Module -I

1

TRENDS IN INDIA'S NATIONAL INCOME AND PCI

Unit Structure:

1.0 OBJECTIVES

- To study the meaning of national income.
- To study the various concepts of national income.
- To study the trends in India's national income since 1990.
- To study the trends in per capita income since 1990.
- To study the structural changes in Indian economy.

1.1 INTRODUCTION

National income measures the money value of goods and services produced by a country during a given year. National income is usually expressed in the form of Gross National Product (GNP) or Gross Domestic Product (GDP). GDP is the money value of all the goods and services produced within the economy. When the net foreign income is added to the GDP, we have the GNP. GDP and GNP can be measured either at current prices or at constant prices. The national income prices reveals the real growth rate of an economy. The growth of national income requisite for economic development.

1.2 BASIC INFORMATION ABOUT NATIONAL INCOME

In India, a systematic measurement of national income was first attempted in 1949. Earlier, many attempts were made by some individuals and institutions. The earliest estimate of India's national income was made by

DadabhaiNaoroji in 1867-68. Since then many attempts were made, mostly by economists and the government authorities to estimate India‘s national income These estimates differ in coverage, concepts and methodology and are not comparable. Besides, earlier estimates were mostly for one year, only some estimates covered a period of 3 to 4 years. It was therefore not possible to construct a consistent series of national income and assess the performance of the economy over a period of time.

In 1949, a National Income Committee (NIC) was appointed with P.C. Mahalnobis as its Chairman, and Dr. D.R. Gadgil and V.K.R.V. Rao as members. The NIC not only highlighted the limitations of the statistical system of that time but also suggested ways and means to improve data collection systems. On the recommendation of the Committee, the Directorate of National Sample Survey was set up to collect additional data required for estimating national income. Besides, the NIC estimated the country’s national income for the period from 1948-49 to 1950-52. In its estimates, the NIC also provided the methodology for estimating national income, which was followed till 1967.

In 1967, the task of estimating national income was given to the Central statistical Organization (CSO). Till 1967, the CSO had followed the methodology laid down by the NIC. Thereafter, the CSO adopted a relatively improved methodology and procedure which had become possible due to increased availability of data. The improvements pertain mainly to the industrial classification of the activities. The CSO publishes its estimates in its publication, Estimates of National Income.

Concepts of National Income

1. Gross Domestic Product (GDP):

GDP refers to the value of final goods and services produced within the country in a, particular year. GDP is different from GNP. A part of GNP may be produced outside the country For example the money earned by the lndian’s working in USA is a part of India's GNP But it is not a part of GDP since they are earned abroad. Therefore the boundaries of GNP are determined by the citizens of a country whereas the boundaries of GDP are determined by the geographical limits of a country. It is also clear that the difference between GDP and GNP is due to the "net revenue from abroad." If the citizens of a country are earning more from abroad than foreigners are earning in that country, GNP exceeds GDP If the foreigners in the country are earning more than its citizens are earning abroad, GNP is less than GDP.

2. Net National Product :

This is a very important concept of national income. In the production of gross national product, during a year, some capital is used up or consumed i.e. equipment, machinery etc. the capital goods wear out or undergo depreciation. Capital goods fall in value due to its use in production process. By deducting the charges for depreciation from the gross national product, we get the net national product. It means the market value of all

the final goods and services after providing for depreciation. It is called national income at market prices. In other words, net national product is the total value of final goods and services produced in the country during a year after deducting the depreciation, plus net income from abroad.

3. Net Domestic Products:

NDP is obtained by subtracting the depreciation from the GDP. NDP differs from MNP due to the net income from abroad. If the net income from abroad is positive, NDP will be less than NNP If the net income from abroad is negative, NDP will be greater than NNP NDP is also calculated either at market price or at factor cost.

National Income at Factor Cost:

It means sum total of all income earned by resource suppliers for their contribution of land, labour, capital and entrepreneurial ability which go into the years net production. National income at factor cost shows how much it costs society In terms of economic resources to produce the net output. We use the term national income for the national income at factor prices.

National Income at factor cost = Net national product (National Income at market prices) - (indirect taxes +Subsidies).

4. Personal income:

It is the sum of the income actually received by individuals or households during a given year. Personal incomes earned are different from national income. Some incomes which are earned such as social security contributions corporate income taxes and undistributed corporate profits are not actually received by households. In the same manner, some incomes which are received like transfer payments are not currently earned ex Old age pension, unemployment compensation, relief payments interest payments etc. To get personal income from national we must subtract from National income the three types of incomes which are earned but not received and add incomes that are not currently earned, Personal income = N.I. - Social Security - contributions - corporate income taxes -undistributed corporate profit + Transfer Payments**.**

5. Disposable Income:

The personal income which remains after payment of taxes to the government in the form of income tax, personal property tax etc., is called disposable income. Disposable income = Personal Income - Personal Taxes. An individual can decide to consume or save the disposable income as he wishes.

1.3 TRENDS IN INDIA'S NATIONAL INCOME SINCE 1990

The Central Statistical Organization (CSO) has changed the base year of calculate of national income at constant prices from 1993-94 to 1999-

2000. The base year is revised to 2004-05 prices. The trends in national income, in terms of GDP at factor cost, are shown in Table 1.1 the national income of the country (GDP at factor cost) at current prices increase from Rs. 9,719 crore in 1950- 51 to Rs. 71,57,412 crores in 2010-11 that is by 736 times increase in national income at current prices is largely on account of rise in prices.

Table 1.1

Gross Domestic Product at Factor Cost

Sr. No.	Financial Year	Gross Domestic Product at Current Prices (In Rupees)	Gross Domestic Product at Constant Prices (In Rupees)
1.	1950-51	9719	224786
2.	1990-91	515032	1083572
3.	2010-11	7157412	4885954

(**Source:** Economic Survey 2011-12)

The national income at constant prices shows the real increase in national income, the increase in the production of goods and services. The GDP at factor cost at prices increased from Rs. 2,24,786 crore in 1950-51 to Rs. 48,85,954 crore in 2010-11, only by 22 times during the period 1950-51 to 2010-11.

1.4 TRENDS IN PER CAPITA INCOME (PCI) SINCE 1990

Per capita income is one of the important indicators of the 'Human Development Besides other things, it shows an increase in the standard of living. Traditionally the of per capita income has been regarded as a summary indicator of the economic well of the country. The trends in per capita income are shown in Table 1.2. The per capita at constant prices increased only by 6.3 times during the period 1950-51 to 2010-11.and Rs. 5,708 in 1950-51 to Rs. 35,993 in 2010-11.

The rise in per capita income has been very slow as compared to rise in real income. Poor growth rates coupled with rapid increase in population are the main for such dismal performance.

Table 1.2

Per Capita NNP at Constant Prices

Sr. No.	Financial Year	Per Capita NNP at Constant Prices (In Rupees)
1.	1950-51	5708
2.	1990-91	11535
3.	2010-11	35993

(**Source:** Economic Survey 2011-12)

1.5 STRUCTURAL CHANGES IN INDIAN ECONOMY

The different sectors have been grouped under three heads, namely, Agriculture and allied activities, Industry and services. The share of GDP originating from agriculture and allied activities has steadily declined, while that originating from industry and services sectors has increased. These changes show that Indian economy has transformed from the production structure of a backward economy to that of developing economy.

Table 1.3

Percentage Share of Different Sectors in GDP at Cost

(At Constant 2004-05 Prices)

Sr. No.	Sector	1950-51	1990-91	2010-11
1	Agriculture and Allied	56.1	33.3	16.8
2	Industry	14.4	24.1	25.6
3	Services	29.5	42.6	57.6
Total		**100.00**	**100.00**	**100.00**

Source: Economic Survey 2011-12

1. Decreasing Share of Agriculture and Allied Activities:

Agriculture has been a way of life and continuous to be the single most important livelihood of the masses Agriculture and allied activities include agriculture, forestry and fishing, mining and quarrying. The share of agriculture and allied activities has declined from about 56 % in 1950-51 to 33.3 % in 1990-91 and further to about 17% in 2010-11. The gap between the growth of agriculture and non-agriculture sector started to widen since 1996- 97 because of acceleration in the growth of industry and service sectors. The continuous fall in the share of agriculture and allied activities in the GDP is partly due to the high growth in other sectors in the economy and partly to the low growth in this sector especially agriculture. During the Ninth and Tenth Five Year Plans agricultural sectoral growth rate was 2.44% and2.3% respectively compared to 4.72% during the 8 th Plan. During the Eleventh Plan agricultural growth is estimated at 3.28 % against the target of 4%. Low investment, imbalance in fertilizer use, low seeds replacement rate, a distorted incentive system, low post harvest value addition and erratic rainfall continued to affect the performance of agricultural sector.

2. Rising Share of Industry:

`The share of industry comprising manufacturing, construction, electricity, gas and water supply has steadily increased from 14.4 percent of GDP in 1950-51 to 24 percent in 1990-1991 and further to 25.6 % in 2010-11 (see Table 1.7). Industrial sector is comprised of manufacturing, construction,

electricity, gas and water supply. The near stability of the share of industry in GDP indicates that the potential of this sector has not yet been fully exploited. The manufacturing is the most dominant sector within industry. The share of manufacturing in GDP remained in the range of 14-16 % during the post-reform period between1991-92 and 2011-12. The industrial sector is open to international trade environment and rapid technological change. Thus, this sector is required to be innovative and competitive.

3. Increasing Share of Services:

The services sector comprises of three components, i.e., (i) Trade, hotels, transport and communication; (ii) Financing insurance, real estate and business services; and (iii) Public administration, defense and other services. The share of services increased steadily from 29.5 percent of GDP in 1950-51 to 42.6 percent in 1990-91 and further to about 57.6 percent in 2010-11. Services sector has acted as the important engine of overall growth of Indian economy for more than a decade. The Indian economy has successfully navigated the difficult years of the recent global economic crisis because of the vitality of this sector in the domestic economy.

4. Increasing Share of sub-sectors in the Services:

The services sector is composed of three components and their share in the GDP have increased. This is given in Table 1.8.

a) Share of trade, hotels, transport and communication: Their share in GDP have increased from 11.3 percent in 1950-51 to 27.2 percent in 2010-11. Trade, hotels, transport and communication services have been growing rapidly in the recent years, impressive progress in expanding railway passenger network and production of commercial vehicles, and fast addition of existing stock of telephone connections, particularly mobiles, have played key roles in such growth.

b) Share of financing, insurance, real estate and business services:

Their shares have grown from 7.7 percent of GDP in 1950-51 to about 17.4 % in 2010-11. This is due to the growth in financial services (comprising banking, insurance and real estate services). The progressive maturing of Indian financial markets and the ongoing construction boom has contributed to this.

c) Share of public administration and defence and other services:

Their share has steadily increased from 10.5 percent of GDP in 1950-51 to 13 percent in 2010-11. The slow increase in the share of community, social and personal services, public administration and defence reflect the process of fiscal consolidation and increasing efficiency of fiscal expenditure management.

Table 1.4

Percentage Share of Different Components of Services in GDP at Factor Cost

(At 2004-05 Prices)

Components of Services	1950-51	2010-11
a) Trade, hotels, transport & communication	11.3	27.2
b) Financing, insurance, real estate and business services	7.7	17.4
c) Public administration and defence and other	10.5	13.0
Total Share of Services Sector in GDP	29.5	57.6

(**Source:** Economic Survey, 2011-12)

According to the theory of economic development has the process of economic development takes place, the share of secondary and tertiary sectors in the national income increases and that of primary sector declines. Such sectoral change is taking place in India, but at a slow pace. The changes in the sectoral composition of national income bring out the effect of the process of economic development in India.

1.6 SUMMARY

- GNP is the total market value of all final goods and services produced in a year plus net income from abroad. This is the basic social accounting measure of the total output or aggregate supply of goods and services.

- GDP refers to the value of final goods and services produced within the country in a, particular year. GDP is different from GNP.

- Net national product is the total value of final goods and services produced in the country during a year after deducting the depreciation, plus net income from abroad.

- NDP is obtained by subtracting the depreciation from the GDP.

- Personal income is the sum of the income actually received by individuals or households during a given year. Personal income = N.I - Social Security - contributions - corporate income taxes -undistributed corporate profit + Transfer Payments.

- The personal income which remains after payment of taxes to the government in the form of income tax, personal property tax etc., is called disposable income. Disposable income = Personal Income - Personal Taxes.

- National income may be measured by three different corresponding methods : A) Net product method B) Factor-income method C) Expenditure method

1.7 QUESTIONS

1. What is the meaning of per capita income? Explain the trends in per capita income of India since 1990.

2. Give the definition of national income and explain the trends in India's nation income since 1990.

3. Write note on 'Structural Changes in Indian Economy'.

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2

EMPLOYMENT GENERATION AND POVERY ALLEVIATION PROGRAMMES AND REGIONAL INEQUALITIES

Unit Structure:

2.0 OBJECTIVES

- To study the meaning of Employment Generation.
- To study the meaning of Poverty Alleviation.
- To take brief overview of Employment Generation and Poverty Alleviation Programmes.
- To know the meaning of Regional Inequalities.
- To study the measures to reduce Regional Inequalities in India.

2.1 MEANING OF EMPLOYMENT GENERATION AND POVERTY ALLEVIATION

Poverty eradication is one of the major objectives of planned economic development. Economic growth has always been recognized as an important among various factors contributing to poverty alleviation. It is now recognized that it is not the rate of growth but the composition of growth which determines the pace of the "trickle down" effect of growth.

India's anti-poverty programmes are mainly run by the Central Government. There are three main types of poverty alleviation

programmes :(1) rural works, (2) self-employment and (3) food subsidy. All three have been subject to reforms in the recent years. Plan allocations have been enhanced in areas of health, education, sanitation and other facilities in order to promote capacity building and wellbeing of the poor. Anti-poverty programmes have been strengthened and restructured through special programmes for the weaker sections of the-society.

According to the World Bank, *Poverty is pronounced deprivation in well-being and comprises many dimensions. It includes low incomes and the inability to acquire the basic goods and services necessary for survival with dignity. Poverty also encompasses low levels of health and education, poor access to clean water and sanitation, inadequate physical security, lack of voice, and insufficient capacity and opportunity to better one's life.*

As per the Planning Commission of India, the level of poverty in a country can be estimated based on the consumer expenditure surveys that are conducted by the National Sample Survey Office (NSSO) under the Ministry of Statistics and Programme Implementation. This article will talk about the various Poverty Alleviation Programmes in India and the initiatives taken by the Government of India towards poverty alleviation.

Why is employment generation important in poverty alleviation in India?

The unemployment issue in India is considered as one of the major causes of poverty in India. The poverty rate of a country can be reduced with high economic growth and by reducing the unemployment problem. Various poverty alleviation programmes are set up under the Government of India that aims to eradicate poverty by providing employment on-demand and through specific guaranteed wage employment every year to the households living below the poverty line.

The generation of employment is important in poverty alleviation because of the following reasons:

- It will increase the income level of the poor household families and will help in reducing the rate of poverty in the country. Hence, there is a significant relationship between unemployment and poverty.
- It will decrease the rural-urban migration through the generation of employment programs in rural areas.
- An increase in the income level through the generation of employment programs will help the poor in accessing basic facilities including education, health facilities, and sanitation.

2.3 BRIEF OVERVIEW OF EMPLOYMENT GENERATION AND POVERTY ALLEVIATION PROGRAMMES

The major employment generation and poverty alleviation programmes currently operating in the country are discussed below:

1. National Food for Work Programme

In line with the NCMP, National Food for Work Programme was launched on November 14, 2004 in 150 most backward districts of the country with the objective to intensify the generation of supplementary wage employment. The programme is open to all rural poor who are in need of wage employment and desire to do manual unskilled work. It is implemented as a 100 per cent centrally sponsored scheme and the food grains are provided to States free of cost. However, the transportation cost, handling charges and taxes on foodgrains are the responsibility of the States. The collector is the nodal officer at the district level and has the overall responsibility of planning, implementation, coordination, monitoring and supervision. For 2004-05, Rs.2020 crore have been allocated for the programme in addition to 20 lakh tones of foodgrains.

2. Swaranjayanti Gram Swarozgar Yojana (SGSY)

SGSY, launched in April 1999, aims at bringing the assisted poor families (Swarozgaris) above the poverty line by organizing them into Self Help Groups (SHGs) through a mix of Bank credit and Government subsidy.

3. Sampoorna Grameen Rozgar Yojana (SGRY)

SGRY, launched in 2001, aims at providing additional wage employment in all rural areas and thereby food security and improve nutritional levels. The SGRY is open to all rural poor who are in need of wage employment and desire to do manual and unskilled work around the village/habitat. The programme is implemented through the Panchayati Raj Institutions (PRIs).

4. Rural Housing – Indira Awaas Yojana (IAY)

The Indira Awaas Yojana (IAY) operationalised from 1999-2000 is the major scheme for construction of houses for the poor, free of cost. The Ministry of Rural Development (MORD) provides equity support to the Housing and Urban Development Corporation (HUDCO) for this purpose.

5. Pradhan Mantri Gramodaya Yojana (PMGY)

PMGY launched in 2000-01 envisages allocation of Additional Central Assistance (ACA) to the States and UTs for selected basic services such as primary health, primary education, rural shelter, rural drinking water, nutrition and rural electrification. For 2003-04 as well as 2004-05, the annual allocation of ACA for PMGY was Rs.2, 800 crore.

6. Rural Employment Generation Programme (REGP)

REGP, launched in 1995 with the objective of creating self-employment opportunities in the rural areas and small towns, is being implemented by the Khadi and Village Industries Commission (KVIC). Under REGP, entrepreneurs can establish village industries by availing of margin money assistance from the KVIC and bank loans, for projects with a maximum cost of Rs.25 lakh. Since the inception of REGP, up to 31 March 2004, 1,86,252 projects have been financed and 22.75 lakh job opportunities

created. A target of creating 25 lakh new jobs has been set for the REGP during the Tenth Plan. 8.32 lakh employment opportunities have already been created during 2003-04. For 2004-05, a target of creating 5.25 lakh job opportunities has been fixed.

7. Prime Minister's Rozgar Yojana (PMRY)

PMRY started in 1993 with the objective of making available self-employment opportunities to the educated unemployed youth by assisting them in setting up any economically viable activity. So far, about 20 lakh units have been set up under the PMRY, creating 30.4 lakh additional employment opportunities. The targets for additional employment opportunities under the Tenth Plan and in 2004-05 are 16.50 lakh and 3.75 lakh, respectively. While the REGP is implemented in the rural areas and small towns (population up to 20,000) for setting up village industries without any cap on income, educational qualification or age of the beneficiary, PMRY is meant for educated unemployed youth with family income of up to Rs.40, 000 per annum, in both urban and rural areas, for engaging in any economically viable activity.

8. Pradhan Mantri Gram Sadak Yojana (PMGSY)

The PMGSY, launched in December 2000 as a 100 per cent Centrally Sponsored Scheme, aims at providing rural connectivity to unconnected habitations with population of 500 persons or more in the rural areas by the end of the Tenth Plan period. Augmenting and modernising rural roads has been included as an item of the NCMP.

The programme is funded mainly from the accruals of diesel cess in the Central Road Fund. In addition, support of the multi-lateral funding agencies and the domestic financial institutions are being obtained to meet the financial requirements of the programme.

Up to October, 2004, with an expenditure of Rs 7,866 crore, total length of 60,024 km. of road works has been completed. The National Rural Roads Development Agency (NRRDA), an agency of the Ministry of Rural Continue..... Social SectorsDevelopment registered under the Societies Registration Act, provides operational and technical support for the programme.

9. Drought Prone Areas Programme (DPAP), Desert Development Programme (DDP) and Integrated Wastelands Development Programme (IWDP)

DPAP, DDP and IWDP are being implemented for the development of wastelands/degraded lands. During 2004-05 allocation of Rs. 300 crore, Rs. 215 crore and Rs. 368 crore were provided for DPAP, DDP and IWDP, respectively. So far, during 2004-05, 2,550 projects covering 12.75 lakh hectares, 1,600 projects covering 8 lakh hectares and 165 projects covering 8.32 lakh hectares, have been sanctioned under DPAP, DDP and IWDP, respectively.

10. Antyodaya Anna Yojana (AAY)

AAY launched in December 2000 provides foodgrains at a highly subsidized rate of Rs.2.00 per kg for wheat and Rs.3.00 per kg for rice to the poor families under the Targeted Public Distribution System (TPDS). The scale of issue, which was initially 25 kg per family per month, was increased to 35 kg per family per month from April 1, 2002. The scheme initially for one crore families was expanded in June 2003 by adding another 50 lakh BPL families. During 2003-04, under the AAY, against an allocation of 45.56 lakh tonnes of foodgrains, 41.65 tonnes were lifted by the State/UT Governments. Budget 2004-05 expanded the scheme further from August 1, 2004 by adding another 50 lakh BPL families. With this increase, 2 crore families have been covered under the AAY.

11. Swarna Jayanti Shahari Rozgar Yojana (SJSRY)

The Urban Self Employment Programme and the Urban Wage Employment Programme are the two special components of the SJSRY, which, in December 1997, substituted for various extant programmes implemented for urban poverty alleviation. SJSRY is funded on a 75:25 basis between the Centre and the States. The expenditure during 2003-04 was Rs.103 crore. For 2004-05, the allocation is Rs.103 crore, out of which Rs. 90.38 crore were utilized by December 31, 2004.

12. Valmiki Ambedkar Awas Yojana (VAMBAY)

The VAMBAY launched in December 2001 facilitates the construction and upgradation of dwelling units for the slum dwellers and provides a healthy and enabling urban environment through community toilets under Nirmal Bharat Abhiyan, a component of the scheme. The Central Government provides a subsidy of 50 per cent, the balance 50 per cent being arranged by the State Government. Since its inception and up to December 31, 2004, Rs. 753 crore have been released as Government of India subsidy for the construction/upgradation of 3,50,084 dwelling units and 49,312 toilet seats under the scheme. For the year 2004-05, out of the tentative Central Fund allocation of Rs.280.58 crore, up to December 31, 2004, an amount of Rs. 223.66 crore has been released covering 1,06,136 dwelling units and 20,139 toilet seats.

Reference: http:/indiabudget.nic.in

2.4 MEANING OF REGIONAL INEQUALITIES

Regional Disparity means divergence or inequality of characters, phenomena or processes having specific territorial allocation (can be allocated in defined territorial structure) and occurring at least in two entities of the territorial structure'.

2.5 MEASURES TO REDUCE REGIONAL INEQUALITIES IN INDIA

The various programmes undertaken to remove/reduce regional disparities can be identified as follows:

1) Resource Transfers from the Centre to the States, Weighed in Favour of Backward States:

The resource transfers, take place via (a) the Planning Commission mainly in the form of plan transfers, and (b) the Finance Commission in the form of non-plan transfers. The location of Central projects and Centrally-sponsored schemes are determined in the planning process by the Planning Commission in collaboration with the relevant wings of the Government. A recent study on the subject suggests that the poorer states have been receiving proportionately larger amount of funds for developmental purpose relative to their rich counterparts.

2) Priority given to Programmes which spread over the entire Area within the Shortest Possible Time:

Programmes of agriculture, community development, irrigation and power, transport and communications and social services have the widest coverage, and aim at providing basic facilities and services to people in all the regions. Since, these programmes are included in the plans of States, it is largely through the shape given to State plans and the changes through which they pass in the course of the plan period that the benefits of development are carried to every part of the country.

3) Provision of Facilities in Areas which Lag Behind Industrially:

River valley projects form the most important segment in the plans of several States and large investments have been made in multi-purpose projects. These and other projects are essential for the development of vast regions in the country, some of which suffer from scarcity or unemployment or are otherwise poorly developed. The implementation of agricultural production and community development programmes, and of education and health schemes also carries the benefits of development to the remotest areas.

4) Programmes for the Expansion of Village and Small Industries:

Village and small industries are spread all over the country and various forms of assistance provided by the Central and State Governments are made available in the areas according to programmes undertaken. Industrial estates have been set up in all States, and increasingly, they are being located in smaller towns and rural areas.

5) Diffusion of Industrial Activity:

In the location of public sector projects, the claims of relatively backward areas have been kept in view wherever this could be done without giving

up essential technical and economic criteria. The location of several important projects has been determined on the basis of expert study and on economic considerations. But as they are situated in areas which were hitherto industrially backward, the latter will benefit. While in the selection of sites for basic capital and producer goods industries, proximity to raw materials and other economic considerations have naturally been important, it is felt that in a wide range of consumer goods and processing industries, it is possible to foster a regional pattern of development. To some extent, the development of new processes and new uses of raw materials have assisted in the spread of industry. To encourage such elements, care need to be taken to ensure that a balance is maintained in the regional spread of industrial activities.

6) Schemes for Development of Backward Areas:

The present policy for the development of backward areas comprises a set of special schemes under which plan funds are provided over and above the funds allocated for general sectoral programmes.

The special schemes to reduce regional disparities can be classified as follows:

- **Schemes focusing on areas with special features:** The Desert development programme, the Drought-Prone Area Programme, the Command Area Development Programme, the Hill Area Development Projects and sub-plans, the North Eastern Council set-up, and the Tribal Area Sub-Plans and Tribal Development Agency projects).

- **Schemes focusing on target group:**Small farmers' development agencies and the special component plan for Scheduled Castes).

- **Schemes providing incentives and concessions** for particular activities in backward areas (concessional finance from financial institutions, tax relief, investment subsidy, transport subsidy and priority in raw material allocations and hire-purchase of machinery, for industries located in 246 backward district/areas, and relaxed viability and loan repayment terms for extensions of electricity by the Rural Electrification Corporation in backward areas).

- **Rashtriya Sam Vikas Yojana** has been launched in 150 districts. A Rs. 25,000 crore Backward States Grant Fund has been set up; the Fund will be operational for five years starting 2005-06.

2.6 SUMMARY

The regional disparity in India has been a major challenge for planners and policy makers. Despite a number of development programmes overtime, regional disparities have persisted. Regional disparities are observed in growth rates, per capita SDP, per capita consumption expenditure, sectoral contribution to GSDP, agricultural development, Industrial development, infrastructural development and also in human 77 development. The

important factors responsible for regional disparities are: variation in the occupational structure of workers, historical factors like variation in infrastructure development, decline in budgeting support for financing infrastructure, financial institutions, provision of education and training facilities etc. various programmes have been launched towards removal of regional disparities. However, all these schemes and programmes have suffered from several limitations and a lot need to be done for ensuring balanced regional development.

2.7 QUESTIONS

1. Give the meaning of employment generation and poverty alleviation.
2. Give brief overview of employment generation and poverty alleviation Programmes.
3. What is regional inequalities? Explain the measures to reduce regional inequalities in India.

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Module - II

3

AGRICULTURAL SECTOR – I

Unit Structure:

3.0 OBJECTIVES

- To study the role of agriculture in economic development.
- To study the causes of low productivity of agriculture.
- To know the concept of agricultural inputs.
- To study the income support for farmers.
- To study recent minimum support price policy
- To study the agricultural price policy.

3.1 INTRODUCTION

At the time of independence, India's agriculture was in a state of backwardness. Productivity per hectare and per worker was extremely low. The techniques employed were age-old and traditional. Because of low productivity, agriculture merely provided subsistence to the farmers. Following causes explains the backward and traditional nature of Indian agriculture.

1. Feudal relations of production:

At the time of Independence, three types of land tenure system were prevalent in the country – zamindari, mahalwari and ryotwari. The zamindari system was based on exploitation since zamindars pressurized peasants in a variety of ways. Ryots in the Ryotwari system also leased out their land to tenants for cultivation and these tenants were also subjected to the exploitation. After Independence, the State governments enacted

laws to abolish the intermediaries. However, these were entirely inadequate to have any drastic impact on the agrarian structure.

2. Usurious capital and rural indebtedness:

During the pre-Independence period, moneylenders charge exorbitant rates of interest, manipulate accounts to their advantage and often seize the land of small and marginal farmers on one or the other pretext. Since long the Indian peasant has been living the life of bonded land slave. After Independence, the government has initiated a number of steps to curb their activities. One of the important policy measures being the development of cooperative credit institutions and the increasing participation of banks in providing rural credit. However, because of a number of factors, the small and marginal farmers continue to depend on moneylenders for fulfilling their credit.

3. Labour market dualism:

Because of the excessive pressure of population on land, wages in the agricultural sector tend to be considerably lower as compared to the modern (industrial) sector. This leads to a labour market dualism. This dualism is explained by the fact that large number of workers remain sticking to traditional agriculture despite low wage due to either to ignorance of better opportunities outside agriculture, or to their inability to obtain a modern sector job despite wishing to do so, or to the cost of moving being unacceptably high in relation to the expected wage premium. These cheap labour leads to the adoption of labour-intensive methods of production.

4. Outmoded farming techniques:

Most of the Indian farmers continue to use outmoded farming techniques. The traditional agriculture depends on the biological sources of energy, rains and drug manure. Returns to farmers under this technique of production are very meagre and the nature of farming is appropriately described as subsistence farming. However, with the advent of the new agricultural strategy in 1966, modern techniques of production and new high-yielding varieties of seeds, agricultural productivity registered substantial increases in these areas. However, since large areas of the country continue to use outmoded agricultural techniques.

5. Fluctuations and instability in crop output:

The Indian agriculture has rightly been called a ‘gamble in monsoons ‘. Even now as much as 60 per cent of gross cropped area continues to depend on rainfall. Therefore, nature continues to play a major role in determining the level of agricultural production.

6. Diversities in the agricultural sector and the problem of generalization:

India is a large country having substantial agricultural diversities. Different regions exhibit entirely different characteristics so that no one

plan can be conceived for all agricultural regions of the country. For e.g., take a case of rainfall. Western Rajasthan and a part of the Thar Desert have a very uncertain rainfall of 4 to 5 inches a year, whereas Cherrapunji in Assam has an annual rainfall of more than 450 inches. While considerable areas face drought conditions in a particular year, some areas encounter the fury of floods. Some areas face the problems of waterlogging and salinity. There are substantial regional inequalities in regard to sub-division and fragmentation of holdings.

The presence of large diversities in the agricultural sector makes it necessary to devise separate agricultural policies for different regions. It is not possible to generalize and formulate a single agricultural policy for the nation as a whole.

3.2 ROLE OF AGRICULTURE IN ECONOMIC DEVELOPMENT

3.2.1 ROLE OF AGRICULTURE IN DEVELOPING ECONOMY

In developing and the underdeveloped nations agriculture has always and is still playing very crucial role in their economic development and employment generation. In our following discussion we will have a look at the detailed role of agriculture in its contribution to the economic growth of such underdeveloped or developing nations.

1. Product Contribution:

Majority of the underdeveloped or developing nations depend on their own agricultural activity for food grains and pluses for their own self consumption. However, as exceptions do exist there are a few nations like Malaysia and Saudi Arabia who exports their natural resources like oil and gas which in turn helps them earn foreign exchange in huge volumes, and this huge amount of foreign exchange which they earn helps them import their entire food requirements for their population. These countries being exceptions, all the other developing nations don't earn or don't have such a huge reserve of foreign exchange from which they can import the entire food requirement of the population of their entire country, and hence they have to rely on their own agriculture to produce enough quantity of food grains to feed their entire population.

In developing or underdeveloped nations, the farmers have to produce food grains well above their survival requirements as they have to supply necessary quantity of food grains to their urban population. Farmers in the developing nations should have marketable surplus of food grains which will help meet the food requirements of population employed as workforce in both secondary as well as the tertiary sectors which is ultimately necessary for the growth of both these sectors. With the growth of secondary and the tertiary sectors, it is equally important that the agricultural sector also grows at such a rate which matches the food grain requirement of the increasing workforce and helps in sustaining both the growth of secondary as well as the tertiary sector.

The agricultural growth has to match the industrial development because if there is a shortfall in the agricultural production then the food grains import is not possible due to the shortage of foreign exchange reserves. This is turn will adversely affect industrial or the secondary sector as the terms of trade will turn against the secondary or the industrial sector and this will ultimately halt the growth process, as the industrial production will no longer be profitable. This will ultimately result in the economy coming to a grinding halt.

2. Factor Contribution:

Nearly 60% of the population of the developing countries is engaged in the agriculture, so agriculture can supply a huge quantity of workforce to the secondary and tertiary sectors provided if proper training is given to such a workforce employed in the agricultural sector. This can only happen when the productivity in industrial or tertiary sector rises. In Lewis's "Model Of Development With Unlimited Supplies Of Labour" surplus labour mobilization which is disguisedly unemployed in the agricultural sector is necessary for the growth and expansion of the industrial or secondary sector and capital accumulation is necessary for generating employment in the expanding industries. Lower wage rate for workers implies lower will be the cost of production for the industrial or secondary sector which in turn will generate huge profits for the industrialists, who can reinvest these profits for further industrial development and capital accumulation.

In countries like India, where there is a democratic set up and everyone has a right to choose their own occupation, the labour employed in the agricultural sector cannot be forced to migrate to the industrial sector until and unless there is an increase in the agricultural productivity and hence there is a marketable surplus of food grains. Green Revolution of mid 1960s played a crucial role in revolutionizing the use of technology in the agricultural sector and leading to a marketable surplus generation in the agricultural sector. This led to a growth in the industrial sector of many developing countries of South-East Asia using cheap labour so freed from the agricultural sector.

3. Source of Capital:

Agriculture can be a key source capital formation for the industrial growth in the developing nations. In many poor developing nations, the agricultural income is unequally distributed, so people living in the rural areas and having high income can invest their savings in the industrial development.

Land revenue generated from agriculture forms an insignificant source of State income in India. A committee led by late Dr K. N. Raj suggested 'Agricultural Holding Tax' to transfer savings from agricultural sector for economic development.

4. Market Contribution:

It reflected in the demand for the industrial products. In the initial stages of development, when the urban sector is not very well developed or very small and export market is still a distant dream, agriculture sector in the underdeveloped nations is a major market for industrial products. The farmers spend their money income on industrial goods which they earn by selling their production of cash crops like sugar, jute, cotton, etc. Income generated by the farmers by selling their marketable surplus of food grains is also used in creating the demand for the industrial goods.

For the industrial growth to be high, the demand for industrial products has to expand or increase. It has been observed in India, that whenever there is a slow or a negative growth in the agricultural sector, there has been no growth in the industrial sector due to deficiency of demand for the industrial products. When there is an increase in the agricultural productivity and production leads to an increase in the demand for industrial goods and services and this leads to an acceleration in the rate of economic development. According to World Development Report of the year 1979, "a stagnant rural economy with low purchasing power holds back industrial growth in many developing countries."

There is a direct relationship between agriculture and the industries, agriculture creates a demand for the various industrial products and in turn supplies food and raw materials to the industries, raw materials include items like sugarcane, jute, cotton, oilseeds etc. Agriculture also provides raw materials to the agro-based industries like sugar manufacturing, rice-husking, oil-crushing, handloom weaving, etc. Hence, when the agricultural growth is slow or sluggish, these agro-based industries will not be able to get regular and required supply of their raw-materials.

From the above discussion it is clear that a rapid and a healthy growth in the agricultural sector is a prerequisite for a rapid industrial growth. This has an impact on the pricing of the agricultural products in relation to the industrial goods, that is this decides the terms of trade between agriculture and the industry. Lower agricultural prices imply cheaper raw materials and food for the industry which in turn leads to lower cost and which ultimately leads to higher profitability. From the agriculture point of view lower prices means lower income for farmers, which in turn would impact their purchasing power to buy industrial goods.

As lower agricultural prices would only discourage the agricultural productivity. So for balancing of the terms of trade between the agricultural sector and the industrial sector, the agricultural prices should neither be to high to make industrial production an unprofitable bargain, nor should they be so low that leads to the exploitation of the agricultural sector and farmers are not encouraged to increase their agricultural productivity.

5. Foreign Exchange Contribution:

In initial stages of economic development with low industrial development, exports of agricultural products can be the main source of foreign exchange earnings for an underdeveloped country, agriculture earns foreign exchange from its exports of primary goods.

In the initial stages of economic development, the developing countries face a major crisis of foreign exchange or what is often referred to a 'foreign exchange gap' to meet their requirements of imports of industrial goods for their industrial development. Agriculture by exporting primary goods contributes to the foreign exchange earnings thereby enabling the developing nations to be able to import the industrial goods needed for their industrial growth, these are the goods which cannot be produced in the importing country or even if produced will be produced at a higher opportunity cost.

So, here we can see that agriculture can play an important role in contributing to the economic development of the nation by earning foreign exchange needed to import the industrial raw materials and capital goods needed for industrial expansion. The shortage or lack of foreign exchange acts as a big hindrance for the growth process of a developing nation. In India's Second and Third Five Year Plan the agricultural sector was relatively ignored in allocation of investment resources, so the growth process too came to a halt as even the basic food requirements were needed to be imported with lack of enough foreign exchange balance, the balance of payments problems were being experienced and it increasingly became more difficult to import even necessary inputs for the industrial growth.

6. Agriculture and Poverty Alleviation:

In India, majority of the poor population lives in the rural areas of the country. Still around 40% of the Indian rural population lives below poverty line, even after 60 years of independence, and majority of them are marginal farmers, Scheduled Castes and Tribes, landless agricultural labourers. Among others, Montek Singh Ahluwalia the former Deputy Chairman of Indian Planning Commission that agricultural growth leads to a decline in the poverty. Agricultural growth plays an important role in any strategy framed to eradicate poverty. Agricultural growth helps in increasing both the productivity as well as the income levels of small and marginal farmers and improves the employment level as well as the wage level of the agricultural workers. In this way, it helps in both the poverty as well as the disguised unemployment. An increase in the agricultural productivity ensures lower food prices and thus, helps in keeping inflation under control and thus contributes in lowering of the poverty level.

7. Contribution of Agriculture to Employment Generation:

In key growth models for labour-surplus developing nations, eminent among them are 'Lewis' model of growth with unlimited supply of labour,' Mahalanobis growth model of assigning higher importance to

basic and heavy industries highlighted the point of withdrawal of surplus labour from the agricultural sector to be employed in the growing or expanding industrial sector. However, it was observed that instead of withdrawing of surplus labour from agriculture, the modern industries were highly capital intensive and generated very little or limited employment opportunities which were not even able to employ the openly unemployed workforce in the urban areas.

Agricultural growth provides a good employment potential, however to generate this employment potential from agricultural growth it is necessary that a proper strategy of agricultural growth is followed. The use of new agricultural technology like High Yield Value Seeds, pesticides, fertilizers accompanied by optimum quantity of water for irrigation purposes will help in increasing the level of agricultural employment. Adaptation of inputs like high-yielding technology helps the farmers to adopt multiple cropping which in turn leads to a large employment potential generation in the agricultural sector.

In order to improve and expand the irrigation facilities and other agricultural infrastructural needs so that the farmers across India can draw benefits from the new high-yielding technology, there is need to increase in the capital investment in the agricultural sector. The extensive dispersion of the high-yielding technology in the rural areas of India will not only raise the agricultural productivity but will also raise the employment level in the agricultural sector. In order to achieve full employment potential agricultural growth, mechanisation in agriculture should be used in a selective manner so that there is no reckless substitution of manpower by machines leading to an increase in the unemployment level. Further to increase the employment level in the agricultural sector, land reforms like tenancy reforms and distribution of land through imposition of ceiling on land holdings should be effectively be implemented as small farmers employ more labour, have higher cropping intensity and higher productivity.

3.2.2 ROLE OF AGRICULTURE IN A DEVELOPED ECONOMY

Agriculture sector has always played a tactical role in the economic development of any country. It has made an important contribution to the economic well-being of advanced countries.

If we have a look at the history, we find that there is clear evidence that Agricultural Revolution led to the Industrial Revolution there. Similarly, in U.S. and Japan also we see that the agricultural development aided in a huge way in the process of industrialization.

Over the years it has been witnessed that an increased agricultural productivity and output contributes to the overall economic development of the nation in a big way. So it will be more logical and correct to give greater importance to the further development of the agricultural sector.

According to all leading economists like Prof. Kinderberger, Todaro, Lewis, Nurkse etc. agriculture contributes to the economic development in several ways, viz

1. As it not only provides food for the entire population but also provides raw material to the non-agricultural sectors of the economy.

2. It creates a demand for non-agricultural sectors in the rural areas, as it increases the purchasing power of the rural population which happens when they sell their marketable surplus.

1.3.1 Role of Agriculture in A Developed Countries

1. **Contribution to National Income**

If we have a look at the economic history of many advanced and developed countries, we find that the agricultural prosperity has immensely contributed in encouraging economic progress. It has been rightly said that today's well developed and industrialized economies were once mainly agricultural economies, and today's underdeveloped economies are primarily agricultural countries, and agriculture contributes a major chunk of income to their national income.

2. Source of Food Supply

Even though, agriculture may not be the prime source of income for the developed nations, it is of significant importance to the developed nations as well, because if there is any shortfall in the agricultural production and it fails to meet the ever-increasing food demand, then it will adversely affect the growth rate of even the developed economies. So increasing the agricultural output has been of prime importance for the economic growth of any nation, whether it's a developed nation or a developing one.

3. Pre-Requisite for Raw Material

A steady growth and advancement in the agricultural sector is a must for any economy irrespective of the fact whether it's a developing or a developed economy. As far as the developing economies are concerned agricultural sector forms a substantial part of their national income, the importance of agricultural sector is no less in developed countries either, as it provides raw materials to the industries which in turn converts them into finished products. Say, for example flour mills converts wheat into flour which is ultimately supplied to bread manufacturers who manufacture bread from the same flour. There are many such examples where industries take their raw materials from agriculture products and later manufacture them into finished goods for final consumption.

4. Shift of Manpower

When the economy is a developing economy, agriculture absorbs large amount of workforce. However, it is important for the economy that there is a progress in the agricultural sector through automation, which will force the workforce to shift from agricultural sector to non-agricultural

sectors which will ultimately lead to economic development. This will help in reducing the burden of the workforce on land which is always limited in supply. Once the economy turns into a developed economy, the percentage of labour employed by agriculture will be very low mainly due to the fact that the advanced technology has replaced the huge labour force from the agricultural sector. Which ultimately leads to high productivity and limited employment of labour in the agricultural sector.

5. Helpful in Phasing out Economic Depression

In times like economic depression when the industrial production hits the rock bottom and survival for any economy whether developed or underdeveloped becomes really difficult, it is at this time agriculture plays a vital role in not only the production of necessities of the society but more importantly providing employment to the people and thus creating demand for other goods and services.

Progress in the agricultural sector is essential as it provides for the ever-growing non-agricultural population of the nation. Agricultural progress is further necessary as it provides raw materials to many industries which in turn helps the nation in earning foreign exchange and in generating employment in the nation.

Check Progress

1. What is the role of agriculture in Developing country?
2. What is the role of agriculture in developed country?

3.3 CAUSES OF LOW PRODUCTIVITY

A comparison of productivity levels in Indian agriculture with the levels in other countries shows the low level of productivity in Indian agriculture. Productivity of wheat in India is about 34 percent of the productivity in U.K. and 67 percent of the productivity in China. As far as rice is concerned, productivity in India is 49 percent of the productivity in China and 40 percent of the productivity in USA. The productivity of seed cotton in India is about one-fifth as compared with China and less than one-half as compared with USA and Pakistan. As far as groundnut is concerned, productivity in India is 26 percent of the productivity in USA and 36 percent of the productivity in China. India happens to be one of the largest growers and producers of most of the agricultural crops but ranks very low in terms of yield. The causes of low productivity in Indian agriculture can be divided into the following categories:

A. General causes.

B. Institutional causes.

C. Technical causes.

A. General causes:

1. Social environment: The Indian farmer is illiterate, superstitious, conservative and non responsive to the new agricultural techniques of production which helps to increase productivity. This type of social environment of villages is often stated as an obstacle in agricultural development.

2. Pressure of population on land: There is heavy pressure of population on land. Since the non-agricultural sectors of the economy have not been able to expand, the pressure on agricultural sector continued to increase. In 2001, nearly three quarters of the rural working population was employed in the agricultural sector. Increasing pressure on land is partly responsible for the subdivision and fragmentation of holdings. Productivity on small economic holdings is low.

3. Land degradation: Government of India has recently estimated that nearly half of the country's 329 million hectares of soil could be categorised as degraded. Almost 43 percent of the land suffers from high degradation resulting in 33-67 percent yield loss while 5 percent is so damaged that it has become.

B. Institutional causes:

1. Land tenure system: In the pre independence period, the agrarian structure depended solely on the presence of a few big landlords and zamindars. The status of the actual cultivator was not more than a slave or serf, had no incentive to increase productivity. In the post-independence period, legislations were passed to abolish intermediaries. But it only changes their garb and became big landowners. Regulation of rent, security of tenure, ownership rights for tenants, etc. did not make the position of tenants better. In this land tenure system, it is difficult to increase productivity only through technological means.

2. Lack of credit and marketing facilities: The weak agricultural structure is not supported by any sound infrastructure like marketing system, in spite of large trading being carried out by the government agencies like Food Corporation of India and the NAFED, continues to be faulty. In case of the credit finance system, services of regional rural banks and NABARD are inadequate.

3. Uneconomic holdings: According to National Sample Survey, 52 percent holdings in 1961-62 had a size of less than 2 hectares. In 1995-96, 80 percent of the total holdings fell under this category. Most of these holdings are not only extremely small they are also fragmented into a number of tiny plots so that cultivation on them can be carried out only by labour intensive techniques. This results in low productivity. Until the excessive labour employed on agriculture is transferred to alternative jobs and the holdings are consolidated, modern techniques of production cannot be adopted and the possibilities of increasing agricultural productivity will remain limited.

C. Technical causes:

1. Outmoded agricultural techniques: most of the Indian farmers continue to use outmoded agricultural techniques. Wooden ploughs and bullocks are still used by a majority of farmers. Use of fertilizers and new high yielding varieties of seeds is also extremely limited.

2. Inadequate irrigation facilities: Despite substantial expansion of irrigation, even now 60 percent of the gross cropped area continues to depend on rains. Rainfall is often insufficient, uncertain and irregular. Accordingly, productivity is bound to be low in all those areas which lack irrigation facilities, and are totally dependent on rains. Even in areas having irrigation facilities, potential is not wholly utilised because of defective management. The costs of irrigation are also increasing continuously and the small farmer is, therefore, unable to make use of available irrigation facilities.

Check Your Progress:

1. Explain the nature of Indian agriculture.

2. Discuss the institutional causes of low productivity in Indian agriculture.

3.4 AGRICULTURAL INPUTS

The agricultural inputs are defined as **products permitted for use in organic farming**. Agricultural inputs include feedstuffs, fertilizers and permitted plant protection products as well as cleaning agents and additives used in food production.

The types of agricultural inputs are as belows –

1. Consumable Inputs

Consumable inputs are the types of inputs that will be consumed naturally by the crops. The most commonly used consumable inputs arehigh-quality seeds, soil, fertilizers, insecticides, pesticides, insect traps, straw, hay, water etc.

The consumable inputs are the most basic yet necessary aids to smallholder farmers' harvest. Pesticides and insecticides are crucial to deter pests. Mulch can act as a deterrent against weed growth. And don't forget about the importance of high-quality seeds. High-quality seeds are a necessity for ensuring healthy crops from the verybeginning.

2. Capital Inputs

Capital inputs are agri-inputs that are often mechanical and more technologically advanced. These agricultural inputs cannot be consumed by the crops themselves. Capital inputs are necessarily thought of as tools for larger farms, but that's not completely true. There are plenty of

agri-inputs that can aid both larger farms and smallholder farmers alike such as reflective mulches and trellising materials.

Some other common forms of capital inputs are: nylon netting, stakes, tractors, plows, irrigation systems etc.

Capital inputs such as tractors and plows are not commonly used by smallholder farmers since they are such a large investment. We recommend smallholder farmers utilize capital inputs like nylon netting and reflective mulches to aidtheiryield.

3. Eco-Friendly Agri-Inputs

Certain types of agricultural inputs are greener than others. And with global warming rapidly advancing, we recommend that every farmer attempts to be as sustainable as possible. We understand that sustainable farming is often a challenge for smallholder farmers since they have limited resources, but it's not impossible.

Smallholder farmers can be eco-friendly by incorporating an Integrated Pest Management approach into their daily routine. An Integrated Pest Management approach utilizes both organic and non-organic materials to deter pests. By finding the precise balance between the two, smallholder farmers can use sustainable farming methods while ensuring a high yield.

3.5 AGRICULTURAL PRICE POLICY

Price policy plays a pioneer role in the economic development of a country. It is an important instrument for providing incentives to farmers for motivating them to go in for production-oriented investment and technology.

Objectives of Agricultural Price Policy:

Objectives of agricultural price policy vary from country to country depending upon the place of agriculture in national economy. In developed countries, the major objective of price policy is to prevent drastic fall in agricultural income while in developing economies it is to increase the agricultural production.

However, the main objectives of agricultural price policy are summarized below:

(i) To Ensure Relation between Prices of Food-grains and Agricultural Goods:

The foremost objective of agricultural price policy is to ensure the appropriate relationship between the prices of food grains and non-food grains and between the agricultural commodities so that the terms of trade between these two sectors of the economy do not change sharply against one another.

(ii) To Watch Interests of Producers and Consumers:

To achieve the balance between the interest of producers and consumers, price policy should keep a close eye the fluctuations within maximum and minimum limits.

(iii) Relation Between Prices of Crops:

The price policy should be such which may sustain the relationship between the prices of competing crops in order to fulfill the production targets in respect of different commodities in accordance of its demand.

(iv) To Control Seasonal Fluctuations:

Another object of price policy is to control cyclical and seasonal fluctuations of price rise to the minimum extent.

(v) Integrate the Price:

The agricultural price policy should also aim at to bring the greater integration of price between the various regions in the country so that regular flow of marketable surplus could be maintained and exports of farm products stimulated regularly.

(vi) Stabilise the General Price:

To stabilize the general price level, it should aim at increasing the public outlay to boost economic development in the country.

(vii) Increase in Production:

The agricultural price should aim at to raise the production of various commodities in the country.

Therefore, it must keep balance between output and input required by the cultivations.

3.6 MINIMUM SUPPORT PRICE

Food grains and prices committee in 1964 recommended the establishment of Agriculture price commission to enforce a balanced and integrated price structure in the country, and accordingly it was set up in the year 1965. However, in 1985 the agriculture price commission was renamed as commission for agriculture Costs & prices. The main function of the commission is to announce Minimum Support Price (MSP) procurement prices and to fix prices for number of agricultural commodities to be sold to public minimum price is also called Reserved Price.

Definition of MSP:

Support price is defined as price at which the government would be under obligation to buy the entire stocks that may be offered to it for sale. the support prices would have no direct incentives, role to play, but ensure farmers against risk of price falling below particular level.

The main objectives of announcing MSP are –

1. To prevent fall in prices in the situation of over production.
2. To protect the interest of farmers by ensuring them minimum price for their crop in situation of price fall in the market.

The support price would no direct incentive role to play but would ensure farmers against risk of prices falling below a particular level. Under this policy govt. attempts to stabilize the incomes of farmers by entering the market itself buying and selling in open market when there is shortage.

What should be the minimum support price?

Guidelines for determining support prices of agricultural products would depend on objectives that are sought to be achieved. Objective of agricultural price support policies can be and are in fact diverse in different countries. By definition a support price policy assures the farmers against a fall in prices beyond the stipulated level, in some countries (mainly advanced), such price insurance has primary objective of maintaining the general level of farm income. i.e. income – oriented approach.

In several other countries (specially developing countries) the main objective of support price policy is to help augment – overall agriculture production i.e. product oriented approach.

In most developing countries, including India the main objective in present context is to step up the rate of growth of agriculture production so as to match the growth of consumer demand. The support price policy, which is production oriented therefore would seen to have greater relevance. The objective of improving agricultural incomes will be achieved as a sequel to increased production and productivity.

For fixation of minimum support price some economist believed that it should be based on cost of production. But question is what cost should be considered? As the cost of production of a commodity depends on number of factors which vary from farm to farm, size of the farm, soil type, cropping pattern, farm as well as techniques of production employed. As such it is not easy to work out the average cost of production. To avoid these difficulties support price has to be related to the costs of a farms for which the inputs are mostly purchased and not home produced. The reserve price has to be related to the cost of production of a "model". Commercial farm, for which alone the cost is measurable concept the reserve price may thus be deformed as "The price than ensures the cost of production of commercial farm under normal weather condition." Thus defined it will vary from year to year depending upon changes in the condition of supply & hence it will have to be flexible.

However we must sure that primary objective of the support price policy in our country has to be that of augmenting agriculture production and not of achieving income redistribution between agricultural and non-

agricultural sector. The deterring support prices will have to be involved keeping this objective firmly in view.

According to this programme, the govt. should fix the price of farm produce at a level which is higher than the market price and to buy from the farmers. Whatever surpluses are not cleared in market in Fig. P0 is market price of say wheat

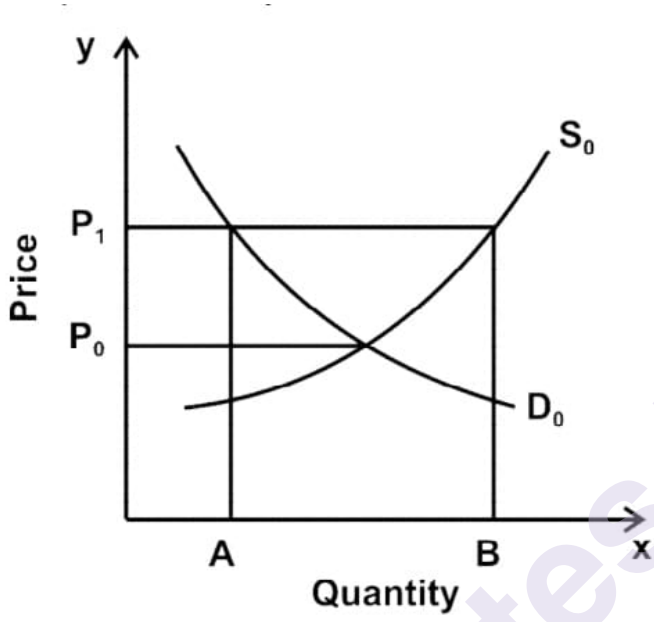

Figure 3.1

The support price by the govt. pegs the price P1 at that price, according to demand curve D0 only OA units of wheat are taken by consumers. But on the other hand, OB units of wheat are offered for sales. Thus the government under the obligation to purchase this surplus supply and keep it in the buffer stock.

In case this policy is successful we will, firstly have smaller fluctuations in the price of farm produce than there would be if price were determined on the basis of completely free market. Secondly total revenue of the farm producers will get stabilized in face of fluctuations in production.

In case of long run one can increased the output as the producer knows he can expand production by increased inputs or costs. Higher support prices fixed by govt. may stimulate agricultural production by causing farmers to use none labour and variable resource inputs to reach higher output level with existing methods of production and the discovery and adoption of new agricultural technologies that result in new, lower cost production possibilities by farmers. Thus it brings about the growth in production in long run.

3.7 SUMMARY

1. At the time of independence, India‘s agriculture was in a state of backwardness. Productivity per hectare and per worker was extremely

low. The techniques employed were age-old and traditional. Due to large diversities in the agricultural sector it is not possible to generalize and formulate a single agricultural policy for the nation as a whole.

2. Indian agriculture in the pre-Independence period can be correctly described as a subsistence occupation. Some farmers started adopting agriculture on a commercial basis only after Independence and more specifically when planning era and Green Revolution started.

3. A comparison of productivity levels in Indian agriculture with the levels in other countries shows the low level of productivity in Indian agriculture.

4. Agriculture's role in the developed countries if we see is mainly limited to maintaining a regular food supply for its population, providing raw materials to the industries which depend on agriculture for regular supply of their raw material these are mainly agro-based industries. Another important role agriculture plays in the developed countries is during depression as it helps revive the economy when all the industrial production is down.

5. However, if we talk about the role of agriculture in developing countries, it plays really a very vital role, be it creating job opportunities nearly 50% of the population in such countries are still employed in the agriculture. Besides this agriculture still contributes to economic development as it supplies raw material to various agro-based industries which still form the backbone of the economy in such countries. Agriculture still forms a major part of the national income of the developing nations and even supports them in earning foreign exchange in their initial years of development.

3.8 QUESTIONS

1. Indian agriculture is backward and traditional in nature – Explain.

2. What are the causes of low productivity in Indian agriculture?

3. Explain the role of agriculture in economic development.

4. Give note on Agricultural Inputs.

5. Give note on Agricultural Price Policy.

6. Give note on Minimum Support Price.

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4

AGRICULTURAL SECTOR - II

Unit Structure:

4.0 OBJECTIVES

- To study the meaning and sources of agriculture finance.
- To understand the concept of micro finance.
- To study the role and function of NABARD.
- To study the structure and problems of agricultural marketing.
- To study the national policy for famers, 2007.
- To study the organic farming policy.
- To study the food security in India.

4.1 INTRODUCTION

In the economic growth of any nation agriculture plays a very important role. Agriculture has made an immense contribution the economic growth of the developed nations and its role in the underdeveloped or developing nations is equally important. Nearly 75% of the Indian population is

depending on agriculture for its livelihood thus making it the largest source of economic activity for the entire nation. Although with rapid development in the technology leading to a substantial growth in the secondary and tertiary sectors, agriculture still remains a very important source of occupation.

4.2 MEANING OF AGRICULTURAL FINANCE

Agricultural finance generally means studying, examining and analyzing the financial aspects pertaining to farm business, which is the core sector of India. The financial aspects include money matters relating to production of agricultural products and their disposal.

4.2.1 Definition of Agricultural finance:

Murray (1953) defined agricultural finance as "an economic study of borrowing funds by farmers, the organization and operation of farm lending agencies and of society's interest in credit for agriculture ."

Tandon and Dhondyal (1962) defined agricultural. finance "as a branch of agricultural economics, which deals with and financial resources related to individual farm units."

4.2.2 Nature and Scope:

Agricultural finance studied at both micro and macro level. Macrofinance deals with different sources of raising funds for agriculture as a whole in the economy. It is also concerned with the lending procedure, rules, regulations, monitoring and controlling of different agricultural credit institutions. Hence macro-finance is related to financing of agriculture at aggregate level.

Micro-finance refers to financial management of the individual farm business units. And it is concerned with the study as to how the individual farmer considers various sources of credit, quantum of credit to be borrowed from each source and how he allocates the same among the alternative uses with in the farm. It is also concerned with the future use of funds.

Therefore, macro-finance deals with the aspects relating to total credit needs of the agricultural sector, the terms and conditions under which the credit is available and the method of use of total credit for the development of agriculture, while micro-finance refers to the financial management of individual farm business.

4.2.3 Significance of Agricultural Finance:

1) Agricultural finance assumes vital and significant importance in the agro – socio – economic development of the country both at macro and micro level.

2) It is playing a catalytic role in strengthening the farm business and augmenting the productivity of scarce resources. When newly

developed potential seeds are combined with purchased inputs like fertilizers & plant protection chemicals in appropriate / requisite proportions will result in higher productivity.

3) Use of new technological inputs purchased through farm finance helps to increase the agricultural productivity.

4) Accretion to in farm assets and farm supporting infrastructure provided by large scale financial investment activities results in increased farm income levels leading to increased standard of living of rural masses.

5) Farm finance can also reduce the regional economic imbalances and is equally good at reducing the inter–farm asset and wealth variations.

6) Farm finance is like a lever with both forward and backward linkages to the economic development at micro and macro level.

7) As Indian agriculture is still traditional and subsistence in nature, agricultural finance is needed to create the supporting infrastructure for adoption of new technology.

8) Massive investment is needed to carry out major and minor irrigation projects, rural electrification, installation of fertilizer and pesticide plants, execution of agricultural promotional programmes and poverty alleviation programmes in the country.

4.3 SOURCES OF AGRICULTURAL FINANCE

Agricultural finance is the provision of multiple types of services dedicated to supporting both on- and off-farm agricultural activities and businesses including input provision, production, and distribution, wholesale, processing and marketing.

This can be divided into two categories:

(i) Non-institutional sources.

(ii) Institutional sources

(i) Non-Institutional sources:

Non-Institutional sources of agricultural finance is a unorganized segment of the rural money market. Non-institutional or private sources include money lenders, traders, commission agents, relatives and landlords. These sources are not come under purview of the Indian banking Company act. The accounts of these agencies are not assessed by the Government. There is not any control of the Government on these agencies. These agencies have informal relationship with their borrowers. There is elasticity about rate of interest, rules and guarantor. The non-institutional sources are the following i) moneylenders ii) relatives iii) traders iv) commission agents v) landlords.

(ii) Institutional sources:

(a) Cooperatives

(b) Scheduled Commercial Banks

(c) Regional Rural Banks (RRBs)

(a) Co operatives:

(i) Primary Agricultural Cooperative Societies (PACSs) provide short and medium term loans.

(ii) PCARDBs provide long term loan for agriculture.

(b) Commercial banks:

In fact up to 1970 the government policy was to depend entirely on the cooperative banks as a major source of institutional credit in rural areas. Government felt that Cooperative Bank alone cannot meet the growing demand. Therefore Govt, policy changed and a number of institutions were developed to give rural credit. In 1969, 14 major banks were nationalised.

In 1980, six more banks were nationalised. In 2004, the number of total branches had shot up to 67062, of this 32,200 in rural areas. Despite the achievement of the commercial banks in the field of rural creditmentioned above, their performance and operations have invited a lot of criticism.

(c)Regional Rural Banks:

The Working Group on Rural Banks (1975) recommended the establishment of Regional Rural Bank (RRBs) to supplement the efforts of the commercial banks and the cooperatives in extending credit to weaker sections of the rural community, small and marginal farmers, landless labourers, artisan and other rural residents of small means.

The intention in having these new banks was that there should, in the Indian context, be an institutional device which combined the local feel and familiarity with the rural problems which the cooperatives possessed and the degree of business organisation and modernised outlook which the commercial banks had, with a view to reaching the rural poor more extensively.

Consequent upon the recommendations of the Working Group, 5 RRBs were initially set up in 1975. Their number later rose to 196. In 2003-04, RRBs provided Rs. 7,581 crores as credit to the agricultural sector. This was 8.7% of total institutional credit to agriculture in that year.

4.4 MICRO FINANCE

Micro credit or micro finance is a novel approach to ―banking with poor where bank credit is extended to the poor through Self 67 Help Groups (SHGs), Non-Governmental Organizations (NGOs), credit unions,

etc. It attempts to combine lower transaction costs and high degree of repayments. The SHG-bank linkage programme, introduced and encouraged by NABARD, is now being implemented vigorously by more than 30,000 branches of commercial banks, RRBs and cooperative banks in over 520 districts in 30 states and Union Territories. At the end of March 2007, as many as 2.9 million SHGs are linked with banks and 7,000 NGOs are associated with the scheme.

4.5 NABARD: ROLE AND FUNCTION

A National Bank for Agricultural and Rural Development (NABARD) or the National Bank was set up in July 1982 by an Act of Parliament to take over the functions of the Agricultural Refinance Development Corporation (ARDC) and the refinancing functions of RBI in relation to co-operative banks and RRBs. NABARD is linked originally with the RBI by the latter contributing half of its share capital and the other half being contributed by the Government of India and nominating three of its Central Board Directors on the board of NABARD, besides a Deputy Governor of RBI being appointed as Chairman of NABARD.

4.5.1 ROLE OF NABARD

1. It is an apex institution which has power to deal with all matters concerning policy, planning as well as operations in giving credit for agriculture and other economic activities in the rural areas.

2. It is a refinancing agency for those institutions that provide investment and production credit for promoting the several developmental programs for rural development.

3. It is improving the absorptive capacity of the credit delivery system in India, including monitoring, formulation of rehabilitation schemes, restructuring of credit institutions, and training of personnel.

4. It co-ordinates the rural credit financing activities of all sorts of institutions engaged in developmental work at the field level while maintaining liaison with Government of India, and State Governments, and also RBI and other national level institutions that are concerned with policy formulation.

5. It prepares rural credit plans, annually, for all districts in the country.

6. It also promotes research in rural banking, and the field of agriculture and rural development.

4.5.2 FUNCTION OF NABARD

NABARD has a dual role to play (a) as an apex institution and (b) as a refinance institution. NABARD has inherited its apex role from RBI i.e. it is performing all the functions formerly performed by RBI with regard to agricultural credit. At the same time, NABARD has taken over the functions of ARDC and thus provides refinance facilities to all banks and financial institutions lending to agriculture and rural development.

i) NABARD services as a refinancing institution for all kinds of production and investment credit to agriculture, small scale industries, cottage and village industries, handicrafts and rural crafts and real artisans and other allied economic activities with a view to promoting integrated rural development

ii) It provides short term, medium term and long term credit to State Co-operative Banks (SCBs), RRBs, LDBs and other financial institutions approved by RBI.

iii) NABARD gives long term loans (up to 20 years) to State Governments to enable them to subscribe to the share capital of co-operative credit societies.

iv) NABARD gives long term loans to any institution approved by the Central Government or contribute to the share capital or invests in securities of any institution concerned with agriculture and rural development.

v) NABARD has the responsibility of co-ordinating the activities of Central and State Governments, the Planning Commission and other all India and state level institutions entrusted with the development of small scale industries, village and cottage industries, rural crafts, industries in the tiny and decentralised sectors, etc.

vi) It has the responsibility to inspect RRBs and co-operative banks, other than primary co-operative societies.

vii) It maintains a Research and Development Fund to promote research in agriculture and rural development, to formulate and design projects and programmes to suit the requirements of different areas and to cover special activities.

4.6 AGRICULTURAL MARKETING: STRUCTURE AND PROBLEMS

Agricultural marketing covers the services involved in moving an agricultural product from the farm to the consumer. These services involve the planning, organizing, directing and handling of agricultural produce in such a way as to satisfy farmers, intermediaries and consumers. Numerous interconnected activities are involved in doing this, such as planning production, growing and harvesting, grading, packing and packaging, transport, storage, agro- and food processing, provision of market information, distribution, advertising and sale. Effectively, the term encompasses the entire range of supply chain operations for agricultural products, whether conducted through *ad hoc* sales or through a more integrated chain, such as one involving contract farming.

4.6.1 STRUCTURE OF AGRICULTURAL MARKETING

The important types of agricultural markets in India are as follows:

1. Primary or local markets:

These markets are organised by Village Panchayats, who charge some rent from shopkeepers for the space occupied. These markets are known as ‘shandies‘, in southern states, or ‘chuna‘ in Kerala, hat, painth or bazar in northern and north eastern states, held once or twice in a week in the neighbourhood of a group of villages. More than 50 percent of the total marketed surplus is sold at these markets. The village bania acts as a middleman in these markets.

2. Secondary markets:

Business in these markets is transacted regularly throughout the year. The markets provide facilities of storage, handling and banking services, and are well served by roads and railways. These are also known as ‘wholesale‘ or ‘assembling‘ markets and are called mandis or gungs. A number of middlemen operate in these markets.

3. Terminal markets:

These markets perform the function of carrying goods to consumers, final buyers or to places of processing. Such markets are located in big cities or at ports.

4. Fairs:

Fairs held at religious occasions at pilgrim centres are important sources of marketing of agricultural produce in India. Such fairs are held annually and are organised by district officers, local bodies or private agencies. They are very popular in states like Bihar, Orissa, U.P., Maharashtra, W. Bengal and Rajasthan.

5. Regulated markets:

These have been set up by the Government for the purpose of checking fraudulent practices which are generally practised by traders in the primary and secondary markets. Government rules and regulations govern the market practices.

6. Cooperative marketing:

These markets function on the basis on the basis of principles of cooperation. A cooperative marketing society can carry the agricultural produce direct to the consumers, thus dispensing with a large army of middlemen and intermediaries.

7. State Trading:

In agricultural produce has become an important element of agricultural marketing in India. State agencies, like the Food Corporation of India, set

up their exclusive centres in and around villages and mandis at harvest time to procure produce from peasants at Government-fixed prices.

4.6.2 PROBLEMS OF AGRICULTURAL MARKETING

a. In the agricultural marketing in India there are a large number of middlemen indulging in widespread malpractices.

b. Lack of proper warehousing facilities in the villages, therefore the farmer was compelled to store his products in pits, mud-vessels, kutcha storehouses etc. These unscientific methods of storing led to considerable wastage.

c. There was not any provision for grading, thus there was no incentive to use better seeds and produce better varieties.

d. Transportation facilities were also highly inadequate and only a small number of villages were joined by railways and pucca roads to mandis. The produce was carried on slow moving transport vehicles like bullock-carts which could not be used to carry produce to far-flung places and the farmer force to sell his produce in nearby market at low prices.

e. Farmers are illiterate and they are not aware about the prices of their produce in different markets, so there is no option for them but to accept the price offered to them by the middlemen.

f. Indian farmer is poor and lack staying power, so he tried to sell his produce immediately after harvest at less prices.

g. There was a total lack of institutional sources of credit and the farmers were almost totally dependent on the moneylenders whose sole objective is to exploit the farmers by forcing them to sell produce to them at low prices than the market prices in turn for the loans granted to them.

4.6.3 GOVERNMENT MEASURES TO IMPROVE AGRICULTURAL MARKETING SYSTEM IN INDIA

An efficient agricultural market may lead to increase in efficiency of farmers and provide an incentive to produce more. Following measures have been adopted by Government to overcome the defects of agricultural marketing.

1. Establishment of Regulated markets:

Regulated markets are places where transactions are governed by various rules and regulations. The market committees consist of representatives of growers, traders and the government, who look after functioning of these markets. These committees are responsible for the enforcement of fair grading practices, licensing of market functionaries, stopping the deduction of unauthorised market charges, introduction of the open auction system of sales and enforcement of standard weights and to secure

impartial arbitration in case of disputes. The markets provide yards, godowns, sheds, etc. Reliable and up-to-date market news are made available to the farmers. There are 7,161 regulated markets in the country.

2. Private terminal markets:

Private parties are being permitted to set up terminal markets for agricultural produce. These markets are being set up by corporate, other private enterprises and cooperatives. The facilities provided at the markets include electronic auction, cold chain and logistics support from the primary collection centres located at convenient places.

3. Provision for Storage and Warehousing facilities:

Improved storage performs the function of regulating supply in relation to demand, stabilisation of prices and maintenance of buffer stocks. A warehouse is a godown where goods are stored on the journey from places of manufacture or consumption. Storage and warehousing facilities for agricultural crops on commercial basis are available both in the public and private sectors. The main institutional agencies providing these facilities are the Central and State Warehousing Corporations, the Food Corporation of India and the Cooperatives.

4. Corporate marketing:

Corporates are more capable of undertaking risks and can face financial losses than small and medium farmers. The corporate buy the produce on contract basis from farmers, and pay them the prevailing market prices. The farmers can sell their produce elsewhere if they get a better price. The corporate are paying detailed attention to several aspects of retail chain right from seed distribution, fertiliser application, improving irrigation technologies, facilitating credit, processing and setting up cold storage, transporting and finally selling the produce.

5. Standard weights and Grading:

The Standard weights and Measures Act was brought into force in 1958. Under the Act, only Government weights and measures can be used for transactions. Grading of agricultural produce is done under the provisions of the Agricultural Produce (Grading and Marketing) Act, 1937, for which purpose the insignia AGMARK is used. This insignia is the hallmark of quality. Grading standards have been laid down for 150 agricultural and allied commodities. Compulsory grading before export is carried out in respect of 41 commodities.

6. Market information:

Relating to agricultural products collected by public agencies and co-operatives is made available to farmers. For dissemination of information all sorts of media, like display boards, radio, television, weekly, monthly and yearly publications, conferences, etc. are used. This information service is a part of the infrastructure that is needed for a healthy functioning of the market. Further, during 2005-06, a scheme for

Marketing Research and Information Network, AGMARKNET, was implemented to provide electronic connectivity to important wholesale markets in the country for collection and dissemination of price and market related information.

7. Transport arrangements:

In an integrated road development programme, rural roads have been assigned a higher priority so as to bring lakhs of our villages into the national mainstream. As at the beginning of the Tenth Plan, 61,947 villages out of a total of 67,915 villages with a population of 1,500 and above had been connected by all-weather roads. Similarly, 40,551 villages out of a total of 57,859 villages with a population between 1,000 and 1,500 had been so connected.

8. State Trading in Food-grains:

It has been introduced mainly with the object of providing food-grains to the deficit States. However, it has also been adopted as a measure to support the farmers in securing reasonable prices. It is carried out partly by the Food Departments and partly by the FCI.

9. Market Intervention Scheme (MIS):

In order to protect the growers of the horticultural / Agricultural commodities which are perishable in nature, from making distress sales in the event of bumper crop during peak arrival period when prices fall to very low level, Government implements MIS for a particular commodity on the request of a State Government concerned. Losses suffered are shared on 50:50 basis between Central and the State. The NAFED has been appointed as a Central Nodal Agency which operates the scheme through the State designated agencies i.e., State Marketing Federations.

10. Marketing Inspection, Research and Training:

The government has paid attention to the requirements of adequate arrangements for market inspection, research and training. Occasional surveys of markets can help in identifying problems and finding solutions for them. The directorate of Marketing and inspection undertakes inspection and research of major agricultural products.

11. Cooperative marketing:

It requires that individual farmers organise themselves into a cooperative society; they pool their produce together, and market it collectively. The sales proceeds are distributed among the individual members in proportion to their share in the produce marketed.

CHECK YOUR PROGRESS:

1. What are the different types of agricultural markets in India?

2. Write a note on Co-operative marketing in India.

4.7 NATIONAL POLICY FOR FARMERS, 2007

The Government of India has approved the National Policy for Farmers, 2007. The national policy for farmers, among other things, has provided for a holistic approach for development of the agriculture sector. The broad areas of the National Policy for Farmers, 2007 are as follows:

1. The focus of this policy is on the **economic well-being of the farmers** in addition to production and productivity.
2. **Asset Reforms:**To ensure that a farmer household in villages either possesses or has access to a productive asset or marketable skill.
3. **Wate use efficiency:** The concept of maximizing yield and income per unit of irrigation water in all the crop production programmes would be accorded priority with stress on awareness and efficiency of water use.
4. **New technologies** like bio-technology, information and communication technology (ICT), renewable energy technology, space applications and nano-technology would be encouraged for improving productivity per unit of land and water on a sustainable basis.
5. **National Agricultural Bio-security System** would be established to organize a coordinated agricultural bio-security programme.

4.8 ORGANIC FARMING

According to FSSAI, 'organic farming' is a system of farm design and management to create an ecosystem of agriculture production without the use of synthetic external inputs such as chemical fertilisers, pesticides and synthetic hormones or genetically modified organisms.

Government Initiatives to Promote Organic Farming

1. Mission Organic Value Chain Development for North East Region (MOVCD):

Mission Organic Value Chain Development for North East Region (MOVCD-NER) is a Central Sector Scheme, a sub-mission under National Mission for Sustainable Agriculture (NMSA)

It was launched by the Ministry of Agriculture and Farmers Welfare in 2015 for implementation in the states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.

The scheme aims to develop certified organic production in a value chain mode to link growers with consumers and to support the development of the entire value chain.

2. Paramparagat Krishi Vikas Yojana (PKVY):

Paramparagat Krishi Vikas Yojana was launched in 2015 is an elaborated component of Soil Health Management (SHM) of major project National Mission of Sustainable Agriculture (NMSA).

Under PKVY, Organic farming is promoted through adoption of organic villages by cluster approach and Participatory Guarantee System (PGS) certification.

3. Certification Schemes:

i) Food Safety and Standards Authority of India (FSSAI) is the food regulator in the country and is also responsible for regulating organic food in the domestic market and imports.

ii) Participatory Guarantee System (PGS): PGS is a process of certifying organic products, which ensures that their production takes place in accordance with laid-down quality standards. PGS Green is given to chemical free produce under transition to 'organic' which takes 3 years. It is mainly for domestic purpose.

iii) National Program for Organic Production (NPOP): NPOP grants organic farming certification through a process of third party certification for export purposes.

iv) Soil Health Card Scheme has led to a decline of 8-10% in the use of chemical fertilizers and also raised productivity by 5-6%.

4. Agri-export Policy 2018:

Focus on clusters and Marketing and promotion of "Produce of India" have positively impacted the organic farming in India

5. One District - One Product (ODOP):

The programme aims to encourage more visibility and sale of indigenous and specialized products/crafts of Uttar Pradesh, generating employment at the district level.

The presence of aggregators is imperative to bring about economies of scale for the small and marginal farmers.

6. PM Formalization of Micro Food Processing Enterprises (PM FME):

The Ministry of Food Processing Industries (MoFPI) launched the PM FME scheme as a part of 'Atmanirbhar Bharat Abhiyan'.

It aims to bring in new technology, apart from affordable credit to help small entrepreneurs penetrate new markets.

7. Zero Budget Natural Farming:

Zero budget natural farming is a method of chemical-free agriculture drawing from traditional Indian practices.

4.9 FOOD SECURITY IN INDIA

Meaning and definition of food security:

World Development Report (1986) defined food security as ―access by all people at all times to enough food for an active, healthy life.

Food and Agriculture Organisation (FAQ) defined food security as ―ensuring that all people at all times have both physical and economic access to basic food they need.

Food Policy in India:

Objectives:

a) To avoid localised and widespread famine and open under nutrition;

b) To maintain remunerative prices to farmers, encourage them to use modern inputs and technology;

c) To stabilise prices due to market distortions;

d) To provide price support when there is a rapid fall in food-grain prices;

e) To attempt through administrative means to keep down prices when there is a strong upward pressure;

f) To supply vulnerable classes with food-grains at below market prices;

g) To procure food-grains for public distribution at below market prices;

h) To build and maintain a buffer stock of food-grains to facilitate government operations;

i) To use the agricultural price policy to resist general inflationary forces in the economy.

Instruments of Food Policy:

The various instruments of food policy in India can be explained under three sections,

A) Production and Supply of food-grains,

B) Consumption of food-grains,

C) Distribution of foodgrains.

A) Production and Supply of food-grains:

The basic objective of agricultural planning in India has been to achieve self-reliance in production of food-grains.

1. Production:

Production of food-grains in particular, and agricultural production in general, has been sought to be raised through the adoption of a package of measures which can be grouped under three heads, viz., technological improvements, institutional and infrastructural reforms, and support services. Technological improvements and institutional reforms have aimed at providing infrastructure that proves conducive to the goal of a rapid increase in agricultural production. Minimum support prices guarantee the producers that the prices will not be allowed to fall below the minimum economic levels. Since 1977-78, the support prices have been raised from year to year.

2. Supply:

Domestic production of food-grains has always been sought to be supplemented by imports, whenever warranted by the domestic situation. The primary objective of imports as of the food policy in general has been to help sustain the public distribution system and to protect the interests of the weaker sections of society.

B) Consumption of food-grains:

There are two aspects of consumption of food-grains in India:

- There is increasing number of mouths to be fed.
- The consumption pattern of people have been loaded in favour of cereals, specially wheat and rice.

1. Population Policy:

The aim of the Government policy in this regard has been to give the facilities and incentives to people to check the size of their families. The family welfare planning programme which forms a part of the nation‘s population policy has striven hard to bring down the fertility rate.

2. Nutrition policy:

The National nutrition Policy, formulated in 1993, recognises the significance of short term measures such as nutrition interventions for special vulnerable groups, fortification of food items, control of micro-nutrient and protein-energy deficiencies through inter-sectoral programmes such as universalisation of supplementary feeding for pre-school children and expectant and nursing mothers through Integrated Child Development Scheme, basic minimum services including mid-day meals for school going children, child survival and safe motherhood

programme to extend nutrition and universal immunisation. To achieve these, the National Plan of Action was initiate in 1995.

C) Distribution of food-grains:

1. Public Distribution System (PDS):

The basic objective of the public distribution system in India is to provide essential consumer goods at cheap and subsidised prices to the consumers. To run this system, the government resorts to levy purchases of a part of the marketable surplus with traders / millers and producers at procurement prices. The grain thus procured, is used for distribution to the consumers through a network of ration / fair price shops and / or building up buffer stocks. PDS has been also used in India for the distribution of edible oils, sugar, coal, kerosene and cloth. The most important items covered under PDS in India have been rice, wheat, sugar and kerosene. Together these four items have accounted for 86 percent of the total PDS sales. PDS distributes commodities worth more than Rs.30,000 crore annually to about 160 million families and is perhaps the largest distribution network of its kind in the world.

The main agency providing food-grains to the PDS is the Food Corporation of India (FCI) set up in 1965. The primary duty of the Corporation is to undertake the purchase, storage, movement, transport, distribution and sale of food-grains and other foodstuffs. It ensures on the one hand that the farmers get remunerative prices for their produce, and on the other hand, the consumers get food-grains from the central pool at uniform prices fixed by the government of India.

2. Buffer stocks:

This is the stock which would enable the Government to maintain the supply line even in a year of crop failure. The primary objectives of buffer stocks are price stabilisation and achievement of stability of farm incomes. These objectives determine the optimum size of buffer stocks that the Government should hold. The holdings of food-grains involve costs in the form of interest lost, go-down rentals and wastage in storage. These costs have been estimated to have gone up from Rs.77.55 per quintal in 1991-92 to Rs.390.0 per quintal in 2005-06 and are estimated to be rising at the rate of 15 percent per annum.

3. Procurement:

Buffer stock operations can be successfully maintained only if these are supported by a proper procurement of food-grains by the government. The following systems of procurement have been adopted in India in recent years:

- A monopoly purchase in which the whole of the marketable surplus is to be sold to the State only;
- A graded levy on producers on his total land holdings and with a certain weightage for irrigated land; - A levy on millers / dealers;

- Purchase through licensed wholesale dealers including millers;
- Support purchase in open market.

National Food Security Act 2013:

The National Food Security Act 2013 (also 'Right to Food Act') is an Indian Act of Parliament which aims to provide subsidized food grains to approximately two thirds of the country's 1.2 billion people. It was signed into law on 12 September 2013, retroactive to 5 July 2013.

The National Food Security Act, 2013 (NFSA 2013) converts into legal entitlements for existing food security programmes of the Government of India. It includes the Midday Meal Scheme, Integrated Child Development Services scheme and the Public Distribution System. Further, the NFSA 2013 recognizes maternity entitlements. The Midday Meal Scheme and the Integrated Child Development Services Scheme are universal in nature whereas the PDS will reach about two-thirds of the population (75% in rural areas and 50% in urban areas).

4.10 SUMMARY

1. The credit needs of the Indian farmers can be classified as short-term credit for the period up to 15 months, medium term credit for the period between 15 months to 5 years and long term credit for the period exceeding 5 years.

2. There are two sources of credit available to farmers – institutional and private. Institutional credit refers to loans provided to farmers by co-operative societies and co-operative banks, and commercial banks including regional rural banks (RRBs).

3. Private or Non institutional sources include money-lenders, traders and commission agents, relatives and landlords.

4. A National Bank for Agricultural and Rural Development (NABARD) or the National Bank was set up in July 1982 by an Act of Parliament to take over the functions of the Agricultural Refinance Development Corporation (ARDC) and the refinancing functions of RBI in relation to co-operative banks and RRBs.

5. There are various types of agricultural marketing in India such as primary markets, secondary markets, terminals, fairs, regulated markets, co-operative markets, state trading corporations etc.

6. Government adopted several measures to correct the defects of agricultural marketing in India.

7. The agricultural Prices Commission was, accordingly, set up in January 1965. It was renamed Commission for Agricultural Costs and Prices (CACP) in 1985.

8. The CACP performs functions such as organisation of food zones, fixation of minimum support prices and procurement prices, rationing and sale through fair price shops etc.

9. Food and Agriculture Organisation (FAQ) defined food security as ―ensuring that all people at all times have both physical and economic access to basic food they need.

10. The various instruments of food policy in India can be explained under three sections, A) Production and Supply of food-grains, B) Consumption of food-grains, C) Distribution of food-grains.

11. The basic objective of the Public Distribution System (PDS) in India is to provide essential consumer goods at cheap and subsidised prices to the consumers.

12. To overcome the shortcomings and weaknesses in the PDS, Targeted Public Distribution System (TPDS) have been suggested.

4.11 QUESTIONS

1. Explain the need and purpose of rural credit.

2. What are the sources of rural credit in Indian agriculture?

3. Write a note on NABARD.

4. Discuss the different types of Agricultural markets in India.

5. What are the defects of agricultural markets in India?

6. Explain the measures adopted by the Government to correct the defects of agricultural markets.

7. Explain the Agricultural Price Policy in detail.

8. Examine the Food Policy in India.

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Module -III

5

INFRASTRUCTURE AND POLICIES FOR INDUSTRIAL DEVELOPMENT IN INDIA

Unit Structure:

5.0 OBJECTIVES

- To understand the concept of Infrastructure for Industrial Development.
- To familiar students with the Industrial policies in India.
- To enable the learners to grasp fully the role, importance of MSME sector.
- To explain the studentsgrowth of Large scale industries in India.
- To understand the role of large-scale industries in economic development of India.

5.1 INTRODUCTION

Infrastructure sector is a key driver for the Indian economy. The sector is highly responsible for propelling India's overall development and enjoys intense focus from Government for initiating policies that would ensure time-bound creation of world class infrastructure in the country. Infrastructure sector includes power, bridges, dams, roads, and urban infrastructure development.

5.2 INFRASTRUCTURE FOR INDUSTRIAL DEVELOPMENT

5.2.1 Introduction to Infrastructure:

The infrastructure is important for faster economic growth and alleviation of poverty in the country. The adequate infrastructure in the form of road and railway transport system, ports, power, airports, and their efficient working is also needed for integration of the Indian economy with other economies of the world.

5.2.2 Important Constituents of Infrastructure:

The following are the important constituents of infrastructure are as follows -

1. Power and the source of its production such as coal and oil;

2. Roads and road transport;

3. Railways;

4. Communication, especially telecommunication;

5. Ports and airports; and

6. For agriculture, irrigation constitutes the important infrastructure.

A distinguishing feature of infrastructure is that while the demand-supply gap in case of other factors can be met by importing some of them, the deficiency of infrastructure cannot be made up through imports. Because location-based the need for relevant infrastructure facility can be met through development of its capacity in the domestic economy. For example, you cannot import power facility, roads, ports, or railways as they have to be built up in the domestic economy.

5.2.3 Important Features of Infrastructure:

It is worthwhile to mention some distinctive features of infrastructure –

- First, the building of infrastructure requires large and lumpy investment, and they contribute to output, after a long time that is their gestation period is quite long.

- Second, due to large overhead capital and lumpy investment, the significant economies of scale are found in most of them. Due to the significant economies of scale found in many infrastructure services, they have the characteristics of natural money.

- The third important feature of infrastructure facilities is they create externalities.

For example, building of rural roads will benefit agriculture as the farmers are able to sell their products in towns where they can get remunerative prices. Besides, they can get some inputs such as fertilizers, pesticides and other industrial products at relatively cheaper prices as their transport costs decline due to improved transportation. Power plants generate both positive and negative externalities. The construction of power plants produces electricity which is used for industrial helps production and commercial use and thereby helps in acceleration of economic growth. A power plant also produces negative externalities in the form of emission of pollutants, especially CO_2.

The above feature of infrastructure means that competitive market system will not be able to achieve a socially optimal level of infrastructural services in most of the cases. Besides, in many of infrastructural facilities, there are significant economies of scale and therefore they have the features natural monopoly. In other words, we find market failure to achieve their socially optimal level.

Therefore, these infrastructural facilities are either built or run by the government and public sector enterprises or if private sector is permitted to make investment in them and run them, they need to be regulated by the government, so that they should not exploit the consumers. For example, the distribution of electricity which is an infrastructural service is being provided by two power Companies of Tata and Reliance in different regions of Delhi, the electricity rates and other charges are being regulated by an authority appointed by the government. Similarly, in telecommunication, which is another infrastructural service, various companies such as Airtel, Vodaphone, Idea, MTNL are providing this service of wireless telephony (i.e., mobile service) are being regulated by TRAI.

5.2.3 Importance of Infrastructure:

It needs to be emphasized that good quality infrastructure is important not only for faster economic growth but also to ensure inclusive growth. By inclusive growth we mean that benefits of growth are shared by most of the people of a country. Thus, the inclusive growth will lead to the alleviation of poverty and reduction in income inequality in the country.

For example, micro, small and medium enterprises (MSME) are dispersed throughout the economy and production by them, and their growth require access to quality and reliable infrastructure services to compete efficiently with large-scale enterprises which can often build some of their own infrastructure such as installing their own small power plants or

generators. Besides, large-scale firms can even locate themselves near ports and near transport hubs where required infrastructure is available.

Small enterprises, on the other hand, are dispersed widely in the economy and have to rely on the availability of the general infrastructure facilities. Thus, by building up general infrastructure facilities helps the small enterprises to compete successfully with large-scale industries and being labour-intensive generate large employment opportunities for the workers. This will help to alleviate the poverty in developing countries.

The expansion in infrastructure facilities such as irrigation, rural electrification, roads and road transport will promote agricultural growth and setting up of agro-processing industries. These general infrastructure facilities will help farmers and owners of processing industries to get their requirements of raw materials, fertilizers and other inputs at cheap rate and also help them to bring their products to the markets which are located in big towns and cities.

Thus, according to Thirlwall, "For poor farmers improved infrastructure will reduce their input cost and increase agricultural production and reduce traders' monopoly by improving their access to markets. Nearly two-thirds of African farmers are cut off from national and world markets, because of poor infrastructure and market access. Better transport means greater access to public resources including schools, hospitals and other health facilities".

It follows from above that the expansion of infrastructure facilities will ensure sustained growth of employment in agriculture and small-scale rural industries and bring prosperity in the rural areas and in this way ensure inclusive growth. Besides, this will also help to prevent the mass exodus of the rural people to urban areas where they cause problems of urban congestion, growth of slums and acute housing shortage.

Lack of adequate infrastructure not only holds lack economic development, it also causes additional costs in terms of time, effort and money of the people for accessing essential social services such as healthcare and education. Emphasizing the importance of adequate infrastructure, authors of Economic Survey of India for the Year 2013 -14 quite rightly write, "Rural economic growth in recent years has put enormous pressure on existing infrastructure particularly on transport, energy and communication. Unless it is significantly improved infrastructure will continue to be a bottleneck for growth and obstacle to poverty reduction". In other words, it is the challenge to ensure strong, sustainable and balanced development through integration of the economy with environmentally sustainable development of infrastructure.

It may be noted that with large investment in infrastructure during the last decade (2003-04 to 2013-14) India has become the second fastest growing economy of the world but in the two years (2012- March 2014) economic growth slowed down and this has been mainly due to the stalled infrastructure projects which held back economic development. It is therefore urgently needed that infrastructure projects be given

environment clearance quickly and investment in them be speeded up if the Indian economy is to be brought back on the fast growth trajectory.

The availability of good quality infrastructure raises productivity levels in the economy and brings down costs of the enterprises. Besides, the availability of adequate infrastructure helps to expand trade not only within a country by improving transport facilities but also promote foreign trade through improvement of ports and airports. It also helps to diversify production by the firms as they are able to get the required supplies of raw materials and other inputs from the places where these are available in abundance. Furthermore, with improved infrastructure the firms can produce goods in accordance with the demands of the people of different regions and countries.

According to World Bank estimates, in the year 2008 developing countries made investment of around $ 500 billion a year in new infrastructure—transport, power, water, sanitation, telecommunication, irrigation and so on equal to 20 per cent of GDP but the need for infrastructure investment is still large. In developing countries one billion people still lack access to clean water, two billion people lack access to sanitation and electric power and adequate transport facilities are still lacking in developing countries.

Having discussed the importance of infrastructure in general, we now discuss below the importance of sector-specific infrastructure for economic growth of a country.

5.2.4 Basic Infrastructure Services:

1. Road Transport:

Road transport is another important infrastructure which is essential for movement of goods, raw materials, and fuel. The availability of transport expands the market for agricultural and industrial products and thereby enables the producers to produce on a large scale and reap the benefits of the economies of scale.

Besides, transport development helps to open up more regions and resources for production. Some parts of a country may have abundant forests and reserves of mineral resources, but they remain unexploited for production because they are remote and inaccessible through means of transport. There is thus a need for linking these backward regions with building of roads and railways so that their untapped mineral and forest resources be utilized for production. India has one of the largest road networks in the world spread over around 49 lakh kilometers. It comprises national highways, expressways, state highways, district roads with length details given in Table 35.2. In the last few years there has been some progress in the development of national highways and in rural roads but much more needs to the done.

Table No. 5.1

Road Network in India (as in May 2014)

Type of Road	Length (in km)
National Highways and Expressways	92851
State Highways	142687
Other Roads	4629482

The National Highways (NHs) with a total length of 92,851 km serve as the arterial network of the country. The development of National Highways is the responsibility of the Central Government which has been mandated to upgrade and strengthen a total of 54,478 km of NHs, through various phases of the National Highways Development Project (NHDP). A total length of around 22,000 km has been completed till March 2014. There are some difficulties in the way of developing national highways due to acquisition of land from the owners from which national highways have to pass through.

In India a special effort is needed to speed up road connectivity in Jammu and Kashmir, Northeast, and other special category States. A good start had been made in the development of roads in Northeast in the Eleventh Five Year Plan and is proposed to be pursued with greater vigour in the 12th Plan in which enhanced connectivity of Northeast has been given a high priority. Furthermore, the construction of roads and upgradation of national highways (NHs) in the districts affected by Left-Wing extremism in Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, and Uttar Pradesh have been taken up for inclusive growth of these areas.

2. Railways:

Railways are an important infrastructure as a means of transport whose expansion and efficient working is required for rapid growth of the economy. The demands of a growing economy such as ours require railways to expand its freight network, increase its ability to carry larger weight per wagon and the efficiency of the rail system for faster delivery. Besides, the railway requires improving the reach and quality of its passenger services. To meet the growing demand for carrying goods and passengers the current focus of Indian Railway should be the creation of additional capacity, modernisation of its existing network, improvement in asset utilisation and productivity. Besides, it should pay attention to modernisation of its rolling stock and maintenance practices to bring about overall improvement in the quality of its services.

It may be further noted that the Indian Railways is expected to generate its internal resources for its expansion and modernisation. The broad

objective of Indian Railways should be to develop a strategy to be a part of an effective multi-modal transport system and to ensure an environment-friendly and economically efficient transport system.

3. Airports:

Airport development is a basic infrastructure requirement for international connectivity, especially because the demand for air travel is projected to grow rapidly in India. There had been a significant progress of airport development in the Eleventh Plan period with the development of four new airports at Bangalore, Hyderabad, Delhi and Mumbai under public-private participation (PPP) mode. To expand airport infrastructure in India, modernisation of airport infrastructure in metro and non-metro cities and construction of Greenfield airports are under consideration of the government.

Development of 35 non-metro airports which have been identified based on regional connectivity, development of regional hubs etc. has been undertaken by Airports Authority of India (AAI). Out of 35 metro airports work has been completed in 33 metros and in the remaining two airports of Vadodara and Khajuraho work is in progress.

4. Ports:

Ports are another important infrastructure for international trade connectivity. It is mainly through these that the goods are exported to other countries and the goods and raw materials are imported. Without efficient ports it is not possible to expand foreign trade. In the Eleventh Plan period (2007- 12) some problems were faced for expansion of the Indian ports because several issues had to be resolved for the proposed public-private participation (PPP) in this connection. These have now been resolved and it is expected that in the next five years there will be significant progress in this area. As regards minor ports which come under State governments, there has been good progress in the Eleventh Plan period.

During 2013-14 major and non-major ports in India handled a total cargo of 980 million tonnes reflecting increase of 5.0 per cent over 2012-13. This can mainly be attributed to an increase of 1.8 per cent in the cargo handled at major ports. In contrast, traffic at non-major ports increased at around 9.6 per cent during 2013-14 as compared to 9.8 per cent in 2012-13.

5. Telecommunications:

Telecommunications occupy an important place in the modern economy. E-commerce and E-governance require the efficiency of telecommunication services. The companies like Amazon, Flipkart, Snapdeal are engaged in E-commerce for sale of goods. They work through mobiles and internet network. Besides, many BPO companies are providing outsourcing services through telecommunication. Without the efficient telecommunication system, the business through E-commerce

and BPO is not possible. Telecommunications and the associated increase in Internet connectivity is a productivity enhancing development and India is well based to benefit from this.

Telecommunications in India have seen impressive expansion and large investment in the past several years with a tele-intensity increasing from 26.2 per cent in 2008 to 78.7 per cent in 2012. The expansion of telecommunications in India has been led by private sector whose market share (in terms of number of connections) increased from 73.5 per cent in 2008 to 86.3 per cent in 2012. However, due to arbitrariness and irregularities in the allocation of 2G Spectrum in 2008, 2G licenses and associated spectrum were cancelled by the Supreme Court in 2011 and ordered for reallocation of the spectrum through auction. The new auction of 2G spectrum was completed by January 2013.

There is a very large scope for further expansion in the telecommunications, especially with the introduction of 3G and 4G services. Besides, recently in July 2015, Prime minister has launched Digital India scheme to promote the role of telecom. In India many companies providing telecom services have come into being. Business firms and even farmers can sign up for a telecom service which provides information through SMS or E-mail about market prices and other prevailing market conditions. This will help them to take optimal decisions regarding their business. Banks are also providing their customers, through SMS or E-mail, the status of their deposits and withdrawal. Besides, the banks are providing through E-mail the information regarding investment avenues open to them.

Keeping in view the role of an efficient telecom network in E-commerce and E-governance and delivery of public services provisions for state-of-art IT facilities in the country need to be put in place. Issues requiring attention include the policy for better spectrum management, strengthening a national fibre-optic network, network mobile number possibility and rural telephony.

5.2.5 Evaluation of the Performance of Infrastructural Services:

Whether in the public sector or regulated private sector the performance of infrastructural services has been quite poor. In many developing countries, most of the population, does not have access to the electricity and until recently in telephone services. After over 50 years of independence, in India the adequate pucca rural roads had not been built and natural highways were in very bad shape and not properly built and maintained lack of good ports and ports in India affected foreign trade of the country. It is only since 2001 that the work of building rural roads, highways, good ports and airports has been started in the 10th, 11th and 12th Five Year Plan.

In the case of electricity, the quality of service has been quite poor. There have been quite often fluctuations in voltages and often supply-cuts even in capital city of Delhi. In UP, Haryana and other states there are interruptions of supply for many hours compelling big companies to install

their own big generators. Besides, State Electricity Boards which are usually responsible for distribution of electricity are running heavy losses. Prices charged by them even do not cover variable costs of supply, let alone contributing to overhead costs.

Similarly, until recently before the extensive use of mobile-phone wireless technology, telephone connections were very few and were a luxury consumer service rather than an essential productive service required to link markets, producers, and consumers. Besides, one must wait for many years to get telephone connection. However, in the last 12 years, regarding telephone service things have improved a lot in India, especially with the widespread use of mobile telephone service. Likewise, in India, the performance of railways port and airport services has been quite inefficient and poor and need drastic reforms to be undertaken to improve their services.

To conclude, Prof. T.N. Srinivasan is right in saying that, the said performance of enterprises providing infrastructural services has been a factor in the poor performance of many developing countries including India. Thus, the case for reforming the infrastructural sectors is very strong, both for improving their own performance and for removing the drag of an unreformed and poorly performing infrastructure sector on the realization of potential benefits of reforms in other sectors.

India has shown very promising results in investments in infrastructure, due to the vast resources both in labour and capital format. Therefore, there has been a steady growth in industrial and business infrastructure in India that has been giving significant returns and contributing to the economic growth of the country. One of the key drivers for the Indian economy is the Infrastructure Sector. To create world-class infrastructure in the country it is crucial to investigate India's overall development in respect to how the government helps in the growth of this sector and the way in which it ensures time-bound creation. According to World Banks, Logistics Performance Index India ranked 44 out of all the countries in the world. In 2019, it ranked 2nd in the Agility Emerging Markets Logistics Index.

5.2.6 What is Infrastructure Development?

Infrastructure provides the most basic facilities that help serve different economic activities and thereby help in the facilitation of the growth of the country, development of the country, education, communication, transport, banking and insurance, health, technology. The example just provided are some of the basic needs that are required to fuel the growth of the economy. For the economy, these do not produce services or goods for the economy but help in inducing the production of the industry, agriculture, and trade by creating an external economy. The best examples of economic infrastructure are the railway line or the national highway. They help induce external investment and generate economies.

5.2.7 Infrastructure and Development:

For the basic development of the most basic goods in the economy, it is required as it does not help in the direct production of any goods or services, but it does help in the facilitation of the various goods and services in different sectors of the economy i.e. the primary, secondary and tertiary sectors. It is a fact that the level of economic development is dependent on the infrastructure development of the country. If we are to look at the most developed countries in the world it is easily seen that there is a tremendous amount of growth in terms of economic and social infrastructure.

With communication and transport, there has been revolutionary progress in these countries. The financial sector in these countries is also doing well because of the best planned and organized banking and insurance. In terms of technology and science, there is a tremendous amount of progress as well. But in counties like India, we do not have such high standards of qualitative infrastructure and because of this, the level of economic development is slow and low.

5.2.3 Infrastructure in Indian Economy

To facilitate production and investment in the economy we need the best infrastructure in terms of quality and also should be sufficient. The bigger infrastructure facilities pave the way for bigger investments in that sector. But the problem with underdeveloped countries is the shortage of these facilities because of less economic development. The Indian economy was behind by the time it got its independence with respect to the rest of the world. So once we got independent the priority for the planners of the country was infrastructure development.

Out of the total planned expenditure about 50 percent was devoted to infrastructure. In the first plan, thirteen percent was spent on power, ten percent on flood and irrigation control and twenty-seven percent was given to transport and communication. Because of all the infrastructure development we have done since independence, we have caught up with the rest of the world and the country has become one of the most promising countries in terms of development and growth.

5.3 ROLE OF INDUSTRIAL DEVELOPMENT IN ECONOMIC GROWTH

The following points explain the role of industrial development in economic growth:

1. Modernisation of Industry:

Industrial development is necessary for modernisation of agriculture. In India, agriculture is traditional and backward. The cost of production is high, and productivity is low. We need tractors, threshers, pump sets and harvesters to modernize agriculture. To increase productivity, we need chemical fertilizers, pesticides, and weedicides etc. These are all industrial

products. Without industrial development, these goods cannot be produced. Agricultural products like jute, cotton, sugarcane etc. are raw materials. To prepare finished products like flex, textiles and sugar etc. we need industrialisation. So industrial development is necessary for modernisation of agriculture.

2. Development of Science and Technology:

Industrial development encourages the development of science and technology. The industrial enterprises conduct research and develop new products. Ethanol in the form of biofuel is an example of industrial development. Industry conducts research on its wastes and develops byproducts like biodiesel from Jatropha seeds. Due to industrialisation, we have made progress in atomic science, satellite communication and missiles etc.

3. Capital Formation:

Acute deficiency of capital is the main problem of Indian economy. In agricultural sector, the surplus is small. Its mobilisation is also very difficult. In large scale industries, the surplus is very high. By using external and internal economies, industry can get higher profit. These profits can be reinvested for expansion and development. So industrialisation helps in capital formation.

4. Industrialisation and Urbanisation:

Urbanisation succeeds industrialisation. Industrialisation in a particular region brings growth of transport and communication. Schools, colleges, technical institutions, banking, and health facilities are established near industrial base. Rourkela was dense forest but now is ultra-modern town in Orissa. Many ancillary units have been established after setting up of big industry.

5. Self-reliance in Defence Production:

To achieve self-reliance in defence production, industrialisation is necessary. During war and emergency dependence on foreign countries for war weapons may prove fatal. Self-reliance in capital goods and industrial infra-structure is also necessary. Atomic explosion at Pokhran (Rajasthan) and Agni Missile are examples of industrial growth.

6. Importance in International Trade:

Industrialisation plays an important role in the promotion of trade. The advanced nations gain in trade than countries who are industrially backward. The underdeveloped countries export primary products and import industrial products. Agricultural products command lower prices and their demand is generally elastic. While industrial products command higher values & their demand is inelastic. This causes trade gap. To meet the deficit in balance of payments we have to produce import substitute products or go for export promotion through industrial development.

7. Use of Natural Resources:

It is a common saying that India is a rich country inhabited by the poor. It implies that India is rich in natural resources but due to lack of capital and technology, these resources have not been tapped. Resources should be properly utilized to transform them into finished industrial products. The British people took India's cheap raw materials for producing industrial goods in their country. India was used as a market for their industrial products. So India fought with poverty and England gained during industrial revolution. Hence industrialisation plays important role for proper utilisation of resources.

8. Alleviation of Poverty and Unemployment:

Poverty and unemployment can be eradicated quickly through rapid industrialisation. It has occurred in industrially advanced countries like Japan. The slow growth of industrial sector is responsible for widespread poverty and mass unemployment. So, with fast growth of industrial sector, surplus labour from villages can be put into use in industry.

9. Main Sector of Economic Development:

Industry is viewed as leading sector to economic development. We can have economies of scale by applying advanced technology and division of labour and scientific management. So production and employment will increase rapidly. This will bring economic growth and capital formation.

10. Fast Growth of National and Per Capita Income:

Industrial development helps in the rapid growth of national and per capita income. The history of economic development of advanced countries shows that there is a close relation between the level of industrial development and the level of national and per capita income. For instance, the share of industrial sector to national income was 26% and the per capita income in year 2000 was 36,240 dollars in USA.

The share of agriculture in the same year was only 2%. In Japan, the share of industrial sector in her GDP was 36% and her per capita income was 36210 dollars. In India due to industrialisation, the contribution of industrial sector to GDP has gone up to 28.5% in 2000-01 and per capita income has risen to Rs. 16,486 in 2000.

11. Sign of Higher Standard of Living and Social Change:

A country cannot produce goods and services of high quality in order to attain decent living standard without the progress of industrial sector.

5.4 INDUSTRIAL POLICY OF INDIA SINCE INDEPENDENCE

Industrialization is an important component of economic growth. Industrial Policy refers to the strategies adopted by government for industrial development in the country. The government of India has

amended first industrial policy of India in 1948. The new industrial policy was brought to address the changing environment. The objective of present industrial policy is to globalize the Indian economy and provide freer play of market forces in domestic economy.

- Government action to influence the ownership & structure of the industry and its performance. It takes the form of paying subsidies or providing finance in other ways, or of regulation.
- It includes procedures, principles (i.e., the philosophy of a given economy), policies, rules and regulations, incentives and punishments, the tariff policy, the labour policy, government's attitude towards foreign capital, etc.

5.4.1 Objectives:

The main objectives of the Industrial Policy of the Government in India are:

1. to maintain a sustained growth in productivity.
2. to enhance gainful employment.
3. to achieve optimal utilization of human resources.
4. to attain international competitiveness; and
5. to transform India into a major partner and player in the global arena.

5.4.2 Industrial Policies in India since Independence

1. Industrial Policy Resolution of 1948:

It defined the broad contours of the policy **delineating the role of the State in industrial development** both as an entrepreneur and authority.

It made clear that India is going to have a **Mixed Economic Model.**

It classified industries into four broad areas:

- **Strategic Industries (Public Sector):** It included three industries in which Central Government had monopoly. These included Arms and ammunition, atomic energy and Rail transport.
- **Basic/Key Industries (Public-cum-Private Sector):** 6 industries viz. coal, iron & steel, aircraft manufacturing, shipbuilding, manufacture of telephone, telegraph & wireless apparatus, and mineral oil were designated as "Key Industries" or "Basic Industries".

These industries were to be set-up by the Central Government.

However, the existing private sector enterprises were allowed to continue.

Important Industries (Controlled Private Sector): It included 18 industries including heavy chemicals, sugar, cotton textile & woollen industry, cement, paper, salt, machine tools, fertilizer, rubber, air and sea transport, motor, tractor, electricity etc.

These industries continue to remain under private sector however, the central government, in consultation with the state government, had general control over them.

Other Industries (Private and Cooperative Sector): All other industries which were not included in the above mentioned three categories were left open for the private sector.

The **industries (Development and Regulation) Act**was passed in 1951 to implement the Industrial Policy Resolution, 1948.

2. Industrial Policy Statement of 1956:

Government revised its first Industrial Policy (i.e. The policy of 1948) through the Industrial Policy of 1956.

It was regarded as the **"Economic Constitution of India" or "The Bible of State Capitalism".**

The 1956 Policy emphasized the need to expand the public sector, to build up a large and growing cooperative sector and to encourage the separation of ownership and management in private industries and, above all, prevent the rise of private monopolies.

It provided the basic framework for the government's policy regarding industries till June 1991.

IPR, 1956 classified industries into three categories -

- **Schedule A** consisting of 17 industries was the exclusive responsibility of the State. Out of these 17 industries, four industries, namely arms and ammunition, atomic energy, railways and air transport had Central Government monopolies; new units in the remaining industries were developed by the State Governments.

- **Schedule B,** consisting of 12 industries, was open to both the private and public sectors; however, such industries were progressively State-owned.

- **Schedule C-** All the other industries not included in these two Schedules constituted the third category which was left open to the private sector. However, the State reserved the right to undertake any type of industrial production.

The IPR 1956, stressed the **importance of cottage and small-scale industries** for expanding employment opportunities and for wider decentralization of economic power and activity

The Resolution also called for **efforts to maintain industrial peace;** a fair share of the proceeds of production was to be given to the toiling mass in keeping with the avowed objectives of democratic socialism.

Criticism:

The IPR 1956 came in for sharp criticism from the private sector since this Resolution **reduced the scope for the expansion of the private sector significantly.**

The sector was **kept under state control through a system of licenses.**

Industrial Licenses

- To open new industry or to expand production, obtaining a license from the government was a prerequisite.
- Opening new industries in economically backward areas was incentivized through easy licensing and subsidization of critical inputs like electricity and water. This was done to counter regional disparities that existed in the country.
- Licenses to increase production were issued only if the government was convinced that the economy required more of the goods.

3. Industrial Policy Statement, 1977-

In December 1977, the Janata Government announced its New Industrial Policy through a statement in the Parliament.

- The main thrust of this policy was the effective **promotion of cottage and small industries** widely dispersed in rural areas and small towns.
- In this policy the **small sector was classified into three groups—** cottage and household sector, tiny sector and small scale industries.
- The 1977 Industrial Policy prescribed **different areas for large scale industrial sector-** Basic industries,Capital goods industries, High technology industries and Other industries outside the list of reserved items for the small scale sector.
- The 1977 Industrial Policy restricted the scope of large business houses so that no unit of the same business group acquired a dominant and monopolistic position in the market.
- It put emphasis on reducing the occurrence of labour unrest. The Government **encouraged the worker's participation in management** from shop floor level to board level.

Criticism:

The industrial Policy 1977, was subjected to serious criticism as there was an absence of effective measures to curb the dominant position of large scale units and the policy **did not envisage any socioeconomic transformation of the economy** for curbing the role of big business houses and multinationals.

4. Industrial Policy of 1980 sought to promote the **concept of economic federation,** to raise the efficiency of the public sector and to reverse the trend of industrial production of the past three years and reaffirmed its faith in the **Monopolies and Restrictive Trade Practices (MRTP) Act** and the **Foreign Exchange Regulation Act (FERA).**

5.5 NEW ECONOMIC POLICY OF 1991: OBJECTIVES, FEATURES AND IMPACTS

5.5.1 Introduction:

New Economic Policy of India was launched in the year 1991 under the leadership of P. V. Narasimha Rao. This policy opened the door of the India Economy for the global exposure for the first time. In this New Economic Policy P. V. Narasimha Rao government reduced the import duties, opened reserved sector for the private players, devalued the Indian currency to increase the export. This is also known as the LPG Model of growth.

New Economic Policy refers to economic liberalisation or relaxation in the import tariffs, deregulation of markets or opening the markets for private and foreign players, and reduction of taxes to expand the economic wings of the country.

Former Prime Minister Manmohan Singh is the father of New Economic Policy (NEP) of India. **Manmohan Singh introduced the NEP on July 24,1991.**

5.5.2 Main Objectives of New Economic Policy:

The main objectives behind the launching of the New Economic policy (NEP) in 1991 by the union Finance Minister Dr. Manmohan Singh are stated as follows:

The main objective was to plunge **Indian Economy** into the arena of 'Globalization and to give it a new thrust on market orientation.

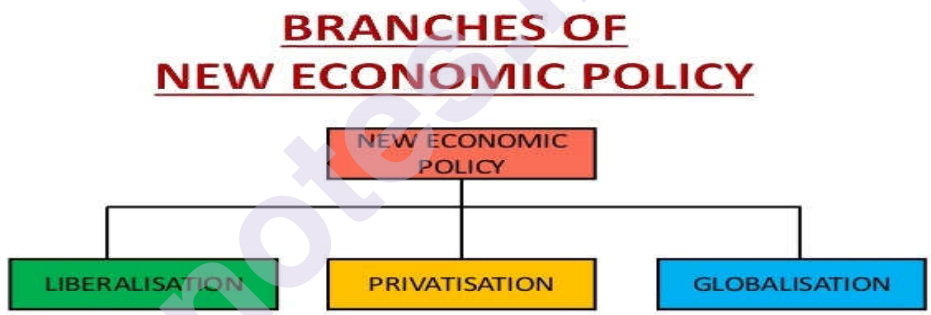
1. The NEP intended to bring down the rate of inflation.
2. It intended to move towards higher economic growth rate and to build sufficient foreign exchange reserves.
3. It wanted to achieve economic stabilization and to convert the economy into a market economy by removing all kinds of un-necessary restrictions.
4. It wanted to permit the international flow of goods, services, capital, human resources, and technology, without many restrictions.
5. It wanted to increase the participation of private players in all sectors of the economy. That is why the reserved numbers of sectors for government were reduced. As of now this number is just 2.

Beginning with mid-1991, the govt. has made some radical changes in its policies related to foreign trade, Foreign Direct Investment, exchange rate, industry, fiscal discipline etc. The various elements, when put together, constitute an economic policy which marks a big departure from what has gone before.

The thrust of the New Economic Policy has been towards creating a more competitive environment in the economy to improving the productivity and efficiency of the system. This was to be achieved by removing the barriers to entry and the restrictions on the growth of firms.

5.5.3 Main Measures Adopted in the New Economic Policy:

Due to various controls, the economy became defective. The entrepreneurs were unwilling to establish new industries (because laws like **MRTP Act 1969** de-motivated entrepreneurs). Corruption, undue delays, and inefficiency risen due to these controls. Rate of economic growth of the economy came down. So, in such scenario economic reforms were introduced to reduce the restrictions imposed on the economy.



1. Liberalization

Removal of Industrial Licensing and Registration:

Previously private sector had to obtain license from Govt. for starting a new venture. In this policy private sector has been freed from licensing and other restrictions.

Industries licensing is necessary for following industries:

(i) Liquor

(ii) Cigarette

(iii) Defence equipment

(iv) Industrial explosives

(v) Drugs

(vi) Hazardous chemicals

Following steps were taken under the Liberalization measure:

(i) Free determination of interest rate by the commercial Banks:

Under the policy of liberalization interest rate of the banking system will not be determined by RBI rather all commercial Banks are independent to determine the rate of interest.

(ii) Increase in the investment limit for the Small-Scale Industries (SSIs):

Investment limit of the small-scale industries has been raised to Rs. 1 crore. So, these companies can upgrade their machinery and improve their efficiency.

(iii) Freedom to import capital goods:

Indian industries will be free to buy machines and raw materials from foreign countries to do their holistic development.

(v) Freedom for expansion and production to Industries:

In this new liberalized era now the Industries are free to diversify their production capacities and reduce the cost of production. Earlier government used to fix the maximum limit of production capacity. No industry could produce beyond that limit. Now the industries are free to decide their production by their own based on the requirement of the markets.

(vi) Abolition of Restrictive Trade Practices:

According to **Monopolies and Restrictive Trade Practices (MRTP) Act 1969,** all those companies having assets worth Rs. 100 crore or more were called MRTP firms and were subjected to several restrictions. Now these firms have not to obtain prior approval of the Govt. for taking investment decision. Now MRTP Act is replaced by the competition Act, 2002.

2. Privatisation:

Simply speaking, privatisation means permitting the private sector to set up industries which were previously reserved for the public sector. Under this policy many PSUs were sold to private sector. Literally speaking, privatisation is the process of involving the private sector-in the ownership of Public Sector Units (PSU's).

The main reason for privatisation was PSUs were running in losses due to political interference. The managers cannot work independently. Production capacity remained under-utilized. To increase competition and efficiency privatisation of PSUs was inevitable.

The following steps are taken for privatization:

i) Sale of shares of PSUs:

Indian Govt. started selling shares of PSUs to public and financial institution e.g. Govt. sold shares of Maruti Udyog Ltd. Now the private sector will acquire ownership of these PSU's. The share of private sector has increased from 45% to 55%.

ii) Disinvestment in PSU's:

The Govt. has started the process of disinvestment in those PSU's which had been running into loss. It means that Govt. has been selling out these industries to private sector. Govt. has sold enterprises worth Rs. 30,000 crores to the private sector.

iii) Minimization of Public Sector:

Previously Public sector was given the importance with a view to help in industralisation and removal of poverty. But these PSUs could not able to achieve this objective and policy of contraction of PSU's was followed under new economic reforms. **Number of industries reserved for public sector was reduces from 17 to 2.**

(a) Railway operations

(b) Atomic energy

3. **Globalization:**

Literally speaking Globalisation means to make Global or worldwide, otherwise taking into consideration the whole world. Broadly speaking, Globalisation means the interaction of the domestic economy with the rest of the world about foreign investment, trade, production, and financial matters.

Following steps are taken for Globalisation:

(i) Reduction in tariffs:

Custom duties and tariffs imposed on imports and exports are reduced gradually just to make India economy attractive to the global investors.

(ii) Long term Trade Policy:

Forcing trade policy was enforced for longer duration.

Main features of the policy are:

- Liberal policy
- All controls on foreign trade have been removed
- Open competition has been encouraged.

(iii) Partial Convertibility of Indian currency:

Partial convertibility can be defined as to convert Indian currency (up to specific extent) in the currency of other countries. So that the flow of foreign investment in terms of Foreign Institutional Investment (FII) and foreign Direct Investment (FDI).

This convertibility stood valid for following transaction:

- Remittances to meet family expenses
- Payment of interest
- Import and export of goods and services.

(iv) Increase in Equity Limit of Foreign Investment:

Equity limit of foreign capital investment has been raised from 40% to 100% percent. In 47 high priority industries foreign direct investment (FDI) to the extent of 100% will be allowed without any restriction. In this regard **Foreign Exchange Management Act (FEMA)** will be enforced.

If the Indian economy is shining at the world map currently, its sole attribution goes to the implementation of the New Economic Policy in 1991.

5.6 MICRO, SMALL, MEDIUM ENTERPRISES (MSME'S)

Micro, Small, Medium Enterprises (MSME's) are entities that are involved in production, manufacturing and processing of goods and commodities.

The MSME sector is considered the backbone of the Indian economy that has contributed substantially to the economic development of the nation. It generates employment opportunities and works in the development of backward and rural areas. India has approximately 6.3 crore MSMEs.

In addition, due to the following features, they are considered a viable source of income for those looking to venture into the manufacturing industry

Export Promotion and potential for Indian products

- Funding – Finance & Subsidies
- Government's Promotion and Support
- Growth in demand in the domestic market
- Less Capital required
- Manpower Training
- Project Profiles
- Raw Material and Machinery Procurement

MSMEs contribute to approximately 8% of India's GDP, employ over 60 million people, have an enormous share of 40% in the exports market and 45% in the manufacturing sector. Hence, they are of paramount importance for overall economic development of India.

The concept of MSME was first introduced by the government of India through the Micro, Small & Medium Enterprises Development (MSMED) Act, 2006.

Government of India enacted Micro, Small and Medium Enterprises Development Act, 2005 (**MSME Act**) under which classification of micro, small and medium enterprises (**MSME**) was dependent on two factors: (i) investment in plant and machinery; and (ii) turnover of the enterprise. It is also pertinent to note that different thresholds were prescribed for being classified as an MSME based on the aforesaid factors, for enterprises engaged in manufacturing and services sector.

However, recently, under Aatmanirbhar Bharat Abhiyan (**ABA**), Ministry of Micro, Small and Medium Enterprises, vide its notification dated June 1, 2020, revised MSME classification by inserting a composite criterion for both investment in plant and machinery and annual turnover of enterprises. Also, the distinction between the manufacturing and the services sectors under erstwhile MSME definition has been done away with. This removal will create parity between the sectors.

5.6.1Classification of MSMEs:

The new classification of MSME's shall be effective from July 1, 2020. This new classification has been introduced by the Government to boost businesses and put to rest the growing fear among MSMEs of losing benefits granted under the MSME Act on account of outgrowing the erstwhile thresholds of classification. While this is a welcome initiative by the Government, various questions remain unanswered, namely - what constitutes "plant and machinery", will the previous guidelines on calculation of investment towards plant and machinery still be applicable.

Further, it is pertinent to note that Finance Minister has clarified that start-ups are eligible to avail relief measures announced for MSME under the ABA. While start-ups are not explicitly covered under the definition of MSMEs, start-ups operating and engaged in the manufacturing and services sector may consider registering themselves as an MSME on the Udyog Aadhar Portal (considering the revised classification of MSMEs). By registering as an MSMEs, start-ups can avail the various other benefits offered to MSMEs under the ABA. Official notifications, in this regard are waited.

A comparison of the erstwhile MSME classification to the revised classification where the investment and annual turnover, both are to be considered for classification of an enterprise as an MSME, is set out below:

Erstwhile MSME Classification **Criteria: Investment in Plant and Machinery/Equipment**			
Classification	**Micro**	**Small**	**Medium**
Manufacturing Enterprises	Investment not more than INR 25 lakhs	Investment not more than INR 5 crores	Investment not more than INR 10 crores
Enterprises rendering Services	Investment not more than INR 10 lakhs	Investment not more than INR 2 crores	Investment not more than INR 5 crores
Revised MSME Classification (w.e.f. July 1, 2020)Composite Criteria: Investment in Plant and Machinery/Equipment and Annual Turnover			
Classification	**Micro**	**Small**	**Medium**
Manufacturing Enterprises and Enterprises rendering Services	Investment in P&M/Equipment not more than INR 1 crore and Annual Turnover not more than INR 5 crores	Investment in P&M/Equipment not more than INR 10 crores and Annual Turnover not more than INR 50 crores	Investment in P&M/Equipment not more than INR 50 crores & Annual Turnover not more than INR 250 crores

5.6.2 Features of MSMEs:

Here are some of the essential features of MSMEs

1. MSMEs are known to provide reasonable assistance for improved access to the domestic as well as export markets for businesses.
2. MSMEs support product development, design innovation, intervention, and packaging elements of a business.
3. MSMEs support the upgrading of technology, infrastructure, and the modernization of this sector.
4. MSMEs provide employment opportunities and loans.
5. MSMEs provide credit limits or funding support to various banks in the country.

5.6.3 Role of MSMEs in the Indian Economy

1. The MSME sector has proven to be a highly dynamic factor in the forecasting of the Indian economy. Since MSMEs produce and manufacture a variety of products for both domestic as well as international markets, they have helped promote the growth and development of various product segments and industries.

2. MSMEs have played an essential role in providing employment opportunities in underprivileged areas.

3. They have helped in the industrialization of such areas with a low capital cost compared to the larger industries in cities.

4. MSMEs have also contributed and played an essential role in the country's development in different areas like the requirement of low investment, flexibility in operations, low rate of imports, and a high contribution to domestic production.

5.7 LARGE SCALE INDUSTRIES

5.7.1 What are Large Scale Industries?

Large scale industries are referred to as those industries that are having huge infrastructure, raw material, high manpower requirements and large capital requirements. Those organisations having a fixed asset of more than 10 crore rupees are large scale industries.

The growth of the economy is very much dependent on these industries. Such industries work towards bringing in foreign reserves, generating employment opportunities and paving the way for economic growth.

5.7.2 Large Scale Industries in India

Large scale industries in India can be categorised into the following types of industries:

1. Iron and Steel Industry

2. Automobile Industry

3.Textile Industry

4.Telecommunication Industry

5. Information Technology Industry

6. Petroleum and Natural Gas Industry

7. Silk Industry

8. Fertiliser Industry

9. Jute Industry

10. Paper Industry

11. Cement Industry

5.7.3 Advantages of Large-Scale Industries

Large scale industries offer the following advantages:

1. Large scale industries use the latest machinery and technology, which helps in improving the production. Due to large scale production, the companies benefit as well as it is beneficial for the economy.

2. Large scale industries help in the development of industries in the economy, which is essential for industrialisation.

3. Large scale industries require skilled workers and therefore, the development of large-scale industries help in the development of a skilled workforce in the country.

4. Large scale industries require large amounts of raw materials, which opens up employment opportunities in the related sectors.

5. As large-scale industries are involved in large scale production; it provides an opportunity to reduce the cost of goods and services as these are produced in bulk.

6. Large scale industries help in the development of small-scale industries, as the requirement of items cannot be met only by a single industry.

   Hence, small scale industries are required to produce the ancillary products and therefore small-scale industries thrive on the growth of large-scale industries.

7. Large scale industries can incur expenses required for research and development as they have a high influx of capital. Such research will help in generating more profits in future.

8. Large scale industries also help improve the quality of life of its employees by providing them with adequate remuneration and other benefits.

5.7.4 Problems of Medium and Large-scale Industries

1. Lack of capital

For the establishment of medium and large-scale industries huge amount of capital is required which is very difficult to be formed in the context of Nepal. So, lack of capital is the problem of medium and large-scale industries.

2. Lack of infrastructure

Infrastructures such as transportation, communication and electricity are the most essential elements for a industry to be operated. In our country all there mentioned infrastructure are not available in adequate number or are not sufficient.

3. Lack of skilled manpower

Generally, medium, and large-scale industries need skilled manpower for handling the delicate task but there is a situation of Brain Drain in our country. So, there is scarcity of skilled manpower.

4. Lack of competitiveness

Most of the Nepalese industrial products are of low quality. Such low-quality products pose a formulate difficulty to complete in both domestic and international market. Car telling is the major problem of Nepalese market.

5. Limited Market

The domestic market for Nepalese industrial products is very limited due to low purchasing power of the people. There is lack of transport and communication facilities to sell the commodity throughout the country.

5.8 SUMMARY

Recent Policy Initiatives Impacting Industrial Growth

1. Implementation of GST

The GST is a game changing reform introduced by the government. It is expected that implementation of GST will facilitate the creation of one common market in the country by removing tax barriers; eliminate cascading of taxes thereby reducing cost of production of manufacturing goods; and enhance ease of doing business by cutting down transaction costs associated with the complex tax regime. The implementation of GST is also going to cover the unorganized sector industries.

2. Make in India

The 'Make in India' programme has been launched globally on 25th September 2014 which aims at making India a global hub for manufacturing, research and innovation and integral part of the global supply chain. This initiative is based on four pillars of New Processes, New Infrastructure, New Sectors and New Mindset.

3. Start-up India

Start-up India is a flagship initiative of the Government of India, intended to build a strong eco-system for nurturing innovation and Start-ups in the country that will drive sustainable economic growth and generate large scale employment opportunities. The Government through this initiative aims to empower Startups to grow through innovation and design.

4. Ease of Doing Business

The Government has taken up a series of measures to improve Ease of Doing Business. The emphasis has been on simplification and rationalization of the existing rules and introduction of information

technology to make governance more efficient and effective. States too have been brought on board in the process to expand the coverage of these efforts.

5. Intellectual Property Rights (IPR) Policy

In May 2016, Government for the first time adopted a comprehensive National Intellectual Property Rights (IPR) policy to lay future roadmap for intellectual property. This aims to improve Indian intellectual property ecosystem, hopes to create an innovation movement in the country and aspires towards "Creative India; Innovative India".

5.9 QUESTIONS

1. Write the Introduction to Infrastructure and Important Constituents of Infrastructure.

2. What are the basic infrastructure services.

3. Evaluate the Performance of Infrastructural Services.

4. What is the role of Industrial Development in Economic Growth

5. What are the objectives of New Economic Policy of 1991.

6. What are the features of New Economic Policy of 1991.

7. Write a note on Micro, Small, Medium Enterprises (MSME's).

8. Large Scale industries and Economic development.

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6

RECENT POLICIES AND PROGRAMS FOR INDUSTRIAL DEVELOPMENT

Unit Structure:

6.0 OBJECTIVES:

- To understand the different policies and programmes for Industrial Development in India.
- To familiar students with the Start Up India Initiative and its role and challenges.
- To enable the learners to grasp fully the Make in India Mission & its advantages.
- To explain the students the skill India initiative to generate employment in India.
- To understand the role of Foreign Direct Investment in economic development of India.

6.1 STARTUP INDIA

The Startup India initiative was announced by Hon'ble Prime Minister of India on 15th August 2015. The flagship initiative aims to build a strong eco-system for nurturing innovation and Startups in the country that will drive sustainable economic growth and generate large scale employment opportunities. Further to this, an Action Plan for Startup India was unveiled by Prime Minister of India on 16th January 2016. The Action Plan comprises of 19 action items spanning across areas such as "Simplification and handholding", "Funding support and incentives" and "Industry-academia partnership and incubation".

Government of India has made fast paced efforts towards making the vision of Startup India initiative a reality. Substantial progress has been

made under the Startup India initiative, which has stirred entrepreneurial spirit across the country.

The Department for Promotion of Industry and Internal Trade (DPIIT) is mandated to coordinate implementation of Startup India initiative with other Government Departments. Apart from DPIIT, the initiatives under Startup India are driven primarily by five Government Departments viz. Department of Science and Technology (DST), Department of Biotechnology (DBT), Ministry of Human Resource Development (MHRD), Ministry of Labour and Employment and Ministry of Corporate Affairs(MCA) and NITI Aayog.

Since the launch of initiative in January 2016, there has been a substantial progress under Startup India Action Plan. A detailed progress made on 19 Action Points of Startup India Action Plan is at Annexure-I.

Many other initiatives beyond the Startup India Action Plan have been undertaken for development of overall growth of Startup movement in the country. Summary of achievements made so far under such initiatives is at Annexure-II.

Startup India Scheme is an initiative by the Government of India for generation of employment and wealth creation. The goal of Startup India is the development and innovation of products and services and increasing the employment rate in India. Benefits of **Startup India Scheme** is Simplification of Work, Finance support, Government tenders, Networking opportunities. Startup India was launched by Prime Minister Shri. Narendra Modi on 16th January 2016. Let us learn more about Benefits and Eligibility of Startup India.

6.1.1Action Plan of Startup India Scheme

The action plan of Startup India is based on the following factors:

1. **Simplification of Work**:

This initiative simplifies the work for the new entrants in order to motivate them. This includes following steps taken by the government:

- Firstly, the government has set-up **Startup India hubs** where all the works related to incorporation, registration, grievance handling, etc.
- Secondly, an application and an online portal is set-up by the government to facilitate registration from anywhere and anytime.
- Thirdly, the patent acquisition and registration is now fast for the startups.
- Lastly, according to the Insolvency and Bankruptcy Bill, 2015 facilitates fast winding up of the startups. A new startup can wind-up itself within 90 days of the incorporation.

2. **Finance Support:**

- To motivate the startups, the government provides various financial supports. These steps taken by the government are as follows:
- The government has set up a corpus of Rs.10,000 crores for 4 years (Rs.2500 crore each year). From such fund, the government invests in various startups.
- Special funds are provided, investment in which leads to exemption from the income tax on the Capital Gain.
- Income tax exemption is available for the startups for the first 3 years after the incorporation.
- Under The Income Tax Act, where a Startup (company) receives any consideration for issue of shares which exceeds the Fair Market Value of the shares, such excess consideration is taxable in the hands of the recipient as Income from Other Sources.
- Investment by venture capital funds in Startups is exempted from the application of this provision. The same extends to the investment made by incubators in the Startups.

6.1.2 Benefits of Startup India

- Financial Benefits
- Income Tax Benefits
- Registration Benefits
- Government Tenders
- Huge Networking Opportunities

1. Financial Benefits

Most of the startups are patent based. It means they produce or provide unique goods or services. To register their patents, they have to incur a heavy cost which is known as the Patent Cost.

Under this scheme, the government provides 80% rebate on the patent costs. Moreover, the process of patent registration and related is faster for them. Also, the government pays the fees of the facilitator to obtain the patent.

2. Income Tax Benefits

Startups enjoy a good amount of benefits under the Income Tax head. The government exempts their 3 years income tax post the incorporation year.

But they can avail it only after getting a certificate from the Inter-Ministerial Board. Also, they can claim exemption from tax on Capital Gains if they invest money in specified funds.

3. Registration Benefits

Everyone believes that incorporation and registration of business are far more difficult than running it. It is because of the long and complex steps of registration.

Under the Startup India scheme, an application is there to facilitate registration. A single meeting is arranged to at the Start-up India hub. Also, there is a single doubt and problem-solving window for them.

4. Government Tenders

Everyone seeks to acquire Government tenders because of high payments and large projects. But it is not easy to acquire the government tenders.

Under this scheme, the startups get priority in getting government tenders. Also, they are not required to have any prior experience.

5. Huge Networking Opportunities

Networking Opportunities means the opportunity to meet with various startup stakeholders at a particular place and time. The government provides this opportunity by conducting 2 startups fests annually (both at domestic as well as the international level).

Startup India scheme also provides Intellectual Property awareness workshop and awareness.

6.1.3Challenges faced by Startup India

1. People generally believe startups are just about thinking about a new idea or plan. But, execution of such plan is more necessary than just thinking about it.

2. The view or perspective of the government on startup India plan is quite short-term in nature. It does not look at the long-term path of the startups.

3. For the success of any new business, competent workforce is necessary. But in case of startups, skilled workforce is not possible due to the lack of funds at the initial phase.

4. The risk of reaching failure is greater in the startups as compared to other organizations. It is because they tend to take steps quite fast.

6.2 MAKE IN INDIA

Make in India Mission Logo

The logo of 'Make in India' – a lion made of gear wheels – itself reflects the integral role of manufacturing in government's vision and national

development. The logo was designed by the Indian branch of a foreign company **Weiden+ Kennedy India Limited**.

Make in India is an initiative which was launched on September 25, 2014, to facilitate investment, foster innovation, building best in class infrastructure, and making India a hub for manufacturing, design, and innovation. The development of a robust manufacturing sector continues to be a key priority of the Indian Government. It was one of the first 'Vocal for Local' initiatives that exposed India's manufacturing domain to the world. The sector has the potential to not only take economic growth to a higher trajectory but also to provide employment to a large pool of our young labour force. Make in India initiative has made significant achievements and presently focuses on 27 sectors under Make in India 2.0. Department for Promotion of Industry and Internal Trade is coordinating action plans for manufacturing sectors, while Department of Commerce is coordinating service sectors.

The Government of India is making continuous efforts under Investment Facilitation for implementation of Make in India action plans to identify potential investors. Support is being provided to Indian Missions abroad and State Governments for organising events, summits, roadshows, and other promotional activities to attract investment in the country under the Make in India banner. Investment Outreach activities are being carried out for enhancing international co-operation for promoting FDI and improve Ease of Doing Business in the country.

India has registered its highest ever annual FDI Inflow of US $74.39 billion (provisional figure) during the last financial year 2019-20 as compared to US $ 45.15 billion in 2014-2015. In the last six financial years (2014-20), India has received FDI inflow worth US$ 358.30 billion which is 53 percent of the FDI reported in the last 20 years (US$ 681.87 billion).

Steps taken to improve Ease of Doing Business include simplification and rationalization of existing processes. As a result of the measures taken to improve the country's investment climate, India jumped to 63rd place in World Bank's Ease of Doing Business ranking as per World Bank's Doing Business Report (DBR) 2020. This is driven by reforms in the areas of Starting a Business, Paying Taxes, Trading Across Borders, and Resolving Insolvency.

Recently, Government has taken various steps in addition to ongoing schemes to boost domestic and foreign investments in India. These include the National Infrastructure Pipeline, Reduction in Corporate Tax, easing liquidity problems of NBFCs and Banks, policy measures to boost domestic manufacturing. Government of India has also promoted domestic manufacturing of goods through public procurement orders, Phased Manufacturing Programme (PMP), Schemes for Production Linked Incentives of various Ministries.

Further, with a view to support, facilitate and provide investor friendly ecosystem to investors investing in India, the Union Cabinet on 03rd June,

2020 has approved constitution of an Empowered Group of Secretaries (EGoS), and also Project Development Cells (PDCs) in all concerned Ministries/ Departments to fast-track investments in coordination between the Central Government and State Governments, and thereby grow the pipeline of investible projects in India to increase domestic investments and FDI inflow.

The activities under the Make in India initiative are being undertaken by several Central Government Ministries/ Departments and various State Governments. Further, Ministries formulate action plans, programmes, schemes and policies for the sectors being dealt by them. This Department does not maintain information on such formulations by the line ministries.

6.2.1 Make in India – Focus on 25 Sectors:

The Make in India website also has listed the 25 focus sectors and furnished all relevant details about these sectors, and related government schemes, including the FDI policies, IPR, etc. The main sectors (27 sectors) covered under this campaign are given below:

Manufacturing Sectors:

1. Aerospace and Defence
2. Automotive and Auto Components
3. Pharmaceuticals and Medical Devices
4. Biotechnology
5. Capital Goods
6. Textile and Apparels
7. Chemicals and Petro chemicals
8. Electronics System Design and Manufacturing (ESDM)
9. Leather & Footwear
10. Food Processing
11. Gems and Jewellery
12. Shipping
13. Railways
14. Construction
15. New and Renewable Energy

Services Sectors:

16. Information Technology & Information Technology enabled Services (IT &ITeS)

17. Tourism and Hospitality Services
18. Medical Value Travel
19. Transport and Logistics Services
20. Accounting and Finance Services
21. Audio Visual Services
22. Legal Services
23. Communication Services
24. Construction and Related Engineering Services
25. Environmental Services
26. Financial Services
27. Education Services

6.2.3 Pillars of Scheme

The initiative is built on four pillars which are as follows:

1. New Processes:

The introduction of new reforms to attracting Foreign Direct Investment and updating of archaic business laws has been one of the main characteristics of the scheme.

2. New Infrastructure:

Development of industrial corridors and smart cities with state-of-the-art technology and high-speed communication to boost the innovation and research base. Training of skilled workforce and timely registration of business is also an interesting and much-needed element of this initiative. Major Industrial corridor that were developed are-

- *Delhi-Mumbai Industrial Corridor (DMIC)*
- *Chennai-Bengaluru Industrial Corridor (CBIC)*
- *Bengaluru-Mumbai Economic Corridor (BMEC)*
- *Vizag-Chennai Industrial Corridor (VCIC)*
- *Amritsar Kolkata Industrial Corridor (AKIC)*

3. New Sectors

Proposal to promote the development of 25 sectors. The sectors that are covered under the scheme can be accessed at www.makeinindia.com.

4. New Mindset

Encouraging a paradigm shift in the manner of the Government's interaction with industries.

Key Stakeholders

- Invest India
- Department of Defence Production
- Ministry of Information & Broadcasting
- Department of Space
- Department of Promotion of Industry & Internal Trade
- Department of Financial Services
- Ministry of Mines
- Foreign Investment Facilitation Board
- Ministry of Home Affairs
- Ministry of Civil Aviation
- Department of Telecommunications
- Department of Economic Affairs
- Department of Pharmaceuticals

6.2.4 Why Make in India?

There are multiple reasons why the government has chosen to focus on manufacturing. The key ones are discussed below:

1. For the past two decades, India's growth story seems to have been led by the services sector. This approach paid off in the short-run, and India's IT and BPO sector saw a huge leap, and India was often dubbed the 'back office of the world'. However, even though the share of the services sector in the Indian economy rose to 57% in 2013, it contributed to only 28% in the share of employment. So, the manufacturing sector needed to be augmented to boost employment. This is because the services sector currently has low absorption potential considering the demographic dividend in the country.

2. Another reason to launch the campaign is the poor condition of manufacturing in India. The share of manufacturing in the overall Indian economy is only about 15%. This is way lower than our neighbours in East Asia. There is an overall trade deficit when it comes to goods. The trade surplus in services hardly covers one-fifth of India's trade deficit in goods. The services sector alone cannot hope to answer this trade deficit. Manufacturing will have to chip in. The government is hoping to

encourage businesses, both Indian and foreign to invest in manufacturing in India, which will help this sector and also generate employment in both skilled and unskilled levels.

3. To focus on manufacturing is that no other sector seems to have such a huge multiplier effect on economic growth in a country, according to various studies. The manufacturing sector has larger backward linkages and hence, growth in demand in manufacturing spurs growth in other sectors as well. This generates more jobs, investments, and innovation, and generally leads to a higher standard of living in an economy.

6.2.5 Make in India – Objectives

There are several targets aimed by the Make in India mission. They are:

1. Raise in manufacturing sector growth to 12-14% per year.
2. Create 100 million additional jobs in the manufacturing sector by 2022.
3. Increase in the manufacturing sector's share in the GDP to 25% by 2022.
4. Creating required skill sets among the urban poor and the rural migrants to foster inclusive growth.
5. A rise in the domestic value addition and technological depth in the manufacturing sector.
6. Having an environmentally sustainable growth.
7. Augmenting the global competitiveness of the Indian manufacturing sector.

6.2.6 Make in India – Initiatives

1. For the first time, the sectors of railways, insurance, defense, and medical devices have been opened for more Foreign Direct Investment (FDI).
2. The maximum limit in FDI in the defense sector under the automatic route has been raised from 49% to 74%. This increase in FDI was announced by Finance Minister Nirmala Sitaraman on May 16, 2020.
3. In construction and specified rail infrastructure projects, 100% FDI under the automatic route has been permitted.
4. There is an Investor Facilitation Cell that assists investors from the time of their arrival in India to their departure from the country. This was created in 2014 for giving services to investors in all phases such as the pre-investment phase, execution, and also after delivery services.

5. The government has taken steps to improve India's 'Ease of Doing Business' rank. India climbed 23 points in the Ease of Doing Business index to 77th place in 2019, becoming the highest-ranked in South Asia in this index.

6. The Shram Suvidha Portal, eBiz portal, etc. have been launched. The eBiz portal offers single-window access to eleven government services connected with starting a business in India.

7. Other permits and licenses required to start a business have also been relaxed. Reforms are being undertaken in areas like property registration, payment of taxes, getting power connection, enforcing contracts, and resolving insolvency.

8. Other reforms include licensing process, time-bound clearances for applications of foreign investors, automation of processes for registration with the Employees State Insurance Corporation and the Employees Provident Fund Organization, adoption of best practices by states in granting clearances, decreasing the number of documents for exports, and ensuring compliance through peer evaluation, self-certification, etc.

9. The government hopes to improve physical infrastructure chiefly through the PPP mode of investment. Ports and airports have seen increased investment. Dedicated freight corridors are also being developed.

6.2.7 Make in India – Schemes

Several schemes were launched to support the Make in India programme. These schemes are discussed below:

Skill India

This mission aims to skill 10 million in India annually in various sectors. Make in India to turn into a reality, there is a need to upskill the large human resource available. This is important because the percentage of formally skilled workforce in India is only 2% of the population.

Startup India

The main idea behind this programme is to build an ecosystem that fosters the growth of startups, driving sustainable economic growth, and creating large-scale employment.

Digital India

This aims to transform India into a knowledge-based and digitally empowered economy. To know more about Digital India, click on the linked page.

Pradhan Mantri Jan Dhan Yojana (PMJDY)

The mission envisages financial inclusion to ensure access to financial services, namely banking savings & deposit accounts, remittances, credit, insurance, pension in an affordable manner. Click the linked article to know more about Pradhan Mantri Jan Dhan Yojana (PMJDY).

Smart Cities

This mission aims to transform and rejuvenate Indian cities. The goal is to create 100 smart cities in India through several sub-initiatives.

AMRUT

AMRUT is the Atal Mission for Rejuvenation and Urban Transformation. It aims to build basic public amenities and make 500 cities in India more livable and inclusive.

Swachh Bharat Abhiyan

This is a mission aimed at making India cleaner and promoting basic sanitation and hygiene. For more information on Swachh Bharat Mission, click on the linked article.

Sagarmala

This scheme aims at developing ports and promoting port-led development in the country.

International Solar Alliance (ISA)

The ISA is an alliance of 121 countries, most of them being sunshine countries, which lie either completely or partly between the Tropic of Cancer and the Tropic of Capricorn. This is India's initiative aimed at promoting research and development in solar technologies and formulating policies in that regard.

AGNII

AGNII or Accelerating Growth of New India's Innovation was launched to push the innovation ecosystem in the country by connecting people and assisting in commercializing innovations.

6.2.8 Make in India – Progress

There have been several milestones attributed to the Make in India scheme. Some of the prominent ones are listed below:

1. The introduction of the Goods and Services Tax (GST) has eased the tax procedural system for businesses. The GST has been a fillip to the Make in India campaign.

2. Digitization in the country has gained momentum. Taxation, company incorporation, and many other processes have been made online easing

the overall process and improving efficiency. This has upped India's rank in the EoDB index.

3. The new insolvency code namely, the Insolvency and Bankruptcy Code 2016 integrated all laws and rules relating to insolvency into a single legislation. This has taken the bankruptcy code of India on par with global standards.

4. Due to schemes of financial inclusion such as the PMJDY, as of May 2019, 356 million new bank accounts were opened.

5. FDI liberalization has helped India's EoDB index to be favourable. Larger FDI inflows will create jobs, income, and investments.

6. Infrastructure and connectivity have received major push through schemes like Bharatmala and Sagarmala, as well as various railway infrastructure development schemes.

7. BharatNet – this is a telecom infrastructure provider set up by the GOI to enhance digital networks in the rural areas of the country. This is perhaps the world's largest rural broadband project.

8. India is ranked four in the world in terms of its capacity to harness power from winds and ranked number 6 in the world in harnessing solar power. Overall, India is ranked fifth in the world in installed renewable energy capacity.

6.2.9 Make in India – Advantages

The Make in India campaign has had several positive developments for the country. Below are some more benefits that have been derived from this mission.

1. Generating employment opportunities.

2. Increasing the GDP by expanding economic growth.

3. When FDI inflows become more, the rupee will be strengthened.

4. Small manufacturers will get a thrust, particularly when investors from abroad invest in them.

5. When countries invest in India, they will also bring with them the latest technologies in various fields.

6. Due to the various initiatives taken under the Mission, India has moved up the ranks in the EoDB index.

7. Setting up manufacturing centres and factories in rural areas will foster the development of these areas as well.

6.2.10 Make in India – Challenges

Even though the campaign has seen success in some quarters, there have been criticisms as well. There are also many challenges facing the country

if she is to achieve the lofty targets set by the establishment. Some of the criticisms are laid out below.

1. India has about 60% of cultivable land. The thrust on manufacturing is said to affect agriculture negatively. It can even cause a permanent disruption of arable land.

2. It is also believed that the rapid industrialization (even with the thrust on "going green") can lead to a depletion of natural resources.

3. A fallout of inviting large-scale FDI is that local farmers and small entrepreneurs may not be able to face the competition from international players.

4. The campaign, with all its focus on manufacturing, can cause pollution and environmental side-effects.

5. There are serious lacunae in the physical infrastructure facilities in the country. For the campaign to be successful, it is necessary to build up the infrastructure available in the country and reduce problems like corruption at the lowest levels. Here, India can take lessons from China, which has dramatically improved its share of global manufacturing from 2.6% in the 1990s to 24.9% in 2013. China rapidly developed its physical infrastructure like railways, roadways, power, airports, etc.

6.3 SKILL DEVELOPMENT IN INDIA

6.3.1 What is Skill Development?

Our whole life is simply a long period of developing our skills. We learn to walk. We learn to speak. We learn how to take care of ourselves. All of this is achieved through the same general method of repeating something over and over before it becomes a subconscious act. We follow the same trend as we develop skills later in life. The only distinction is that we are much more conscious and interested in our engagement in studying.

Skill Development can be basically defined as the process of:

- Identifying a person's skills and knowledge gaps
- To develop and strengthen these skills. It's critical because your skills decide your ability to effectively implement your plans.

Skill Development can be broadly classified into two categories. They are:

- **Hard skills:** Skills relevant to some specific task; typically readily quantifiable. They aim to be knowledge-based, such as subject proficiency, training, and specialized qualifications. Fluency in a language, XYZ tech skills, graphic design and scripting are all hard skills.

- **Soft skills:** Personality skills that tend to be transferable, such as collaboration, management, problem-solving, stress management, decision-making, flexibility, ability to cope with challenges, and communication.

6.3.2 Free Skill Development Courses Online

To encourage the initiative of Skill India and Made in India, the National Skill Development Corporation offers a wide range of online skill development courses in the country. You can explore many free online courses at MOOCs, i.e., Massive Open Online Course. Here are the top learning platforms offering free Skill Development Courses Online:

1. **National Skill Development Corporation (NSDC)**
2. **MOOCs**
3. **Coursera**
4. **Allison**
5. **Skillshare**
6. **eSkill India by NSDC**

Here are the most popular skill development courses online:

- **The Science of Well-Being** by Yale University on Coursera
- **Machine Learning** by Stanford University on Coursera
- **Go Digital by NSDC**
- **Employability and Digital Literacy by NSDC**
- **Pradhan Mantri Aarogya Mitra by eSkill India**
- **Introduction to Psychology** by University of Toronto on Coursera
- **Academic Writing by University of California, Irvine** on Coursera

6.3.3 Schemes & Initiatives through NSDC

1. Pradhan Mantri Kaushal Vikas Yojana 2016-2020

Ministry of Skill Development and Entrepreneurship through National Skill Development Corporation has implemented Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 2015-16 with a target to cover 24 lakh youth in the country. The scheme is implemented with the objective to enable many Indian youths to take up industry-relevant skill training that will help them in securing a better livelihood. Individuals with prior learning experience or skills were also assessed and certified under Recognition of Prior Learning (RPL) category.

During its pilot phase, PMKVY trained 19.85 lakh candidates in 375 job roles. Under PMKVY 2015-16, it was not mandatory for National Skill

Development Corporation's (NSDC's) training partners to report employment data. The employment data available reflects only a fraction of the actual employment provided under the scheme. Out of the total trained candidates, around 2.53 lakh candidates have been reported as placed. It was a reward-based scheme, which provided entire cost of training as reward to successful candidates.

Common Norms for uniformity and standardization of skill development ecosystem existing in the country was notified on 15th July 2015. Based on the learnings of PMKVY 2015-16 and aligning it with Common Norms, the scheme has been revamped and the Union Cabinet in its meeting held on 13th July 2016, has approved the new version with modification and continuation of the **Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 2016-2020** as 'Skill Development Component' of umbrella PMKVY to skill 1 crore people over four years (2016-2020) with an outlay of Rs.12,000 crore.

PMKVY (2016-2020) is a grant-based scheme, providing free of cost skill development training and skill certification in over 252 job roles to increase the employability of the youth. The scheme was launched on 2nd October 2016 with the following objectives:

a. Provide fresh skill development training to school dropouts, college dropouts and unemployed youth through short term courses.

b. Recognize the skill available of the current work force through skill certification.

c. Engage States in the implementation of the scheme leading to capacity development of the states.

d. Improved quality of training infrastructure along with alignment of training with the needs of the industry.

e. Encourage standardization in the certification process and initiate a process of creating a registry of skills.

2. Pradhan Mantri Kaushal Kendra (PMKK)

Under Skill India Mission, Ministry of Skill Development and Entrepreneurship (MSDE) has initiated the establishment of state-of-the-art, visible, and aspirational model training centers in every district of India, ensuring coverage of all the parliamentary constituencies. These model training centers are referred to as "Pradhan Mantri Kaushal Kendra" (PMKK).

PMKK is MSDE's initiative towards creation of standardized infrastructure for delivery of skill development training which are equipped to run industry-driven courses of high quality with focus on employability and create an aspirational value for skill development training. PMKK envisions to transform the short-term training ecosystem from a mandate driven delivery model to a sustainable institutional model.

The PMKK program provides financial support in form of a soft loan up to INR 70 lakhs to create training infrastructure and complements the delivery of the Pradhan Mantri Kaushal Vikas Yojana (PMKVY), the flagship skill development program of the Government at the district level.

6.4 FOREIGN DIRECT INVESTMENT IN INDIA

6.4.1 Introduction

Apart from being a critical driver of economic growth, Foreign Direct Investment (FDI) has been a major non-debt financial resource for the economic development of India. Foreign companies invest in India to take advantage of relatively lower wages, special investment privileges like tax exemptions, etc. For a country where foreign investment is being made, it also means achieving technical know-how and generating employment.

The Indian Government's favourable policy regime and robust business environment has ensured that foreign capital keeps flowing into the country. The Government has taken many initiatives in recent years such as relaxing FDI norms across sectors such as defence, PSU oil refineries, telecom, power exchanges, and stock exchanges, among others.

6.4.2 Market size

According to the Department for Promotion of Industry and Internal Trade (DPIIT), FDI equity inflow in India stood at US$ 547.2 billion between April 2000 and June 2021, indicating that the government's efforts to improve ease of doing business and relaxing FDI norms have yield results.

FDI equity inflow in India stood at US$ 17.56 billion between April 2021 and June 2021. Data between April 2021 and June 2021 indicates that the automobile sector attracted the highest FDI equity inflow of US$ 4.66 billion, followed by computer software & hardware sector (US$ 3.06 billion), services sector (US$ 1.89 billion) and metallurgical industries (US$ 1.26 billion).

Between April 2021 and June 2021, India recorded the highest FDI equity inflow from Singapore (US$ 3.31 billion), followed by Mauritius (US$ 3.29 billion), the US (US$ 1.95 billion), Cayman Islands (US$ 1.32 billion), the Netherlands (US$ 1.09 billion), Japan (US$ 539 million) and the UK (US$ 345 million). In the same period, Karnataka registered the highest FDI equity inflow of US$ 8.45 billion, followed by Maharashtra (US$ 4.09 billion), Delhi (US$ 1.95 billion) and Gujarat (US$ 765 million).

6.4.3. Advantages of foreign direct investments in India:

1. Promotion of investment in key areas:

By allowing FDI, we can promote investment in key areas such as infrastructure development because of which there will be more production of capital goods. For example, investment in power generation

can generate more electric power which will enable the growth of more industries.

2. New technologies:

FDI can bring in more new technologies which were not adopted in the country till now. Examples are the recent developments in the Communications System. The launching of satellites with the help of other countries has enabled the growth of communication system in the country. Nokia has come to India for promoting India's communication system.

3. Increase in Capital inflow:

FDI promotes more capital inflow into the country especially in key and core sectors. We have a shortage of capital not only in the form of money but also in the form of material. FDIs will bridge this gap by which there will be speedy economic growth in the country.

4. Increase in Exports:

With the help of FDI, the exports of many underdeveloped countries have increased. The creation of Economic Zones and promotion of 100% export-oriented units have helped FDIs in increasing their exports from other countries. Certain consumer products produced by them have world-wide markets. There is a change in the composition of exports and direction of exports with the presence of FDI.

5. Promotion of Employment opportunities:

The advent of FDI in developing countries has promoted the service sector. This has resulted in a change in the advertising and marketing technologies. This provides more scope for employment opportunities. Educated unemployment to some extent is reduced by the FDI as they could absorb some of Indian work force.

6. Promotion of financial services:

FDI strengthens financial services of a country by not only entering its banking industry but also by extending other activities such as merchant banking, portfolio investment, etc., which has resulted in the promotion of more new companies. It has also helped the capital market in the country.

7. Exchange rate stability:

Reserve Bank of India has been maintaining the exchange rate in the country through its exchange control measures. But the constant and continuous supply of foreign exchange is a must for continuing exchange rate stability. With more FDIs coming into the country, this is made possible and today RBI is having a comfortable foreign exchange reserve position of more than 1 billion dollars.

8. Development of backward areas:

Foreign direct investments are in a way responsible for the development of backward areas. There are so many industries started by them in far reaching and backward areas, as a result of which these areas have developed into industrial centres. Some of the backward regions have utilized the services of FDIs for starting industries in backward areas. Examples are Hyundai and Ford car units started at Sriperumbadur and Maraimalainagar in India.

9. Utilization of natural resources:

The natural resource in the country is put to better use by the FDIs which otherwise would have remained unutilized. The examples are Saint Gobain glass company and manufacture of paper and newsprint.

10. Change in the lifestyle of people:

The presence of FDIs has no doubt changed the life-style pattern of people. The purchase of consumer goods such as TV, fridge, automobiles are made possible as these goods are made available through hire purchase system. The increasing number of automobiles in most ofthe cities is a standing example for the change in the lifestyle.

India has been one of the top recipients of Foreign Direct Investment (FDI) across the globe over the last decade. Despite the pandemic, India has recovered steadily and is a crucial destination for investors. The country witnessed a 9.8% rise in total FDIs for Financial Year (FY) 2020-21, making it the 5th highest recipient of FDI over the last year.

6.4.4 FDI in India and its economic impact

7. Foreign Direct Investment (FDI) leads to the long-term growth of the economy. MNCs bring about technology transfer to the domestic companies. Organic growth or expansion takes place in the companies. Employment too rises.

8. FDI strengthens the balance sheet as it raises the assets of the companies. Profits of the businesses increase, and labor productivity too increases.

9. Per capita income increases and consumption improves. Tax revenues increase and government spending rises.

10. GDP increases and there is also a lagged effect due to which subsequent years GDP too increases.

11. Furthermore, investment has gestation period and returns increase after few years.

12. FDI puts the companies and hence the economy on higher growth mode and the right process of FDI is selection of the strategic sectors in the economy that generate highest RoI.

13. FDI also acts as a solid complement to domestic stock of investment which is low (about 32%) in India because of low savings. This investment raises competitiveness among the businesses, breeds innovation and efficiency and increases standard of living through better products and services in the market.

14. Exports get a fillip and balance of payments show surplus which causes rupee to appreciate vis a vis the Dollar. Forex reserves rises significantly, and this causes RBI 's assets to increase due to which money supply rises and thus inflation too rises according to Quantity Theory of Money.

15. FDI is better than Foreign Institutional Investment (FII) or hot money which is volatile in nature and moves to the stock and bond markets. Because of FDI, there is solid growth in the companies and hence stock market rallies and attracts more capital which raises more funds for the businesses.

16. In FDI there is technology transfer or the movement of technical know-how to the domestic country due to which skill development takes place and together with higher capital this raises productivity and profitability.

    Total FDI inflows in the country in the last 20 years (April 2000 – September 2020) are $729.8 bn while the total FDI inflows received in the last 5 years (April 2014- September 2019) was $319 bn which amounts to nearly 50% of total FDI inflow in last 20 years.

6.3 SUMMARY

MAJOR FDI REFORMS

FDI stimulates country's economic development and creates more conducive environment for the industry to grow

1. **Defence:** Up to 49% under automatic route and above 49% through Government route
2. **Civil Aviation:** 100% FDI under automatic route in Greenfield Projects and 74% FDI in Brownfield Projects under automatic route beyond 74% for Brownfield Projects is under government route.
3. **Broadcasting:** New sectoral caps and entry routes are as under:
   - → Broadcasting Carriage Services & down-linking of news channels: 100% FDI
   - → Cable Networks: 100% FDI and in News channels: 49% FDI

4. **Banking:** FDI up to 74% with 49% under automatic route rest through government route
5. **Railways:** 100% FDI under automatic route permitted in construction, operation and maintenance of Rail Infrastructure projects
6. **Construction:** 100% FDI through automatic route and Removal of minimum floor area & minimum capital requirement
7. **Pharmaceuticals:** The extant FDI policy on pharmaceutical sector provides for 100% FDI under automatic route in Greenfield pharma and FDI up to 74% under automatic route and 100% under government approval in Brownfield pharma.
8. **Plantation:** Certain plantation activities namely; coffee, rubber, cardamom, palm oil tree and olive oil tree plantations has opened for 100% foreign investment under automatic route.
9. **Telecom:** FDI up to 100% with 49% under automatic route
10. **Insurance & Pension:** FDI Policy has been reviewed to increase the sectoral cap of foreign investment from 26% to 49% with foreign investment up to 26% to be under automatic route.
11. **Medical Devices:** 100% FDI under automatic route for manufacturing of medical devices has been permitted.
12. **E-Commerce:** 100% FDI in B2B e-commerce, Single brand retail trading entity permitted for B2C e-commerce and e-commerce food retailing
13. **Retail:** 100% FDI and 49% under automatic route is allowed. In case of 'state-of-art' and 'cutting-edge technology' sourcing norms can be relaxed subject to Government approval.
    → 100% FDI is now permitted under automatic route in Duty Free Shops located and operated in the Customs bonded areas.

6.4 QUESTIONS

Write note on –

1. Benefits of Start Up Indian
2. Challenges faced by Startup India
3. Objectives and Initiatives of Make in India.
4. Advantage and Challenges of Make in India.
5. Skill Development in India

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Module IV

7

ROLE OF SERVICES SECTOR IN INDIAN ECONOMY

Unit Structure:

7.0 OBJECTIVES

- To study the advantages and significance of service sector in India.
- To see some contribution of service sector in Indian economy.
- To familiar students with the growth & performance of healthcare sector in India.
- To enable the learners to grasp fully the performance of Trade & Tourism in India.
- To understand the Growth & performance of IT and IT-enabled services.

7.1 INTRODUCTION TO THE SERVICE SECTOR IN INDIA

The growth of the Services Sector in India is a unique example of leap-frogging traditional models of economic growth. Within a short span of 50 years since independence, the contribution of the service sector in India to the country's GDP is a lion's share of over 60%. However, it still employs only 25% of the labour force. Consequently, agriculture (which is

stagnant) and manufacturing (which has not yet risen to its full potential) continue to sustain most of our employed population. This presents a unique challenge to future economic growth in India and requires out of the box solutions that will help rapidly harness the potential of the service industry in India. Invest India looks at the contribution of the services sector in the Indian economy, its successes and explores potential enablers for future equitable economic growth.

The economic development of any country is directly dependent on the advancement and progress of the three sectors of the economy viz. primary sector, secondary sector, and tertiary sector. The **primary sector** of an economy making direct use of natural resources that are involved in the production and extraction of raw materials from agriculture, fishing, forestry, mining, dairy, etc. and **secondary sector also known as the industrial sector** is associated with the activities which involve the conversion of raw material into usable products. Most of the India's population is engaged in the primary sector which in turn is the main reason for underemployment in the country. Though in the last couple of years, manufacturing has been a great focus not much growth has been seen in the secondary sector (includes heavy manufacturing, light manufacturing, energy-producing, food processing, etc.) due to lack of infrastructure. So, in order to quickly absorb this underemployed population, there is a need to shift to the tertiary sector.

The tertiary sector also known as the service sector involves a variety of things in its umbrella. Some of which are health and welfare, tourism, leisure, and recreation activities as well as retailing and sales of goods to the people. In the past six years, the service sector has undergone a great evolution which in turn has given it the independent status of the productive sector of the country. Moreover, this sector also provides a major impact on foreign exchange and thus contributes greatly to the modern economic development of the country.

7.2 ADVANTAGES OF THE SERVICE SECTOR

1. No Inventory:

In the service sector, there is no need to built-up a reserve of inventory that needs to be stored in a warehouse. Because the product that you are selling is your skills and expertise wherein, you'll only need to have the necessary equipment required to perform the required services, no warehouse full of inventory needed.

2. Easy to start up:

In comparison to other business industries, starting a business in the service sector is relatively easy. Because business in the service sector requires little more than a license, phone, and a person with the required skills and expertise to get up and going. This not only makes it quite easier but also very affordable to get started.

3. Flexible hours:

Working in the service sector provides flexibility in the working hours, which in turn allows you to get an opportunity to further increase your skill and education and to accomplish other important tasks at times you might not otherwise be able to.

4. Greater adaptability to changes:

The service sector companies are able to adapt to the changes in customer needs much easily and quickly in comparison to product-based companies.

5. Provides job even during economic crisis:

During an economic dip, when people are cutting down their expenditure and are only paying for necessities, the service sector helps to keep the job and bring in the revenue as service sector experts are always in demand.

7.3 SIGNIFICANCE OF THE SERVICE SECTOR

1. Gross Value Added (GVA) at current prices for the services sector is estimated at 96.54 lakh crore INR in 2020-21 and accounts for 53.89% of total India's GVA of 179.15 lakh crore Indian rupees. Thus, **holds the highest share in the country's Net National Product.**

2. **Promotes industrialization:** The service sector provides various facilities such as transportation, banking, electricity, repair, or communication in support of the distribution of the manufactured goods which directly affects the development of an industry in a country. For example-transport systems helps to carry laborer, raw material and finished goods to their destination, communication networks are required to make a market for the product and for the industries to prosper, we require banking and electricity. Moreover, the feedback from the marketplace, fast delivery as well as the ability to customize products are all dependent on the service industry.

3. According to World Bank data in the year 2017, **India has become the 6th largest economy** with a GDP of 2.59 trillion USD, demoting France to the 7th position, allowing for the growth of the service sector in the country.

4. **Growth of Agriculture:** By providing network facilities, service sectors help in the development of agricultural products such as helping in the transport of raw material and finished goods from one place to another.

5. **Increase in the productivity of the goods**: The service sector helps in providing appropriate technical knowledge/education to the workers as well as provide them with proper medical facilities. Moreover, the service sector also facilitates an organized network of

communication and transport systems which helps in increasing mobility and information among the workers. This results in an increase in the productivity.

6. **Provides Good Quality Life**: By providing better services in the field of education and health, banking and insurance as well as communication and transportation, the service sector has helped in increasing the quality of life in the country and thus helping in raising the country's human development index (HDI).

7. **Growth of Market**: This sector provides various services catering to the needs of both primary and secondary sectors and thus helps in providing a market for the finished goods as well as raw materials or semi-finished goods for both i.e. agriculture and industries.

8. **Increase in international trade**: India's trade in services recorded substantial growth as the country became globally competitive in ICT services which increased exports manyfold and led to an increase in India's trade surplus. Service exports have contributed to the inclusive economic processes by increasing the number of well-paid jobs and by reallocating labor to a high-productivity sector.

9. **Removes regional disparities**: The service sector has made it possible to connect every small town and village through a well-organized system of communication and transport. Moreover, the expansion of education, medical as well as banking services in various backward areas of the country has helped in removing the regional imbalances and disparities throughout the nation.

7.4 SOME CONTRIBUTION OF SERVICE SECTOR IN INDIAN ECONOMY

The service sector is the largest recipient of FDI in India with an inflow of 83.14 billion USD between April 2000 and June 2020. Some of the services in the umbrella of the service sector are listed below:

1. Research and Development services:

In the Global Innovation Index of 2020, India ranks 48 among the top 50 countries. This sector presents a significant opportunity for multinational corporations across the world due to the highly trained Indian manpower available at competitive costs and intellectual capital available in the Indian market. For that reason, in recent years, several MNCs have shifted or are shifting their research and development part to India. It helps those MNCs to either develop new innovative products to serve the local market or help the parent company to deliver products faster to the world markets. India's expenditure in R&D is targeted to be about 2% of the country's total GDP by the year 2022.

2. Telecom services:

According to FY20 by TRAI, India has an average wireless data usage of about 11 GB per month per subscriber which is expected to reach 18 GB by 2024. Thus, making India one of the biggest consumers of data worldwide.

3. IT Enabled Services (ITES):

Owing to the socio-economic conditions of India and rapidly changing business, as well as the proliferation of the internet, the Indian ITES industry is now day by day increasing its area and has become a tough competitor for the world market. India's success in software and IT-enabled serviced exports has made it a major exporter of services with a share in **world service exports rising from 0.6% to 3.3% from the year 1990 to 2013**.

4. Tourism services:

Due to historical heritage, variety in ecology, terrains, the rich culture, and places of natural beauty spread across the country, the Indian tourism and hospitality industry has emerged as one of the important services sectors in India. Thus, Tourism is a significant source of foreign exchange for our country. During 2019, the total contribution of travel & tourism to GDP was 6.8% of the total economy, and in the financial year 2020, the tourism sector in India accounted for 8 percent of the total employment in the country. It is expected that about 53 million jobs will be created in the Indian market by 2029.

Conclusion:

The service sector in India has the highest employment generation among all sectors. So, it has the potential for great growth and capability to provide highly productive jobs, thus resulting in revenue generation. To overcome the problem of job creation, the Skill India program aims to provide market-relevant skills to about 40 crores of people by 2022. It aims to do this mainly by adopting private sector initiatives in skill development programs, and by providing them with the necessary funding. Similarly, the Make in India program aims to boost the manufacturing sector in the country and thus, will cause a multiplier effect in adding to the portfolio of the Service Sector. In these circumstances, the Startup India initiative is a key enabler for both the manufacturing as well as the service industry in India by offering to support innovative startups. Thus, we can say that the service sector is going to play a major role in shaping the future of the country in the coming years.

7.5 GROWTH & PERFORMANCE OF HEALTHCARE IN INDIA

7.5.1 Introduction:

Healthcare has become one of India's largest sectors, both in terms of revenue and employment. Healthcare comprises hospitals, medical devices, clinical trials, outsourcing, telemedicine, medical tourism, health insurance and medical equipment. The Indian healthcare sector is growing at a brisk pace due to its strengthening coverage, services and increasing expenditure by public as well private players.

Indian healthcare delivery system is categorised into two major components public and private. The Government, i.e. public healthcare system, comprises limited secondary and tertiary care institutions in key cities and focuses on providing basic healthcare facilities in the form of primary healthcare centres (PHCs) in rural areas. The private sector provides majority of secondary, tertiary, and quaternary care institutions with major concentration in metros and tier I and tier II cities.

India's competitive advantage lies in its large pool of well-trained medical professionals. India is also cost competitive compared to its peers in Asia and Western countries. The cost of surgery in India is about one-tenth of that in the US or Western Europe. India ranks 145 among 195 countries in terms of quality and accessibility of healthcare.

7.5.2 Market Size:

The healthcare market can increase three-fold to Rs. 8.6 trillion (US$ 133.44 billion) by 2022.Indian medical tourism market is growing at 18% y-o-y and is expected to reach US$ 9 billion by 2020. There is a significant scope for enhancing healthcare services considering that healthcare spending as a percentage of Gross Domestic Product (GDP) is rising. The Government's expenditure on healthcare sector has grown to 1.6% of the GDP in FY20BE from 1.3% in FY16.Health insurance is gaining momentum in India. Gross direct premium income underwritten by health insurance grew 17.16% y-o-y to Rs. 51,637.84 crore (US$ 7.39 billion) in FY20.

7.5.3 Investment:

Hospitals and diagnostic centers attracted Foreign Direct Investment (FDI) worth US$ 6.72 billion between April 2000 and March 2020, according to the data released by Department for Promotion of Industry and Internal Trade (DPIIT). Some of the recent investments in the Indian healthcare industry are as follows:

1. In September 2020, AYUSH Ministry inked a MoU with industry bodies to promote cultivation of medicinal plants.

2. In October 2020, All India Institute of Ayurveda signed a MoU with Amity University for Ayurveda Research.

3. In May 2020, Jubilant Generics Ltd entered into a non-exclusive licensing agreement with US-based Gilead Sciences Inc to manufacture and sell the potential COVID-19 drug Remdesivir in 127 countries, including India.

4. In May 2020, Carlyle Group acquired 74% stake in animal health focused pharmaceutical company, SeQuent Scientific Ltd, for about Rs. 1,580 crore (US$ 224.15 million).

5. In April 2020, first COVID-19 sample collection mobile lab of the country, namely 'Mobile BSL-3 VRDL Lab', was launched, which can process more than 1,000 samples in a day and enhance country's capabilities in fighting COVID-19.

6. The value of merger and acquisition (M&A) deals across hospitals jumped by a record 155% to Rs. 7,615 crore (US$ 1.09 billion) in FY19.

7. In August 2019, Microsoft India and Apollo Hospitals Group entered in agreement to set up a National Clinical Coordination Committee for AI-powered Cardiovascular Disease Risk Score API.

8. In January 2019, National Company Law Tribunal (NCLT) approved Tri-County Premier Hearing Services Inc's planned to acquire Bhilai Scan and Research Pvt Ltd (BSR) Diagnostics Ltd for Rs. 67 crore (US$ 9.29 million).

9. India and Cuba signed a memorandum of understanding (MoU) to increase cooperation in the areas of health and medicine, according to Ministry of Health and Family Welfare, Government of India.

10. Fortis Healthcare approved the de-merger of its hospital business with Manipal Hospital Enterprises. TPG and Dr Ranjan Pal could invest Rs. 3,900 crore (US$ 602.41 million) in Manipal Hospital Enterprise.

7.5.4 Government Initiatives:

Some of the major initiatives taken by the Government of India to promote Indian healthcare industry are as follows:

1. In Union Budget 2020 21, Rs. 35,600 crore (US$ 5.09 billion) has been allocated for nutrition-related programmes.

2. The Government has announced Rs. 69,000 crore (US$ 9.87 billion) outlay for the health sector that is inclusive of Rs. 6,400 crore (US$ 915.72 million) for PMJAY in Union Budget 2020–21.

3. The Government of India aims to increase healthcare spending to 3% of the Gross Domestic Product (GDP) by 2022.

4. In February 2019, the Government of India established a new All India Institute of Medical Sciences (AIIMS) at Manethi, District Rewari, Haryana at a cost of Rs. 1,299 crore (US$ 180.04 million).

5. The Union Cabinet approved setting up of National Nutrition Mission (NNM) with a three-year budget of Rs. 9,046 crore (US$ 1.29 billion) to monitor, supervise, fix targets, and guide the nutrition related interventions across ministries.

6. On September 23, 2018, Government of India launched Pradhan Mantri Jan Arogya Yojana (PMJAY), to provide health insurance worth Rs. 500,000 (US$ 7,124.54) to over 100 million families every year.

7. In August 2018, the Government of India approved Ayushman Bharat-National Health Protection Mission as a centrally sponsored scheme contributed by both center and state Government at a ratio of 60:40 for all States, 90:10 for hilly Northeastern States and 60:40 for Union Territories with legislature. The center will contribute 100% for Union Territories without legislature.

8. The Government of India launched Mission Indradhanush with an aim of improving coverage of immunisation in the country. It aimed to achieve at least 90% immunisation coverage by December 2018 and cover unvaccinated and partially vaccinated children in rural and urban areas of India.

7.5.5 Achievements:

Following are the achievements of the Government:

1. As of July 2019, around 125.7 million families enrolled as beneficiaries under Pradhan Mantri Jan Arogya Yojana (PMJAY). The scheme enrolled 16,085 hospitals, including 8,059 private hospitals and 7,980 public hospitals. It included 19 AYUSH packages in the treatment scheme.

2. As of September 2019, about 50 lakh people received free treatment under the Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana.

3. The number medical colleges in India increased to >560 in November 2020 from 412 in FY16.

4. According to Sample Registration System Bulletin-2016, India has registered a 26.9% reduction in Maternal Mortality Ratio (MMR) since 2013.

5. In November 2020, National Telemedicine services completed 8 lakh teleconsultations since its launch, enabling patient-to-doctor consultations from the confines of their home, as well as doctor-to-doctor consultations.

7.5.6 Road Ahead:

India is a land full of opportunities for players in the medical devices industry. The country has also become one of the leading destinations for high-end diagnostic services with tremendous capital investment for

advanced diagnostic facilities, thus catering to a greater proportion of population. Besides, Indian medical service consumers have become more conscious towards their healthcare upkeep.

Indian healthcare sector is much diversified and is full of opportunities in every segment, which includes providers, payers, and medical technology. With the increase in the competition, businesses are looking to explore for the latest dynamics and trends which will have positive impact on their business. The hospital industry in India is forecast to increase to Rs. 8.6 trillion (US$ 132.84 billion) by FY22 from Rs. 4 trillion (US$ 61.79 billion) in FY17 at a CAGR of 16–17%.

The Government of India is planning to increase public health spending to 2.5% of the country's GDP by 2025.India's competitive advantage also lies in the increased success rate of Indian companies in getting Abbreviated New Drug Application (ANDA) approvals. India also offers vast opportunities in R&D as well as medical tourism. To sum up, there are vast opportunities for investment in healthcare infrastructure in both urban and rural India.

Indian healthcare sector is expected to reach US$ 193.83 billion by 2020. Rising income level, greater health awareness, increased precedence of lifestyle diseases and improved access to insurance would be the key contributors to growth. Health insurance is gaining momentum in India. Gross direct premium income underwritten by health insurance grew 17.16% y-o-y to Rs. 51,637.84 crore (US$ 7.39 billion) in FY20.

The country had 393 Ayurveda and 221 homeopathy Government recognized colleges. As of April 2020, number of sub centres reached 169,031 and number of primary health centres (PHCs) increased to 33,987.The hospital industry size is estimated to touch US$ 193.83 billion by 2020 and US$ 372 billion by 2022.

In November 2020, National Telemedicine services completed 8 lakh teleconsultations since its launch, enabling patient-to-doctor consultations from the confines of their home, as well as doctor-to-doctor consultations. Private sector has emerged as a vibrant force in India's healthcare industry, lending it national and international repute. It accounts for almost 74% of the country’s total healthcare expenditure. Telemedicine is a fast-emerging trend in India. Major hospitals (Apollo, AIIMS, and Narayana Hrudayalaya) have adopted telemedicine services and have entered several public-private partnerships (PPP). Further, presence of world-class hospitals and skilled medical professionals has strengthened India’s position as a preferred destination for medical tourism.

Indian medical tourism market is growing at the rate of 18% y-o-y and is expected to reach US$ 9 billion by 2020. The value of merger and acquisition (M&A) deals in hospital sector jumped to a record 155% at Rs. 7,615 crore (US$ 1.09 billion) in FY19.

The Government of India has approved the continuation of National Health Mission with a budget of Rs. 34,115 crore (US$ 4.88 billion) under Union Budget 2020–21. National Nutrition Mission is aimed to reduce the level of stunting by 2%, under-nutrition by 2%, anaemia by 3% and low birth babies by 2% ever year. The Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (PMJAY), the largest Government funded healthcare program targeting more than 500 million beneficiaries, has been allocated Rs. 6,429 core (US$ 919.87 million) under Union Budget 2020–21. As of November 2019, nearly 63.7 lakh people received free treatment under PMJAY.

Under Pradhan Mantri Swasthya Suraksha Yojana (PMSSY), allocation of Rs. 3,000 crore (US$ 429.25 million) has been made under Union Budget 2020–21. Intensified Mission Indradhanush (IMI) 2.0 was launched by the Ministry of Health and Family Welfare from December 2019 to March 2020.

Under Union Budget 2020–21, Rs. 65,012 crore (US$ 9.30 billion) and Rs. 2,100 crore (US$ 300.47 million) has been allocated to the Ministry of Health and Family Welfare and the Department of Health Research, respectively.The Government's expenditure on the health sector has grown to 1.6% of the GDP (Gross Domestic Product) in FY20 from 1.3% in FY16. The Government is planning to increase its public health spending to 2.5% of the country's GDP by 2025. Healthcare's share of GDP is expected to rise by 19.7% by 2027.During April 2000–March 2020, Foreign Direct Investment (FDI) inflow in drugs and pharmaceuticals sector stood at US$ 16.50 billion.

7.6 INDIAN TOURISM AND HOSPITALITY INDUSTRY

7.6.1 Introduction:

The Indian tourism and hospitality industry has emerged as one of the key drivers of growth among the services sector in India. Tourism in India has significant potential considering the rich cultural and historical heritage, variety in ecology, terrains and places of natural beauty spread across the country. Tourism is also a potentially large employment generator besides being a significant source of foreign exchange for the country. In FY20, 39 million jobs were created in the tourism sector in India; this accounted for 8.0% of the total employment in the country. The number is expected to rise by two% annum to 52.3 million jobs by 2028.

According to WTTC, India ranked 10th among 185 countries in terms of travel & tourism's total contribution to GDP in 2019. During 2019, contribution of travel & tourism to GDP was 6.8% of the total economy, ~ Rs. 13,68,100 crore (US$ 194.30 billion).

7.6.2 Market Size:

India is the most digitally advanced traveller nation in terms of digital tools being used for planning, booking, and experiencing a journey. India's rising middle class and increasing disposable income has

supported the growth of domestic and outbound tourism.During 2019, foreign tourist arrivals (FTAs) in India stood at 10.89 million, achieving a growth rate of 3.20% y-o-y. During 2019, FEEs from tourism increased 4.8% y-o-y to Rs. 1,94,881 crore (US$ 29.96 billion). In 2019, arrivals through e-Tourist Visa increased by 23.6% y-o-y to 2.9 million.

International hotel chains are increasing their presence in the country, and it will account for around 47% share in the tourism and hospitality sector of India by 2020 and 50% by 2022.

7.6.3 Investments:

India was globally the third largest in terms of investment in travel and tourism with an inflow of US$ 45.7 billion in 2018, accounting for 5.9% of the total investment in the country.Hotel and Tourism sector received cumulative FDI inflow of US$ 15.57 billion between April 2000 and September 2020.

7.6.4 Government Initiatives:

The Indian Government has realized the country's potential in the tourism industry and has taken several steps to make India a global tourism hub.Some of the major initiatives planned by the Government of India to boost the tourism and hospitality sector of India are as follows:

1. On November 4, 2020, the Union Minister of State (I/C) for Tourism & Culture, Mr. Prahlad Singh Patel inaugurated the "Tourist Facilitation Centre" facility constructed under the project "Development of Guruvayur, Kerala" (under the PRASHAD Scheme of the Ministry of Tourism).

2. The Ministry of Tourism's 'DekhoApnaDesh' webinar series titled '12 Months of Adventure Travel' on November 28, 2020, is likely to promote India as an adventure tourism destination.

3. In October 2020, Prime Minister Mr. Narendra Modi inaugurated four new tourist attractions in Gujarat namely, Arogya Van, Ekta Mall, Children's Nutrition Park and Sardar Patel Zoological Park/ Jungle Safari, near the Statue of Unity at Kevadiya in Narmada district.

4. The initiative is a part of 17 new projects that are planned. Additionally, the government will also launch seaplane service from Ahmedabad to Statue of Unity in a major push to India's tourism.

5. The Ministry of Tourism developed an initiative called SAATHI (System for Assessment, Awareness & Training for Hospitality Industry) by partnering with the Quality Council of India (QCI) in October 2020. The initiative will effectively implement guidelines/SOPs issued with reference to COVID-19 for safe operations of hotels, restaurants, B&Bs and other units.

6. Ministry of Tourism launched Dekho Apna Desh webinar series to provide information on many destinations and sheer depth and expanse on the culture and heritage of India.

7. Ministry of Tourism launched Audio Guide facility App called Audio Odigos for 12 sites in India (including iconic sites).

8. Prime Minister, Mr. Narendra Modi urged people to visit 15 domestic tourist destinations inIndia by 2022.

9. Statue of Sardar Vallabhbhai Patel, also known as 'Statue of Unity', was inaugurated in October 2018. It is the highest standing statue in the world at a height of 182 meter. It is expected to boost the tourism sector in the country and put it on the world tourism map.

10. Government of India is working to achieve one% share in world's international tourist arrivals by 2020 and 2% share by 2025.

11. Under Budget 2020-21, the Government of India has allotted Rs. 1,200 crore (US$ 171.70 million) for development of tourist circuits under Swadesh Darshan for eight Northeast states.

12. Under Budget 2020-21, the Government of India has allotted Rs. 207.55 crore (US$ 29.70 million) for development of tourist circuits under PRASHAD scheme.

13. In 2019, Government reduced GST on hotel rooms with tariffs of Rs. 1,001 (US$ 14.32) to Rs. 7,500 (US$ 107.31) per night to 12% and those above Rs. 7,501 (US$ 107.32) to 18% to increase India's competitiveness as a tourism destination.

7.6.5 Achievements:

Following are the achievements of the Government during 2019-20:

1. During 2019-20, an additional fund Rs. 1,854.67 crore (US$ 269.22 million) was sanctioned for new projects under the Swadesh Darshan scheme.

2. Ministry of Tourism sanctioned 18 projects covering all the Northeastern States for Rs. 1,456 crore (US$ 211.35 million) to develop and promote of tourism in the region under Swadesh Darshan and PRASHAD schemes.

3. Statue of Sardar Vallabhbhai Patel, also known as 'State of Unity', was inaugurated in October 2018 and the total revenue generated till November 2019 stood at Rs. 82.51 crore (US$ 11.81 million).

7.6.6 Road Ahead:

Staycation is seen as an emerging trend were people stay at luxurious hotels to revive themselves of stress in a peaceful getaway. To cater to such needs, major hotel chains such as Marriott International, IHG Hotels

& Resorts and Oberoi hotels are introducing staycation offers were guests can choose from a host of curated experiences, within the hotel.

India's travel and tourism industry has huge growth potential. The industry is also looking forward to the expansion of e-Visa scheme, which is expected to double the tourist inflow in India. India's travel and tourism industry has the potential to expand by 2.5% on the back of higher budgetary allocation and low-cost healthcare facility according to a joint study conducted by Assocham and Yes Bank.

India is a large market for travel and tourism. It offers a diverse portfolio of niche tourism products - cruises, adventure, medical, wellness, sports, MICE, eco-tourism, film, rural and religious tourism. India has been recognized as a destination for spiritual tourism for domestic and international tourists. In his Independence speech from Red Fort, Prime Minister Mr. Narendra Modi urged people to visit 15 domestic tourist destinations in India by 2022 to promote tourism. India ranked 34 in the Travel & Tourism Competitiveness Report 2019 published by the World Economic Forum.

In WTTC's Economic Impact 2019 report, India's Travel & Tourism GDP contribution grew by 4.9%, which was the third highest after China and Philippines. Additionally, the report also highlights that between 2014-2019, India witnessed the strongest growth in the number of jobs created (6.36 million), followed by China (5.47 million) and the Philippines (2.53 million).

Total contribution by travel and tourism sector to India's GDP is expected to increase from Rs. 15.24 lakh crore (US$ 234.03 billion) in 2017 to Rs. 32.05 lakh crore (US$ 492.21 billion) in 2028. Total earning from the sector in India is targeted to reach US$ 50 billion by 2022.

In FY20, 39 million jobs were created in the tourism sector in India; this accounted for 8.0% of the total employment in the country. International Tourists arrival is expected to reach 30.5 billion by 2028. e-Visa facility was offered to 169 countries as of December 2019.

During 2019, foreign tourist arrivals (FTAs) in India stood at 10.89 million, achieving a growth rate of 3.20% y-o-y. During 2019, FEEs from tourism increased 4.8% y-o-y to Rs. 1,94,881 crore (US$ 29.96 billion). In 2019, arrivals through e-Tourist Visa increased by 23.6% y-o-y to 2.9 million.

Under the Swadesh Darshan scheme, 77 projects have been sanctioned of worth Rs. 6,035.70 crore (US$ 863.60 million). In Union Budget 2020-21, the Government has allotted Rs. 1,200 crore (US$ 171.70 million) for the development of tourist circuits under Swadesh Darshan for Northeast.

The launch of several branding and marketing initiatives by the Government of India such as 'Incredible India!' and 'Athiti Devo Bhava' has provided a focused impetus to growth. The Indian Government has also released a fresh category of visa - the medical visa or M-visa, to

encourage medical tourism in the country. The Government is working to achieve 1% share in world's international tourist arrivals by 2020 and 2% share by 2025.

Amid the relaxation provided by the government after the covid lockdown, the Indian Association of Tour Operators (IATO) has urged the government to finalize a roadmap for resumption of international flights and facilitate e-visas and tourist visas.

Subsequently in November end, India introduced a graded relaxation of its visa and travel restrictions for more categories of foreign nationals and Indian nationals.Post the pandemic crisis, the government plans to tap into regional tourism by opening doors for South Asian country tourists.

The Government is also making serious efforts to boost investment in the tourism sector. In the hotel and tourism sector, 100% FDI (Foreign Direct Investment) is allowed through the automatic route. A five-year tax holiday has been offered for 2-, 3- and 4-star category hotels located around UNESCO World Heritage sites (except Delhi and Mumbai).

The Government of India also announced to develop 17 iconic tourist sites in India into world-class destinations as per Union Budget 2019-20. Ministry of Tourism launched Dekho Apna Desh webinar in April 2020 to provide information on the many destinations and the sheer depth and expanse of the culture and heritage of Incredible India. Till August 17, 2020, 48 webinars were conducted under the series.

The Ministry of Tourism developed an initiative called SAATHI (System for Assessment, Awareness & Training for Hospitality Industry) by partnering with the Quality Council of India (QCI) in October 2020. The initiative will effectively implement guidelines/SOPs issued with reference to COVID-19 for safe operations of hotels, restaurants, B&Bs and other units.

7.7 INFORMATION TECHNOLOGY (IT) AND IT ENABLED SERVICES (ITES)

India is regarded as the back office of the world owing mainly to its IT and ITES industry. The sector in India grew at a Compound Annual Growth rate (CAGR) of 15 per cent over 2010-15, which is 3-4 times higher than the global IT-ITES spend and is estimated to expand at a CAGR of 9.5 per cent to US$ 300 bn by 2020. India is also the world's largest sourcing destination for the information technology (IT) industry, accounting for approximately 67 per cent of the US$ 124-130 bn market.

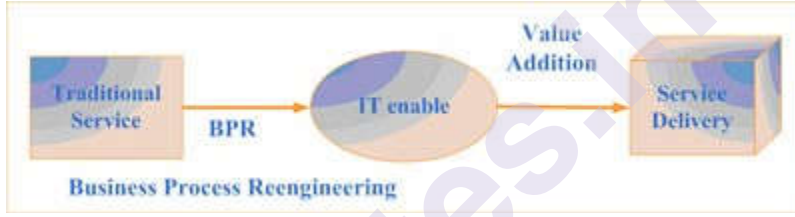
7.7.1 IT enabled Services (ITeS), also called web enabled services or remote services or Tele-working, covers the entire gamut of operations which exploit information technology for improving efficiency of an organization. These services provide a wide range of career options that include opportunities in call Centre, medical transcription, medical billing and coding, back office operations, revenue claims processing, legal

databases, content development, payrolls, logistics management, GIS (Geographical Information System), HR services, web services etc.

Information Technology that enables the business by improving the quality of service is IT enabled services. The most important aspect is the Value addition of IT enabled service. The value addition could be in the form of - Customer relationship management, improved database, improved look and feel, etc. The outcome of an IT enabled service is in the two forms:

- Direct Improved Service
- Indirect Benefits.

Whereas direct benefits can be realized immediately, indirect benefits can accrue over a period, and can be harnessed very effectively, if planned well upfront.



7.7.2 Information Technology Enabled Services (ITeS) Processes and Services

ITeS provide a range of IT-intensive processes and services, which includes businessprocess outsourcing (BPO) and knowledge process outsourcing (KPO), provided from a distant location and delivered over telecom networks. ITeS focus on verticals such as content management, finance and accounts, research and analytics segment. ITeS includes:

- Customer Interaction services -including call center facilities with adequate telecom infrastructure, trained consultants, access to requisite databases, Internet and other online information infrastructure to provide information and support to customers
- Backofficeoperations -data entry, data conversion including finance and accounting and HR services.
- Transcription/Translation services
- Content development/animation/engineering/design and GIS
- Other services including remote education, data search, Market research, Network consultancy and management.

The favored application areas are areas where there is huge amount of data that needs to be processed and utilized for delivering the results, or the

data is the outcome of the service. In all cases, without use f IT the task would otherwise be unmanageable. Some of the most important areas where IT enabled services can be deployed are:

- Telemarketing
- Helpdesk
- Customer Support Centres
- Data Warehouse
- Transcription Centres
- GIS Mapping for Transport tracking
- Electronic Distribution.

7.7.3 Opportunities and Challenges of Information Technology Enabled Services (ITES):

The changing economic and business conditions, rapid technological innovation, proliferation of the internet and globalization are creating an increasingly competitive environment. The role of technology has evolved from supporting corporations to transforming them. Global companies are increasingly turning to offshore technology service providers in order to meet their need for high quality and cost competitive technology solutions. As such a company can encounter a wide variety of risks and challenges in their endeavor to create and maintain a seamless, successful, sustainable and scalable business. Some of the challenges faced include:

- Ability to create and maintain a truly world class proven global delivery model which would allow your organization to provide services to customers on a best shore basis. This would require round the clock execution capabilities across multiple time zones, access to a large pool of highly skilled technology professionals and a knowledge management system to reuse solutions where appropriate
- Develop and expand a strong, comprehensive, best in class end to end solutions and service offerings in order help your clients gain market differentiation or competitive advantage and thus capture a greater share of your client's technology budgets
- Ability to scale when the opportunity arises. This would require constant investment in infrastructure and rapidly recruit, train and deploy new professionals
- Manage revenue and expenses during economic downturn, enhance your organization's capacity to withstand pricing pressures, commoditization of services and decreased utilization rates
- Manage exchange rate volatility and counter party risk in treasury operations

- Expand your client list across business verticals to reduce over dependency and risk of losing substantial market share
- Maintain superior and sophisticated project management methodology in line with global quality standards and ensure timely, consistent, and accurate execution to achieve highest client satisfaction
- Ensuring successful integration of inorganic growth opportunities that your organization may undertake from time to time across geographies

7.7.4 Factors Which Have Propelled the Growth of the Indian ITES Sector:

India is regarded as the back office of the world owing mainly to its IT and ITES industry. The sector in India grew at a Compound Annual Growth rate (CAGR) of 15 per cent over 2010-15, which is 3-4 times higher than the global IT-ITES spend and is estimated to expand at a CAGR of 9.5 per cent to US$ 300 bn by 2020. India is also the world's largest sourcing destination for the information technology (IT) industry, accounting for approximately 67 per cent of the US$ 124-130 bn market. With the rising influence of online shopping, social media and cloud computing, this trend will only further increase. Some of the most important factors behind India's rise as an IT information technology services giant include -

- Newly emerging verticals, such as retail, healthcare, utilities, etc.
- A revival in the demand for IT services from both US and Europe
- Focused government initiatives leading to an increased adoption of technology and telecom, eventually leading to increased ICT adoption
- Growth in the number of high-value clients (> $1million)
- A spurt in the SMAC market (social, mobility, analytics, cloud) to support ITES services
- Growing R&D expenditure across the globe
- Rising costs to train new workforce ($1.6 billion in 2016)
- Plan of the Indian government to lay down a large-scale optical fiber network connecting the whole country
- Partial privatization of telecommunication
- Low operating costs as compared to most other developed and developing nations
- Tax breaks and SOPs offered by the government
- Development of multiple SEZs in tier-2 cities across the country

7.7.5 Benefits and Threats of ITeS

BENEFITS:

1. **Increases company's flexibility:** Through Business Process Outsourcing (BPO) which is a part of ITeS the companies will increase their flexibility. Most services provided by ITeS vendors are offered on a feefor-service basis. This helps the company to change their structure of cost from Fixed to Variable cost. A variable cost helps a company to respond to changes very quickly and make the firm more flexible through outsourcing.

2. One more way in which ITeS contributes to a company's flexibility is that a company focuses on its core competencies, without any burdens from bureaucratic restraints. With this main employee are released from performing non-core operations or administrative processes and can spend more time and energy in building the firm's main businesses.

3. Another way in which ITeS increases organizational flexibility is by increasing the speed of business processes. Using techniques such as linear programming we can decrease the production time and inventory levels, which can increase effectiveness and controls or decreases cost.

4. Supply chain management (SCM) with the effective use of chain partners and business process outsourcing increases the speed of several business processes. Lastly, flexibility is one of the stages of organizational life cycle.

5. ITeS helped to convert Nortel from a bureaucratic organization to a very reliable competitor.

6. ITeS therefore helps the firms to retain their speed and ability, which they must otherwise sacrifice to become efficient. A company grows at a faster rate as it will be less constrained by large capital expenditures for people or equipment which may take years together to gradually write-off the cost. Though the above-mentioned arguments are in favor of ITeS and increases the flexibility of organizations, management needs to be very careful with the implementation of it.

7. The company must look into the challenges before it decides to engage in business process outsourcing. Another issue is that in many cases there is less scope to differentiate BPO from other with size. They provide same services, have same geographic footprints, same technology stacks, and have same Quality Improvement approaches.

THREATS:

1. **Risk is the major threat with ITeS**.: Outsourcing an Information system can cause security risks both from part of communication and from privacy. The Security of North American or European company data is very difficult when accessed or controlled in the Sub-Continent.

2. From the perspective of knowledge, a change in attitude in employees, underestimation of present costs and the major risk of losing independence, outsourcing leads to a different relationship between organizations.

3. Risks and threats of outsourcing can be managed, to achieve any benefits. If we can manage outsourcing in a structured way, maximizing positive outcome, minimizing risks, and avoiding any threats, a Business Continuity Management (BCM) model arises.

7.8 QUESTIONS

1. Explain the advantages of the Service Sector.

2. Explain the significance of the service sector.

3. What is the Contribution of Service Sector in Indian Economy.

4. Write a note on Growth & Performance of Healthcare in India.

5. Write a note on Indian Tourism and Hospitality Industry

6. Write a note on the Information Technology (It) and It Enabled Services (Ites)

8

RESEARCH & DEVELOPMENT SERVICES WITH REFERENCE TO EDUCATION

Unit Structure:

8.0 OBJECTIVES

- To explain the students Research & development in Education sector.
- To acquaint the students with role of skill development in employment generation in India.
- To understand the performance of Service sector during 12th Five-year Plan.

8.1 RESEARCH AND DEVELOPMENT SERVICES WITH REFERENCE TO EDUCATION

8.1.1 Introduction

Like any other business, organization or field of life, Education is also facing many challenges in this rapid changing era. To cope with the challenges, development in the field of education is a must, which can be brought best through research. Research and Development activities can help to evolve existing curricula, learning materials, teaching

methodologies and techniques, and current assessment systems. So, research through development leads to innovation.

The term research consists of two words,' Re'+'Search'. "Re" means again and again and "Search" means to find out something. Actually research is simply the process of arriving as dependable solution to a problem through the planned and systematic collection, analysis and interpretation of a data as revealed by Best, & Kahn (1998). Boykin (1972) stated that research in the field of education is the more formal, systematic and intensive process of carrying on a scientific method of analysis. Research in education primarily aims at systematic investigation of educational problems and tries to provide possible solutions to those problems. Research in education has enabled significant progress to be made in curriculum development and reform, educating learners with difficulties, understanding the individual differences and preferences and in adapting methods of instruction to the needs of individual learners.

8.1.2 Definitions:

Research and development (R&D) is the creation of new body of knowledge about existing products or processes, or the creation of an entirely new product. This is systematic creative work, and the resulting new knowledge is then used to formulate new materials or entire new products as well as to alter and improve existing ones.

Research and development (R&D) is a general term for all those investigative activities that an educational institute conducts with the intention of making a discovery that can either lead to the development of new educational products (e.g. curricula, learning materials) or procedures (e.g. teaching or assessment procedures), or to improvement of existing educational products or procedures.

8.1.3 Forms of Research and development (R&D):

Research and development is a key element for the success of any educational institute. R & D involves two major types of research by purpose. It combines systematically both basic and applied research and aims at discovering solutions to problems or creating new educational products. It involves researching the market and the learners' needs and developing new and improved products and services to fit these needs.

8.1.4Development:

Development is when findings of a research are utilized for the production of specific products including materials, systems and methods. Design and development of prototypes and processes are also part of this area. Development is research that generates requisite knowledge and designs for production and converts these into prototypes e.g. developing course materials or developing computer software for self-paced learning.

8.1.5 General R&D Process:

The R&D may take months or years to yield useful products. Universities utilize this process for new product development and innovation. Though each college or university may have its own unique research methodology, a general research process will form the framework for it.

1. Generate the ideas
    1. Research the market
    2. Identify learners' needs
2. Refine the ideas
    1. Focus ideas
    2. Identify the objectives
3. Basic Research
    1. Hypothesize and clarify
    2. Synthesize and theorize
4. Applied Research
    1. Concept testing research
    2. Design and test the product
5. Development
    1. Develop and test prototype
6. Innovation
    1. Development and marketing of technical invention
7. Scaling up
    1. Commercialization of the product

8.1.6 R&D Cell in Universities:

Research and development (R&D) is a valuable tool for growing and improving universities. Almost all the universities have R&D Cell for this purpose. R&D depends on the size of university. In small universities, R&D tends to focus more on product improvement because of budget and cost limitations. Larger universities may be able to dedicate more time and resources to R&D to introduce new products as well as improve existing ones. The benefits of R&D are often long-term, so it's important to remember that investment in it may not result in short-term profits. R&D can help to develop more efficient processes and new ways of delivering services as well as product development and improvement. Universities

that have an R&D Cell have a greater chance of success than universities that don't.

8.2 EDUCATIONAL RESEARCH

Educational research refers to the systematic collection and analysis of data related to the field of education. Research may involve a variety of methods and various aspects of education including student learning, teaching methods, teacher training, and classroom dynamics.

Educational researchers generally agree that research should be rigorous and systematic. However, there is less agreement about specific standards, criteria, and research procedures. Educational researchers may draw upon a variety of disciplines including psychology, economics, sociology, anthropology, and philosophy. Methods may be drawn from a range of disciplines. Conclusions drawn from an individual research study may be limited by the characteristics of the participants who were studied and the conditions under which the study was conducted.

The purpose of educational research is to develop new knowledge about the teaching-learning situation to improve educational practice. Educational research can address the following variables:

- **Learning:** How do students best learn various subjects?
- **Teaching:** What are the best teaching practices to foster student achievement?
- **Motivation:** What are the best practices for teachers to motivate their students to achieve?
- **Development:** How do children and adults change over time, including their cognitive, social, and emotional skills?
- **Classroom management:** What classroom or school practices make the classroom optimal for student learning?

8.3 CHARACTERISTICS OF RESEARCH IN THE FIELD OF EDUCATION:

Characteristics of research are as follows:

a) Research is a systematic and critical investigation to a phenomenon embedded in our society and education system.

b) Research aims at interpreting and explaining a phenomenon logically and systematically by adopting a scientific method.

c) Research is based on empirical evidence and observable experience and develops generalizations, principles or theories and is directed towards finding answer to the questions and solutions to the education related problems.

d) Research in education deals with social, educational, economic and cultural phenomena related to process, product and system of education and studies human behavior and their feelings.

e) Research in education field is carried out on both for discovering new facts and verification of the old ones and tries to establish casual connection between various human activities, social institutions, and teaching learning process.

8.4 PURPOSES OF RESEARCH IN EDUCATION

a) Research provides answer to questions of what, when, how and why of man, social life and institutions. The main purpose is to discover various facts and their inter relationship and to help us to discard distortions and contribute to our understanding of reality.

b) Another purpose of research is to diagnose different problems prevalent in our society and education system and to make critical and logical analysis of those problems. Our society has innumerable problems such as poverty, unemployment, economic and gender inequality, social stratification etc. and these problems put impact on our education system. The nature and dimensions of such problems must be diagnosed and analyzed. An analysis of problems leads to an identification of appropriate remedial actions.

c) Research provides firsthand information about the nature of social and educational institutions. This knowledge helps us to control over the social phenomena. Research also has potential to investigate and assess latest needs and level of advancement.

d) Another important purpose of research is to suggest possible remedial measures and effective solutions to various problems and challenges. Researchers come up with innovative and creative strategies and ideas to improve the education system and its associated components. Researchers can identify the causes of existing evils and problems and thus it can help in taking appropriate remedial actions.

8.5 IMPORTANCE OF RESEARCH IN EDUCATION

The research is a scientific and systematic tool to study & has immense value in the field of education.

1. Research in education helps to understand any subject and its principals in much better and easier way which will encounter new questions and search for answers of those questions will lead us to learn new theories of any subject.

2. Research helps in identifying the research gaps, learning gaps at various levels of education system and tries to bridge the gap between what is existing and what is expected. Research concerning social

aspects of education ensures the development of children and teaching method.

3. Research professionals are always learning, finding out things, analyzing information, adapting their behaviour according to information received, looking to improve and adapting to modern demands and thus social science research helps in wellbeing of society, social and educational institutions.

4. Research findings could be beneficial for teachers, teacher educators, administrators, policy makers, parents and other stakeholders involved in the education sector. Research findings could be implemented in classroom teaching learning process to bridge the learning gaps. Findings could be used in teacher training programmes, curriculum development programmes and in formulating education policies.

5. Research methodologies give teachers the tools to analyze and make informed decisions about their practice. Research can help in professional development of teachers and teacher educators and orient and prepare them to acquire 21st century skills in order to implement new educational strategies, evaluation techniques in education system. Teachers should be enabled to use and integrate relevant findings and scientific theories of educational research in their professional actions and decisions.

6. Research in education help in analyzing perceptions, attitudes of students' teachers, teacher educators, parents and other stakeholders on different issues related to education sector, local and global environment. Thus, research findings indicate and suggest possible remedies to those issues keeping in mind the views of stakeholders involved.

8.6 CHALLENGES OF RESEARCH IN PRESENT EDUCATIONAL CONTEXT

There are several challenges related to research and these are as follows:

1. **The political nature of education:** The problems of effectiveness of educational research begin with the political-partisan nature of education. Public education is a social construction that responds and is regulated by the government. It is difficult to investigate the social and political ideals that are embedded in educational systems in the form of educational objectives or standards.

2. **The problem of lack of definition of research as a science:** From its beginnings, the expectation has been that educational research solves the problems of education and that prescribes its practice. In this respect, educational research in social science are often ignored and devalued in comparison to science and technology based research.

3. **The dislocation between educational research and the practice of education:** A third argument to explain the ineffectiveness of educational research lies in its relation to the practice of the profession. There is a gap between research embedded in education system and the practice of education in schools, colleges, and other institutions. Most of the times, the ongoing practice of classroom processes, evaluation techniques, and teaching learning materials differ from the research suggestions.

There are many complexities under which educational research work. Other challenges are as follows:

1. The learning and teaching experience be based upon research and evidence, but it runs the risk of being any one of theory, ideology, convenience and prejudice.

2. The main purpose of research in education should be liberate and promote democracy and equality of opportunity but in reality, biasness and other influences are affecting researchers.

3. Education has its sole responsibility to develop active citizens. But in real context by following an ideological route restricts choice, which is the opposite to the real purpose of education the system runs the risk of being outdated and not being forward-looking.

4. Learning is complex, and success is influenced by a multitude of factors, social backgrounds, family background, personality, age, gender, location etc. Theories are needed to be combined, tested and challenged in order to allow us to adapt to suit local and personal environments. Convenience and manageability are important.

Funding and availability of resources, Influences of National policy and provisions, knowledge depth and understanding level of researchers, policy implementation and willingness to apply research findings in real life scenario by administrators, policy makers, teachers, ethical issues, plagiarism, and many other issues are also associated with research in present context which are needed to be replaced to ensure positive impacts of research in the field of education.

The current education system needs a transformation and drastic changes are required to be incorporated in the system to maintain quality. Research can help us to understand what works and why, what the short and long-term implications are, provide a justification and rationale for decisions and actions, help to deal with the unexpected by identifying problems, and promotes improvement. Hence, effective implementation of research in education is what we need the most. Further research can be extended to identify the research challenges and to provide possible solutions and implementation strategies to deal with those challenges for betterment of education sector and for the well-being of our education system as well as for our society.

8.7 SKILL DEVELOPMENT IN EMPLOYMENT GENERATION IN INDIA

8.7.1 Skill Development and Employment Opportunity

Fundamentally, skill development is the time one invests in to improve their proficiency and to stay future-ready, any agilities that one follows as a passion, and the ability to complete a task with higher rates of success at the right time. It is essential because one's skills determine their ability to execute their plans with success.

In today's world, lack of proper education and training restricts people from the opportunities for self-advancement by limiting their access to well-paid employment. Eventually, this prevents such individuals from making an influential contribution to economic growth. Thus, adequate education quality and training are recognized as fundamental ways of breaking down the eco-system of poverty. One individual, Sweta Mishra, has rightly said that "Skill development is no longer a matter of choice. It is imperative to adapt, survive and succeed."

8.7.2Skill development in India

India has a literacy rate of around 70%, which is less than some of the least developed countries, and when it comes to employability, only 20% of them are employable. Literacy is not just restricted to education but even broadens to the concept of skills, which comprises technical expertise, vocational skills, transferrable skills, digital skills, and other such knowledge and abilities required for employment and livelihood. According to a survey, only 25% of the Indian workforce has undergone a skill development program, and India needs a higher number of skilled workforces.

In this era, many organisations prefer skilled employees over less skilled ones as they have outstanding career growth, and they help boost the organisation in the same way with proficient working. Skills intensify the productiveness and quality of work for more significant results. According to the World Trade Organization, the GDP level can increase up to 3%-5% in 2035, if India focuses on skill development and training. There is a great need for India to train and skill the youth for the overall development of the country.

The **Ministry of Skill Development and Entrepreneurship (MSDE)** is accountable for coordinating skill development activities in India. It has supported various organisations like **National Skill Development Corporation (NSDC)**, which aims to promote skill development in the country by establishing institutes across the country and **National Skill Development Agency (NSDA)**, which seeks to coordinate the efforts of the government and the private sector and aid in skill development.

Hon'ble Prime Minister Shri Narendra Modi launched the **Skill India Mission**, under the Ministry of Skill Development and Entrepreneurship on 15 July 2015, which aims to train over 40 crore people in India in

different skills by 2022. The mission seeks to vocational training and certification of Indian youth for a better livelihood and respect in the society. Various initiatives under this campaign are **National Skill Development Mission, National Policy for Skill Development and Entrepreneurship, 2015, Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Skill Loan scheme, Rural India Skill etc.**

Private organisations, such as **CLR Skill training foundation** works under the provision of **NEEM** Scheme of the government to serve skill development, technical skills training and employment, earn and learn, non-technical skills and soft skills to the youth.

We must support programmes that enhance access and improve educational opportunities from early-stage to education and skill development of the people of the country.

Skill development is a vital tool to empower people, to safeguard their future and for the overall development of an individual. It is an important aspect that enhances employability in today's globalization. Skills are as essential as one's academic status. Education and skills should now go hand in hand. They are the roots behind the economic growth and community development of a country.

In this context, the acquisition of education and skills can lead to industrial advancement, economic diversification, innovation, technological evolution and overall development of the country.

8.7.3 ADVANTAGES OF SKILL DEVELOPMENT IN INDIA

- Increase in proficiency
- Grow skill sets
- Achieve task in less time with more results
- Increase in performance level

The Government of India has taken out several plans for skill development, but they are also not sufficient to create opportunities for skill development training in India. They need to emphasize skill development programs and help individuals to make use of their talent and knowledge. Today, everyone wants to establish a good career and for this, proper skill development trainings are required. It comes up to be an important part of any individual's career.

The skill development training in India should be made compulsory to enhance all-round expertise of the people. They need proper guidance and training initiatives to develop. Communication, technological know-how, etc. are important for individuals to have a hold on. This can only be possible if they get enough opportunities to grow and develop through skill development trainings.

Since many universities have given importance to skill development, it was found that many students were placed easily. Organizations today want effective and productive people. With skill development, people can

work effectively and achieve success in whatever they do. There can be increased chances of promotions and individuals can experience a lift in their careers. All in all, skill development training in India is a must!

8.7.4 SIGNIFICANCE OF TECHNOLOGY IN SKILL DEVELOPMENT TRAINING IN INDIA

Technology is essential in scaling up the Skill development training in India Initiative. Technology helps to define standard training tools for the candidates so that all tests and tutorials can be conducted easily.

The main aim of creating a skilled workforce must be united with employment opportunities for young people. Without the required opportunities the core challenges of unemployment in the country will never get resolved.

8.7.5 How is Skill Development shaping the future of India?

1. **Improved scenarios of employability**: Since the government and universities have focused on skill development, it was found that many students were placed easily during the placement drives. Any organization requires for an effective, productive, and proficient employee. With the skill development, the people were able to work productively and achieved the greater number of targets in lesser time, with a better self-growth and the corporate.

2. **Government is providing good opportunities to the youth as per their choice and requirement:** This aims to increase the employability rate to at least 70% people. Skill awareness programs are helping the people to understand the prospectus of skill training initiative and help to achieve more targets.

3. **Personal Development:** Skill development enhances the proficiency of a person in any area. Skill enhances to build the professional network, better communication, time management and negotiation skills.

4. **Nurturing Talent:** Skills are something that can be acquired by learning. Skill training is helping the people to identify, train and nurture their innate talent in the desired field.

5. **Less number of Dropouts:** One of the biggest issues of India is unemployment. Skill development of helping the students to process the basic skills required by the employers today and direct a good direction towards their career.

6. **Increased Career Growth Opportunities:** Everyone aspires to embellish a good career in their life. Skill development is the most important part of any successful career journey. Skill makes a person flexible, reliable, productive, and efficient in the job prospectus and this widens the career opportunities.

The foundations for an effective, efficient, and sustainable skill development ecosystem had been laid over the course of the last few years, however, it is time now to build upon it. As per a Bloomberg Economic article and its projections, India's GDP will grow from $2.7 trillion in 2019 to $5 trillion by 2025 and $8.4 trillion by 2030. Whether we achieve it or not depends on how we capitalize this decade and how effectively we eliminate the causes of disruptions. We must utilize this opportunity to rebuild ourselves rationally and critically with greater impetus. The task is herculean but not impossible. The distance between a probable future and a possible future is always shortened by resilience and determination.

8.7.6 Importance of Skill Development to Reduce Unemployment

Recruiters across industries are struggling to find skilled candidates as most of the educated Indian youth is not necessarily ready for employment. They still lack new-age skills that companies are using on a day-to-day basis. Tech professionals may be the most impacted. With limited online and offline courses for industry-specific training such as engineering, IT, etc., most young professionals lack confidence while encountering on-the-floor problems at their workplace. Moreover, since schools, colleges and universities are following age-old curricula, there is a significant dearth of knowledge of new technologies being adopted by industries. This poses a hurdle when professionals come to face with a real-life circumstance.

But this is where skill development can help. Skill development can end the disparity between the numbers of skilled and unemployed youth. Skill development goes a notch above education and makes students ready to be professionals. Being one of the youngest nations in the world, India has the potential to be a preferred destination for global sourcing. Skill development can bring this to reality by instilling more confidence in young professionals.

As their employability will increase, unemployment rates will decrease and ultimately lead to the nation's financial growth.

8.7.7 Solution

Only 3% of India's workforce is formally trained. On the other hand, over 80% of China's workforce is trained. With immediate competition in our neighborhood, we need to adopt better strategies too. It is time to say goodbye to mediocre standards of education and adopt newer methods. The higher the standards of training and skill development, the better our workforce can be.

Edtech platforms are bridging the gap by offering programmes that provide insights from industry experts and a curriculum that helps an Indian youth take the journey from being students to professionals and, ultimately, true leaders.

The National Skill Development Corporation (NSDC) can also contribute to solving the problem. Skill development still does not get the kind of attention it deserves. The NSDC can create more awareness around it and come up with suitable programmes that can help professionals. Its current success rate of placements is only 12%. This speaks volumes of the cracks that still exist in the curriculum.

These issues may likely take many years to solve. But a step in the right direction can help us get there eventually. Change can only come when the government, the education system, industries and students unanimously understand and acknowledge the importance of skill development and hands-on knowledge.

Global mega trends such as the rising role of technology, climate change, demographic shifts, urbanization, and the globalization of value chains are changing the nature of work and skills demands. To succeed in the 21st century labor market, one needs a comprehensive skill set composed of:

1. **Cognitive skills**, which encompass the ability to understand complex ideas, adapt effectively to the environment, learn from experience, and reason. Foundational literacy and numeracy as well as creativity, critical thinking, and problem-solving are cognitive skills.

2. **Socio-emotional skills**, which describe the ability to navigate interpersonal and social situations effectively, and include leadership, teamwork, self-control, and grit.

3. **Technical skills**, which refer to the acquired knowledge, expertise, and interactions needed to perform a specific task, including the mastery of required materials, tools, or technologies.

4. **Digital skills**, which are cross-cutting and draw on all of the above skills, and describe the ability to access, manage, understand, integrate, communicate, evaluate, and create information safely and appropriately.

The development of skills can contribute to structural transformation and economic growth by enhancing employability and labor productivity and helping countries to become more competitive. Investment in a high-quality workforce can create a virtuous cycle, where relevant and quality skills enable productivity growth and foreign direct investment, which result in more and better jobs for the current workforce and more public and private investment in the education and training system. This, in turn, increases the employability and productivity for both the current and future workforce.

Yet, most countries continue to struggle in delivering on the promise of skills development. There are huge gaps in basic literacy and numeracy of working-age populations, as 750 million people aged 15+ (or 18 percent of the global population) report being unable to read and write, with estimates being nearly twice as large if literacy is measured through direct assessments. Large-scale international assessments of adult skills

generally point to skills mismatches as well as large variation in the returns to education across fields of study, institutions, and population groups. Employers in many developing countries report that a lack of skilled workers is a major and increasing bottleneck for their operations, affecting their capacity to innovate.

The COVID-19 pandemic has brought the pre-crisis vision of equitable, relevant, and quality skills development into sharper relief, adding unforeseen urgency to the calls for reform and highlighting the huge costs of inaction.

8.7.7 The key issues countries need to tackle for skills development are:

1. **Access and completion**. Across the world, investments in education and skills development—from preschool through post-secondary education to vocational training—have high returns. The wage penalty for low literacy is nine percentage points in Colombia, Georgia and Ukraine, and 19 percentage points in Ghana. And the opposite is also true: in Brazil, graduates of vocational programs earn wages about 10 percent higher than those with a general secondary school education. Still, provision of equitable access is a challenge in many low-income and middle-income countries. Furthermore, many students who manage to enroll in education or training programs do not complete their studies and miss out on obtaining formal qualifications, which can dramatically reduce the return on the educational investments in terms of lifetime earning potential.

2. **Quality**. Many young people attend schools without acquiring basic literacy skills, leaving them unable to compete in the job market. More than 80 percent of the entire working age population in Ghana and more than 60 percent in Kenya cannot infer simple information from relatively easy texts. For those who access technical and vocational training at secondary and post-secondary levels, returns can vary substantially by specialization and institution. Technical and vocational training (TVET) systems in many countries face challenges related to quality assurance, resulting in perceptions of the vocational track being a second-best option compared to general secondary or tertiary education.

3. **Relevance**. Technical and vocational education and training —which can last anywhere from six months to three years— can give young people, especially women, the skills to compete for better paying jobs. Nevertheless, more needs to be done in terms of engaging local employers to ensure that the curriculum and delivery of these programs responds to labor market needs.

4. **Efficiency**. Challenges related to governance, financing, and quality assurance also impact the efficiency of skills development programs. The resulting unnecessarily high costs can limit opportunities for disadvantaged youth and adults to access these programs.

Now, we are going to explore how this comprehensive pan India movement can play an integral part in reforming the future of our country.

1. **Increase in Rate of Employment:** So far, the Job market in India was mostly comprised of candidates who, despite being well educated, lost out on several opportunities because they may have lacked the skills required for a specific job profile. With the 'Skill India' initiative, individuals can get appropriate training across various fields from designated skill development institutions and become job-ready prior to venturing into professional realm.

2. **Increase in Productivity:** Through Skill development, individuals will be able to gradually improve their productivity with proper guidance, which can further maximize their efficiency. Since the mission aims to create a skilled workforce – this factor can greatly improve the situation of India's labor force and help in accelerating the growth of our country manifold.

3. **Enable the youth to get Blue-collar Jobs:** The PMKVY scheme under 'Skill India' Mission can enable the youth to get several blue-collar jobs since those who undergo training under this initiative receive an official certificate upon successful completion of the same. This can validate their training and also help them get access to better job prospects.

4. **Skill development at primary & secondary education level:** The 'Skill India' mission encourages and promotes skill development at school level to further bridge the skills gap. Doing so can help create job-ready individuals soon – enabling them to embark on their professional journey without any hurdles on their way.

5. **Improve employment scenario within rural demography:** Since the problem of skills gap is mostly prevalent within the rural population of India, it has become extremely important to upskill this section and recognize their skills to improve their employability. With 'Skill India', many individuals from rural regions have been able to secure well-paying jobs after undergoing training in various programmes, and/or further honing skills which they may have acquired at some point in their life. If this trend continues, the rural demography will be able to significantly contribute its share in furthering the development of India to greater extent.

Although it may seem like a difficult task to achieve, the facts can surely restore the faith of people within the system as well as for this mission. Therefore, we can say that these factors can certainly help 'Skill India' in revolutionizing the future of India – creating a workforce that can overcome any challenges and contribute significantly to the nation's economy.

8.8 TWELFTH FIVE YEAR PLAN (2012-2017)

The Twelfth Five-Year Plan of the Government of India has been decided to achieve a growth rate of 9% but the National Development Council (NDC) on 27 December 2012 approved a growth rate of 8% for the Twelfth Plan.

With the deteriorating global situation, the Deputy Chairman of the Planning Commission Montek Singh Ahluwalia has said that achieving an average growth rate of 9 percent in the next five years is not possible. The Final growth target has been set at 8% by the endorsement of the plan at the National Development Council meeting held in New Delhi.

The government intends to reduce poverty by 10% during the 12th Five-Year Plan. Ahluwalia said, "We aim to reduce poverty estimates by 9% annually on a sustainable basis during the Plan period". Earlier, addressing a conference of State Planning Boards and Planning departments, he said the rate of decline in poverty doubled during the Eleventh Plan. The commission had said while using the Tendulkar poverty line, the rate of reduction in the five years between 2004–05 and 2009–10, was about 1.5% points each year, which was twice that when compared to the period between 1993–95 to 2004–05. The plan aims towards the betterment of the infrastructural projects of the nation avoiding all types of bottlenecks. The document presented by the planning commission is aimed to attract private investments of up to US$1 trillion in the infrastructural growth in the 12th five-year plan, which will also ensure a reduction in the subsidy burden of the government to 1.5 percent from 2 percent of the GDP (gross domestic product). The UID (Unique Identification Number) will act as a platform for cash transfer of the subsidies in the plan.

The objectives of the Twelfth Five-Year Plan were:

- To create 50 million new work opportunities in the non-farm sector.
- To remove gender and social gap in school enrolment.
- To enhance access to higher education.
- To reduce malnutrition among children aged 0–3 years.
- To provide electricity to all villages.
- To ensure that 50% of the rural population has access to proper drinking water.
- To increase green cover by 1 million hectares every year.
- To provide access to banking services to 90% of households.

The sectoral contribution of GVA given in Table 2.3 indicates that the share of agriculture and industry has been declining over the Twelfth plan period, whereas the share of services has steadily increased. The share of agriculture in GVA is expected to drop to 17.0 per cent and that of industry to 29.7 per cent in 2015-16 (PE). However, the share of services is expected to touch 53.2 per cent in 2015-16 (PE). Such a large share for services in total output at a relatively early stage of development is not typical and a matter of concern as, in India, the structural shift from agriculture to services is bypassing the industrial sector.

Table 2.3: Sectoral Contribution to GVA at Current Prices

(per cent)

Item/Year	2012-13	2013-14	2014-15	2015-16@
Agriculture, forestry & fishing	18.2	18.3	17.4	17.0
Industry of which	31.7	30.8	30.0	29.7
Manufacturing	17.1	16.5	16.1	16.2
Services	50.0	50.9	52.6	53.2
Total GVA at Basic Prices	**100.0**	**100.0**	**100.0**	**100**

Source: Central Statistics Office (CSO)

It is important to note that the share of the manufacturing sector in GVA has been falling in the first three years of the Twelfth Plan and is further expected to decline to 16.2 per cent in 2015-16 (PE). To lead the economy to a high-growth trajectory, it is highly essential to harness the potential of the industrial sector – especially manufacturing – thereby boosting overall growth. With the aim of making India the manufacturing hub of the world, the Government has initiated programmes such as 'Skill India' and 'Make in India'.

The country presently faces a dual challenge: a severe paucity of highly trained, quality labour, as well as the non-employability of large sections of the workforce which, while educated, possess little or no job skills. The National Policy for Skill Development and Entrepreneurship 2015 supersedes the policy of 2009.

The primary objective of the new policy is to meet the challenge of skilling at scale with speed, standard (quality) and sustainability. The policy links skills development to improved employability and productivity to pave the way to inclusive growth in India. The 'Make in India' program includes major new initiatives designed to facilitate investment, foster innovation, protect intellectual property, and build best-in-class manufacturing infrastructure. One of the most comprehensive and significant policy initiatives taken by the Government in this regard is the National Manufacturing Policy.

The policy is the first of its kind for the manufacturing sector; it addresses regulations, infrastructure, skill development, technology, the availability of finance, exit mechanisms and other pertinent factors that determine the sector's growth. The focus sectors identified include employment intensive industries like textiles & garments, leather & footwear, gems & jewellery and food processing; capital goods industries like machine tools, heavy electrical equipment, earthmoving & mining equipment, and heavy transport; industries with strategic significance like aerospace, shipping, IT hardware & electronics, telecommunication equipment, defence equipment and solar energy; and industries in which India enjoys a

competitive advantage such as automobiles, pharmaceuticals, medical equipment.

To revive growth and overcome structural constraints in the economy, key policy reforms have been undertaken by the Government. The needs of short-term economic management, in particular taming inflation and reducing imbalances in the external sector, along with a medium to long term vision for sustainable development, are addressed in the policy changes.

8.9 SUMMARY

- Research and development (R&D) is the creation of new body of knowledge about existing products or processes, or the creation of an entirely new product.

- **Educational research** refers to the systematic collection and analysis of data related to the field of education.

- Hon'ble Prime Minister Shri Narendra Modi launched the **Skill India Mission**, under the Ministry of Skill Development and Entrepreneurship on 15 July 2015, which aims to train over 40 crore people in India in different skills by 2022.

8.10 QUESTIONS

1. Explain Research and Development Services with Reference to Education.
2. Write note on 'Educational Research'.
3. Explain the characteristics of Research in the Field of Education.
4. Write the purposes of Research in Education.
5. Explain the importance of Research in Education.
6. What are the challenges of Research in Present Educational Context.
7. Give note on 12thFive Year Plan (2012-2017).