WTO charter along with other 149 countries. Although the process of globalization began in India with the adoption of the new economic policy of 1991, the coming into existence of WTO in 1995 consolidated the process. Globalization of the Indian Industry took place in its various sectors such as steel, pharmaceutical, petroleum, chemical, textile, cement, retail, and BPO.Globalization means the removing trade barriers between nations and the integration of the national economies through financial flow, trade in goods and services, and corporate investments between nations. Globalization has increased across the world in recent years due to the fast progress that has been made in the field of technology especially in communications and transport. The government of India made changes in its economic policy in 1991 by which it allowed direct foreign investments in the country. As a result of this, globalization of the Indian Industry took place on a major scale.The various beneficial effects of globalization in Indian Industry are that it brought in huge amounts of foreign investments into the industry especially in the BPO, pharmaceutical, petroleum, and manufacturing industries. As huge amounts of foreign direct investments were coming to the Indian Industry, they boosted the Indian economy quite significantly. The benefits of the effects of globalization in the Indian Industry are that many foreign companies set up industries in India, especially in the pharmaceutical, BPO, petroleum, manufacturing, and chemical sectors and this helped to provide employment to many people in the country. This helped reduce the level of unemployment in the country. The foreign companies brought in highly advanced technology with them and this helped to make the Indian Industry more technologically advanced. Due to globalization, Indian Industry has become more competitive in the world market.

Liberalization of the Indian economy in a limited way began in the 1980s under Prime Minister Rajeev Gandhi. But full liberalization began only 1991 that ended the era of industrial and import licenses and made the rupee convertible on current account. Foreign investment was allowed gradually, notably in automobiles and telecommunications. All the multinational auto corporations entered in the Indian market to take advantage of the most populous market of the 21st century, but many including General Motors, Ford, Chrysler, Fiat, and Peugeot struggled for over a decade to make a profit and then exited. Suzuki and Hyundai emerged as the top foreign brands. Two Indian companies, Tata Motors

and Mahindra, came up as competitive producers and exporters. By the 2000s, India became a major exporter of cars, scooters, motorcycles, and auto parts.

The WTO rules created a huge global market for generics in which Indian companies soon became one of the biggest global players. They now supply 40 percent of the U.S. generic market.Some Indian companies were decimated by foreign competition. But other Indian companies became multinational corporations in their own right. The Mittal Group acquired France's Arcelor to become the biggest steel company in the world. The Tata Group purchased Corus and Jaguar in the UK and became the biggest private sector employer in the UK.

India's most unexpected success was in computer software and other business services. India's software exports picked up steam in the 1990s. India's information technology industry during 2022-2023 accounted for 5.4 million jobs and $194 billion of exports.

Foreign investment in most sectors was limited until the late 2010s. Foreign direct investment into India rose from $70 million in 1991 to $83.57 billion (3.1 percent of GDP) during 2021-2022. With the deterioration of political relations between China and the West, some multinational corporations have recently started shifting out of China, and India has been a beneficiary. For instance, Apple, which during 2022-2023 produced $7 billion of iPhones in India, of which $5 billion were exported. Apple aims for revenues of $20 billion by 2025, and many of its component manufacturers are also expanding fast in India.

Most Fortune 500 companies are in India but are there more through global capability centers than factories. Many Indians working in these centers have later left to start their own ventures. Thus, global capability centers have become incubators of Indian entrepreneurs. One example is Bhavish Aggarwal, who started in Microsoft but left to create Ola Cabs, the Indian equivalent of Uber, and is now building the biggest electric two□wheeler company in the world, Ola Electric.

The impact of globalization on Indian industry can be looked at particularly from the following aspects.

1. **Growth of Transnational Corporations :** Globalization has contributed to the concentration and monopolization of resources by transnational corporations, global financial companies and funds. Thus trans-nationalization has been one of the unintended impacts of globalization. Today, there are more than 40 thousand multi-national corporations operating in India and there are more than 59 Indian MNCs operating in India and elsewhere in the world. The multinational firms dominate the Indian industry and they produce a wide variety of goods and services. Diversification is the credo of the MNCs and therefore they produce everything that the human being needs. The MNCs grow in their size through natural expansion and through mergers and acquisitions.

2. **Flexible Production Processes :** Globalization has changed the ideas of manufacturing, productivity and competitiveness. Flexible production process have become popular are being adopted to compete in international markets where product life is short and customers are more demanding in terms of higher purchasing power, more discerning in tastes and preferences, more product variety, higher quality and value for money. The new production systems are moving to the network form of enterprises whereby each firm contributes to the production and distribution according to its core competency.

5.9 CONCLUSION

Globalization which formally began with the adoption of the new economic policy of 1991, consolidated in the aftermath of WTO in 1995 and faced hurdles in the form of anti-globalization both in Europe and America in particular briefly in the 2010s. Rapid growth in technology in the field of transport and communication in particular is an inevitable fact of the 21st century. These advancements will reduce geographical distances both within and between nations across the world. As a result, globalization of the world will happen even if there are intermittent hurdles. The populations in Europe and America are on the decline and human beings are the main engines of economic growth and development. The countries of Asia and Africa are the labor surplus countries who will export human capital to the labor and population deficient countries of Europe and America. There will therefore be not only economic globalization but also social globalization or globalization of national populations. Globalization is an irreversible process and moving forward it is the only solution to address the problems faced by today's world.

5.10 QUESTIONS

1. Describe the industrial profile of India.
2. Explain the role and problems of the private sector in India.
3. Write a note on the top ten private sector companies of India.
4. Explain the role and problems of public sector enterprises in India.
5. Explain the performance of the public sector enterprises in India.
6. Explain the role of MSME sector in the Indian economy.
7. What is industrial sickness? Explain the causes of industrial sickness in India.
8. Explain the remedial measures for industrial sickness in India.
9. What is exit policy? Explain the role of BIFR.
10. Explain the impact of globalization on Indian industry.

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6

INDUSTRY AND FDI-II

Unit Structure :

6.0 Objectives

6.1 Trends and Pattern of FDI in India

6.2 Trends and Pattern of Indian Industry Abroad

6.3 Components of Exports - Industrial Sector

6.4 Components of Imports - Industrial Sector

6.5 Direction of India's foreign trade

6.6 Industrial Combinations - Causes, Mergers and Amalgamations

6.7 Mergers and Acquisitions in India

6.8 Questions

6.0 OBJECTIVES

- To study trends and pattern of FDI in India
- To study trends and pattern of Indian industry abroad
- To understand export and import component of Indian Industrial Sector
- To study causes, mergers and amalgamations of Industrial combinations

6.1 TRENDS AND PATTERN OF FOREIGN DIRECT INVESTMENT IN INDIA

Rapid economic growth of developing countries depends upon rapid industrialization. Rapid economic growth in the modern times in the context of developing countries and particularly in the context of emerging market economies of Asia, Latin America and Central Europe would mean huge investments. Huge investments require large savings. However, the savings generated by the developing countries are not sufficient to match the investment requirements and hence there is a need for foreign capital. Even when the saving investment gap is zero as in the case of India, the need for foreign capital continues because even if you have the money to buy technology, it is not always available at a price. For instance, the Gross Domestic Savings during the 10^{th} Five Year Plan period (2002-2007) was 31.4 per cent, which is a reasonably high rate of savings. The GDS was only 21.5 per cent in the year 1991-92 which is the year in which economic reforms were initiated. In 2006-07, the GDS was 34.8

per cent. During the period April-December 2007-08, the net capital flows into the Indian economy were of the order USD 82 billion which is roughly about eight per cent of India's national income. Foreign capital flows have been coming in since the dawn of economic reforms through external sector liberalization of the Indian economy. Due to the influx of foreign capital, the industrial structure of India has widened and deepened i.e. both the variety and quantity of industrial products has increased since then. The multinational firms who develop technology would like to benefit from it through commercial exploitation and not sell it at a price. However, through the foreign capital channels such as Foreign Direct Investment, technology comes along with foreign investment. FDI constitutes long term investment and transforms the domestic production process by bridging the technological gap. FDI is a non-debt form of foreign capital in contrast to foreign aid and external commercial borrowings. Foreign direct investment (FDI is an important driver of economic growth as it leads to productivity enhancement and contributes to employment generation. FDI inflows are critical for sustaining a high growth rate. FDI inflow into India is largely of the equity variety. It is broad based and spread into a range of economic activities like financial services, manufacturing, banking services, information technology services and construction. The other component of foreign capital flows is Foreign Portfolio Investment. Portfolio investments are short term investments and are made in the financial sector of the economy as against FDI which goes into the real sector of the economy.

A favorable policy regime and sound business environment have facilitated increase in FDI flows into the country. In order to liberalize and simplify the FDI policy and to provide ease of doing business in India, the government has undertaken various reforms. A number of sectors have been liberalized, including defense, construction, broadcasting, civil aviation, plantation, trading, private sector banking, satellite establishment and operation and credit information companies.

FDI has been the most attractive type of capital flows for emerging market economies because of its lasting nature and also because it is considered as a medium for transforming the domestic production process by bridging the technological gap between the recipient and investing countries. FDI is a non-debt capital flow and is the main source of external financing, particularly for developing countries like India. It not only increases the competitiveness of the economy but also supplements domestic investment. Since the year 2000, important changes have been made in the FDI policy by the Government of India to ensure that India becomes an attractive investment destination. The present FDI policy is characterized by negative listing that is permitting FDI freely except in a few sectors indicated through a negative list. Under the present system, there are three broad entry options for FDI. In a few sectors, FDI is not permitted (negative list), in another category, foreign investment is permitted only till a specified limit of foreign equity and the third category consists of all other sectors where foreign investment is allowed up to 100 per cent equity. The third category has two sub-categories: the first one consisting of sectors where automatic approval is granted for FDI

(generally foreign equity participation less than 100 per cent) and the second one consisting of sectors where prior approval from the Foreign Investment Approval Board is required. FDI policy changes reflect the requirements of industry and are based on consultation with the stakeholders. Total net FDI inflows from April 2000 to March 2023 were USD 470.45 billion. Net Foreign Portfolio Investment was USD 247.94 billion. FDI inflows declined globally in 2009 and 2010. However, India was able to stem the decline in global inflows in 2009-10. FDI inflows moderated in the year 2010-11. FDI inflows rose to USD 34.42 billion during 2014-15. During the five year period 2010-11 and 2014-15, the average FDI inflows were above USD 30 billion. During the next seven year period, FDI inflows on an average amounted to USD 45.33 billion.

FDI Inflows into India (2000-01 to 2022-23).

Open door policy towards foreign investment adopted by the Government of India through its new economic policy has attracted more investments in to the country. Indian Industries have gone global and at the same time, the inflow of FDI in to the country has increased overtime.

The Inflow of FDI into India over the period 2000-01 to 2022-23 is given in the table 6.1.

Table 6.1

Year	FDI inflows	FDI OUTFLOWS	NET FDI	NET FPI	TOTAL
	(In billion USD)				
2000-01	4.03	0.75	3.27	2.59	5.86
2001-02	6.12	1.39	4.73	1.95	6.68
2002-03	5.03	1.81	3.21	0.94	4.16
2003-04	4.32	1.93	2.38	11.35	13.74
2004-05	5.98	2.27	3.71	9.28	13.00
2005-06	8.90	5.86	3.03	12.49	15.52
2006-07	22.73	15.04	7.69	7.06	14.75
2007-08	34.72	18.83	15.89	27.43	43.32
2008-09	41.73	19.36	22.37	14.03 (-)	8.34
2009-10	33.10	15.14	17.96	32.39	50.36
2010-11	29.02	17.19	11.83	30.29	42.12
2011-12	32.95	10.89	22.06	17.17	39.23
2012-13	26.95	7.13	19.81	26.89	46.71
2013-14	30.76	9.19	21.56	4.82	26.38
2014-15	34.42	1.79	32.62	40.93	73.56
2015-16	44.90	8.88	36.02	-4.13	31.89
2016-17	42.21	6.60	35.61	7.61	43.22
2017-18	39.43	9.14	30.28	22.11	52.39
2018-19	43.30	12.59	30.71	-1.85	28.86
2019-20	56.00	12.99	43.01	1.40	44.41
2020-21	54.92	10.97	43.95	36.13	80.08
2021-22	56.21	17.64	38.58	-16.77	21.81
2022-23	*25.28	5.26	20.02	-8.10	11.92
Total	**683.01**	**212.56**	**470.45**	**247.94**	**718.39**

Source: RBI Handbook on Indian Economy (2014-15), Page 237, Table 156 and Table 5.2 of IES 2022-23.*Half-year.

FDI Inflows to India (2000-01 to 2014-15).

Between 2000-01 and 2005-06, FDI inflows steadily increased and by the end of the six year period, the annual inflow of FDI more than doubled i.e. from 4.03 billion USD to 8.90 billion USD. The year 2006-07 saw a remarkable change in the FDI inflows. The FDI inflow in the year 2006-07 was 22.73 billion USD which was 255% more as compared to the previous year figure of 8.9 billion USD. In the subsequent year i.e. 2007-08, FDI inflows rose to 34.72 billion USD bringing about a 54% increase in FDI inflow. In 2008-09, FDI inflows further rose to 41.73 billion USD which was a 20 % increase. However, the year 2008-09 was the year of the Global Financial Crisis or the sub-prime crisis which originated in the United States and spread around the globalized world. The impact of the sub-prime crisis on foreign investment flows in India can both be seen in the same and subsequent years. In the year 2008-09, FDI inflows grew by 20% as compared to the year 2007-08, net foreign portfolio investment turned negative to the tune of 14.03 billion USD. As a result, the total foreign investment (FDI + FPI) in the year 2008-09 was only 8.34 billion USD. Thereafter, annual FDI inflows fluctuated with a declining trend and stood at 34.42 billion USD in the year 2014-15. From the year 2015-16 onwards FDI inflows continued at a steady pace and by the end of 2022-23, total FDI inflows measured at USD 683.01 billion. The total outflow of FDI was 212.56 and net FDI was USD 470.45 billion.

During the 23 year period 2001-02 to 2022-123, the total cumulative net FDI inflows and net Foreign Portfolio Investment (FPI) was USD 718.39 billion which was about 20% of the GDP in the year 2022-23. In the years 2021-22 and 2022-23, net FPI was negative and large on account of monetary hardening in the USA.

The sector-wise FDI inflow during the years 2020-21, 2021-22 & the half year of 2022-23 is given in Table 6.2.

Table 6.2: Sector-wise FDI Inflows (2020-21 to 2022-23)
(in USD Millions)

SNo.	Sector	2020-21	2021-22	2022-23 (Apr-Sep)
1.	Computer Software and Hardware	26,145	14,461	8068
2.	Services Sector	5060	7131	6559
3.	Trading	2608	4538	4145
4.	Automobile Industry	1637	6994	1275
5.	Construction (Infrastructure)	7875	3248	1221
6.	Telecommunications	392	688	696
7.	Construction Development	422	125	96
8.	Drugs and Pharmaceuticals	1490	1414	1818
9.	Chemicals (except fertilizers)	847	966	1515
10.	Metallurgical Industries	1340	2272	206

Source:https://www.india-briefing.com/news/india-fdi-inflow-2023-latest-data-analysis-on-investment-landscape-27821.html/

A state-wise analysis of FDI inflows to different Indian states shows a clear regional disparity in FDI inflows. Delhi, Haryana, Maharashtra, Karnataka, Tamil Nadu, Gujarat and Andhra Pradesh have together attracted more than 70 per cent of total FDI inflows to India during the last 23 years. However, states with vast natural resources like Jharkhand, Bihar, Madhya Pradesh, Chhattisgarh and Odisha have not been able to attract foreign funds directly for investment in different sectors.

According to data from the DPIIT, Maharashtra and Karnataka were the frontrunners in attracting FDI inflows in 2022-2023. Maharashtra emerged as the top recipient of FDI with a total of US$14.80 billion, followed by Karnataka (US$10.42 billion), Delhi (US$7.53 billion), and Gujarat (US$4.71 billion). An analysis of the period from October 2019 to March 2023 indicates that Maharashtra was the most preferred state for FDI, accounting for 29 percent (US$53.97 billion) of the total investments received in the country. Karnataka, Gujarat, and Delhi followed with 24 percent (US$44.46 billion), 17 percent (US$31.90 billion), and 13 percent (US$25.19 billion), respectively.

Tamil Nadu, Haryana, Telangana, Rajasthan, and West Bengal were other states who also performed well in attracting FDI. Uttar Pradesh has emerged as an attractive FDI destination, with investment proposals worth US$400 billion received during the UP Global Investor's Summit 2023.

The Government of India has taken a series of measures to improve 'Ease of Doing Business' in the country. Existing rules have been simplified and information technology introduced to make governance more efficient and effective. Large improvements in World Economic Forum and World Bank rankings testify to the reforms implemented in this regard. This improvement manifests the effectiveness of the series of small steps taken by the government to foster an investment-friendly environment. India's rank has improved on the 'starting a business', 'dealing with construction permit' and 'getting electricity' indicators. In 2023, India ranked 63 amongst 190 countries on 'Ease of Doing Business'. It is a clear improvement from her 100th position in the year 2017.

Reflecting the better economic performance and the commitment of the government to reforms, the global perception about India's competitiveness has improved as per the Global Competitiveness Index of the World Economic Forum. At position 55, India went up by 16 ranks in 2015-16, which is the largest gain among the major economies. In 2023, India ranked 37th on the Global Competitiveness Index which reflects upon the sustained improvement in the competiveness of the Indian economy.

6.1.1 THE 'MAKE IN INDIA' PROGRAM

With the objective of making India a global hub of manufacturing, design and innovation, the Make in Indiainitiative, which is based on four pillars --new processes, new infrastructure, new sectors and new mindset—hasbeen taken by the government. The initiative is set to boost entrepreneurship, not only in manufacturing but inrelevant infrastructure

and service sectors as well. An interactive portal http://makeinindia.com for disseminationof information and interaction with investors has been created with the objective of generating awareness about the investment opportunities and prospects of the country, to promote India as a preferred investment destination in markets overseas and to increase Indian share of global FDI. In addition, information on 25 thrust sectors, along with details of the FDI Policy, National Manufacturing Policy, Intellectual Property Rights and the proposed National Industrial Corridors including the Delhi Mumbai Industrial Corridor (DMIC), are available on the portal.

The Department of Industrial Policy and Promotion (DIPP), in consultation with various central ministries, state governments, industry leaders, and other stakeholders, has formulated a strategy for increasing the contribution of the manufacturing sector to 25 per cent of the GDP by 2020.

The Government of India has set up Invest India as the national investment promotion and facilitation agency. With the objective of promoting investment in the country, a full-fledged Investment Facilitation Cell has been set-up under the Make in India initiative, primarily to support all investment queries as well as to handhold and liaise with various agencies on behalf of potential investors.

As envisaged by the National Manufacturing Policy 2011, Make in India seeks to create 100 million additional jobs in manufacturing by 2022. The government is taking a number of steps to enhance the skills of workers/the unemployed in India in order to improve their employability. In order to tap the creative potential and boost entrepreneurship in India, the Start-up India, Stand-up India campaign has been announced. An innovation promotion platform called Atal innovation Mission (AIM) and a techno-financial, incubation and facilitation program called Self-Employment and Talent Utilization (SETU) are being implemented to encourage innovation and start-ups in India.

For supporting the financial needs of the small and medium enterprise sector and promote start-ups and entrepreneurship, the government has taken various steps through Make in India. The India Aspiration Fund has also been set up under the Small Industries Development Bank of India (SIDBI) for venture capital financing of newly set-up or expanding units in the MSME sector. SIDBI Make in India Loan for Small Enterprises (SMILE) has been launched to offer quasi-equity and term-based short-term loans to Indian SMEs with less stringent rules and regulations and a special focus on 25 thrust sectors of Make in India. Further, a Micro Units Development Refinance Agency (MUDRA) Bank has been set up to provide development and refinance to commercial banks/NBFCs/cooperative banks for loans given to micro-units. MUDRA Bank would follow a credit-plus approach byalso providing financial literacy and addressing skill gaps, information gaps, etc. (Reference: Box.6.1, page 135, IES 2015-16).

6.1.2 GOVERNMENT MEASURES TO IMPROVE EASE OF DOING BUSINESS

The Government of India undertook the following measures to improve the ease of doing business in India (Reference: Box 6.2, page 136, IES 2015-16):

1. The process of applying for Industrial License (IL) and Industrial Entrepreneur Memorandum (IEM) has been made online and this service is now available to entrepreneurs on a 24x7 basis at the eBiz website.

2. Twenty services are integrated with the eBiz portal which will function as a single window portal for obtaining clearances from various governments and government agencies.

3. Notification has been issued by Directorate General of Foreign Trade (DGFT) to limit number of documents required for export and import to three.

4. The Ministry of Corporate Affairs has introduced an integrated process of incorporation of a company, wherein applicants can apply for Director's Identification Number (DIN) and company name availability simultaneous to incorporation application [Form INC-29].

5. The Companies (Amendment) Act 2015 has been passed to remove requirements of minimum paid-up capital and common seal for companies.

6. Application forms for Industrial License (IL) and Industrial Entrepreneur Memorandum (IEM) have been simplified.

7. Defense products' list for industrial licensing has been issued, wherein a large number of parts/components, castings/forgings, etc. have been excluded from the purview of industrial licensing.

8. Similarly, dual-use items, having military as well as civilian application (unless classified as defense item), will also not require ILs from the defense angle.

9. The Ministry of Home Affairs has stipulated that it will grant security clearance on IL applications within 12 weeks.

10. An Investor Facilitation Cell has been created under Invest India to guide, assist and handhold investors during the entire life-cycle of the business.

11. The process of applying for environment and forest clearances has been made online through the Ministry of Environment and Forests and Climate Change portals.

12. Registration with the Employees Provident Fund Organization (EPFO) and Employees State Insurance Corporation (ESIC) has been

automated and ESIC registration number is being provided on a real-time basis.

13. A unified portal for registration of units for Labor Identification Number (LIN), reporting of inspection, submission of returns and grievance redressal has been launched by the Ministry of Labor and Employment.

14. A report titled 'Assessment of State Implementation of Business Reforms' was released on 14th September 2015. It reports the findings of an assessment of reform implementation by states by the DIPP, Ministry of Commerce and Industry, Government of India, with support from World Bank group and KPMG. This assessment has been conducted to take stock of reforms implemented by states in the period January 1 to June 30 2015 based on a 98-point action plan for business reforms agreed between the DIPP and states/union territories (UT) and rank them according to the ease of doing business.

6.2 TRENDS AND PATTERN OF INDIAN INDUSTRY ABROAD

There was very little investment made by Indian companies abroad until the dawn of globalization initiated under the aegis of the New Economic Policy of 1991. The areas of cross border industrial operations were restricted by the Government of India and hence the ambition of industry to make their global presence felt was limited. Further, the Indian market was a sellers' market until 1991 and promised safe profits. The reason to look beyond was not sufficiently strong for Indian industry to test its waters abroad. However, after 1991, the pace of setting up subsidiaries and joint ventures in foreign countries had gathered momentum. The new economic policy encourages foreign investment by Indian companies. The restrictions on growth through mergers and acquisitions have been removed, financing restrictions have been liberalized. Areas of business for private sector participation have been widened. Domestic market have been liberalized and made more and more competitive. These factors have encouraged Indian industry to invest in foreign countries. Several Indian companies have been relocating production facilities abroad. FDI outflows from India averaged $ 19 million annually during 1989 to 1994 increased to $ 336 million in 2000. Between 2000-01 and 2014-15, FDI outflows averaged $ 8571 million. Significant investments were made by IT companies for overseas acquisitions in the US. Some of the big IT companies who have made investments abroad are TCS, Infosys, Wipro and HCL Technologies. Investments were made for product acquisitions and R& D funding. IT products acquisitions have been mainly in the banking and other financial sector software products.

J. P. Pradhan from the Gujarat Institute of Development Studies had undertaken a study on 'Outward Foreign Direct Investment from India: Trends and Pattern' in the year 2005. The study provides an overview of the changing patterns of Outward FDI from India during the period1975-2001. It shows that the character of investment of an increasing number of

Indian Trans National Corporationsduring 1990s has changed. The trend of Indian investors abroad is to have full or majority ownership, expansion into new industries and service sector, and the emergence ofdeveloped country as the most important host region for trans-national investment activity. The cumulative number of Indian Joint Ventures (IJVs) approved during 1990s is estimated to be 2562, nearly eleven-fold increase from the number of IJVs permitted during 1975-90 at mere 230. In terms of equity value, there was an outflow of $4262 million worth of Indian direct investment as compared to $222 million outflow during the pre-1990s period. The stock of Indian direct investment stood at US$6.6 billion by the end of March 2004 (Reserve Bank of India, 2005) from US$ 116 million in 1980.

This rise in the propensity of Indian firms to undertake international production is being driven by several internal as well as external factors. Among the internal factors the process of industrialization along with the accumulation of skills, technological capabilities, liberalization of trade and inward and outward FDI (O-FDI) policy during 1990s are the most important causal factors. Indian companies have significantly improved from their initial status of mere adaptor of foreign technologies to continuously move nearer to the global frontier of technology in many of the knowledge-based industries like information technology and telecommunications, software, transport, and pharmaceuticals. Government's strategic interventions in the form of large-scale public investment in skill formation through general, technical and management, education; establishment of several public funded research and technology institutions; and fiscal incentives for innovating firms like duty-free imports of inputs had contributed greatly in strengthening indigenous technological capabilities.

The soft patent system adopted by India has legalized reverse engineering as a means of technological strengthening and in industry like pharmaceutical, Indian firms could achieve global recognition for their success. Indian firms continued to expand their created asset bundle by adapting and modifying foreign technology complemented by indigenous R&D. The increased competitive pressure from imports and foreign firms has forced Indian enterprises to change their business strategy hitherto dominated by domestic market-based business expansion and moved towards a strategy of global-market basedexpansion. They realized that in an increasingly liberalizing and globalizing economy, domestic market alone cannot ensure firms survival and growth. The economic reforms process in India has further been complemented by the increasing globalization of the world economy during 1990s. The implementation of policy liberalization measures with respect to trade, investment and technology atvarious levels viz. multilateral, regional and individual country level, made the world economy more liberalized and economically interdependent. Removal of policy hurdles on a global scale offers large opportunities for capable Indian enterprises and also results in reduction of transaction costs associated with trans-border expansion.

For many technologically backward Indian enterprises, O-FDI in the form of overseas mergers and acquisitions (M&As) provides a means of acquiring technology, brand and other competitive advantages overseas to survive in the global market place. In some other cases, firms used O-FDI as a means of establishing trade supporting infrastructure in overseas markets to increase its non-price segment of competitiveness. The liberalization of O-FDI policy of India during 1990s may have provided the ultimate impetus for Indian firms to use O-FDI as a means of competitive strength and survival in the globalizing world economy.

6.2.1 INDIA'S O-FDI POLICY

The Indian government's regulatory framework towards Indian direct investment in joint ventures (JVs) and wholly owned subsidiaries (WOSs) abroad has evolved in two distinct phases since 1978. In 1978 the guidelines for IJVs and WOSs abroad were formulated which remained in place until 1992. The second phase of O-FDI policy begins after 1992. The 1978 O-FDI guidelines permit registered Indian companies under the Companies Act, 1956 to undertake overseas direct investment. This policy requires that Indian equity participation will have to be in accordance with the rules and regulations of the host country.

The policy also required O-FDI to be in the form of export of indigenous plant, machinery and equipment required for the JVs/WOSs. The export of machinery against Indian investment etc should be of 'Indian made' and not second-hand or reconditioned one. The policy also constituted an Inter-Ministerial Committee (IMC) to permit Indian equity participation by way of capitalization of fees, royalties, and other entitlements after considering the merit of the O-FDI projects. Except the 'hardand deserving' O-FDI cases, cash remittances against Indian equity participation were discouraged given the fact that India itself was suffering from resource scarcity to meet its planned industrialization program. The basic idea of O-FDI policy before 1992 was to use Indian direct investment abroad as tool of promotingIndian exports but without offering any scope for local capital to shift trans-border through cash remittances.

The attitude of Indian government towards O-FDI has changed in the nineties in the wake of changing developmental parameters of the country. The nineties saw the implementation of economic liberalization in 1991 and subsequent years that have accelerated the integration of the Indian economy with the global economy. The opening of the economy to external world offered new global business opportunities for Indian business enterprises that had accumulated significant levels of 'created assets' like technology, skill, brand-names and marketing advantages. Unless the O-FDI policy regime liberalizes, the Indian firms will not be able to reap the benefits of these enlarged global business opportunities. Further, continuing process of internal and external liberalization is causing heightened competition in the domestic market, thereby limiting the scope for growth of domestic enterprises relying only on the domestic market. Realizing this changing business environment the Government of India has successively liberalized the OFDI policy regime in the nineties.

The 1992 guidelines define O-FDI as the investment by way of contribution to the equity share capital of foreign concern with a view to acquiring a long term interest in that concern or subscription to the Memorandum of Association of a foreign entity. For the first time the guideline has provided an automatic approval route for an Indian company to undertake JVs/WOSs apart from the existing normal route. For O-FDI proposals under the automatic route no prior approval from the regulatory authority is required for setting up a JV/WOS abroad. A direct investment abroad by an Indian business entity will qualify for automatic approval by Reserve Bank of India, provided the value of Indian equity does not exceed $2 million, of which $500, 000 could be in cash and the rest by the capitalization of Indian exports of plant, machinery, equipment and know-how. The O-FDI proposals under the normal route require the prior clearance of regulatory authority.

The O-FDI regime has been further liberalized in August 1995 with enhancement of the investment ceiling under automatic approval route. The permitted value of Indian direct investment under the automatic route has been raised to Rs. 120 crores in Indian rupee investment in Nepal and Bhutan, $30 million in the case of other SAARC countries and Myanmar, and $15 million in all other cases. Further, it is required that the amount of investment under the automatic route, except investments in Nepal and Bhutan as well as investment made by Indian softwarefirms, must not exceed 25% of annual average exports/foreign exchange earnings of the Indian party in the preceding three years. The Indian entity, besides cash remittances against overseas investment, can also contribute by capitalization of Indian made plant, machinery, equipment, goods, and services like know-how, consultancy, managerial services.

The regulatory framework for Indian direct investment abroad has been further liberalized with the issue of modified notification in May 1999 by Ministry of Commerce and various other circulars issued by RBI. The provisions of existing O-FDI regime are as follows: An Indian party under the automatic route is permitted to make investment in JVs/WOSs abroad (except investment in Nepal, Bhutan and Pakistan) up to $100 million or its equivalent in any one financial year. In the case of Nepal and Bhutan Indian rupee investment up to Rs.350 crores are allowed under the existing procedures. The amount of O-FDI permitted in JVs/WOSs in Myanmar and SAARC (other than Nepal, Bhutan and Pakistan) is up to $75 million or its equivalent in any one financial year. The guidelines require that the direct investment should be in a foreign entity engaged in the same core activity as the Indian party and can be funded out by the balances held in Exchange Earners Foreign Currency (EEFC) account of the Indian party, drawal of foreign exchange including capitalization of exports (up to 50% of the net worth of the Indian party), funds raised through ADR/GDR issues and share swap (i.e. acquisition of the shares of an overseas concern in exchange of the shares of the Indian party). The policy allows Indian company to undertake direct investment in any activity exceptreal estate and banking. The condition that outward investing Indian companies should repatriate the amount invested abroad in full by way of dividend, royalty, etc., within a period of five years has been removed.

Within the overall limit of $100 million the market purchases of foreign exchange for investment in JVs/WOSs abroad has been raised from the limit of 50 % to 100 % of net worth of the investing company. The condition of 'same core activity' has been replaced by 'any bonafide business activity'. The existing ceiling for Indian investment in Myanmar and SAARC countries (excluding Pakistan) under the automatic route has been enhanced to$150 million from $100 million and to Rs.700 crores from Rs.350 crores for rupee investment in Nepal and Bhutan. Credit institutions are now allowed to support Indian O-FDI both in the form of green-field and takeovers. More recently in January 2004 the ceiling on O-FDI has been further relaxed and Indian companies are permitted to invest up to 100 percent of their net-worth even if the investment amount exceeds the $100 million ceiling imposed earlier. Indian companies are also allowed to raise external commercial borrowings (ECB) for undertaking overseas direct investment as well as mergers and acquisitions of overseas companies.

(a) O-FDI up to 1990

Outward FDI up to 1990 has been dominated by the manufacturing firms and that internationalization process was largely directed at developing countries located at similar or lower levels of development as compared to India. The manufacturing firms accounted for more than 65 percent of O-FDI equity and about 56 percent in O-FDI approval cases over 1975-90. The service sector enterprises accounted for about 33 percent and extractive sector, mere 2 percent of Indian overseas direct investment. Low and middle technology manufacturing activities like fertilizer and pesticides, leather, iron & steel, wood &paper had claimed major chunk of Indian O-FDI equity. Financial services &leasing and hotels & tourism were the two largest service sector trans-border investors during this period.

The concentration of Indian O-FDI in manufacturing towards low and medium high technology products reflects the intermediate stage of economic development through which the country was passing during that time. During thisphase the country was moving on the industrialization path with large-scale public investment in skill formation, transportation, communication, and other institutional capacity building. The initial factor endowment of the country like cheap labor, natural resources and low technology intensity generally favored the growth of those firms that utilized these abundant resources extensively. Inhigh technology products the technological capability of Indian enterprises was more of adaptive and assimilating type that was in transition phase towards maturing into more significant and complex form of knowledge creation during1990s. Therefore, during the first period of O-FDI, the Indian enterprises had relied to a greater extent upon simpler and less research-intensive form of technology creation in their trans-border economic expansion process.

The direction of Indian O-FDI during this phase also indicates the intermediate nature of O-FDI evolution. During 1975-90 the Indian O-FDI was more concentrated in the developing regions of the world economy as

reflected by the fact that about 72 percent of O-FDI approvals were directed at it.The concentration is more pronounced in the case of value of investment with developing countries accounting for more than 86 percent share. This general trend of Indian enterprises to focus on developing countries in their internationalization process may suggest that during this phase Indian investors had not yet achieved the sophistication of firm-specific ownership capabilities thatcan enable them to compete with industrialized country MNEs right inside theirhome country. Also concentrating on developing countries situated at similar or lower level of development than Indian economy provides Indian firms some competitive advantages over traditional MNEs such as technological advantages flowing from better adaptation of process and products to local prices, factor quality and demand conditions specific to developing countries, de-scaling of techniques and familiarities with business operation of developing region.

Within developing region the countries of South-East and East Asia emerged as the largest recipient of Indian O-FDI claiming about 36 percent, followed by Africa with 17 percent, West Asia and Central Asia with 10 percent each and South Asia with 9 percent. Latin America and the Caribbean remain as the least attractive region for Indian overseas investment. Therefore, during the First Wave, the forces of proximity in geography, languages, history, and ethnicityhave had strong impact on the locational decision of Indian outward investors.The countries in South-East and East Asia that had the advantages of geographical proximity coupled with strong historical and ethnic links were more attractive for Indian investors than too remotely related Latin American countries in terms of such advantages. The top 20 had attracted about 84 percent of O-FDI approvals and 86 percent of O-FDI equity. Thailand emerged as the largest recipient of Indian O-FDI claiming more than 12 percent of O-FDI flows associated with 14 O-FDI approvals. It is followed by Singapore with 19 O-FDI approvals accounting for about 12 percent of total O-FDI equity. The UK and USA turn out to be two developed countries that secured 5th and 6th place in the ranking based on the share in O-FDI and each had claimed about 6 percent. Another important feature of trans-border Indian direct investment during 1975-90 is that the participation of Indian equity was minority-owned in large number of O-FDI cases. Nearly 64 percent of O-FDI projects approved were observed to have had Indian ownership participation of less than 50 percent and only about13 percent of approved cases were having more than 80 percent of equity participation. This trend of outward investing Indian companies to have minority participation can be attributed to the government policy during this phase that had imposed restriction on Indian equity participation.

The existing literature on the First Wave of Indian O-FDI suggests that the main motives of such production activities were to escape from restrictive business environment of the home country generated by a plethora of government regulations placing restriction on the growth and diversification of large firms and sluggish growth in domestic demand. They are motivated by the desire to exploitthe growing markets of their host countries. In addition, the high costs of domestic and imported inputs

adversely affecting export competitiveness have also led to overseas production by many Indian firms. It seems that Indian overseas ventures during this wave were little backed by ownership advantages based on advanced technologies.

(b) O-FDI POST 1991

The evolution of Indian O-FDI flows from First Wave to Second Wave has seen several significant changes in the character and nature of production activities. Firstly, in 1990s the O-FDI activities by Indian firms has been largely driven bythe service sector enterprises who accounted nearly 60 percent of the value of O-FDI and 52 percent of O-FDI approvals granted. The share of manufacturing enterprises has declined from 65 percent in First Wave to only 39 percent during Second Wave. This decline in the share of manufacturing sector during 1990s has been largely contributed by the fall in O-FDI flows from three largest outward investors of the previous wave namely fertilizers & pesticides,leather & shoes and iron & steel. Importantly, the second wave O-FDI flows had seen the emergence of drugs & pharmaceuticals industry as an important outward investor whose share in total O-FDI has jumped from 2 percent of first wave to 6 percent in second wave. Among services sector, the old outward investor giants such as hotel & restaurant and financial services had seen dramatic decline in their share from 11 percent to 3 percent and from 12 percentto 2 percent respectively. During the second wave Indian IT industry and broadcasting & publishing emerged as the two largest service sector investors and were also the two largest outward investors from the economy with 32 percent and 17 percent share respectively.

The emergence of knowledge-based segment of Indian economy such as drugs& pharmaceuticals, software and broadcasting as the leading outward investors indicate the rapid pace at which India is enhancing global position in knowledge based economy. During the second wave the technological capabilities of Indian enterprises have seen diversification towards basic and frontier research activities under the facilitating role of national innovation system. For example, many of the leading Indian pharmaceutical firms like Ranbaxy, Dr Reddy Labsamong others have made significant progress in directing their R&D focus fornew product developments. May be modestly, the ownership advantages ofIndian O-FDI in industries such as pharmaceutical, software and transport arenow seems to be based on advanced technologies19.

Location-wise the Indian O-FDI has moved away from developing countries to industrialized countries during the second wave. Out of each dollar overseas investment made by the economy about 60 cents has gone into developed region. The developed countries namely the UK and USA were the top two hosts of Indian O-FDI during this period, jointly accounting for more than half of the total O-FDI. Among developing regions the South-East and East-Asia has reported the largest decline from 36 percent during first wave to mere 9 percent during second wave. The other developing regions that witnessed decline in attractiveness as a host of Indian O-FDI were Central Asia and Africa.Latin America has seen

some improvement in its hosting role from less than 1percent to 4 percent. These changing locational distributions of O-FDI from India therefore, indicate that the ownership advantages of Indian enterprises are increasingly finding larger role in advanced countries. Further, advanced countries being service driven economies, are offering growing markets for service sector Indian MNEs particularly from software sector.

Due to the relaxation of the government policy on Indian equity participation, the O-FDI projects approved during the Second Wave takes the form of majority ownership in bulk of the cases. Out of a total number of 1119 projects for whom Indian equity participation is known, 637 O-FDI approvals have equity participation more than 80 percent nearly accounting for 57 percent of the total approvals. There are only 271 number of O-FDI approvals, nearly aquarter of total, that had Indian equity participation of less than 50 percent.Therefore, clearly Indian outward investors prefer majority ownership in their trans-border production ventures during the Second Wave as opposed to theirtendency for minority ownership during the First Wave.

The motivation of O-FDI has also undergone significant changes in the nineties as compared to seventies and eighties. It has seen a rapidly evolving character from mere market access and natural resource seeking type to that of trade supportingand strategic asset seeking type. Many of Indian enterprises are usingO-FDI as a tool of international competitiveness. The economic presence of the company through its subsidiaries in overseas market ensures closer interaction between sellers and buyers and better after-sales services, which contribute an important ingredient for international competitiveness. Therefore, the set of motivations for overseas productions by Indian enterprises are now broad based and particularly in the case of overseas acquisitions they are motivated not only to access international market but also to acquire firm-specific intangibles like technology and human skills and benefits from operational synergies. Thus, O-FDI has emerged as a strategic business decision to overcome constraints from limited home market growth, and to survive in an increasingly competitive business environment.

(c) O-FDI (2001-2023)

O-FDIfrom India has undergone a considerable change in terms of magnitude, geographical spread and sectoral composition. Analysis of the trends in direct investments during the period 2001-2023 shows that while investment flows, both inward and outward, were rather muted during the early part of the period (see Table 3.1), they gained momentum during the latter half. There has been a perceptible shift in Overseas Investment Destination (ODI) during this period. In the first half, overseas investments were directed to resource rich countries such as Australia, UAE, and Sudan and in the latter half, ODI was channeled into countries providing higher tax benefits such as Mauritius, Singapore, British Virgin Islands, and the Netherlands.

Outward foreign direct investment (OFDI), both under Automatic Route and the Approval Route in October 2023, declined by 29 per cent year-on-year to $1.885 billion against $2.661 billion in October 2022 amidst a broader fall in global FDI flows. OFDI also fell sequentially in the reporting month as against the previous month's $2.145 billion. A break-up of RBI's OFDI data shows that two of the three components declined in October 2023: equity commitment to $865.28 million ($1.424 billion in October 2022) and loan to $245.81 billion ($515.56 billion). Guarantees issued by India Incorporated, however, rose to $774.19 million ($721.43 million).

Country-wise distribution of Outward Direct Investment shows that Singapore accounted for the highest share at 22.3 per cent in 2022-23, followed by USA (13.6 per cent), United Kingdom (12.8 per cent), Netherlands (11.7 per cent), UAE (9.6 per cent), Mauritius (8.4 per cent), among others as per RBI.

6.3 COMPONENTS OF EXPORTS – INDUSTRIAL SECTOR

The top ten components of industrial exports published at page 32 by the Ministry of Commerce and Industry in its Annual Report for the year 2022-23 are reproduced below. Data with regard to principal exports for two years i.e. 2020-21 and 2022-23 along with data for the half year of 2022-23 is presented in Table 6.3 below.

Exports of Top 10 Commodities in 2021-22

(Values in US$ billion)

S. No.	Commodity	2020-21	2021-22	Apr-Nov 2022(P)	Growth % in 2021-22 over 2020-21	Share %
1	Petroleum products	25.80	67.47	65.34	161.47	15.99
2	Pearl, precious, semiprecious stones	18.15	27.68	17.61	52.51	6.56
3	Iron and Steel	12.12	22.91	9.29	88.93	5.43
4	Drug formulations, biologicals	19.04	19.00	12.74	-0.22	4.5
5	Gold and other precious metal jewelry	6.63	11.06	8.67	66.9	2.62
6	Organic chemicals	7.64	10.95	6.65	43.34	2.59
7	Aluminum, products of aluminum	5.80	10.64	6.16	83.56	2.52
8	Electric machinery and equipment	8.13	10.35	7.11	27.37	2.45
9	RMG cotton incl accessories	6.87	9.04	6.00	31.64	2.14
10	Products of iron and steel	6.56	8.79	6.41	33.98	2.08
	Total	291.81	422.00	298.29	44.62	100

Source: DGCI&S, Kolkata, P stands for provisional

1. **Petroleum Products.**The value of exports of petroleum products in the year 2020-21 was USD 25.80. In the subsequent year, there was a 161% increase in the value of exports of petroleum products and in terms of USD it was 67.47 billion. In the half year of 2022-23, petroleum product exports replicated the previous year's performance and amounted to USD 65.34. Petroleum products accounts for the largest share in industrial exports and it amounted to 16% in the year 2021-22.

2. **Pearl, Precious & Semi-precious Stones.** In the year 2020-21, the value of exports of precious things was USD 18.15 billion. It rose by 52.5 % in the subsequent year to USD 27.68 and USD 17.61 billion in the half year of 2022-23. The share of this segment in to the total exports was 6.56 and ranked second in order.

3. **Iron & Steel.**Iron and Steel exports were of the order of USD 12.12 billion in the year 2020-21. In the next year, the exports rose by 88.93% to USD 22.91 billion. The share of Iron and Steel in total exports was 5.43%.

4. **Drug Formulations and Biological Products.**The exports of drug formulations and biological products in the year 2020-21 was worth USD 19.04 and it marginally went down to USD 19 billion in the subsequent year. However, this segment performed remarkably well in the half year of 2022-23 with exports of USD 12.74 billion. These products accounted for 4.5% of the total exports from India.

5. **Gold and Other Precious Metal Jewelry.**In the year 2020-21, gold and metal jewelry products accounted for USD 6.63 billion. In the subsequent year, the figure rose to 11.06 billion which was a 66.82% rise and in the half year of 2022-23, the figure was USD 8.67. Gold and precious jewelry had a share of 2.62% in the total exports from India.

6. **Organic Chemicals**. In the year 2020-21, organic chemical exports accounted for USD 7.64 billion. The figure rose to 10.95 billion in the subsequent year indicating a 43.34% rise and in the half year of 2022-23, the exports of organic chemicals amounted to USD 6.65 billion. This segment has a share of 2.59% in the total exports from India.

7. **Aluminum and Aluminum Products.** The exports of aluminum and aluminum products were of the order of USD 5.8 billion in the year 2020-21. The figure rose by 83.56% to amount to USD 10.64 billion in the subsequent year and USD 6.16 billion in the half year of 2022-23. These products had a share of 2.52% in the total exports from India.

8. **Electric Machinery and Equipment.** Electric machinery and equipment exports were of the order of USD 8.13 billion in the year 202-21. The figure rose to USD 10.35 billion in the year 2021-22 registering a growth of 27.37%. This segment performed well in the half year with exports of USD 7.11 billion. They have a share of 2.45% in the total exports.

9. **RMG Cotton and Accessories.** The exports of RMG Cotton and accessories were of the order of USD 6.87 billion in the year 2020-21. The figure rose to USD 9.04 billion in the subsequent year showing a 31.64% increase. This segment has a share of 2.14% in the total exports.

10. **Iron and Steel Products.**The exports of iron and steel products were valued at USD 6.56 billion in the first year and USD 8.79 billion in the second year indicating an increase of 33.98%. In the half year of 2022-23, the figure was impressive at USD 6.41 billion and this segment had a share of 2.08% in the total exports from India.

The total value of exports of industrial goods in the year 2020-21 was USD 291.81 billion. The figure rose to 422.0 billion in the year 2021-22 indicating a rise of 44.62%. In the half year of 2022-23, the total value of industrial exports was 298.29 billion.

6.4 COMPONENTS OF IMPORTS – INDUSTRIAL SECTOR

The top ten components of industrial imports published at page 33 by the Ministry of Commerce and Industry in its Annual Report for the year 2022-23 are reproduced below. Data with regard to principal imports for two years i.e. 2020-21 and 2022-23 along with data for the half year of 2022-23 is presented in Table 6.4 below.

Imports of Top 10 Commodities in 2021-22

(Values in US$ billion)

Rank	Commodity	2020-21	2021-22	Apr-Nov 2022 (P)	Growth % 2021-22 over 2020-21	Share%
1	Petroleum: Crude	59.48	122.45	113.64	105.87	19.97
2	Gold	34.60	46.17	27.21	33.41	7.53
3	Petroleum Products	23.21	39.36	32.79	69.61	6.42
4	Coal, Coke And Briquittes etc.	16.27	31.72	37.25	94.9	5.17
5	Pearl, Precious, Semiprecious Stones	18.89	31.01	21.05	64.17	5.06
6	Electronics Components	15.30	25.94	16.27	69.58	4.23
7	Vegetable Oils	11.09	18.99	14.28	71.26	3.1
8	Organic Chemicals	11.09	17.77	13.02	60.22	2.9
9	Telecom Instruments	14.88	15.22	10.63	2.31	2.48
10	Computer Hardware, Peripherals	10.43	15.17	10.32	45.44	2.48
	Total	394.44	613.05	493.46	55.43	100

Source: DGCI&S, Kolkata, P stands for provisional

1. **Petroleum Crude.** In the year 2020-21, the value of imports of petroleum crude was USD 59.48 billion which rose to USD 122.45 billion in the year 2021-22 showing a rise of 105.87 %. This segment has the highest share of 19.97% in the total imports of India.

2. **Gold.** Gold imports were valued at USD 34.60 billion in the first year with the figure rising to USD 46.17 billion in the subsequent year indicating a rise of 33.41%. In the half year of 2022-23, the figure was 27.21 clearly indicating a rising trend. Gold imports had the second highest position with a share of 7.53% in the import bill of India.

3. **Petroleum Products.** Petroleum products accounted for USD 23.21 billion in the first year and then rose to USD 39.36 billion in the subsequent year indicating an increase of 69.61%. Finally, in the half year of 2022-23, petroleum imports figure was USD 32.79 billion. These products had a 6.42 % share in the import bill of India.

4. **Coal, Coke and Briquittes.** The imports of this segment accounted for USD 16.27 billion in the year 2020-21. It rose to 31.72% in the subsequent year showing an increase of 94.97%. This segment had a share of 5.17% in the total imports.

5. **Pearl, Precious and Semi-precious Stones.** The imports of pearl and precious stones registered an amount of USD 18.89 billion in the year 2020-21. The figure rose to 31.01 billion in the next year. The share of this segment was 5.06% in the import bill of India.

6. **Electronics Equipment.** The import value of electronics equipment in the year 2020-21 was USD 15.3 billion. It went up to USD 25.94 billion in the year 2021-22 indicating a rise of 69.58%. In the half year of 2022-23, the import of electronic equipment was worth USD 16.27 billion. These products had a share of 4.23 % in the total imports of India.

7. **Vegetable Oils.** Vegetable oil imports were of the order of USD 11.09 billion to begin with and then the figure rose to 18.99 billion showing a rise of 71.26%. In the half year of 2022-23, the figure was 14.28 billion with a share of 3.1% in the total imports of India.

8. **Organic Chemicals.** The imports of organic chemicals were of the order of USD 11.09 billion, then to 17.77 billion and finally to 13.02 billion in the half year. The rise was 60.22% over the year 2020-21. This component had a share of 2.9% in the total imports of India.

9. **Telecom Instruments.** The import bill of telecom instruments was USD 14.88 billion in the year 2020-21. It rose marginally to USD 15.22 billion in the next year and then to USD 10.63 in the half year. The share of this segment was 2.48% in the total imports of India.

10. **Computer Hardware and Peripherals.** Computer hardware and peripherals had a share of 2.48% in the total imports of India in the year 2021-22. The import bill was worth USD 10.43 billion in the year 2020-21. It rose to USD 15.17 billion in the subsequent year and in the half year of 2022-23 the imports were of the order of USD 10.32 billion.

6.5 DIRECTION OF INDIA'S FOREIGN TRADE

The value of India's exports and imports from major regions/ countries in Dollar terms are given in Tables 5 and 6. Share of major destinations of India's Exports and sources of Import during 2020-21, 2021-22 and half year of 2022-23are also given in the same tables.Data in Table 4.3 on exports to principal regions and countries reveal that the USA is the largest export destination of India, followed by UAE, China and Bangladesh.

In terms of imports, China has the largest share of 15.43% in our import bill, followed by UAE, USA, Saudi Arabia and Iraq.

Top 10 Export Destinations of India in 2021-22

(Values in US$ billion)

Rank	Country	2020-21	2021-22	Apr-Nov 2022(P)	Growth % in 2021-22 over 2020-21	Share%
1	U S A	51.63	76.18	53.14	47.53	18.05
2	United Arab Emirates	16.68	28.04	20.83	68.14	6.65
3	China	21.19	21.26	9.90	0.36	5.04
4	Bangladesh	9.69	16.16	8.10	66.70	3.83
5	Netherland	6.47	12.55	12.32	93.78	2.97
6	Singapore	8.68	11.15	8.01	28.53	2.64
7	Hong Kong	10.16	10.98	6.54	8.09	2.60
8	U K	8.21	10.50	7.31	27.94	2.49
9	Belgium	5.24	10.08	6.12	92.61	2.39
10	Germany	8.13	9.88	6.71	21.64	2.34
	Total	291.81	422.00	298.29	44.62	100.00

Source: DGCI&S, Kolkata, P stands for provisional

Top 10 Import Sources of India in 2021-22

(Values in US$ billion)

Rank	Country	2021-21	2021-22	Apr-Nov 2022(P)	Growth % in 2021-22 over 2020-21	Share %
1	China	65.21	94.57	67.92	45.02	15.43
2	United Arab Emirates	26.62	44.83	36.95	68.39	7.31
3	U S A	28.89	43.31	34.20	49.94	7.07
4	Saudi Arab	16.19	34.10	29.10	110.67	5.56
5	Iraq	14.29	31.93	24.93	123.47	5.21
6	Switzerland	18.23	23.39	12.06	28.31	3.82
7	Hong Kong	15.17	19.10	12.73	25.86	3.12
8	Singapore	13.30	18.96	14.95	42.52	3.09
9	Indonesia	12.47	17.70	21.48	41.95	2.89
10	Korea Rp.	12.77	17.48	14.24	36.83	2.85
	Total	394.44	613.05	493.46	55.43	100.00

Source: DGCIS, Kolkata, P stands for provisional

6.6 INDUSTRIAL COMBINATIONS, CAUSES, MERGERS & AMALGAMATIONS

A merger is an agreement that unites two existing companies into one new company. There are several types of mergers and also several reasons why companies complete mergers. Mergers and acquisitions are commonly done to expand a company's reach, expand into new segments, or gain market share. All of these are done to increase shareholder value. During a merger, companies have a no-shop clause to prevent purchases or mergers by additional companies. A merger is the voluntary fusion of two companies on broadly equal terms into one new legal entity. The firms that agree to merge are roughly equal in terms of size, customers, and scale of operations. For this reason, the term "merger of equals" is sometimes used. Acquisitions, unlike mergers, are generally not voluntary and involve one company actively purchasing another.

Mergers are most commonly done to gain market share, reduce costs of operations, expand to new territories, unite common products, grow revenues, and increase profits—all of which should benefit the firms' shareholders. After a merger, shares of the new company are distributed to existing shareholders of both original businesses.

There are various types of mergers, depending on the goal of the companies involved. Below are some of the most common types of mergers.

1. Conglomerate

This is a merger between two or more companies engaged in unrelated business activities. The firms may operate in different industries or in different geographical regions. A pure conglomerate involves two firms that have nothing in common. A mixed conglomerate, on the other hand, takes place between organizations that, while operating in unrelated business activities, are actually trying to gain product or market extensions through the merger.

Companies with no overlapping factors will only merge if it makes sense from a shareholder wealth perspective, that is, if the companies can create synergy, which includes enhancing value, performance, and cost savings. A conglomerate merger was formed when The Walt Disney Company merged with the American Broadcasting Company (ABC) in 1995.

2. Congeneric

A congeneric merger is also known as a Product Extension merger. In this type, it is a combining of two or more companies that operate in the same market or sector with overlapping factors, such as technology, marketing, production processes, and research and development (R&D). A product extension merger is achieved when a new product line from one company is added to an existing product line of the other company. When two companies become one under a product extension, they are able to gain access to a larger group of consumers and, thus, a larger market share. An example of a congeneric merger is Citigroup's 1998 union with Travelers Insurance, two companies with complementing products.

3. Market Extension

This type of merger occurs between companies that sell the same products but compete in different markets. Companies that engage in a market extension merger seek to gain access to a bigger market and, thus, a bigger client base. To extend their markets, Eagle Bancshares and RBC Centura merged in 2002.

4. Horizontal

A horizontal merger occurs between companies operating in the same industry. The merger is typically part of consolidation between two or more competitors offering the same products or services. Such mergers are common in industries with fewer firms, and the goal is to create a larger business with greater market share and economies of scale since competition among fewer companies tends to be higher. The 1998 merger of Daimler-Benz and Chrysler is considered a horizontal merger.

5. Vertical

When two companies that produce parts or services for a product merger, the union is referred to as a vertical merger. A vertical merger occurs when two companies operating at different levels within the same industry's supply chain combine their operations. Such mergers are done to increase synergies achieved through the cost reduction, which results from merging with one or more supply companies. One of the most well-known examples of a vertical merger took place in 2000 when internet provider America Online (AOL) combined with media conglomerate Time Warner.

Examples of Mergers

Anheuser-Busch InBev (BUD) is an example of how mergers work and unite companies together. The company is the result of multiple mergers, consolidation, and market extensions in the beer market. The newly named company, Anheuser-Busch InBev, is the result of the mergers of three large international beverage companies—Interbrew (Belgium), Ambev (Brazil), and Anheuser-Busch (United States).

Ambev merged with Interbrew uniting the number three and five largest brewers in the world. When Ambev and Anheuser-Busch merged, it united the number one and two largest brewers in the world. This example represents both horizontal merger and market extension as it was industry consolidation but also extended the international reach of all the combined company’s brands.

The largest mergers in history have totaled over $100 billion each. In 2000, Vodafone acquired Mannesmann for $181 billion to create the world’s largest mobile telecommunications company. In 2000, AOL and Time Warner vertically merged in a $164 million deal considered one of the biggest flops ever. In 2014, Verizon Communications bought out Vodafone’s 45% stake in Vodafone Wireless for $130 billion.

6.6.1 ACQUISITION

Let us understand the difference between Acquisition, Takeover and Merger. Although technically, the words ‘acquisition’ and ‘takeover’ mean almost the same thing, they have different meanings. In general, ‘acquisition’ describes a primarily amicable transaction, where both firms cooperate; ‘takeover’ suggests that the target company resists or strongly opposes the purchase; the term ‘merger’ is used when the purchasing and target companies mutually combine to form a completely new entity. However, because each acquisition, takeover, and merger is a unique case, with its own peculiarities and reasons for undertaking the transaction, use of these terms tends to overlap.

Friendly acquisitions occur when the target firm agrees to be acquired; its board of directors approves the acquisition. Friendly acquisitions often work toward the mutual benefit of the acquiring and target companies. Both companies develop strategies to ensure that the acquiring company

purchases the appropriate assets, and they review the financial statements and other valuations for any obligations that may come with the assets. Once both parties agree to the terms and meet any legal stipulations, the purchase proceeds.

Unfriendly acquisitions, commonly known as 'hostile takeovers,' occur when the target company does not consent to the acquisition. Hostile acquisitions don't have the same agreement from the target firm, and so the acquiring firm must actively purchase large stakes of the target company to gain a controlling interest, which forces the acquisition.

Even if a takeover is not exactly hostile, it implies that the firms are not equal in one or more significant ways.

As the mutual fusion of two companies into one new legal entity, a merger is a more-than-friendly acquisition. Mergers generally occur between companies that are roughly equal in terms of their basic characteristics—size, number of customers, the scale of operations, and so on. The merging companies strongly believe that their combined entity would be more valuable to all parties than either one could be alone.

Companies acquire other companies for various reasons. They may seek economies of scale, diversification, greater market share, increased synergy, cost reductions, or new niche offerings. Other reasons for acquisitions are as follows:

1. To Make Entry in a Foreign Market.

If a company wants to expand its operations to another country, buying an existing company in that country could be the easiest way to enter a foreign market. The purchased business will already have its own personnel, a brand name, and other intangible assets, which could help to ensure that the acquiring company will start off in a new market with a solid base.

2. As Part of the Growth Strategy.

Perhaps a company met with physical or logistical constraints or depleted its resources. If a company is encumbered in this way, then it's often sounder to acquire another firm than to expand its own. Such a company might look for promising young companies to acquire and incorporate into its revenue stream as a new way to profit.

3. To Reduce Excess Capacity and Decrease Competition.

If there is too much competition or supply, companies may look to acquisitions to reduce excess capacity, eliminate the competition, and focus on the most productive providers.

4. To Gain New Technology.

Sometimes it can be more cost-efficient for a company to purchase another company that already has implemented a new technology successfully than to spend the time and money to develop the new technology itself.

Examples of Acquisitions.

AOL and Time Warner (2000).

AOL Inc. (originally America Online) is the most publicized online service of its time, and often extolled as "the company that brought the internet to America." Founded in 1985, by the height of its popularity in 2000 AOL was the United States' largest internet provider.

Time Warner, Inc. was being decried as an "old media" company, despite its tangible businesses like publishing, and television, and an enviable income statement.In 2000, in a masterful display of overweening confidence, the young upstart AOL purchased the venerable giant Time Warner for $165 billion; this dwarfed all records and became the biggest merger in history. The vision was that the new entity, AOL Time Warner, would become a dominant force in the news, publishing, music, entertainment, cable, and Internet industries. After the merger, AOL became the largest technology company in America.

However, the joint phase lasted less than a decade. As AOL lost value and the dot-com bubble burst, the expected successes of the merger failed to materialize, and AOL and Time Warner dissolved their union:

1. In 2009, AOL Time Warner dissolved in a spin-off deal. From 2009 to 2015, Time Warner remained an entirely independent company.

2. In 2015, Verizon Communications, Inc. acquired AOL for $4.4 billion.

AT&T and Time Warner (2018).

In October 2016, AT&T and Time Warner (TWX) announced a deal in which AT&T will buy Time Warner for $85.4 billion, morphing AT&T into a media heavy hitter. In June 2018, after a protracted court battle, AT&T completed its acquisition of Time Warner.

Certainly, the AT&T-Time Warner acquisition deal of 2018 will be as historically significant as the AOL-Time Warner deal of 2000; we just can't know exactly how yet. These days, 18 years equals numerous lifetimes—especially in media, communications, and technology—and much will continue to change. For the moment, however, two things seem certain:

1. The consummation of the AT&T-Time Warner merger already has begun to reshape much of the media industry.

2. M&A enterprise is still alive and well.

6.6.2 JOINT VENTURE

Joint venture could be considered as an entity resulting froma long term contractual agreement between two or more parties, undertaken for mutual benefits. It is a type of partnership and whenboth parties are establishing new units, they are exercisingsupervision and control over the new business. Joint venture alsoinvolves the sharing of ownership.Joint

ventures are popular as there is sharingof development cost, risk spread out and expertise combined tomake effective use of resources. It is best way to enter into foreigncollaboration. Generally Indian firms are entering into foreigncollaboration with the help of joint ventures.

Following are the advantages of joint venture:

1. More capital availability
2. Better use of resources
3. Goodwill and reputation
4. Risk sharing
5. Economies of scale
6. Expansion and diversification
7. Improves competitiveness
8. Customer satisfaction
9. Motivate employees

6.6.3 DIVERSIFICATION

Diversification refers tochanging product or business line. In this case business enters intoin the new business service or product which is extension ofexisting activity or there could be a substantial difference in skilltechnology and knowledge. The reasons for diversification are as follows:

1. **Spreading of risk :** Diversification enables to spread the risk. In this the business operates in different markets wherein one market business may suffer a loss, that can be compensated in other market and the levels of profit will be maintained.

2. **Improves corporate image :** Corporate image is creating mental picture of the company in the peoples mind. Through the diversification company as changes products and knowledge gives better quality product and services with which it creates positive impact on peoples mind.

3. **Face competition effectively :** Due to the diversification company introduce wide range of products and services. This enables company to maintain it's a sale in the market.

4. **Utilization of resources :** Diversification enables company to use the resources optimally as it has excess capacity manufacturing. If facilities managerial man power and other resources to production dept and other activities.

5. **Economies of scale :** Diversification brings economies of scale especially in the area of diversification. The company can combine the distribution old product as well as new products with the help of same distribution chain.

6. **Customer satisfaction :** When the company entered into new business it assured to give qualitative product and good services. This leads to customer's satisfaction.

7. **Synergistic advantages :** Synergistic advantages are those which are gained by putting little bit improvement in the same product or process which are related to old product and gain new products. This will be easily attained in diversification.

The types of diversification listed by RR Barthwal are: lateral diversification, conglomerate diversification, vertical diversification and diagonal diversification.

a. Lateral Diversification

When a firm produces different goods which varies from the same process or source or which are used as materials for the same process or market, it is known as lateral diversification. The motives behind lateral diversification are as follows:

1. When production of one commodity involves production of another, there is a possibility for lateral diversification. Production of mutton and wool, bitumen, lubricants, paraffin, raw chemicals etc together with petroleum refining, coal, coke and their products such as benzene etc are examples of lateral diversification.

2. When market demand for existing products is falling or remaining constant, a firm has to diversify its business laterally in order to maintain its earnings or to increase it.

3. Better utilization of existing facilities such as managerial talents, Research and Development activities and machines is the motive behind lateral diversification. This leads to economies of scope.

4. Seasonal demand for products may lead to lateral diversification. For example, a firm may produce colors and water sprayers together for the color festival.

5. Mergers increase market power by reducing competition and through extension of operations in different industries.

6. In order to maintain the rate of growth.

7. As an entry barrier to potential competition.

b. Conglomerate Diversification.

1. It helps in extension of the market power of the firm.

2. It brings stability in earnings through cross-subsidization.

3. It creates entry barrier to potential competitors.

4. It provides more options for risk taking for the sake of profits through economies of scope.

5. It maintains the growth process and gives monetary gains to the firm.

6. It provides better utilization of the facilities.

c. Vertical Diversification

The motives for vertical diversification are as follows:

1. It provides security to the firm. A firm integrates backward to ensure assured sources of supplies. Similarly, a firm integrates forward to assure market for its products.

2. It provides economies of linked processes and thus the efficiency of the firm goes up due to improvements in capacity utilization.

3. It provides economies of marketing such as saving of transportation, advertisement, procurement and selling costs.

4. Middle men are eliminated leading to more savings.

5. The firm assumes greater market power, creates entry barriers and reduces competition.

6.7 MERGERS AND ACQUISITIONS IN INDIA

M&A deals increased in India after 1999. During the years of 2007 and 2008 M&A deals declined particularly due to the global financial crisis and the lack of availability of credit. M&A in India has been decreasing from 2000 to 2008. By 2010, M&A deals began to peak. Since then, Indian companies have considered M&A as an important business strategy in corporate restructuring and there has been a considerable increase in M&A deals in India after 2010. Multinational companies have entered India with the help of joint ventures or through acquisitions leading to increased competition between Indian and foreign firms.In 2018, about 70% of the M&A activity included distresses deals. At present, there are a lot of acquisitions in businesses focused on clean-tech and solar energy.This was enabled because of the Corporate Insolvency Resolution Process (CIRP) under the Insolvency and Bankruptcy Code, 2016.

Foreign investments as part of M&A deal were seen among various sectors and industries in India in 2024. Since 2019, a number of reforms were introduced to encourage M&As in India. Some of these reforms were:

1. New framework by SEBI on the aspect of issuance of Shares with Differential Voting Rights. This enabled organizations and its members to receive investment without losing any control.

2. Tax incentives and exemptions were granted to all registered start-ups, which led to increased M&A in the start-up sector.

3. Corporate Income Tax rate reduction has made India attractive to foreign investment leading to M&A activity in all the secondary and tertiary sectors and sub-sectors of the economy.
4. The PLI Scheme introduced in the third quarter of 2021, and which is being continued in 2024 led to higher flow of foreign investment and M&A activity.
5. The privatization process which began in 1991 has assumed critical mass after three decades instilling confidence in foreign investors.

The major Mergers and Acquisitions in 2019 were:

1. Acquisition of Yatra with a majority stake of 71% for $337.8 Million by Ebix Inc.
2. OYO acquisition of Innov8 for INR 220 Cr.
3. Acquisition of CloudCherry by Cisco.
4. Paytm Acquisition of a travel startup NightStay.
5. PayU Acquisition of Wibmo in a deal worth $70 Million.

In the year 2020, the following M&A deals were completed:

1. ITC acquired 100% equity shares of Sunrise Foods Pvt. Ltd for Rs. 2150 crores.
2. Facebook invested $5.7 billion in Jio Platforms for a 9.99% stake in Jio.
3. Zomato acquired Uber Eats for $350 million. The deal was via stock exchange and Uber got 9.99% of ownership in Zomato.
4. RIL acquired 60% of Vitalic Health and acquired 100% ownership in Vitalic's subsidiaries which included Tresara Health Pvt. Ltd and Netmeds Market Place Limited for Rs. 60 crores.
5. Hindustan Unilever Limited merged with GlaxoSmithKline Consumer Limited and paid the latter Rs. 31,700 crore, plus Rs. Rs.3,045 crore getting for itself the Horlicks trademark.

The 2021 story included the following companies:

The Most Popular and Major Mergers and Acquisitions in 2021 are:

1. Prosus acquired Indian payment service provider BillDesk for $4.7 billion.
2. Adani Green Energy Limited acquired SB Energy Holdings Limited (SB Energy India) for $3.5 billion.
3. Thyrocare was bought by PharmEasy for $610 million.
4. Tata Sons acquired Air India for ₹ 18,000 crore.

5. Byju acquired Aakash Educational Services for around $1 billion in a cash equity (70:30) deal.

In 2022-23, the following deals were made:

1. The Tata Group acquired Air India for a sum of $2.4 billion. Tata Group also announced a merger between Air India and Vistara, whereby Singapore Airlines (the owner of 49% of Vistara equity) will get ownership of 25.1% of the combined merged entity.

2. The Adani Group had already held an ownership of 29.18% equity stake in NDTV via an indirect subsidiary (RRPR). Via this acquisition, RRPR bought 27.26% equity stake in NDTV owned by its founders, at a price of INR 342.65 per share, for a total sale value of around INR 602.30 crore.

3. The HDFC Bank and HDFC Ltd were merged to create a financial services conglomerate. Post-merger, the market capitalization of HDFC bank in the year 2022-23 was Rs.10, 50,000 crores.

4. Zomato and Blinkit have reached an agreement for a merger. The all-stock deal values Blinkit between $700 million and $750 million.

5. The Adani Group has acquired a 72.3% stake in Ambuja Cements Limited from Holcim Group for Rs. 24,680 crore ($3.3 billion). The acquisition was completed in March 2022.

6.8 QUESTIONS

1. Explain the trends and pattern of FDI inflows in India.
2. Explain the trends and pattern of outward FDI (OFDI) from India.
3. Explain the export components of the industrial sector of India.
4. Explain the import components of the industrial sector of India.
5. Write a note on the direction of trade of India.
6. Explain the concept of industrial combinations.
7. Explain the trends in M&A activity in India after the year 2000.

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Module 4

7

THE AGRICULTURAL SECTOR - I

Unit structure :

7.0 Objectives

7.1 Introduction: Agricultural Productivity

7.2 Institutional Structure Land Reforms in India

7.3 Technological changes in agriculture

7.4 Agriculture Pricing Policy

7.5 Questions

7.0 OBJECTIVES

- To know the classification of agriculture productivity
- To know the level of productivity and reasons for low productivity
- To understand the institutional structure of agriculture
- To know the various technological initiatives taken by the government
- To be aware of various pricing practices in agriculture

7.1 INTRODUCTION :AGRICULTURAL PRODUCTIVITY

The agricultural production depends not only on the area but also on the productivity of land. It shows the relationship between inputs and output.

The agricultural productivity can be classified into two categories viz;

(A) Agricultural Productivity per worker.

(B) Agricultural Productivity per hectare.

A. Agricultural Productivity per Worker:

In India, the productivity per worker is not only low but also differs from one state to other Per Worker-Agricultural Productivity: let us understand the International Comparisons:

The per worker labour productivity in India is low as compared to some developed countries. According to Dr. Baljeet Singh, "In India per worker productivity forms 1/23 of that of U.S.A. and Japan and 1/21 of that in U.K." The low level of per-worker productivity is an indicator of

backward agriculture. However, a brief presentation of per worker productivity of different countries of the world. The above table 6 shows that India's agricultural productivity per worker is a little more than one thirty fourth of West-Germany and less than one twentieth of England. The stagnation in agricultural productivity has resulted due to the increasing prices of agricultural produce, disapproving many theories of price production complexes and imperfect food distribution. However, productivity per worker for India was Rs. 1,213 while it was Rs. 18,120 for Japan, Rs. 19,264 for USA, Rs. 27,690 for West Germany.

B. Agricultural Productivity per Hectare:

The Per hectare productivity has been analyzed in two aspects as:

• Per-hectare Productivity of Different Crops:

For maize, it was 1638 kg per hectare in 2002-03 against 547 kg per hectare in 1950-51. The per hectare productivity of sugarcane was recorded to be 65,000 kg. in 2002-03 against 3342 kg. in 1951. In case of cotton it rose to 193 kg. Per hectare in 2002-03 against 88 kg. Per hectarein 1950- 51. Regarding, Jute, it was 1043 kg. per hectare in 1950-51 which increased to 1130 kg. in 1980-81 and further 2154 kg. per hectare in 2002-03.

C. Some International Comparison of Productivity:

No doubt per hectare productivity in India has increased after the introduction of economic planning, but if we compare it with developed countries it seems to be very low.

Reasons for low productivity in Indian agriculture

On the whole, Indian agriculture does not show high efficiency or productivity, though there is an improvement since independence.

Some reasons for this situation are as follows:

1. Population Pressure:

Land is limited, and has almost reached the level where more expansion in cultivated area is notpossible. The growth in population creates immense pressure on land. Even though land-human ratio in India is better compared to some of the developed countries like Japan, the Netherlands, Belgium and even China, other factors like very low yields and low levels of industrialization in India compound the problem of population pressure on agricultural land.

2. Uneconomic Holdings:

The average size of landholdings in India in 2001 was less than two hectares. One-fourth of the total rural households own less than 0.4 hectare each, while another one-fourth are landless. This creates difficulties in application of modern inputs, adoption of scientific land

improvement, water conservation and plant protection measures and in introducing mechanised operations.

These measures alone are capable of securing and stabilising high yields. The tardy progress of land reforms in most states has compounded this problem. Consolidation of land can help improve productivity.

3. Uncertain Monsoons and Inadequate Irrigation Facilities:

With more than half of the gross cropped area being rained, failure or inadequacy of rains causes fluctuation in yields. Even if the maximum irrigation potential is realized, around 86.5 mHa of gross cropped area will remain under rained conditions.

This underlines the need to develop rained agriculture on scientific lines.

4. Subsistence Nature of Farming:

Indian agriculture is characterized by its subsistence nature, i.e., most of the produce is directly consumed by the producers and surplus, if any, is generally low. This is because most Indian farmers, being poor, use outdated implements and technology, and are not able to afford costly inputs. This results in low levels of returns and meagre incomes, which in turn means low savings and low levels of reinvestments.

Thus, a vicious circle operates and stagnation in agriculture prevails.

5. Decline in Soil Fertility:

For an agricultural country like India, soil is a precious resource, and degradation-of soil is a serious problem, which leads to depletion of soil fertility. Soil erosion is the main form of degradation which occurs because of deforestation and unscientific agricultural practices like shifting cultivation. Increasing salinity, alkalinity and aridity because of mismanagement and repeated use are other reasons for loss of soil fertility.

6. Lack of Support Services:

This refers to the institutional support factors like support pricing, marketing and credit facilities. These services help create a favorable environment to induce a spirit of entrepreneurship among farmers by absorbing the risks involved in the agricultural activity. These services are particularly inadequate in case of coarse cereals, and pulses.

7. Poor Organization of Resources and Lack of Entrepreneurship:

India has an underdeveloped agricultural infrastructure and institutions. Conditions of poverty and deprivation and unequal distribution of land resources hamper the evolution of an agricultural entrepreneur class.

An underdeveloped agricultural sector on account of low productivity is the main reason for low levels of diversification of the economy. A buoyant agricultural sector has been the basis for industrial development in the developed countries.

7.2 INSTITUTIONAL STRUCTURE AND LAND REFORMS IN INDIA

Institutional structure refers to the agrarian structure, the size of landholdings, the method of cultivation and the relationship between the people involved in cultivating the land. The agrarian structure in India is a defective one. It is characterised by small size of landholdings. The small landholdings are further divided, sub-divided and fragmented. Such uneconomic landholdings prevent mechanisation and large-scale farming.

During the British regime, the zamindari system was the main system of land tenure. The zamindars collected the land revenue from the farmers on behalf of the government. This system was based on the exploitation of labour. Huge amount of land revenue was collected by the zamindars as rent and they did not contribute anything to increase production and productivity. They lived as social parasites. The tenants did not have any interest in improving production. The landlord did not take any initiative to improve agriculture. As a result agriculture sector remained stagnant for nearly six decades from 1880 to 1940.

In the post-independence era, Government introduced land reforms to stop the exploitation of agricultural labour.

The main objectives of land reforms were:

(1) Prevention of exploitation,

(2) Reducing inequality in land ownership,

(3) Reorganisation of agriculture,

(4) Increase in agricultural production and productivity.

To achieve these objectives, the land reforms consist of the following measures:

1. Abolition of intermediaries.
2. Tenancy reforms referring to regulation of rent, security of tenure and conferment of ownership of land on the tenants.
3. Ceilings and floors on landholdings,
4. Co-operative farming.

Let us now study these measures in detail:

a. ABOLITION OF THE ZAMINDARI SYSTEM

The government passed suitable legislations for the abolition of the zamindari system and it was claimed that by the end of the first plan, it was fully abolished. However, when it was implemented various difficulties cropped up. Some of them were:

(1) Proper records were not available.

(2) Zamindars filed a case in the court and that took a longer time.

(3) The various loopholes in the legislations were exploited by the zamindars etc.

Due to this, the zamindari system was abolished only on paper and not in reality. They have changed only their garb i.e. they are termed as big landowners instead of zamindars.

b. TENANCY REFORMS

It consisted of three measures:

(1) Regulation of rent,

(2) Security of tenure,

(3) Conferment of ownership rights on tenants.

The Government fixed the rent as 1/4th or 1/5th of the produce. As far as security of tenure was concerned, the Government provided the following provisions:

- The tenants cannot be evicted arbitrarily.

Land can be resumed only for personal cultivation.

- In the event of resumption, the tenant has to be given a minimum area of land.

While implementing the tenancy reforms, a number ofdifficulties cropped up:

(1) In many regions, farmers were not aware of the rent limit fixed by the Government.

(2) The tenants were also scared of the landlords and they were hesitant to pay a low rent.

(3) Lack of records also posed a major problem.

(4) The term tenant was not defined properly.

(5) The provision of personal cultivation has been exploited by the landlords.

(6) In many villages, voluntary surrender of land took place.

Though it appeared voluntary, actually the landlords were pressurizing the tenants to surrender the land.

(7) Many farmers were not willing to purchase the land offered by the government.

The government conferred ownership rights on the farmers as it believed that the tiller of the soil should be the owner of the soil.

However, the tenants were not willing to pay the purchase price and they were also very scared of the landlords. In many villages a strange phenomenon of voluntary surrender of lands by the tenants took place. This actually was not voluntary but forced by the landlords. Hence the objective of equality in distribution of land could not be achieved.

All these problems limited the success of tenancy reforms.

c. **CEILING ON LANDHOLDINGS**:

The purpose behind this land reform was to ensure equality in the distribution of land holdings. **The main features of the Ceiling Act are as follows:**

(1) The basis of ceiling is a family consisting of five members (Father, mother and three minor children).

(2) The ceiling limits for lands, which have assured water supply and which can produce two crops in a year has been fixed at 10 to 18 acres. If only one crop can be raised, the ceiling has been fixed at 27 acres and for other types of land, 54 acres.

(3) Certain categories of lands have been exempted. For e.b Tea, coffee, rubber plantations, co-operative farms, sugarcane farms etc.

(4) While taking away the surplus land, the landlord has to be paid a nominal compensation.

(5) While redistributing the land, preference will be given to STs and SCs.

All the state Governments passed the Ceiling Act and implemented the same to achieve equality in land distribution.

However, the progress has been highly unsatisfactory due to poor performance. Till 2000, only 2.98 million hectares of land had been declared as surplus of which 2.14 million hectares has been distributed.

The reasons for the poor performance are:

(1) The large number of exemptions given made the Ceiling Act a mockery.

(2) The landlord carried out a number of illegal (Benami) transactions to keep the family property under control.

(3) The Government officials did not implement the law effectively.

(4) Non-availability of proper records and legal battle between the zamindars and the government also resulted in poor performance.

d. CO-OPERATIVE FARMING:

This has been encouraged to solve the problem of subdivision. Under this, the farmers pool their resources and land and cultivate the land together. It has various benefits like; large-scale farming, mechanisation of agriculture, a large output and also the spirit of co-operation is developed. It is said to be the best system to solve all the problems related to agriculture. The Government gave a number of incentives during the first three plans to encourage cooperative farming. However, the result was not impressive. The various practical problems limit the development of co-operative farming. Some of them are: differences in the fertility of the soil, huge initial outlay, the tricky issue of sharing the output, the individualistic nature of the Indian farmer etc.

Limitations of Land Reforms:

The land reforms implemented by the government suffered from a number of limitations. They are:

(1) Many loopholes in the reforms provided an opportunity to the landlords to protect themselves against the interests of the tenants and also surrendering the surplus land to the government. Many benami transfer of land defeated the purpose of ceiling on land holdings.

(2) Administrative machinery was inefficient and corrupt. Vested interests in the administrative and political system prevented the effective implementation of land reforms.

(3) Tenants could not fight for their rights due to absence of proper records.

(4) The ceiling on land holdings led to many litigations in the court. This delayed the availability of surplus land. Even the lands which were acquired were not distributed equally.

(5) Absence of support services like credit facilities, marketing facilities supply of essential inputs at subsidized rates, etc. made the land reforms ineffective.

(6) Too much pressure of population on land and majority of the population being poor landless labourers enabled the rich to continue their exploitative tactics.

The drawbacks of the various reforms do not imply that land reforms are meaningless. In fact, land reforms are very much required to strengthen agriculture. It is possible to remove the drawbacks and make land reforms more meaningful. This can positively improve agricultural productivity and production.

7.3 TECHNOLOGICAL CHANGES IN AGRICULTURE

The government has started a lot of technological changes since the contribution of agriculture to GDP needs to be raised. They are listed in the following order:

1) Mechanisation

Agricultural mechanization increases productivity of land and labour by meeting timeliness of farm operations and increases work output per unit time. Besides its paramount contribution to the multiple cropping and diversification of agriculture, mechanization also enables efficient utilization of inputs such as seeds, fertilizers, and irrigation water. Farm mechanization in India has been growing at a rate of less than 5 per cent in the last two decades. The main challenges to farm mechanization are, first, a highly diverse agriculture with different soil and climatic zones, requiring customized farm machinery and equipment and, second, largely small landholdings with limited resources.

Credit flow for farm mechanization is less than 3 per cent of the total credit flow to the agriculture sector. A dedicated Sub-Mission on Agricultural Mechanization has been initiated in the Twelfth Plan, with focus on spreading farm mechanization to small and marginal farmers.

2) **Use of Fertilizers**

The following major initiatives were taken in the fertilizer policy of the government

a) In order to address the issue of underrecoveries of the existing urea units due to the freezing of fixed cost at the 2002–03 level, the Modified New Pricing Scheme (NPS–III) for existing urea units was notified on April 2, 2014. The policy has been amended and is in effect for a year as of the notice date.

b) Additionally, on January 2, 2013, the government announced the New Investment Policy 2012 in an effort to encourage new investment in the urea sector and help India achieve self-sufficiency. On October 7, 2014, the Department of Fertilizers notified the public of the revision to the New Investment Policy - 2012. The actual output of nitrogen and phosphate for the months of April through November 2014 was 25.05 lakh tonnes and 89.68 lakh tonnes, respectively, compared to the targets of 33.51 lakh tonnes and 82.86 lakh tonnes.

3**) Use of Better Seeds**

The fundamental component needed to increase agricultural productivity and output is seed.The quality of the seed used greatly influences the effectiveness of all other agricultural inputs, including irrigation, pesticides, fertilizers, and fertilizers, as well as the effects of agroclimatic conditions. It is estimated that 20–25 percent of agricultural productivity is attributed to seed quality. The states predict that 343.55 lakh quintals of

certified/quality seeds will be needed overall for 2014–15 (kharif and rabi). 351.76 lakh quintals of certified or high-quality seed are on hand to counter this. Thus, during 2014–15, an excess of 8.21 lakh quintals of seed is available.

During 2014-15, there has been shortfall in the availability of certified/quality gram, lentil, pea, soyabean, and potato seeds. Given our import dependence on oils and pulses and susceptibility of potato to inflation, steps are necessary to avoid shortages of certified seeds of these commodities.

4) Agricultural Extension

Government-funded agricultural research institutes and extension organizations provide little to no technical support and expertise, according to data from the NSSO 70th round survey, which is reported by 59% of farmers. They are consequently compelled to rely on progressive farmers, the media, and private businesses such as distributors of agricultural products like seeds, fertilizer, and pesticides for technical information. To ensure last-mile connectivity, extension services need to be ready to meet evolving information and technological needs. The lab-to-farm program's effectiveness can be increased by utilizing information technology, e- and mobile (m-) applications, professional NGOs' involvement, etc.

A portion of the current unfavorable ratio of one extension worker for every 800–1000 farmers will be partially offset by the Budget 2014–15's allocation of Rs. 100 crore to Kisan TV, which will be used to provide farmers with up-to-date information on innovative farming methods, water conservation, organic farming, and other topics. Additionally, farmers will have direct access to agricultural specialists.

5) Irrigation Facilities

To complete unfinished irrigation projects, the national government launched the Accelerated Irrigation Benefit Programme (AIBP) in 1996–1997. Up till December 31, 2014, grants for Central Loan Assistance (CLA) of Rs. 67,195.47 crore were made available under the AIBP. Up until March 2013, states under the AIBP are said to have produced an irrigation potential of 85.03 lakh ha through big, medium, and small irrigation projects.

In an effort to close the gap between irrigation potential that has been generated and that which is exploited, the program has also been combined with the AIBP.

Periodically, proposals have been made for a National Water Grid to move water from places of surplus water to areas with shortage water. Despite these programs, only 35% of Indian agriculture is irrigated across states, making it extremely dependent on rainfall. Concentrating on micro-irrigation devices, such as sprinklers and drips, will greatly improve productivity and water-use efficiency.

6) Agricultural Research and Education

The Indian Council of Agricultural Research (ICAR) is engaged in developing new crop varieties with specific traits that improve yield and nutritional quality along with tolerance / resistance to various biotic and abiotic stresses.

Besides, it matches crop production and protection technologies to target agro-ecologies. A total of 104 varieties of different crops were released for different agro-ecological niches. To ensure effective seed chain for making quality seed available to farmers, 11,835 tonnes of breeder seeds of recommended varieties of different field crops were developed. The adoption of improved varieties and crop management technologies has resulted in enhancement of production and productivity of cereals, pulses, and other

7.4 AGRICULTURAL PRICE POLICY

The Indian government has implemented various measures to stabilize agricultural prices, adjusting them based on economic conditions. In the 1960s, South India created food zones for wheat and rice, restricting grain movement. The government procured foodgrains from surplus states and distributed them to deficit states through a public distribution system. In 1965, the Agricultural Price Commission was established, later renamed the Commission for Agricultural Cost and Prices (CACP) in 1985. Other measures include buffer stock operation, public distribution, and warehousing provision facilities etc. are also taken to ensure stability in agricultural prices. All these measures can be discussed as follows:

1. **Administered price mechanism**: The government fixes the prices of agricultural goods through the CACP. The CACP announces three types of prices every year. They are

(a) Minimum support price

(b) Procurement price and

(c) Issue price.

(a) Minimum support price: The Minimum Support Price (MSP) is a long-term guarantee for farmers, covering the cost of production and a margin of profit. It ensures that prices do not fall below the MSP, preventing farmers from incurring losses even during market gluts. In 2018-19, the government announced that MSP would be one and half times the cost of production, ensuring farmers do not lose money.

(b) Procurement price: It is the price at which the government buys from the farmers for PDS, buffer stock operations and for welfare schemes. It is higher than the minimum support price but lower than the market price.While MSP is announced before the sowing operation, procurement prices are announced after the harvest.

(c) Issue price: Issue price is the price at which the government sells foodgrains under the public distribution system. It is lower than the procurement price. The difference between procurement price and

issue price accounts for the subsidy incurred by the government on foodgrains.

(d) Statutory Minimum Support Price: This price is fixed for jute and sugarcane. It is illegal to buy these two goods below this price. It is compulsory to pay this statutory price for jute and sugarcane. At present these twocommodities are covered under this statutory fixation. If necessary other commodities can also be covered.

Fixed prices are set for 22 crops by the Commission for Agricultural Cost and Prices (CACP), which includes groundnut, cotton, sunflower, rice, wheat, jowar, and bajra. These minimum support prices are set by the government every year prior to seeding operations and are periodically adjusted in accordance with the rate of inflation. The prices are more than the cost of manufacture and quite lucrative. The minimum support price (MSP) for wheat was Rs. 1,170 per quintal in 2010–11 and for paddy it was Rs. 1,000. These MSPs are implemented by the government in an effort to ensure crop diversity, self-sufficiency, and sufficient supply in order to contain inflation.

2. **Buffer stock operations**: It is an important constituent of price policy and food security system. Under this system, the government buys foodgrains and builds up a reserve to meet shortages. The actual stocks to be maintained depends on a variety of factors like population growth, demand for foodgrains, supply conditions etc. The limits of buffer stock are revised taking, into account the economic situation and government's policy. This operation helps the government to meet emergency situations and also ensure adequate supply of foodgrains throughout the year. The foodgrains stock for buffer stock as on 1st July, 2018 was 65 million tonnes. This stock was estimated to be quite sufficient to meet the requirements of the economy.

3. **Public distribution system**: Under the public distribution system, essential items are provided by the government to the people at subsidised prices. Till 1997 it was made available to all the people. In 1997, the government introduced the Targetted Public Distribution System. (TPDS). Under TPDS only the poor people living below the poverty line are given foodgrains at subsidised rates. This system aims at providing the essential items only to the poorest of the poor. Both Central and State governments are involved in implementing the system. 5.33 lakh fair price shops have been operational to implement the TPDS. Further the Decentralised procurement scheme has been adopted by some state governments to improve the efficiency of the public distribution system.Moreover an Online Procurement Monitoring system has been put in place to disseminate procurement information.Efficiency and transparency is also enhanced by using technology and digital intervention.

4. **Warehousing facilities**: The government built warehouses to help farmers store their produce and sell it later when there is a market for it, thus improving storage facilities. Distress sales are less likely as a result. In 1957, the Central Warehousing Corporation was founded. The Food Corporation of India maintains several warehouse locations.

To enhance the storage facilities, State Warehousing Corporations have also been established.

5. **National Crop Forecasting Centre**: The National Crop Forecasting Centre was established in 1999 to forecast the fluctuations in the prices of agricultural goods. Such forecasts enable the government to intervene in the market at the right time and avoid undue fluctuations in prices.

6. **Price Monitoring Board**: This Board was specially set up in 1999 to monitor the prices of essential goods. It also advises the government the initiatives to be taken to control price fluctuations.

7. **Support services to the farmers**: Farmers are given access to many forms of support services, such as marketing and financial facilities. Many states have created regulated markets, which are organized marketplaces that aid in minimizing farmer exploitation, as a means of facilitating efficient marketing. Under priority lending easy credit facilities are provided by commercial banks. These measures help the farmers to avoid distress sale.

8. **Market Intervention Scheme (MIS)**: The MIS is undertaken by the Department of Agriculture and Cooperation as per the request of State governments and Union Territory. MIS is specifically concerned with the procurement of perishable commodities like fruits, vegetables etc. It helps the farmers to avoid distress sale especially when there is a bumper crop.NAFED is the nodal agency for MIS.

9. **Price Support Scheme (PSS)**: PSS is implemented by the Department of Agriculture and Cooperation throughNAFED. Under this scheme procurement of oilseeds, pulses and cotton is undertaken when their prices fall below the minimum support price and it is continued till prices stabilise.

Apart from the above measures, the government has also taken measures like import of foodgrains, state trading, stringent action against hoarding and black-marketing etc. to stabilise prices of agricultural goods.

7.5 QUESTIONS

1. Explain in detail agricultural productivity in India.
2. Critically examine Land reforms in India.
3. Discuss various technological changes in Indian agriculture.
4. Write an explanatory note on Agricultural Price Policy in India.

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8

THE AGRICULTURAL SECTOR-II

Unit structure :

8.0 Objective

8.1 Terms of trade between Agriculture and Industry

8.2 Agriculture finance

8.3 Agriculture Marketing

8.4 National Agricultural Policy

8.5 Questions

8.0 OBJECTIVES

- To know the terms of trade in agriculture
- To understand the structure of agriculture finance
- To know the problems of agriculture marketing
- To analyse the problems of sustainable growth

8.1 TERMS OF TRADE BETWEEN AGRICULTURE AND INDUSTRY

Terms of Trade (ToT) in simple terms refers to the ratio of the prices at which a country sells its exports to the prices at which it buys its imports**.** In an economic context, TOT refer to the relationship between how much money a country pays for its imports and how much it earns from exports. It is expressed as a ratio of import prices to export prices.

ToT for Indian agriculture refers to the movement in prices of farm commodities relative to non-farm goods and services. Terms of trade refers to ratio of agricultural prices to industrial prices measured as price indices.

For agriculture, ToT compare the price farmers get for their agricultural products (like wheat, rice) against the prices of the goods and services they need to pay (like for machinery, fertilizers).

For farmers and agricultural laborers, Terms of Trade measure how much they are earning from their crops and labor, when compared against the costs of essential items like food and tools.

This metric reflects whether they are making more money from their work than they spend on daily needs. Favorable Terms of Trade occur when these earnings surpass their expenses.

8.1.1 Significance of Terms of Trade

1. **Economic Indicator:** ToT shows a country's economic strength. Better ToT means earning more from exports than spending on imports, leading to a stronger economy.

2. **Living Standards:** For individuals, especially in sectors like agriculture, favorable ToT can mean higher income from their produce, which can improve their living standards. Conversely, unfavorable ToT can lead to reduced income and lower standards of living.

3. **Income Distribution:** In the agricultural context, ToT affects income distribution within the economy. If farmers are getting better prices for their products, it can lead to a more equitable distribution of income, benefiting rural communities.

8.1.2 Social and Economic impact of Terms of Trade

1. **Impact on Marginalized Communities:** The rise in ToT benefited agricultural laborers, primarily from Dalit, Adivasi, and Most Backward Classes, historically at the socioeconomic bottom.

2. **Economic Growth and Labor Opportunities:** Growth in the wider economy around 2003-04 opened up non-agricultural jobs, particularly in construction and urban services, impacting labor availability in agriculture.

3. **Tightening of labor markets:** Initiatives like the Mahatma Gandhi National Rural Employment Guarantee Act and public distribution systems contributed to the tightening of labor markets and improvement in laborers' wages and ToT.

4. **Challenges for Farmers:** Farmers have been under **financial pressure due to rising labor and input costs**. Despite government support through subsidies and MSP, their Terms of Trade (ToT) have not shown significant improvement, remaining largely stagnant. This increased demands from agrarian communities like Marathas, Jats, and Patidars for government job reservations and educational benefits.

8.2 AGRICULTURE FINANCE

Finance is essential requirement for every productive activity. In India. There is an immense need of proper agricultural credit as Indian farmers are very poor. Financial requirements of the farmer can be classified on the basis of time period on the basis of purpose

On the basis of time, they required the following types of financial assistance

Short-term credit: short-term loans are for the period of 15 months. They are provided by the cooperative credit bank and money lenders. Such loans are required for the purchase of seats, fertilisers, labour charges etc

Medium term. These loans are for the period up to 5 years. These are the financial requirements to make improvement online buying cattle or agriculture equipments, digging up of canals etc

Long-term, these loans are for the period of more than five years and are generally required to buy additional land or tractor or making permanent improvement on land

On the basis of purpose, the credit requirements of the farmers are as follows

Productive purpose it refers to the loan that are required for the cultivation of land and to buy necessary inputs

Consumption purpose agriculture is a seasonal occupation during the off-season. Farmers need funds for their consumption purpose.

Unproductive purpose when the loans are demanded for unproductive purpose like performing rites and rituals functions, it is said to be unproductive in nature

8.2.1 SOURCES OF AGRICULTURAL FINANCE

The main source of finance for the farmers are divided into two categories, non-institutional and institutional

(A) Non-institutional sources

1. Money lenders

From the very beginning money, lenders have been advancing. A major share of farm credit money lenders are of two different types, professional money, lenders and agriculturist money lenders. These money lenders were supplying a major portion of agricultural credit and indulge into practises like manipulation of accounts and exorbitant rate of interest on their loan.

Traders and commission agent

2. **Traders and commission agent** are also advancing loan to the agricultural for productive purposes before the maturity of crop and then force the farmers to sell their crops at very low prices and charge heavy commission. This type of loan are mostly advanced for cash crops. The share of these traders in farm credit increase gradually and sharply declined in the recent years

3. **Relatives** Cultivators are also normally borrowing fund from their own relatives in times of their crisis both in terms of cash or kind. These loans are kind of informal loans and carrying no interest and are normally returned. After harvest. The importance of this source of credit is also declining as its share of agriculture credit has already declined.

(B) Institutional sources

The main source here are commercial banks, corporative credit Society, regional rural bank and NABARD. The institutional sources have increased their participation in rural credit considerably over a period of time. Due to this, the dependence of farmers on non-institutional sources has declined considerably. The role of the various institution in agriculture finance is as follows.

1. Commercial banks

In the initial years of planning, the contribution of commercial banks was very less. They were very hesitant to finance agricultural operation operation as it was considered as a risky venture due to its dependence on monsoon. However, after nationalisation of 14 major banks credit provided by the commercial banks to the agriculture has increased significantly, the number of branches in rural areas increase considerably. They have helped the farmers to adopt new agricultural strategy and enable the process of modernisation of agriculture.

While providing finance to agriculture they face variety of problem such as they could not maintain the quality of lending due to expansion and diversification. They have to maintain large number of small advances which are time consuming and not cost-effective. The recovery position of commercial banks is very bad and there are large number of overdue, there is no coordination between various commercial banks.

2. Cooperative credit societies

They provide short term and long-term credit. The short-term credit structure is based on three Aure at village level. The primary agricultural credit society provide credit to the farmers. They can formed by any 10 or more than 10% at the second year. They are central cooperative banks at the district level they provide loans to primary credit society year the state cooperative banks are present. It provides loans to central cooperative and coordinates and regulates their working.

The long-term requirements of farmers are taken care by theprimary cooperative, agricultural and rural development band which operate at primary level and the state cooperative, agricultural and rural development banks at the state level

Let commercial banks they also suffer from low productivity, poor recovery and lack of professional management management

3. Regional rural bank

These banks were established by the government as per the recommendation of working group on rural banks. The main objective was to have small and marginal farmers. Landless labourers and artisans. Five RRB were started in 1975 and it increased up to 196 RRB over the period of time at present, there are 56 RRB

Like commercial and cooperative even RRB faces Following constraints like their capital is contributed by central government state government and also by the commercial bank which sponsors it. Hence it is controlled by main agency. Even the recovery position of RRB is not satisfactory and many RRB have incurred a substantial loss, they are not managed efficiently

4. Micro finance institutions

In 1992, the RBI and NABARD encourage commercial banks to link up with NGO to establish and finance self-help group of the poor. The RBI has included self help group under the priority sector lending. At present there are three groups of SHG. SHG form the financed by banks, and form by other formal agencies, but finance by banks. And SHGs financed by banks using NGOs and other agencies. These institution provides small loans to the poor at low interest rates without collateral.

There are various advantages of microfinance schemes that it is cost effective way of financing rural poor that it reduces cost of borrower as well as lenders.

5. NABARD national bank for agricultural and rural development

It is the Apex bank for rural credit and development. All functions performed by the RBI are related to rural finance and were taken over by NABARD. The share capital of Nabha was contributed by the government of India and RBI. It is an all India apex refinancing agency. It has the objective of strengthening the credit structure of agriculture and rural development.

8.2.2 NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT (NABARD)

NABARD was established in July 1992 as an apex institution to coordinate the activities of organizations engaged in the area of rural credit. It took over from RBI all the functions that the latter performed in the field of rural credit. It is designed specifically to provide undivided attention and focus to the credit problems of rural sector. As an apex bank it is involved in refinancing credit needs of major financial institutions in the country engaged in offering financial assistance to agriculture and rural development operations and programmes. The functions of NABARD can be divided into three categories:

1. Credit Functions

This activity involves framing policy and guidelines for rural financial institutions, providing credit facilities to issuing organizations such as commercial banks, cooperatives etc. and monitoring the flow of ground level rural credit. As stated earlier, NABARD doesn't directly deal with farmers and other rural people. It provides refinance facilities in terms of short-term loans for crops, marketing and other working capital requirements, medium-term and long-term credit to cooperatives for

investment purposes including rural infrastructure. The loans are also provided to the state government for investment in cooperatives.

2. Developmental and Promotional Measures

In order make credit more productive, NABARD has been undertaking a number of developmental and promotional activities such as to provide help to cooperative banks and Regional Rural Banks to prepare development actions plans for themselves, enter into MoU with state governments, cooperative banks and RRBs to improve the affairs of banks, provide financial assistance to cooperatives and Regional Rural Banks for establishment of technical, monitoring and evaluations cells

3. Supervisory Functions

NABARD has been sharing with the Reserve Bank of India certain supervisory functions in respect of cooperative banks and Regional Rural Banks (RRBs). NABARD has been entrusted with the statutory responsibility of conducting inspections of State Cooperative Banks (SCBs), District Central Cooperative Banks DCCBs) and Regional Rural Banks (RRBs) under the provision of the Banking Regulation Act, 1949. In addition, NABARD has also been conducting periodic inspections of state level cooperative institutions such as State Cooperative Agriculture and Rural Development Banks (SCARDBs), Apex Weavers Societies, Marketing Federations, etc. on a voluntary basis.

The objectives of periodic inspections is to protect the interest of the depositors, to ensure banks work according to the rules and regulation issued by Government and to examine the financial soundness of the banks.

8.2.3 PROBLEMS OF RURAL CREDIT

The major problems which are being met by the farmers in the receipts of rural credit from the institutional sources are summarized below:

1. Less Flow of Credit to Small Farmers

There are millions of small farmers throughout the country. In spite of expansion of institutional rural credit, the gain has reached more to the big landlords. It is therefore, an urgent need that the credit should reach the small farmers who are the backbone of agricultural industry.

2. Complicated Procedure for Advancing Loans

At present, the procedure for advancing loans by institutional sources is quite complicated. The loans are advanced to the farmers on the basis of pass books which contain the details of land owned by the farmers. The procedure is quite complicated.

3. Delay in the Disbursement of Credit

The procedure involved for advancing loans to the farmers is cumbersome.

Who-so-ever succeeds in completing the documents are entitled to receive loans. It has been observed that the disbursement of credit is farmers are after it has been approved. It is a serious problem which the farmers are facing these days.

4. High interest Rate

The interest charged by the various institutions on farm credit is high. The low income farmers cannot bear it. As regards the interest-free loans, they are not reaching the small deserving farmers. These loans are being misused on large scale through proxy loaning, family loaning and paper loaning.

5. Number of Bad Debts is increasing

The loans advanced particularly to the big landlords are not being repaid to the institutions. Since the big landlords have political influence, they therefore manage to get them written off.

6. Reaching the Small Farmers is Expensive

The financial institutions which provide rural credit avoid to advance loans to the small farmers. It is because of the fact that the procedure involved in advancing loans is cumbersome, complicated and expensive.

7. Provision of Loans for Marketing Storage, Processing of Agricultural Produce

The various financial institutions are trying to provide loans to the farmers mostly for the purchase of seeds, fertilizers, pesticides, tractors, etc. There is a considerable need to provide loans for marketing, storage and processing of agricultural produce.

8.3 AGRICULTURE MARKETING

Marketing is the process whereby the producer and the consumer are brought together. It serves as a link between the consumers and the producers. A good marketing system enables the consumers to get agricultural goods and reasonable prices and at the same time ensures fair returns to the producer.

Agricultural goods in India are marketed by the following ways:

1. **Village markets:** Many farmers sell their output in the local markets. The local markets are known as a 'Shanties' in South India and 'Bazar' in North India. The Village Panchayats help to organise the local markets.

2. **Agricultural fairs:** Farmers market their produce in 'fairs' or melas organised by a cluster of villages. Even cattle are exchanged in these fairs.

3. **Wholesale markets:** Here goods are traded in bulk. It-provides various services related to marketing like grading and standardisation, storage etc. The big farmers generally benefit from the wholesale market as they have a substantial marketable surplus.

4. **Cooperative marketing:** Under this system the farmers in a village join together and provide goods directly to the consumers. This system is said to be the most suitable one asit avoids middlemen and ensures a fair price for both the producer and the consumer.

5. **Regulated markets:** These markets are organised by the government. They function under the rules and regulations fixed by the government. Such markets help to avoid a variety of malpractices involved in agricultural marketing.

6. **State Trading:** This refers to the trading of agricultural goods by the government. Special agencies like the Food Corporation of India undertakes the function on behalf of the government.

8.3.1 PROBLEMS OF AGRICULTURAL MARKETING:

1. **Inadequate storage:** The warehousing facilities are inadequate and facilities that are available are not scientific.The farmers keep their output in earthen pots, in pits, in bullock carts etc. They are exposed to the weather and there is considerable wastage. It has been estimated that nearly 1/3rd of the produce every year becomes unfit for human consumption. Due to inadequate facilities, farmers do not have the holding capacity. Hence, they try to dispose the output at the earliest and in the process, they do not get a fair price.

2. **Lack of grading and standardisation:** The different varieties of agricultural output are not graded properly. Farmers generally heap together the various categories and sell as one category. The farmers who produce quality goods do not get a fair, price. Hence, there is no incentive to use better seeds and produce better products.

3. **Inadequate transport facilities:** These facilities are grossly inadequate. There are so many parts of the country untouched by rail or pakka road; some places do not have even kutcha roads. Water transport is also underdeveloped.Most of the roads are kutcha roads. Hence, farmers have to use only slow moving vehicles. Farmers find it difficult to transport the output to the nearby markets and in the case of perishable goods; the problem is all the more severe. During rainy season, kutcha roads become muddy and therefore farmers find it very difficult to transport the output to the market and he mostly sells it in the local market at a lesser price.

4. **Presence of a large number of middlemen:** The number of middlemen in the marketing system is very large and the share of the farmer is reduced substantially. A study reveals that in the case of rice a farmer gets only 53% of the price. In the case of vegetables and fruits, he gets only 39% and 34% respectively. Between the farmer and

the final consumer and number of middlemen like village traders, brokers, wholesalers, retailers etc. are present. Due to this chain of middlemen, both the producer and the consumer are affected.

5. **Malpractices in unregulated markets:** A number of unregulated markets exist in India. The traders in the market are called Arhatiyas. They take advantage of the illiteracy and ignorance of the farmers and exploit them in a number of ways. A variety of charges are imposed by them and they vary from person to person. They also use wrong weights and measures. The poor farmers are cheated in a number of ways in these markets.

6. **Inadequate market information:** Farmers are neither fully posted nor supplied with correct information about market prices, demand, international trends, government policies etc.There is no proper agency to disseminate information relating to the markets to the farmers. The poor farmers generally obtain information from the local traders and moneylenders.It is generally wrong and biased in favour of the purchasers.

7. **Inadequate credit facilities:** The financial facilities available with the farmers are inadequate. Due to their poverty, they lack staying power. They try to dispose-off their output as soon as the harvest is over. The non-availability of timely credit forces the farmers to depend on the moneylenders to charge a very high rate of interest and pushes the farmers to severe indebtedness.

8. **Marketing under adverse circumstances:** The prevailing marketing system helps only the big farmers as they have a huge surplus to sell. The poor farmers who constitute a majority have a small marketable surplus. They do not have the capacity to hold their output for a long time. They are also pressurised by the moneylenders for the payment of loans.

All these factors force the farmers to indulge in distress sale.

8.3.2 REMEDIAL MEASURES: To solve the problem of agriculture marketing during the planning era, the government has taken a number of measures to improve the system of agricultural marketing. The various measures taken by the government are as follows:

1. **Organisation of regulated markets:** They have been started to protect the farmers from exploitation. The regulated markets are managed by a market committee. The committee consists of nominees of the state government, local bodies, arhatiyas, brokers and farmers. The term of the committee is fixed for a specific period. The committee performs various functions which includes:

(a) Fixation of various charges,

(b) Prevention of malpractices,

(c) Enforcing the use of proper weights and measures,

(d) Providing market information and

(e) Settling disputes.

2. **Grading and standardisation:** To provide this facility the Government passed the Agricultural Produce (Grading and Marketing Act) in 1937. Initially, few goods were graded andat present nearly 162 commodities are graded. A central quality control laboratory has been setup at Nagpur. A number of regional quality control, labs have also been established. Samples of important products are obtained and their properties are analysed in these labs. On this basis grades are given and the quality goods are given the AGMARK (Agricultural Marketing) seal. At present AGMARK is given to a number of commodities like rice, wheat, butter, jaggery, pulses, honey etc.

3. **Use of standard weights and measures :** The Government passed the Standard Weights Act in 1939. Under this, all traders have been asked to use proper weights and measures.

   In 1958, Central Government adopted the metric system of measures and this has introduced uniformity in the use of weights and measures throughout the country.

4. **Warehousing facility:** To enable the farmers to get a fair price, to improve their staying power, enough storage facilities are required. The rural credit survey committee appointed in 1954 recommended a 3-tier storage system at the national level, state and district level and village level. The Government accepted the recommendation and established the Central Warehousing Corporation in 1957. Then a number of State Warehousing Corporations have also been established. Even at the village, level efforts have been made to improve the godown and storage facilities.

5. **Dissemination of market information:** The Government uses the media to provide information to the farmers. All India Radio and Doordarshan provide the trends on market prices and also organise special programmes and talks related to marketing. The newspapers also provide ample information about supply, prices etc. Through internet, information about prices, stocks, other market related information is provided to the agricultural markets.

6. **Market inspection, research and training:** The Govertorate has taken steps to attend these requirements. The Directorate of Marketing and Inspection was setup by the Government to advise the central and state governments on problems of agricultural marketing. It co-ordinates the marketing activities of various agencies.

7. **Stabilisation of prices:** The Government announces minimum support prices for various agricultural goods to ensure fair return to the farmers. A Commission for Agricultural Costs and Prices recommends the price policy to the Government. The Government buys foodgrains from the farmers at the procurement price suggested by the

Commission. It sells the foodgrains to the consumers at subsidised prices through the PDS. Through this, the Government tries to protect both the producers and the consumers.

8. **National Institute of Agricultural Marketing:** It was established in 1988. Earlier it was known as Centre for Agricultural Marketing. It aims at:

- Improving agricultural marketing infrastructure through research, consultancy services and teaching.
- Designing and conducting training programs for personnel and enterprises.
- Undertaking research to develop better management techniques.
- Offering education programmes in agricultural marketing.

9. **Cooperative Marketing:** Cooperative marketing system is said to be the best solution for the problems of agricultural marketing in India. Under this system, the farmers in a village join together and provide goods directly to the consumers. This system has been encouraged by the government since the second five year plan. It operates at a three tier level namely primary cooperative marketing societies at the village level, central marketing societies at the district level and state marketing societies at the state level.

8.4 NATIONAL AGRICULTURAL POLICY

The National Agricultural Policy deals with policy measures with respect to sustainable agriculture, investments in agriculture, food and nutritional security, generation and transfer of technology, incentives for agriculture, investments in agriculture, institutional reforms, risk management and management reforms.

The Government of India announced a National Agricultural policy on July 28, 2000. The National Policy on Agriculture aims to open up the untapped growth potential of India agriculture, strengthen rural infrastructure to support faster agricultural development, promote value addition, accelerate the growth of agro business, create employment in rural areas, secure a fair standard of living for the farmers and agricultural workers and their families and discourage migration to urban areas. The policy also contains measures to face the challenges arising out of economic liberalization and globalization. Over the next two decades, it aims to attain.

1. A growth rate in excess of 4% per annum in the agricultural sector.
2. Growth which is based on efficient use of resources and conserves our soil, water and bio-diversity.
3. Growth with equity and growth which is widespread across the regions and farmers.

4. Growth that is demand driven and caters to the domestic markets and maximizes benefits from exports of agricultural products in the face of the challenges arising from economic liberalization and globalisation.

5. Growth that is sustainable technologically environmentally and economically.

8.4.1 THE SALIENT FEATURES OF THE NEW AGRICULTURAL POLICY ARE :

1. Sustainable Agriculture

The policy will seek to promote technically sound, economically viable, environmentally non-degrading, and socially acceptable use of country's natural resources - land, water and genetic endowment to promote sustainable development of agriculture.

Measures will be taken to contain biotic pressures on land and to control indiscriminate diversion of agricultural lands for non-agricultural purposes. The unutilized wastelands will be put to use for agriculture and afforestation. Particular attention will be given for increasing cropping intensity through multiple-cropping and inter-cropping.

2. Food and Nutritional Security

Special efforts will be made to raise the productivity and production of crops to meet the increasing demand for food generated by unabated demographic pressures and raw materials for expanding agro-based industries. A regionally differentiated strategy will be pursued, taking into account the agronomic, climatic and environmental conditions to realize the full growth potential of every region. Special attention will be given to development of new crop varieties, particularly of food crops, with higher nutritional value through adoption of bio-technology particularly genetic modification, while addressing bio-safety concerns.

3. Generation and Transfer of Technology

To modernize agriculture, agricultural research is emphasized by the newpolicy. The steps indicated are:

(a) Improved variety of seeds which are location specific will be developed on a priority basis.

(b) Research in different regions will be based on the agro-climate zones.

(c) Extension services are very vital for strengthening agricultural research. As per the new policy, the extension system would be strengthened by introducing suitable reforms and by making it more decentralized.

(d) Empowerment of women and their access to land and inputs will be given attention.

4. Inputs Management

Adequate and timely supply of quality inputs such as seeds, fertilizers, plant protection chemicals, bio-pesticides, agricultural machinery and credit at reasonable rates to farmers will be the endeavour of the Government. Soil testing and quality testing of fertilisers and seeds will be ensured and supply of spurious inputs will be checked.

Balanced and optimum use of fertilizers will be promoted together with use of organic manures and bio-fertilizers to optimize the efficiency of nutrient use.

Integrated pest management and use of biotic agents in order to minimize the indiscriminate and injudicious use of chemical pesticides will be the cardinal principle covering plant protection. Selective and eco-friendly farm mechanization through appropriate technology will be promoted, with special reference to rainfed farming to reduce arduous work and to make agriculture efficient and competitive as also to increase crop productivity.

5. Incentives for Agriculture

The Government will endeavour to create a favourable economic environment for increasing capital formation and farmer's own investments by removal of distortions in the incentive regime for agriculture, improving the terms of trade with manufacturing sectors and bringing about external and domestic market reforms backed by rationalization of domestic tax structure. It will seek to bestow on the agriculture sector in as many respects as possible benefits similar to those obtaining in the manufacturing sector, such as easy availability of credit and other inputs, and infrastructure facilities for development of agri-business industries and development of effective delivery systems and freed movement of agro produce.

The structure of taxes on foodgrains and other commercial crops will be reviewed and rationalized. Similarly, the excise duty on materials such as farm machinery and implements, fertilizers, etc., used as inputs in agricultural production, post harvest storage and processing will be reviewed. Appropriate measures will be adopted to ensure that agriculturists by and large remain outside the regulatory and tax collection systems.

Farmers will be exempted from payment of capital gains tax on compulsory acquisition of agricultural land.

6. Investments in Agriculture

The agriculture sector has been starved of capital. There has been a decline in the public sector investment in the agriculture sector. Public investment for narrowing regional imbalances, accelerating development of supportive infrastructure for agriculture and rural development particularly rural connectivity will be stepped up. A time-bound strategy

for rationalisation and transparent pricing of inputs will be formulated to encourage judicious input use and to generate resources for agriculture. Input subsidy reforms will be pursued as a combination of price and institutional reforms to cut down costs of these inputs for agriculture. Resource allocation regime will be reviewed with a view to rechannelizing the available resources from support measures towards assets formation in rural sector.

A conducive climate will be created through a favourable price and trade regime to promote farmers' own investments as also investments by industries producing inputs for

7. **Institutional Structure**

Indian agriculture is characterized by pre-dominance of small and marginal farmers. Institutional reforms will be so pursued as to channelize their energies for achieving greater productivity and production. The approach to rural development and land reforms will focus on the following areas:

- Consolidation of holdings all over the country on the pattern of north-wester States;
- Redistribution of ceiling surplus lands and waste lands among the landless farmers, unemployed youth with initial start-up capital;
- Tenancy reforms to recognize the rights of the tenants and share croppers;
- Development of lease markets for increasing the size of holdings by making legal provisions for giving private lands on lease for cultivation and agri-business;
- Updating and improvement of land records, computerization and issue of land pass-books to the farmers, and
- Recognition of women's rights in land.

The rural poor will be increasingly involved in the implementation of land reforms with the help of Panchayati Raj Institutions, Voluntary Groups, Social Activists and Community Leaders.

Private sector participation will be promoted through contract farming and land leasing arrangements to allow accelerated technology transfer, capital inflow and assured markets for crop production, especially of oilseeds, cotton and horticultural crops.

8. Risk Management

Despite technological and economic advancements, the condition of farmers continues to be unstable due to natural calamities and price fluctuations. National Agriculture Insurance Scheme covering all farmers and all crops throughout the country with built-in provisions for insulating

farmers from financial distress caused by natural disasters and making agriculture financially viable will be made more farmer-specific and effective. Endeavour will be made to provide a package insurance policy for farmers, right from sowing of crops to post-harvest operations, including market fluctuations in the prices of agricultural produce.

In order to reduce risk in and impart greater resilience to Indian agriculture against droughts and floods, efforts will be made for achieving greater flood-proofing of flood prone agriculture and drought-proofing of rainfed agriculture for protecting farmers from vagaries of nature. For this purpose, contingency agriculture planning, development of drought and flood resistant crop varieties, watershed development programmes, drought prone areas and desert development programmes and rural infrastructure development programmes, will receive particular attention.

9. Management Reforms

Effective implementation of policy initiatives will call for comprehensive reforms in the management of agriculture by Central and State Governments. Central Government will supplement/complement the State Governments' through regionally differentiated

8.5 QUESTIONS

1. Explain the meaning and significance of Terms of Trade between agriculture and industry in Indian economy.

2. Discuss the various types of agricultural finance in India.

3. Explain the problems of agricultural marketing and remedial measures to solve these problems in India.

4. Write a note on Anational Agricultural Policy 2000.

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