INDIAN ECONOMY

Edited By

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SYLLABUS
Indian Economy

Objectives:

Objective of this course is to acquaint students of the Indian Economy, present and future of Indian Economics, and how the Indian Economy is influencing the business environment in India context.

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1	Characteristics of Indian Economy on the eve of independence, **Development Strategies in India:** Planning in India: Objectives Strategies and Evaluation, 11th five year plan.
2	Trend and Structure of National Income since 1951, Economic Reforms in India since 1991, Critique of Indian Economic Policies-Pre and Post Reforms
3	Demographic Features and Indicators of Development, Poverty: Concept, Causes and Government policies, **Unemployment in India:** Concept, Causes and Government policies, Inflation: Nature and extent
4	**Sectoral performance I:Agriculture:** Growth, Productivity Trends and Crop Patterns, Green Revolution, Recent Issues in Indian Agriculture
5	**Growth ,Trends and patterns in Agriculture:** Rural Credit & Marketing, WTO & Agriculture

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Unit 1: Characteristics of Indian Economy on the Eve of Independence

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Objectives

After reading this Unit students will be able to:

- Explain the characteristics of Indian Economy on the Eve of Independence.
- Discuss Commercialisation of Agriculture.
- Assess the process of Industrial Transition in India.

Introduction

A close look at the economic development of India during the British period reveals that whenever India's colonial economic links in terms of foreign trade and inflow of foreign capital were disrupted, Indian economy made strides in industrial development. During the 20th century, the colonial economic links were interrupted thrice : first, during the First World War (1914-18) and second, at the time of the Great Depression (1929-34) and third during the Second World War (1939-45). In other words, free flow of foreign trade and capital meant economic stagnation in India, while their absence (partial or total) provided an opportunity for Indian capital to open up avenues of industrial growth in areas choked off by imports.

1.1 Characteristics of Indian Economy

The Indian economy in the pre-British period consisted of isolated and self-sustaining villages on the one hand, and towns, which were the seats of administration, pilgrimage, commerce and handicrafts, on the other. Means of transport and communication were highly underdeveloped and so the size of the market was very small. To understand pre-British India, it is essential to study the structure of the village community, the character of towns, the character of internal and foreign trade, the state of the means of transport and communications.

(a) The structure and organisation of villages

The village community was based on a simple division of labour. The farmers cultivated the soil and tended cattle. Similarly, there existed classes of people called weavers, goldsmiths,

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carpenters, potters, oil pressers, washermen, cobblers, barber-surgeons, etc. All these occupations were hereditary and passed by tradition from father to son. These craftsmen were paid a stipend out of the crops at the harvest time in lieu of the services performed.

Most of the food produced in the village was consumed by the village population itself. The raw materials produced from primary industries were the feed for the handicrafts. Thus the interdependence of agriculture and hand industry provided the basis of the small village republics to function independently of the outside world. Sir Charles Metcalfe writes in this connection : "The village communities are little republics having nearly everything they want within themselves; and almost independent of foreign relations. They seem to last where nothing lasts. This union of the village communities, each one forming a separate little state by itself... is in a high degree conducive to their happiness, and to the enjoyment of a great portion of freedom and independence." The villages did acknowledge some out-side authority, may be that of a local princeling, who in turn may be under a Muslim Nawab or a Hindu king, by paying a portion of the agricultural produce varying between one-sixth to one-third or even in some periods one-half as land revenue. The land revenue sustained the government.

The agriculturists could be further divided into the land-owning and the tenants. Labour and capital needed was either supplied by the producers themselves out of their savings or by the village landlord or by the village moneylender.

Did u know? There were three distinct classes in village India: (i) the agriculturists, (ii) the village artisans and menials, and (iii) the village officials.

(b) The structure and character of the towns

Towns had come into being principally on account of the following three reasons :

(1) Towns were the places of pilgrimage or sacred religious centres. Important examples of such towns were Allahabad, Banaras, Gaya, Puri, Nasik etc.

(2) Towns were the seat of a court or the capital of a province. In this category may be included Delhi, Lahore, Poona, Lucknow, Tanjore, etc. These towns lost their importance as the prop of the court was withdrawn.

(3) Towns were trading or commercial centres. These towns existed on important trade routes. Mirzapur, Bangalore, Hubli, etc. are examples of this category.

Towns had a life much different from the villages. There existed a large variety of occupations and trades in towns. They catered to wider markets.

1.2 Industries and Handicrafts in Pre-British India

The popular belief that India had never been an industrial country, is incorrect. It was true that agriculture was the dominant occupation of her people but the products of Indian industries enjoyed a worldwide reputation. The muslin of Dacca, the calicos of Bengal, the sarees of Banaras and other cotton fabrics were known to the foreigners. Egyptian mummies dating back to 2000 B.C. were wrapped in Indian muslin. Similarly, the muslin of Dacca was known to the Greeks under the name Gangetika.

The chief industry spread over the whole country was textile handicrafts. The high artistic skill of the Indian artisans can be visualised from this account given by T.N. Mukherjee : "A piece of the muslin 20 yards long and one yard wide could be made to pass through a finger ring and required six months to manufacture."Besides the muslins, the textile handicrafts included chintzes of Lucknow, dhotis and dopattas of Ahmedabad, silk, bordered cloth of Nagpur and Murshidabad. In addition to cotton fabrics, the shawls of Kashmir, Amritsar and Ludhiana were very famous.

Not only that India was also quite well-known for her artistic industries like marble-work, stone-carving, jewellery, brass, copper and bell-metal wares, wood-carving, etc. The cast-iron pillar near

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Delhi is a testament to the high level of metallurgy that existed in India.

The Indian industries "not only supplied all local wants but also enabled India to export its finished products to foreign countries."Thus, Indian exports consisted chiefly of manufactures like cotton and silk fabrics, calicos, artistic wares, silk and woollen cloth. Besides, there were other articles of commerce like pepper, cinnamon, opium, indigo, etc. In this way, Europe was a customer of Indian manufactures during the 17th and 18th centuries. It was this superior industrial status of India in the pre-British period that prompted the Industrial Commission (1918) to record :

"*At a time when the West of Europe, the birth place of modern industrial system, was inhabited by uncivilised tribes, India was famous for the wealth of her rulers and for high artistic skill of her craftsmen. And even at a much later period, when the merchant adventurers from the West made their first appearance in India, the industrial development of this country was, at any rate, not inferior to that of the more advanced European nations*."

1.3 Commercialisation of Agriculture (1850-1947)

Another noteworthy change in Indian agriculture was its commercialisation that spread between 1850-1947. *Commercialisation of agriculture implies production of crops for sale rather than for family consumption.* At every stage of the economic history of the nation, a part of the agricultural output is produced for the market. Then, what distinguished commercial agriculture from normal sales of marketable surplus ? It was a deliberate policy worked up under pressure from British industries. By the middle of the nineteenth century. Industrial Revolution had been completed in England. There was a tremendous demand for raw materials, especially cotton, jute, sugarcane, groundnuts for the British industries. By offering a higher bait of market price, the peasants were induced to substitute commercial crops for the food crops as the former were more paying than the latter. Consequently, the peasants shifted to industrial crops and in some districts, the movement for commercial agriculture became so strong that the peasants started buying foodstuffs from the *mandis* for their domestic needs. This led to a fall in the production of food and, consequently this period is marked by the occurrence of most terrible famines in the economic history of India. Commercial agriculture was also, to some extent, the result of the mounting demands of the land revenue by the state and excessive rents by the landlords from the peasantry.

The process of commercial agriculture necessitated by the Industria Revolution was intensified by the development of an elaborate network of railway in India after 1850. Railways linked the interior of the country with ports and harbours, urban marketing centres and thus Indian agriculture began to produce for world markets. Large quantities of wheal from Punjab, jute from Bengal and cotton from Bombay poured in for export to England. The same railways which carried commercial crops from the various parts of the country, brought back the foreign machine-made manufactures to India. Thus, railways and link-roads connecting the hinter-land of country with commercial and trading centres were instrumental in intensifying commercial agriculture on the one hand and sharpening competition of machine-made goods with Indian handicrafts, on the other. These factors led to the ruin of Indian industries.

1.4 Famines and Famine Relief in India

The new land system and commercialisation of Indian agriculture produced very adverse economic consequences on the Indian economy. These influences retarded, nay halted, the process of industrialisation the Indian economy, created "built-in depressors" in agriculture and were responsible for the occurrence of famines in India.

The Nature of Famines in India

Before the advent of modern means of transport, especially railways, the famines in India were localised scarcities of food in those regions where the crops had shrunk on account of bad rains. Both the construction of railways and the growth of trade after 1860 brought about a radical change in the nature of famines. Previously a famine meant extreme hunger and the population had to undergo suffering on account of lack of food because there were no means of transporting the surplus foodgrain even if it was available in other parts of the country. The position after 1860 was that the rapid means

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of transport made it possible to carry food from one region to the other without much loss of time. But periods of famine were invariably periods of high food prices and extensive agricultural unemployment. Therefore, the mass of the poor people found it impossible to purchase food. Consequently, the earlier famines were described as food famines but later ones are more appropriately described as purchasing power famines. The Famine Commission (1898) made it abundantly clear when it emphasized that food was "always purchasable in the market though at high and in some remote places at excessively high prices." Two factors were responsible for pushing up food prices : First, an impending shortage of food meant hoarding and speculation which helped to push up the price level very fast. Secondly, government did not allow any decrease in the export of foodgrains even in the lean years. Consequently, the speculator and the Government both accentuated the gravity of the problem.

Causes of Famines

There is no doubt that the immediate cause of famines was the failure or the unseasonableness of rains. It is common knowledge that the means of irrigation were undeveloped and rainfall played a crucial role in agricultural production. Famines were a common occurrence in the dry regions and areas with a rainfall varying between 15 and 60 inches. The areas affected most by famines were Bihar, West Bengal, Orissa, Rajasthan. Tamil Nadu. Maharashtra, Andhra Pradesh and Karnataka. Failure of rains caused an absolute deficiency which resulted in great famines, but unseasonableness of rainfull also proved destructive to crops and, therefore, created food scarcity. In a country wholly or mainly depending on rainfall, considered as the most dominant factor determining agricultural production was the behavior of monsoons.

To understand the real factors which led to the occurrence of famines again and again in India--while they were banished after 1850 from Europe--it is quite desirable to understand the economic and sociological transformation that took place during the British rule. Three factors can be discerned in the Indian agricultural society during the British period :

(1) **The destruction of Indian handicrafts :** Fierce competition from British manufactures resulted in the destruction of Indian handicrafts. It stripped the artisan, the weaver and the handicraftsman of his means of livelihood. Under the circumstances, the unemployed increased the pressure of population dependent on land. This led to excessive sub-division and fragmentation of land, the creation of a class of landless labourers and an increase in the rent of land. Whereas in 1842, Sir Thomas Munro did not deem it necessary to statistically measure the number of landless labourers because they formed a too insignificant portion of Indian agricultural population, in 1872 the Census Commission counted agricultural labourers as 18 per cent of agricultural working force. This sudden increase of the agricultural proletariat in the 30-year period exposed the most vulnerable section of the population in Indian rural society to the uncertainties of weather.

(2) **The new land system :** The British created a class of landlords so as to affix responsibility for land revenue, but the British left the process of rent fixation to the free market mechanism. The increasing demand for land for a growing agricultural population led to an exorbitant increase in rents. Land was transformed in this process to an attractive capital asset. Thus, there was a great desire among the moneylending classes to acquire land. The rise in prices of land enhanced the value of the security in the form of land against which peasants could borrow. This led to increase in agricultural debt of the Indian peasantry repeatedly exposed to uncertainties. The high rates of interest charged by the moneylending classes made it impossible for the peasants to repay their debts. Gradually lands passed on to the moneylending classes. The dispossession of the peasantry by the moneylenders added to the process of pauperisation of the cultivating classes.

Thus, the new land relations which embodied the creation of a class of land owners and a class of cultivators (whether on a tenancy basis or a daily wage) separated ownership from cultivation. The landlords were interested in extracting high rents leaving a pittance with the cultivators. The investment on land fell sharply because the cultivators had to part off with a major portion of the produce in the form of rent to the landlords and interest to the moneylenders. This created

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in Indian agriculture a built-in-depressor. Thus, the new agrarian relations were disincentive-ridden and therefore, retarded the process of agricultural development.

(3) The impact of colonial rule : Colonialism also had a deep impact on the repeated occurrence of famines in India. The destruction of the Indian handicrafts increased unemployment in the rural areas. Whereas in England, surplus labour from rural areas was quickly absorbed in new industries created in the process of industrialisation, nothing of this kind happened in India. The industrialisation of the Indian economy would have deprived England of a ready market for its goods and so the colonial interests were opposed to the development of industries in India. Thus, labour thrown out of employment in traditional industries imposed additional burden on a subsistence agriculture.

But the burden of colonialism was to be borne by agriculture. The cost of extravagant and lavish British administration, the cost of imperial wars in Burma and Afghanistan, the depreciation of the value of the Indian currency since 1873 and the growing burden of home charges were to be paid by the Indian people. The major taxes were land revenue, excise, salt tax, stamps and opium. Income tax which was levied in 1886 was withdrawn because its yield was too poor. Apart from opium, all other taxes fell on the rural classes. Land revenue was the chief fiscal engine and this increased the burden on the peasantry.

On account of these factors, India was forced to keep a favourable balance of trade with England. But her principal exports were mainly food and agricultural raw materials. Thus, even in the famine years exports of foodgrains had to be maintained in order to create an export surplus on merchandise account. There is evidence that after 1870, foodgrains exports increased because the railways became a convenient vehicle of mobilisation of the food surplus. Thus, the compulsions of colonialism in maintaining an export surplus, burdening the peasantry with higher taxes and the swelling up of an agricultural population led to the impoverishment of the rural classes.

1.5 Process of Industrial Transition in India

The process of industrial transition in the British period is broadly divided into industrial growth during the 19th century and industrial progress during the 20th century. It was mainly the private sector--whether indigenous or foreign-- that carried industrialisation forward. Only after the First World War some protection was granted to Indian industries otherwise Indian industry had to weather all storms and face world competition on its own strength. This explains the slow growth of industrialisation.

(A) Private enterprise and industrial growth in the 19th century

The outstanding industrial events of the 19th century were the decline of indigenous industries and the rise of large-scale modern industries. This change was brought about by private enterprise. The rise of large-scale industries was slow in the beginning but by the close of the 19th century, the movement was more rapid.

The period 1850-55 saw the establishment of the first cotton mill, first jute mill and the first coal mine. In the same period, the first railway line was laid in India. In a period of 25 years, that is, by the last quarter of the 19th century, there were 51 cotton mills and 18 jute mills. During the same period, India produced one million tonnes of coal per annum and the Indian railways had a mileage of 8,000. By the end of the 19th century there were 194 cotton mills and 36 jute mills, and coal production had risen to over 6 million tonnes per annum. In spite of the very rapid increase in industrialisation and the fact that the foundations for the development of modern industries for the utilisation of coal and iron resources were laid by the end of the 19th century, India was being gradually converted into an agricultural colony of the British. By 1900, India had become a great exporter of rice, wheat, cotton, jute, oilseeds, tea, etc. and an importer of British manufactures. In this way India had become an appendage of the British colonial system.

During the 19th century, it was but natural that British business should pioneer industrial enterprise in India. The Britishers had experience of running industries at home. British enterprise received maximum state-support. Besides, much of the business developed in India was related

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either to the Government or interests in some way connected with Britain. Though industrialisation was started by the British in the 19th century, the Britishers were more interested in their profit and not in accelerating the economic growth of India.

Apart from the British, the Parsis, the Jews and the Americans were also prominent first as merchants and later as industrialists. They were close-knit and highly progressive communities. The Parsis were particularly progressive to rapidly adopt European business methods.

Within the Indian community, conditions were not favourable for the emergence of industrial leaders, partly because of the peculiar way in which factory industry came to India, as compared to its development in England. In the West two principal groups were ready to set up factories: the merchants and the master craftsmen. The merchants had capital, marketing ability and capacity to manage labour. The master craftsmen did not have capital but had understood the materials and their proper handling. Because of certain peculiar features, neither Indian merchants nor Indian craftsmen took interest in the factory system. Most Indian merchants belonged to the *Baniya* or moneylending community. They possessed capital and were always eager for its security and profits. But when the factory system was introduced in India by the British, the merchant class found greater opportunities for trade. The development of shipping and the building of railways resulted in larger trade, both external and internal. Besides, there were more opportunities for lending money. Thus, the merchants found greater scope for profits in their traditional occupations and hence did not give them up and take to the factory industries.

At the same time, Indian craftsmen too did not play the part played by their western counterparts in the field of industrialisation because they did not possess large capital. Besides, they were without proper training and education.

However, Indians joined the ranks of industrialists early in the middle of the 19th century and their role grew throughout the period, continuously and steadily. They used the same managing agency system as the Britishers. They were becoming increasingly important members of companies established by the Britishers. Those indigenous business groups who gave up traditional occupations and who took to industrial ventures were the Parsis, the Gujaratis, the Marwaris, the Jains and the Chettiars.

(B) Private enterprise and industrial growth in the first half of the 20th century

Over 70 cotton mills and nearly 30 jute mills were set up in the country. Coal production was more than doubled. Extension of railways continued at the rate of about 800 miles per annum. The foundation of iron and steel industry was finally laid during this period.

The war of 1914-18 created enormous demand for factory goods in India. Imports from England and other foreign countries fell substantially. Besides, the government demand for war-purposes increased considerably. As a result, great stimulus was given to the production of iron and steel, jute, leather goods, cotton and woollen textiles. Indian mills and factories increased their production and were working to full capacity. But on account of the absence of heavy industries and also of the machine tools industry, they could not develop fast enough.

Notes In 1905, the Swadeshi movement was started. It stimulated Indian industries and there was a slow but steady growth in the field of existing industries as well as the establishment of new industries between 1890 and the outbreak of the war of 1914.

(C) Causes of slow growth of private enterprise in India's industrialisation (1850-1957)

It is important to find out the reasons why Indian industry did not expand significantly relative to the rest of the economy over the hundred years before Independence. They were :

(a) Unimaginative private enterprise : One important reason frequently mentioned is the inadequacy of entrepreneurial ability. Indians were reluctant to enter the industrial field because of the comparatively easier and secure scope for profit which existed in trading and moneylending. The Britishers who pioneered industrial change in India were not

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really interested in industrialisation of the country as such. But then Indian industrialists too were so short-sighted, they rarely bothered about the future and cared very little for replacement and for renovation of machinery. They were influenced by nepotism rather than ability in their choice of personnel. They were also influenced by their trading background viz., high price and high profit margin rather than low prices and larger sales. They emphasized sales than production. To a certain extent, therefore, unimaginative private enterprise was responsible for the slow growth of industrialisation in this country.

(b) Problem of capital and private enterprise : In the 19th and 20th centuries, Indian industrialists had suffered from lack of adequate capital. Just as British enterprise was prominent, so also British Capital was significant in India's industrialisation. A larger part of the total invested capital in modern enterprises in India was imported from Britain. Capital was scarce not only because the resources of the country were underdeveloped but also because the avenues for the investment of surplus wealth were few. There were no Government loans or company stocks and debentures. Accordingly, people held their wealth in the form of gold and silver.

There was complete absence of financial institutions to help the transfer of savings to industrial investment. The indigenous financial institutions concerned themselves with rural moneylending and financing of internal trade. Institutions which concerned themselves with rural savings for a comparatively long period, were altogether neglected. In the early days of industrialisation, people were generally hesitant to entrust their savings to the company promoters.

(c) Private enterprise and the role of the Government : One of the important reasons and according to some authorities, the most important reason for the slow growth of Indian industries was the lack of support from the Government. In the 19th century, the Government did provide certain overhead investments which helped private enterprise. Examples were the railways and communications. But the Government did not provide the other conditions essential for private enterprise. The important fact to remember is that in the critical years of growth (between 1850 and 1947) Indian enterprise was operating under a foreign government which was extremely unsympathetic to native private enterprise.

1.6 Colonial Exploitation: Forms and Consequences

The major form through which the exploitation of India was done was trade. Later, the British started making investments in Indian industries and the process of economic drain started through investment income in the form of dividends and profits. In addition to this, India had to pay the costs of British administration, in the form of home charges. They included salaries of British officers (both civil and military), payment of pensions, furloughs and other benefits, as also interest payments on sterling debt.

The main forms of colonial exploition were:

(i) Trade policies aimed at developing a colonial pattern of trade in which India would become an exporter of foodstuffs and raw materials and an importer of manufactures; (ii) encouragement of British capital to take up direct investment in Indian consumer goods industries; (iii) encouragement of finance capital, through the managing agency system, to appropriate a major portion of the profits through various malpractices; and (iv) to force India to pay the costs of British administration as well as to finance the wars and expeditions undertaken by the British Government.

(a) Exploitation through Trade Policies

Trade policies were used against India by the East India Company and later by the British Government to drain away wealth from India to feed the expanding British industry with raw materials and also to encourage the trend towards commercialisation of agriculture so that the Indian economy could be transformed as an appendage of the British colonial system. Thus, trade policies were a very convenient, but a potent source of exploitation.

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1. **Exploitation of cultivators to boost indigo-export :** East India Company wanted to encourage indigo export. Some (500 to 1000) European planters were settled in Bengal. They were given land at a very nominal price. They forced the cultivators on their land to cultivate and sell the indigo plant at a very low price. Even other zamindars were compelled to allocate a portion of their land for indigo cultivation. Once an agreement was signed with a zamindar or aryot accepted the advance for cultivation he had to suffer the ruthless exploitation of the indigo planters who made fabulous profits from its export.
2. **Exploitation of artisans through Company agents to deliver cotton and silk fabrics much below the market price :** During the 18th century, the East India Company wanted to benefit from the export of Indian cotton and silk fabrics which enjoyed a world-wide reputation. For this purpose, the Company made use of agents called as *Gomastas*. The *gomastas* who were Indians in the employment of the Company, would go to the village and force the artisans to sign a bond to deliver a certain quantity of goods at a price to be fixed by the *gomasta*. The price fixed was at least 15 per cent and in extreme cases, even 40 per cent lower than the market price. In case, an artisan refused to accept the advance offered by the Company's *gomasta*, he was punished by flogging and in certain cases, by imprisonment. In this way, through the Company's *gomastas*, the East India company was able to procure cotton and silk fabrics at very low prices. Thus, the poor artisan was squeezed so that the East India Company made huge profits through the export of these fabrics. The ruthlessness of the Company was so inhuman that the artisans worked like bonded labour and this explains their growing pauperisation.
3. **Exploitation through the manipulation of import and export duties :** Though Great Britain professed to be a follower of free trade, but her trade policies towards Indian goods only revealed that she never followed the policy of free trade. During the 18th century. Indian goods, specially cotton and silk fabrics, enjoyed a lead over the British goods. The aim of British trade policies was to destroy the supremacy of the Indian goods, protect the interests of British industries and ultimately succeed in penetrating the Indian market by the machine-made goods.

(b) Exploitation through export of British Capital to India

In the early phase of colonialism, the chief instrument of exploitation was trade but later the British thought of encouraging investment in India. There were three principal purposes of these investments. Firstly after the first war of Indian Independence (1857), which, the British described, as the Mutiny, it was realised by the Government that for the effective control and administration of the country, it was essential that an efficient system of transport and communication should be developed. Secondly, in order to effectively exploit the natural resources of India, it was essential to develop public utilities like generation of electricity and water works. Thirdly, to promote foreign trade so that food and raw materials collected in various *mandis* are quickly transported abroad and the manufactures imported in India are quickly distributed in various markets, the British thought it necessary to link railways with major ports on the one hand and the marketing centres (*mandis*) on the other. This explains why railway development in India was planned in such a manner that it served the colonial interests. Thus, the major fields of direct foreign investments were as under :

Fields of direct foreign investments

(1) Economic overheads and infrastructure like railways, ports, shipping, generation of electric energy, water works, roads and communications; (2) for promoting mining of coal, gold and petroleum and metal-lurgical industries; (3) for promoting commercial agriculture, investments in tea, coffee and rubber plantations; (4) to undertake investments in consumer goods industries like cotton and jute textiles, matches, woollen textiles, paper, tobacco, sugar, etc; (5) investments in banking, insurance and trade; and (6) some investments were made in machine building, engineering industries and chemicals.

All these investments were undertaken by the British multi-nationals operating through their subsidiaries. Some of these investments took the form of loans to the British Government in India in the form of sterling debts.

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Two major forms of investment

(i) Direct private foreign investment in India was made in coal, mining companies, in jute mills, tea, coffee, rubber plantations and in sugar.

(ii) Sterling loans given to the British Government in India and public and semi-public organisations to undertake investments in railways, ports, electricity undertakings and other public utilities. These loans represented sterling debt.

(c) Exploitation through finance capital via the Managing agency system

Indian business did not possess any experience of the organisation of modern industry by setting up joint stock companies. The British merchants who had earlier set up trading firms acted as pioneers and promoters in several industries like jute, tea and coal. These persons were called as managing agents.

The managing agency firms may be described as partnerships of companies formed by a group of individuals with strong financial resources and business experience. The managing agency firm is entitled to the management of the whole affairs of the Company unless otherwise provided in the agreement.

The principal functions of the managing agents were as follows : (i) to do the pioneering work of floating new concerns; (ii) to provide their own funds and also to arrange for finance by acting as the guarantors; (iii) to act as agents for the purchase of raw materials, stores, equipments and machinery; (iv) to act as agents for marketing of the produce; and (v) to manage the affairs of the business.

(d) Exploitation through payments for the costs of British administration

The British employed a large number of British officers for the military and civil administration of the country. The British officers in the army were given a separate cadre and were paid much higher salaries and allowances than their Indian counterparts. All the top ranking positions were monopolised by the British officers.

Similar situation prevailed in the civil administration. All the key positions and top ranks were manned by British officers. They were also paid fabulous salaries and allowances. Besides this, they were provided other benefits for the maintenance of their children. These officers had immense administrative powers. They could award contracts for supplies and stores and thus the contractors paid them commissions for the favours. These unauthorised earnings had also become a part of the system. These officers after a certain specified period of service could seek retirement and thus were entitled to benefits of pension. The payments which were remitted to England out of the savings of the officers living in India and also on account of pension and other benefits were called as family remittances. These payments were a heavy drain on our resources. Besides, India had also to pay interest on sterling loans raised for the construction of railway and irrigation works. Payments accruing on account of interest on debts incurred by India and those connected with civil departments in India, such as pensions, gratuities, furlough allowances, and payments for stores purchased in India — all taken together were called Home Charges. In 1931, the payments accruing to Britain on account of home charges amounted to ₹ 43 crores.

Not only that, India was forced to pay for the various wars of the East India Company like the Mysore and Maratha Wars, the Afghan and Burmese Wars. The British forced the Indian people to pay through their nose for their expeditions to Prussia, Africaetc. The entire cost of the telegraph line from England to India was charged from India.

During the two World Wars, India exported more to Britain than it imported. Against this positive balance of trade, Britain authorised the Government of India to issue more currency on the backing of the Sterling Balance held in England. India exported more and imported less. The Sterling Balances, therefore, represented the sweat, the tears and the toil of the millions of the poor people of India. But Great Britain by its policy only exported inflation to India. This accounted for a much larger rise of the price level in India during the war. It imposed a heavy burden on the Indian people.

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The consequences of the various forms of exploitation were that :

(i) India remained primarily an agricultural country and its agriculture became commercialised to serve the interests of Great Britain by exporting tea, coffee, spices, oilseeds, sugarcane and other foodstuffs, besides other raw materials.

(ii) India which was an industrially advanced country during the 16th and 17th century was not permitted to modernize her industrial structure during the 18th and 19th century. Her handicrafts were destroyed and she became an importer of manufactured goods.

(iii) The British employed the policy of discriminating protection along with imperial preference to have complete control over the Indian market. This also helped to provide safe and secure avenues for the British investors in India.

(iv) The British developed the economic infrastructure in the form of railways and irrigation and electricity works with a view to promote foreign trade and exploit India's natural resources to their advantage. Direct British investment was made in consumer goods industries like tea, coffee and rubber plantations, but no effort was made to develop heavy and basic industries.

(v) The Managing Agency System did help to promote consumer goods industries in the initial phase, but became exploitative in character later. It appropriated nearly 50 per cent of the gross profits as managerial remuneration.

(vi) The British exploited India through the economic drain via home charges. India was also forced to pay for several wars like Afghan and Burmese Wars. This was indicative of the highly exploitative character of the British rule.

The net result of the British policies was poverty and stagnation of the Indian economy.

Poverty of the Masses and the Economic Drain

Dadabhai Naoroji, a distinguished Indian economist, in his classic paper on the 'Poverty of India'(1876), emphasized that the drain of wealth and capital from the country which started after 1757 was responsible for absence of development of India. According to Dadabhai Naoroji. "The drain consists of two elements—first, that arising from the remittances by European officials of their savings, and for their expenditure in England for their various wants both there and in India : from pensions and salaries paid in England : and second that arising from remittances by non-official Europeans." This implies that India had to export much more than she imported in order to meet the requirements of the economic drain. During the period of the East India Company, an outright plunder in the form of gift exactions and tributes was carried out. Dadabhai Naoroji. Y.S. Pandit and S.B. Saul have estimated the annual drain for various periods. Taking the estimates based on the balance of payments alone, Saul's figure for 1880 amounts to 4.14% of the Indian national income. Irfan Habib, therefore, writes : "The fact that India had to have a rale of saving of 4% of its national income just to pay the Tribute must be borne in mind when economists speak of the lack of internal capacities for development, or the low per capita income base, from which the British could not lift the Indians, however, much they tried.''

The economic drain of wealth prevented the process of capital creation in India but the British brought back the drained out capital and set up industrial concerns in India owned by British nationals. The government protected their interests and thus the British could secure almost a monopoly of all trade and principal industries. The British component of industries established in India further drained off Indian wealth in the form of remittances of profits and interest. Thus, the economic drain which commenced right from the inception of the British rule acted as a drag on economic development till 1947.

1.7 Colonialism and Modernization

The British economists have always upheld that the backwardness of the Indian economy and its failure to modernize itself was largely due to the value system, i.e.. spiritualism, asceticism, the caste system, joint family, etc. Similarly, the British economists have always argued that Indian capital was proverbially shy, it always sought safe avenues of investment and thus lacked the basic quality of

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adventure, which is an essential condition for dynamic entrepreneurship. Dr. Bipan Chandra who has examined the impact of colonial rule in modernizing India rejects both these arguments for absence of modernization as mere shibboleths. He writes : "It is a historical fallacy to assume that India under British rule did not undergo a fundamental transformation, or that it remained basically traditional." But the modernization of India was brought within the political parameters of a colonial economy. Thus, the colonial links between India and Britain resulted in the progress of the Industrial Revolution in Britain while it meant the modernization of those sectors of the Indian economy which strengthened the process of integration of the Indian economy with British capitalism. "It was, therefore, not an accident nor was it historically exceptional that India was integrated into world capitalism without enjoying any of the benefits of capitalism, without taking part in the industrial revolution. It was modernized and underdeveloped at the same time."

It is also not correct to argue that British capital showed a spirit of adventure. The British developed the railways in India under the Guarantee System which assured a minimum return on whatever capital they invested. Similarly, the development of tea and coffee plantations or investment in jute industry was undertaken only when the British investor felt attracted by high profits available in these areas. Not only that, the entire policy of protection was aimed at protecting British industrial and commercial interests. The introduction of the clause of most favoured nation treatment' further made it clear that along with profit maximization, the British used the arm of the state to obtain security maximization. There is, therefore, no basis for the assertion that British capital was more adventurous than Indian capital.

Did u know? In 1905, the Swadeshi movement was started. It stimulated Indian industries and there was a slow but steady growth in the field of existing industries as well as the establishment of new industries between 1890 and the outbreak of the war of 1914.

The British rule was a long story of the systematic exploitation by an imperialistic government of a people whom they had enslaved by their policy of divide and rule. The benefits of British rule were only incidental, if any. The main motive of all British policies was to serve the interests of England. Thus, in 1947 when the British transferred power to India, we inherited a crippled economy with a stagnant agriculture and a peasantry steeped in poverty. As Jawaharlal Nehru put it : "India was under an industrial capitalist regime, but here economy was largely that of the procapitalist period, minus many of the wealth-producing elements of that pre-capitalist economy. She became a passive agent of modern industrial capitalism suffering all its ills and with hardly any of its advantages."

Self-Assessment

1. Choose the correct option:

(*i*) The Great Depression happened during
- (*a*) 1929-34
- (*b*) 1914-18
- (*c*) 1939-45
- (*d*) None of these

(*ii*) The Suez Canel was opened in
- (*a*) 1890
- (*b*) 1862
- (*c*) 1869
- (*d*) None of these

(*iii*) The commercialization in Indian agriculture was spread during
- (*a*) 1850-1947
- (*b*) 1857 -1919
- (*c*) 1891-1951
- (*d*) None of these

(*iv*) During the 18th century, the East India Company wanted to benefit from the export of Indian cotton, the company made use of these agents called
- (*a*) East India Company
- (*b*) Company agents
- (*c*) Gomastas
- (*d*) None of these

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(*v*) The first census of India's foreign liabilities and assets of the Reserve of India was published in

(*a*) 1948 (*b*) 1957

(*c*) 1965 (*d*) 1991

1.8 Summary

- The Indian economy in the pre-British period consisted of isolated and self-sustaining villages on the one hand, and towns, which were the seats of administration, pilgrimage, commerce and handicrafts, on the other. Means of transport and communication were highly underdeveloped and so the size of the market was very small. To understand pre-British India, it is essential to study the structure of the village community, the character of towns, the character of internal and foreign trade, the state of the means of transport and communications.
- India had been conquered before the British too but the invaders settled in India. The difference of the British conquest lies in the fact that it led to the emergence of a new political and economic system whose interests were rooted in a foreign soil and whose policies were guided solely by those interests. Whereas the early invaders Indianized themselves, the British tried to keep a distance between them and the Indian people and thus created the distinction erstwhile not known to Indian history--the foreign rulers and the Indian subjects.
- The process of commercial agriculture necessitated by the Industria Revolution was intensified by the development of an elaborate network of railway in India after 1850.
- The new land system and commercialisation of Indian agriculture produced very adverse economic consequences on the Indian economy. These influences retarded, nay halted, the process of industrialisation the Indian economy, created "built-in depressors" in agriculture and were responsible for the occurrence of famines in India.
- The process of industrial transition in the British period is broadly divided into industrial growth during the 19th century and industrial progress during the 20th century. It was mainly the private sector--whether indigenous or foreign-- that carried industrialisation forward. Only after the First World War some protection was granted to Indian industries otherwise Indian industry had to weather all storms and face world competition on its own strength.
- The outstanding industrial events of the 19th century were the decline of indigenous industries and the rise of large-scale modern industries. This change was brought about by private enterprise. The rise of large-scale industries was slow in the beginning but by the close of the 19th century, the movement was more rapid.
- Over 70 cotton mills and nearly 30 jute mills were set up in the country. Coal production was more than doubled. Extension of railways continued at the rate of about 800 miles per annum. The foundation of iron and steel industry was Finally laid during this period.
- The major form through which the exploitation of India was done was trade. Later, the British started making investments in Indian industries and the process of economic drain started through investment income in the form of dividends and profits. In addition to this, India had to pay the costs of British administration, in the form of home charges. They included salaries of British officers (both civil and military), payment of pensions, furloughs and other benefits, as also interest payments on sterling debt.
- Trade policies were used against India by the East India Company and later by the British Government to drain away wealth from India to feed the expanding British industry with raw materials and also to encourage the trend towards commercialisation of agriculture so that the Indian economy could be transformed as an appendage of the British colonial system.
- In the early phase of colonialism, the chief instrument of exploitation was trade but later the British thought of encouraging investment in India. There were three principal purposes of these investments. Firstly after the first war of Indian Independence (1857), which, the British described, as the Mutiny, it was realised by the Government that for the effective control and administration of the country, it was essential that an efficient system of transport and communication should be developed.

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- Indian business did not possess any experience of the organisation of modern industry by setting up joint stock companies. The British merchants who had earlier set up trading firms acted as pioneers and promoters in several industries like jute, tea and coal. These persons were called as managing agents.
- The British employed a large number of British officers for the military and civil administration of the country. The British officers in the army were given a separate cadre and were paid much higher salaries and allowances than their Indian counterparts. All the top ranking positions were monopolised by the British officers.
- During the two World Wars, India exported more to Britain than it imported. Against this positive balance of trade, Britain authorised the Government of India to issue more currency on the backing of the Sterling Balance held in England. India exported more and imported less.
- Dadabhai Naoroji, a distinguished Indian economist, in his classic paper on the 'Poverty of India'(1876), emphasized that the drain of wealth and capital from the country which started after 1757 was responsible for absence of development of India.
- The British economists have always upheld that the backwardness of the Indian economy and its failure to modernize itself was largely due to the value system, i.e.. spiritualism, asceticism, the caste system, joint family, etc.
- The British rule was a long story of the systematic exploitation by an imperialistic government of a people whom they had enslaved by their policy of divide and rule. The benefits of British rule were only incidental, if any. The main motive of all British policies was to serve the interests of England. Thus, in 1947 when the British transferred power to India, we inherited a crippled economy with a stagnant agriculture and a peasantry steeped in poverty.

1.9 Key-Words

1. Colonised : Come to settle among and establish political control over (the indigenous people of an area).
2. Monopolised : (of an organization or group) Obtain exclusive possession or control of (a trade, commodity, or service).

1.10 Review Questions

1. What are the characteristics of Indian Economy? Discuss.
2. Write a short note on industries and handicrafts in pre-British India.
3. What are the causes of the decline of Indian Handicrafts? Explain.
4. Discuss the commercialization of agriculture.
5. Explain the process to Industrial transition in India.

Answers: Self-Assessment

1. (*i*) (*a*) (*ii*) (*c*) (*iii*) (*a*) (*iv*) (*c*) (*v*) (*a*)

1.11 Further Readings

Books

1. The Indian Economy; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001.
2. Indian Economy ; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055.

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Unit 2: Development Strategies in India: Planning in India: Objectives, Strategies and Evaluation

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Objectives

After reading this Unit students will be able to:

- Describe the Planning in India.
- Explain the Objective, Strategies and Evaluation of Planning.

Introduction

India follows the concept of mixed economy, with public and private sectors playing complementary roles, remaining active partners in the common tasks of development. Since independence, India has following planning for social and economic development. This means the state plays a proactive role in deciding about 'what, how, how much, where and whom' in economic and social activities of the system. At the same time, it also by and large respects institutions of private property and market. The Indian Constitution itself gave scope for market to function and yet asked the State to intervene in the functioning of the market. India's democratic planning aims to achieve a high and sustained rate of growth, a progressive improvement in the standards of living of the people, eradication of poverty and unemployment to lay the foundation for a self-reliant economy. It may be noted that planning strategy envisaging the role of state vis-a-vis market has drastically shifted in favour of market in the 1990s onwards.

2.1 Planning in India

Mixed economy is the outcome of the compromise between the two diametrically opposite schools of thought—the one which champions the cause of **capitalism** and the other which strongly pleads for the socialisation of all the means of production and of the control of the entire economy by the state. The economic development of U.K., USA and many free nations of Europe and America was due to private enterprise. This explains why in the writings of the 18th and 19th century economists, the concept of mixed economy finds no mention, since in those days, economic liberty and non-interference of the state in economic affairs were cardinal principles. According to the English classical and neo-classical economists, the economic system worked smoothly and what was most profitable for the individual, was also most conducive to the economic welfare of the community at large. Perfect harmony in the economic system could be achieved through the acceptance of the invisible hand of self-interest and the use of market forces of demand and supply.

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Karl Marx believed that the capitalist economy allowed a few powerful industrialists and traders to exploit the vast majority of workers. Marx advocated socialization of all the means of production and wanted the state to direct the economy. He would have no private enterprise system based on self-interest, private property, market forces of demand and supply and maximization of profit for the individual. The rise of communist regimes in USSR in 1917 and eastern European countries, Communist China, Vietnam, Cuba etc., later was the direct consequence of the impact of Marxist ideas.

2.2 Objectives of Economic Planning in India

The Committee produced a series of studies on different subjects concerned with economic development. The Committee laid down that the State should own or control all key industries and services, mineral resources and railways, waterways, shipping and other public utilities and, in fact, all those large-scale industries which were likely to become monopolistic in character.

Besides the National Planning Committee (NPC) eight leading industrialists of India conceived "A Plan of Economic Development" which was popularly known as the Bombay Plan. There was also a Gandhian Plan which was prepared by Shriman Narayan. The world famous revolutionary M.N. Roy formulated the People's Plan. All these plans were only of historical importance because they were just paper plans which were never implemented. But they stimulated thinking about the various aspects of planning in India.

Just after the attainment of Independence the Prime Minister Nehru set up the Planning Commission in 1950 to assess the country's needs of material capital and human resources and to formulate economic plans for their more balanced and effective utilisation. The First Five Year Plan commenced in 1950-51 and it was followed by a series of Five-Year Plans.

Did u know? The India National Congress, under the inspiration of Jawaharlal Nehru, set up the National Planning Committee (NPC) towards the end of 1938.

The Directive Principles of our Constitution laid down : "The State shall, in particular, direct its policy towards securing - (a) that citizens, men and women equally, have the right to an adequate means of livelihood : (b) that the ownership and control of the resources of the community are so distributed as best to subserve the common good : (c) that the operation of the economic system does not result in the concentration of wealth and means of production to the common detriment." The Directive Principles of the Indian Constitution are, thus, an expression of the will of the of people of India for rapid economic growth. Accordingly, the Government of India adopted planning as a means of fostering economic development. The Planning Commission set out the following four long term objectives of planning :

(i) to increase production to the maximum possible extent so as achieve higher level of national and per capita income;

(ii) to achieve full employment;

(iii) to reduce inequalities of income and wealth; and

(iv) to set up a socialist society based on equality and justice and absence of exploitation.

The First Five-Year Plan expressed clearly the long-term objectives of goals of economic planning in India as follows : "Maximum production and full employment, the attainment of economic equality or social justice which constitute the accepted objectives of planning under present day conditions are not really so many different ideas but a series of related aims which the country must work for. None of these objectives can be pursued to the exclusion of others, a plan of development must place balanced emphasis on all of these.

In his book **"Planning and the Poor"**. B.S. Minhas a former member of the Indian Planning Commission states : "Securing rapid economic growth and expansion of employment, reduction of disparities in income and wealth, prevention of concentration of economic power, and creation of the value and attitudes of a free and equal society have been among the objectives of all our plans."

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We may discuss the above socio-economic objectives under the headings of (a) Economic planing and removal of poverty, and (b) Economic planning and social change.

A. Economic Planning and Removal of Poverty

Rapid economic growth : The basic aim of economic planning in India is to bring about rapid economic growth through development of agriculture, industry, power transport and communications, and all other sectors of the economy. *The basic measure of economic growth of a country is the continuous expansion, year after year, of real national income and real per capita income. Economic growth, should also include improvements in quality of life consisting of life expectancy, infant mortality, literacy, etc.* A little consideration will show that all these indicators of development are inter-related in the sense that expansion of real national income is the basis for increase in per capita income and also improvement in the quality of life. For a poor country such as India with a large mass of people steeped in poverty and misery, increase in national income by itself is not enough-instead. consistent increase in per capita income over a period, alongwith improvement in quality of life is the yardstick to judge the economic development of India.

Indian planners aimed at increasing national and per capita incomes on the assumption that the continuous increase in these incomes would reduce and eventually remove poverty and misery and raise the standard of living of the masses. But when our planners found that increase in national income was not accompanied by reduction of poverty in the country, the objective of planning from the Fourth Plan onwards was not simply economic growth but raising the standard of living of those who have been living in abject poverty for generations, nay, for centuries. According to the Fourth Five-Year Plan, "the basic goal is a rapid increase in the standard of living of the people", and again" emphasis is placed on the common man, the weaker sections and the less privileged." In fact, the slogans of "**garibi hatao**" (Removal of poverty) and "**growth with justice**" were coined during the early 1970's to indicate clearly that the emphasis would be on removal of poverty and not simply on increase in national income.

Increase in employment : Unemployment and under-employment are important causes of poverty in India. Hence, from the very beginning, removal of unemployment and underemployment has been an important objective of economic planning in the country. The Planning Commission has all along assumed that increase in investment would be accompanied by increase in employment as well as increase in national income of the country. The Commission argued explicitly in the Third Plan that as national income increased in response to investment and development outlay, the demand for labour would automatically rise and more employment would the created.

At the same time, the removal of unemployment would result in increase in gross national product and standard of living of people on the other. Accordingly all the Five Year Plans had programmes of economic growth, with increase in employment as inherent in the development programmes.

Even though employment has been mentioned as one of the objectives of economic planning in all our Five-Year Plans, it has never been accorded a high priority. In no plan, do we find separate employment plans framed for each one of the sectors and regions, so as to boost employment on the one side and national income on the other. This explains why unemployment has increased over the years. For the first time, the Planning Commission admitted in the Janata Party Sixth Plan (1978-83) the possibilities of real conflict between employment and economic growth and accorded employment a pride of place in the Plan. However, in the Sixth Plan (1980-85) which was finally accepted and implemented by the Congress Party, the main focus reverted to the traditional growth approach, with the usual assumption that employment would increase with rise in investment, irrespective of choice of techniques. Thus, not a single plan has been framed keeping employment generation as a primary objective and only lip service was paid to the achievement of full employment goal.

B. Economic Planning and Social Justice

In an unplanned society, various types of retrogressive forces operate, such as inequalities of income, poverty, absence of equal opportunities for progress, etc. India's economic plans made

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conscious effort to remove all these retrogressive forces and foster social as well as individual development. Reduction of inequalities of income and the establishment of a socialist society create conditions in which everyone will have equal opportunities in the matter of education and employment. Besides, there will be no concentration of economic power and exploitation of one individual by another.

Reduction of inequality of incomes : A very small group of persons in India are better-off and have not experienced poverty and misery. These are rich landlords in the countryside, merchants, industrialists, bankers, top officials of the Government, etc. The vast majority of people are, however, very poor because their income is very low. Extreme inequalities of income and wealth in India have their roots in the traditional social formation and necessarily, therefore, the reduction of inequalities of income and wealth would be possible only through abolishing the semifeudal relations of production in our villages. The Planning Commission outlined such measures as the removal of all intermediaries and the ceiling on landholding for reduction of inequalities of wealth and income in rural areas.

Another aspect of inequalities of income in India is the large disparities between rural and urban incomes which are bound to be accentuated over the years with industrialisation and economic growth. The Planning Commission has suggested measures to raise agricultural productivity, development of agro-based industries, fair price to farmers for their products, etc.

Even though reduction of income inequalities has always been mentioned as one of the objectives in all the plans, in terms of priority this objective invariably got a very low position. This could possibly be so because Nehru, the architect of Indian planning, did not believe that the problem of economic inequalities of income and wealth could ever be solved merely by redistribution. The Fourth Plan stated clearly : "In a rich country, greater equality could be achieved in by transfer of income through fiscal, price and other policies. No significant results to be achieved through such measures in a poor country.

Notes Socialism and democracy are the means for the creation of a society in India in which all have equal opportunities to education, health care, employment etc; and exploitation of one class by another is abolished.

2.3 Strategies and Evaluation of Planning

The basic objectives of our Five-Year Plans were development along socialist lines to secure rapid economic growth and expansion of employment, reduction of disparities in income and wealth, prevention of concentration of economic power and creation of values and attitudes of a free and equal society." In order achieve these objectives, the planners formulated a strategy of planned economic development.

Mahalanobis Model of Growth

It was only with the Second Plan that there was a clear enunciation of a strategy of development by Indian planners. Prof. P.C. Mahalanobis who was the real architect of the Second Plan, was responsible for introducing a clear strategy of development based on the Russian experience. This strategy emphasised investment in heavy industry to achieve industrialisation which was assumed to be the basic condition for rapid economic development. For Jawahar Lal Nehru, the first Prime Minister of India, the development of heavy industry was synonymous with industrialisation. He stated : "If we are to industrialise, it is of primary importance that we must have the heavy industries which build machines." Again, "there are some who argue that we must not go in for heavy industry but for lighter ones. Of course, we have to have light industries also but it is not possible to industrialise the nation rapidly without concentrating on the basic industries which produce industrial machines

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which are utlised in industrial development." Nehru was, thus, extremely forthright in pointing out that **industrialisation meant development of heavy industries.** The Plan frame of the Second Plan stated this, in unequivocal terms, as follows:

"In the long run, the rate of industrialisation and the growth of the national economy would depend upon the increasing production of coal, electricity, iron and steel, heavy machinery, heavy chemicals and heavy industries generally-which would increase the capacity tor capital formation. One important aim is to make India independent as quickly as possible of foreign imports of producer goods so that the accumulation of capital would not be hampered by difficulties in securing supplies of essential producer goods from other countries. The heavy industry must, therefore, be expanded with all possible speed."

Thus the core of the strategy adopted by Indian planners for the Second Plan and with minor modification for the subsequent three Plans (i.e. up to the Fifth Plan) - was rapid industrialisation through lumpy investment on heavy, basic and machine-building industries.

The Need for Rapid Industrialisation

The planners justified their strategy of rapid economic development through rapid industrialisation.

(a) At the time of Independence, India was essentially agrarian, though the country with its vast natural and human resources was ideally suited for industries. The planners felt that diversification of the use of resources would be in the interest of the country from the point of view of production, employment and defence. Resources should, therefore be applied more towards the development of industry rather than to agriculture.

(b) Indian agriculture was already, suffering from heavy population pressure on land and productivity of labour on land was quite low—it was even thought that marginal productivity of labour on land might be zero and even be negative. One method of reducing this pressure of population on land and to raise agricultural productivity was to reduce the percentage of people living on land, and to shift the surplus population to industries. The setting up and expansion of the industrial sector was thus a necessary condition for raising the national product in general and for agricultural development in particular.

(c) Rapid industrialisation was an essential condition for the development of not only agriculture but also for all other sectors in the country. For instance, with the expansion of industries and the shifting of labour from rural to urban areas, the demand for foodgrains and agricultural raw materials (such as cotton, jute, oil seeds, etc.) would increase. At the same time, increased production and supply of fertilisers, pesticides, agricultural machinery, etc. would help in the expansion of agricultural production. With rapid industrialisation, and with rapid expansion of markets, there would be expansion in trade and commerce, in transportation, in banking and finance, etc.

(d) Productivity of labour is much higher in manufacturing than in agriculture. The growth rates are much higher in industry than in agriculture. Rapid increase in national and per capita income would be possible only through rapid industrialisation.

(e) The income elasticity of demand for industrial goods was much higher and export opportunities for manufactured goods were also high.

It was for all these reasons that industrialisation was emphasised by the Indian planners.

Implications of Heavy Industry Strategy

The important implications of this strategy may be noted here.

Small scale industries and supply of consumer goods : The planners of the Nehru era were clear in their mind that the growth of heavy industries would be limited by the growth of consumer goods in the household sector. Naturally, they did not ignore or neglect the growth of small sector for instance, the Second Plan framework stated : "The greater the marketable surplus of consumer goods in the household or hand industries, the greater will be possibilities of investments in heavy industries with any fear of inflation."

For one thing, the growing population has fed and clothed; actually, the demand for constituted goods will increase with the growth of population. For another, increasing rate of investment on he industries with long gestation periods would responsible for increase in money supply with general

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public and in the absence of matching of supply of consumer goods will result in inflationary press. The Nehru-Mahalanobis model, gave and encouragement to cottage and small indudtries producing consumer goods. It was asserted that input-output ratio would be low in small-scale cottage industries and the gestation period was very short and obviously, the small sector was ideal suited to increase the supply of consumer go Besides, Professor Mahalanobis argued that the co-production in the cottage and small sector need not higher than that of the factory sector since the sector would also be making use of modern machines and electricity.

Nehru also gave due importance to small sector of industries and agriculture which were the sources consumer goods. In his own words, "The test; country's advance in industrialisation is heavy industry—not the small industries that may be put. That does not mean that small industries should ignored. They are highly important in themselves production and for employment." The framework the Second Five Year Plan stated : "The strategy requires all-out efforts for the maximum utilisation of capacity in existing industries and for the development of additional production in the capital light small sector of industries."

Place of Agriculture in the development strategy : On agriculture, Nehru stated : "We shall that this industrial progress cannot be achieved without agricultural advance and progress... Every knows that unless we are self-sufficent in agriculture we cannot have the wherewithal to advance industries. If we have to import food, then we doomed so far as progress is concerned. We can import both food and machinery."

It is thus clear that the Mahalanobis strategy self-sustained growth based on heavy industries not ignore or neglect the growth of small and cottage industries for increasing the supply of consumer good.

In spite of many favourable factors for increasing the supply of consumer goods, Professor Mahalanobis nobis did anticipate shortage in supply of consumer goods and possible rising prices and costs endangering the planning process. In his strategy of development, therefore, he provided for fiscal and physical controls including rationing to keep the prices in check.

Role of the Public Sector : The Mahalanobis investment strategy assigned a dominant role to the public sector. As investment in the heavy sector was very high and as the gestation period was too long and that too with low profitability, the Government felt that heavy industries should be, by and large, in the public sector. Except in isolated cases, the private sector too was not keen on providing infrastructural facilities. Besides, the control of the public sector would vest the control of the commanding heights with the Government and this would help the development of a socialist economy. Above all, the public sector would prevent the rise of monopoly ownership and exploitation which are inherent in the private sector. It was for these reasons that from the Second Plan onwards, the Government went in a big way for the expansion of the public sector.

The role of the private sector : While giving direct responsibility to the public sector for infrastructure investment and the development of heavy industry, the development strategy expected the private sector to develop and expand its activities in a large area of economic activity. In fact, the private sector was given an important place in the mixed economy of India. But the activities of the private sector were seen to be essentially complementary to a rapidly growing public sector. The private sector was also expected to function in harmony with the overall aims and policies of economic planning. The planners anticipated a growing trend towards concentration of economic power in the private sector and to counter this trend, the planners provided larger opportunities for new entrants for medium and small-sized units and also for extensive use of controls and regulations and also use of appropriate fiscal measures.

Role of foreign trade and foreign aid : Initially, the Planning Commission relied considerably on foreign aid to meet India's requirements of capital goods, as our foreign exchange earnings were inadequate. At the same time, the planners had to provide for foreign aid, since the rate of domestic savings was inadequate to match the planned higher rate of investment. They also emphasised that the creation of export surplus and export promotion should go hand in hand with rapid industrialisation. However, this aspect of the strategy was forgotten in practice even during the first decade of planning. The Third Plan clearly brought out this point : "One of the main drawbacks in the past has been that the programme for exports has not been regarded as an integral part of the country's development effort."

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Development Strategy and Employment Objective

The Mahalanobis strategy of planning was essentially to **achieve the objective of self-sustained long-term growth via investment in the heavy sector.** For "rapid industrialisation and diversification of the economy", the Mahalanobis strategy considered the development of "basic industries and industries which make machines to make machines needed for further development as the crucial element. This strategy naturally came in conflict with the employment objective of our plans. For, a fast and self-sustained economic growth could be ushered in only through emphasis on capital-intensive production, namely, "by building of economic and social overheads, exploration and development of minerals and promotion of basic industries like steel, machine building, coal and heavy electricals". To solve the conflict between rapid growth on the one side and immediate increase in employment opportunities on the other, Mahalanobis strategy adopted a "policy of encouraging labour-in-tensive techniques in consumer goods industries even as the capital-intensive sector of heavy industry was being expanded rapidly."

Strategy to Achieve Social Objectives : Use of Fiscal Policy

The Mahalanobis investment strategy broadly implied that increase in production would be accompanied by better and more equal distribution of income and wealth. Apart from this assumption, Indian planners relied on Fabian socialist strategy of using fiscal policy of taxation and public expenditure to achieve the two social objectives of planning, viz., the removal of inequalities of income and wealth on the one hand and the establishment of a socialist society based on equality and justice, on the other.

Fiscal policy aiming at the reduction of inequality of income and wealth had two aspects. Highly progressive income tax was to be imposed to lop off the high incomes beyond a certain level (marginal rate of income tax at one time was 97.25 per cent). Estate duty was to be highly progressive so as to remove a portion of large fortunes; other taxes falling exclusively on affluent sections of the community included wealth tax, capital gains tax and gift tax. While direct taxes attempted to transfer part of the income and wealth of the rich to the Government, public expenditure was specifically used to promote the welfare of the lower income groups and weaker sections of the community.

A fast and concerted development of education was to be an important means for ensuring greater equality of opportunity to different sections of the population. Public expenditure on public health and sanitation, housing, etc. was used to achieve "a measure of redistribution in the consumption of basic necessities such as health and medical care, sanitation, water supply and cheap housing. Tribals, Dalits and other backward classes were to receive favoured treatment under special programmes."

Apart from the use of fiscal policy, the planners did not adopt any measures for direct redistribution of property and wealth to achieve reduction of disparities of income and wealth and to prevent concentration of economic power. The only exception was the half-hearted attempts at land reforms and ceiling on land holdings in rural areas.

Appraisal of the Heavy Industries Development Strategy

The "heavy industries" investment strategy formulated during the Second Plan was the basis of the development of the Indian economy during the last five decades, except for the short period of two years or so — 1977-79 when the Janata Party attempted a shift in favour of small industry and consumer goods.

The heavy industries strategy was hailed during the Second and Third Plans but came in for considerable criticism later. It was commended for the smart rise in saving and investment rates in the country, for the impressive development of economic infrastructure specially in irrigation, energy, transport and communication, etc., considerable expansion in the capital goods sector via the dominant role of the public sector, self-sufficiency in consumer goods and in basic commodities, diversification and expansion of industrial capacity and impressive growth of science and technology. However, this development strategy was severely criticised for its inadequate emphasis on agriculture and small-scale and cottage industries, for the emergence of continuous trade deficits, for growing unemployment in the country and above all, for growing inequality of incomes and wealth on the one side and very slow reduction of poverty on the other.

Models of Economic Development : Nehru Vs. Gandhi

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Nehru-Mahalanobis model of development emerged as the driving force of the strategy of development adopted in the mid-fifties at the time of formulation of the Second Five Year Plan. This strategy has continued right upto the eighties with a short interregnum about 2-3 years when Janata Party was in power during 1977-80. Nehru-Mahalanobis model was based on long run development strategy which accorded greater preference to the long-term goals of development, rather than succumbing to the immediate and short-term goals. The strategy, therefore emphasised

(a) a high rate of saving so as to boost investment to a higher level,

(b) it preferred a heavy industry bias to development the industrial base of the economy,

(c) it opted for the protectionist path so as the safeguard infant industry,

(d) it encouraged import-substitution so as the achieve self-reliance, and

(e) it aimed at enlargement of opportunities forthless privileged sections of the society. Growth wave social justice was thus the goal of Nehru-Mahalanobis model since it intended to foster a self-generating path development with an assurance to the common man the poverty, unemployment, disease and ignorance would removed so that individuals could realise their potent with the extension of social and economic opportunities. Since it was the credo of the fifties that market mechanism could not bring about judicious allocation of the sources to meet the objective of growth with social justice, a much greater role was assigned to the State. The principal functions of the State in the economic sphere were the development of economic and social infrastructure. The economic infrastructure was concerned enlargement of irrigation, power, transport and communications so as to expand markets as also to remove constraints in the form of power on industrial development and irrigation for agricultural development. He increasing social infrastructure in the form of education and health, the State intended to develop skilled man power so that it could provide the necessary skills need for the functioning of the new industries. To channelite investment into socially desired lines of production, the State nationalised major banks. Thus, in the Nehru-Mahalanobis model the **State controlled the commanding heights of the economy through the public sections.**

The Gandhian Model of Growth

Acharya S.N. Agarwala brought out the 'Gandhian Plan' in 1944 and re-affirmed it in 1948. These publications form the basis of Gandhian planning or 'Gandhian model of growth. The basic objective of the Gandhian model is to raise the **material as well as the cultural level** of the Indian masses so as to provide a basic standard of life. It aims primarily at improving the economic conditions of the 5.5 lakh villages of India and therefore, it lays the greatest emphasis on the scientific development of agriculture and rapid growth of cottage and village industries.

Agriculture

The Gandhian model aims at the reform of agriculture as the most important sector in economic planning in India. The primary objective of agricultural development is national self-sufficiency in foodstuffs and maximum regional self-sufficiency in food. This has to be achieved not only by larger and better inputs but also through land reforms-change in the system of tenure, abolition of the proprietary rights on land, consolidation of holdings, organisation of co-operative farms, etc. Money-lending should be abolished, and there should be increased credit facilities for the farmers. The Gandhian model lays special emphasis on dairy farming as an occupation and as an auxilliary to agriculture.

Cottage and Village Industries

The primary aim of the Gandhian plan is the attainment of maximum self-sufficiency in village communities. Hence, the plan emphasises the rehabilitation, development and expansion of cottage industries side by side with agriculture. Spinning and weaving are given the first place. The manufacturing of khadi is important and it is almost on the same level as the production of rice and wheat. "Just as villagers cook their own roti (bread) and rice so must they make their own khadi for personal use. The surplus, if any they may sell." The Gandhian plan outlines a scheme for making

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every village self-sufficient in cloth. At the same time, the Gandhian plan wants the State to consider the revival and expansion of rural cottage industries as the main plank of its industrial planning.

Gandhi emphasized the conflict between village industries and capital-intensive pattern of industrialisation based on high degree of urbanisation. E. Haribabu of the Indian Institute of Technology (Kanpur) writes : "The twin compulsions of reconstructing the economy and achieving rapid economic development after Independence, prompted India's rulers to adopt a model of development based on the experience of the West : the implicit emphasis on capital-intensive industrialisation and urbanisation. Over a time a distinct bias became apparent towards urban settlements in general and big cities in particular". Explaining the role of rural areas in the process of industrial development of India in the post-Independence period, the late Annasaheb Sahasrabudhe wrote : "The rural areas were encouraged to start such industries which provide urban population with things like milk, vegetables, oil seeds, cotton and foodgrains and purchase from the urban areas items such as cloth, oil and other manufactures". The villagers have thus been turned into second class citizens to supply cheap raw materials and semifinished products to the urban organised sector. The principal element in this strategy is the transfer of all but most primitive jobs to the cities. In 1910, village industries constituted 40 per cent of the labour force. By 1946, this had decreased to 10 per cent. Today, they remain at two per cent." Claude Alvares, therefore, questions in a very incisive manner : "How long can we continue to assume the illusion that when the British destroyed local industries, that was wicked, but that when we do so, it is desirable."

Basic Industries

There is a general misconception about Gandhi being against the development of large-scale industries. Actually, **the Gandhian Plan recognises the need for and the importance of certain selected basic and key industries in India,** especially defence industries, hydro-electric and thermal power generation, mining and metallurgy, machinery and machine-tools, heavy engineering, and heavy chemicals. The Gandhian Plan would like the development of basic industries not to interfere with or to hinder the growth of cottage industries. The most dynamic scientific aspect of the Gandhian model is that the basic and key industries will be owned and managed by the State-they will be in the public sector. On this point there is no difference between Nehruvian and Gandhian models of growth.

Generally, people assume that Gandhi's emphasis on cottage industries and handicrafts is a clear indication of his opposition to modern machinery. This is wrong. Gandhi is not against all machinery, for the spinning-wheel itself is a piece of machinery. He protests, however, against the craze for machinery and its indiscriminate multiplication. He believes that the factory system using extensive machinery has become the source of exploitation of labour by a few capitalists. He welcomes machinery and modern amenities wherever they lighten the burden of the villagers without displacing human labour. **Machinery is good when it operates in the interests of all; it is evil when it serves the interests of the few.**

If we carefully analyse the Gandhian model, we will find that the aim is to develop agriculture and industries side by side and to integrate them. The handicrafts and cottage industries are emphasised from the point of view of production as well as that of employment. After Independence. Nehru dominated the Indian scene and Gandhi and his economic ideas were forgotten. During the short period of the Janata rule 1977-79 as well and as in the Draft Sixth some of these ideas were incorporated. In concernt terms the Gandhian model of growth calls for following changes in the present system of planner.

(a) Employment-oriented planning to repeat production-oriented planning : The basic prem here is that unemployment is our greatest enemy that in its solution lies the key to the problems poverty and inequality. It would, therefore, advisable to replace production-oriented planner with employment oriented planning. This work necessitate demarcation of areas of high employments potential which also ensures high and efficiency production.

(b) Agriculture and employment potential : Agriculture offers great scope for enlarging emplement in : (i) agriculture including animal husband compost-making, sanitation and gobar gas;

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(ii) new works such as irrigation projects, soil conservation land reclamation, afforestation etc. and (iii) rural cottage industries.

Under intensive cultivation-land can support much larger number of workers. According to an easy mate, in 1971, 39 workers were employed per land acres in India and as such India was classified as low-performance country but in Japan, South Korea, Taiwan and Egypt during 1965, the number of women employed per 100 acres was between 87 and. These countries are high-performance nations models of small farms and highly labour-intensive pattern. The experience of these countries shows home another 50 to 60 million people can be employed agriculture in India and at the same time increase total output. The employment potential in the newly-integated areas can be increased by 60 per cent provided there is only limited mechanisation i.e., the adoption of machines which supplement human effort and easy or lighten its burden rather than supplant it—"the Japanese style of farm machinery."

(c) **Large Vs. Small Industries :** The Gandhian model of growth is in favour of small-scale and cottage industries and it is against large scale industries producing consumer goods. Charan Singh, an arden supporter of the Gandhian model of economic growth states : "No medium or large-scale enterprise shall be allowed to come into existence in future which will produce goods or services that cottage or small-scale enterprises can produce and no small scale industries shall be allowed to be established which will production goods or services that cottage enterprise can produce."

(d) **Equitable distribution :** Growing concentration of economic power in the hands of a few and inequality of incomes are the two major economic ills of the Indian economy despite the profession of Socialism under Nehru model of economic growth. Accumulation of wealth and the concentration of economic power are directly due to centralisation of the means of production and centralised large-scale production. Gandhi has got probably the best and the most natural solution to the problem of distribution. The natural solution is decentralised small-scale production—this will cut at the very root of accumulation of wealth. And wherever large-scale production is inevitable (as in basic and key industries), it should be left to Government ownership and management. In the Gandhian model, the problem of distribution is tackled at the production end and not at the consumption end.

The Gandhian model of growth hopes to achieve a national minimum level of living within the shortest possible time and aims at removal of concentration of income and wealth and growth with stability.

Self-Assessment

2. Choose the correct option:

1. The communist regimes in USSR rised in
   (*a*) 1917 (*b*) 1914
   (*c*) 1939 (*d*) None of these
2. LPG model of Deployment was introduced in
   (*a*) 1990 (*b*) 1962
   (*c*) 1991 (*d*) None of these
3. Food Security Summit took place in
   (*a*) 2004 (*b*) 2000
   (*c*) 1997 (*d*) None of these
4. The End of Laissz Fair was written by
   (*a*) Kal Marx (*b*) Keynes
   (*c*) Engels (*d*) None of these

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2.4 Summary

- Mixed economy is the outcome of the compromise between the two diametrically opposite schools of thought—the one which champions the cause of **capitalism** and the other which strongly pleads for the socialisation of all the means of production and of the control of the entire economy by the state.
- India is regarded as a good example of a mixed economy. Under the Directive Principles of the India Constitution, it has been laid down that the State should strive "to promote the welfare of the people by securing and protecting as effectively as it may a social order which justice, social, economic and political, shall inform all the institutions of national life."
- A mixed economy is necessarily a planned economy. The public sector will have to be operated according to certain priorities and to achieve certain specified social and economic goals.
- The experiment of mixed economy in India has been carried on for over six decades now. Both Central and State Governments in India set up several public sector enterprises in many lines of production, trade and finance.
- Further, the private sector has been constantly and incessantly trying to evade and, in many ways, distort the planning process. The private sector has corrupted the bureaucracy and the politicians-in-power.
- The India National Congress, under the inspiration of Jawaharlal Nehru, set up the National Planning National Planning Committee (NPC) towards the end of 1938.
- The Directive Principles of our Constitution laid down : "The State shall, in particular, direct its policy towards securing - (a) that citizens, men and women equally, have the right to an adequate means of livelihood : (b) that the ownership and control of the resources of the community are so distributed as best to subserve the common good : (c) that the operation of the economic system does not result in the concentration of wealth and means of production to the common detriment."
- The First Five-Year Plan expressed clearly the long-term objectives of goals of economic planning in India as follows : "Maximum production and full employment, the attainment of economic equality or social justice which constitute the accepted objectives of planning under present day conditions are not really so many different ideas but a series of related aims which the country must work for.
- Unemployment and under-employment are important causes of poverty in India. Hence, from the very beginning, removal of unemployment and underemployment has been an important objective of economic planning in the country.
- In an unplanned society, various types of retrogressive forces operate, such as inequalities of income, poverty, absence of equal opportunities for progress, etc. India's economic plans made conscious effort to remove all these retrogressive forces and foster social as well as individual development.
- On paper, the long-term objectives of India planning appear to be perfectly sound and would achieving. While the first two are economic objective and relate to increase in income and employment, last two are social objectives and relate to the distribution of wealth and income and the establishment of an egalitarian society in the country. But these sets of objectives obviously conflict with each other. For instance, the objective of rapid economic grow based on heavy investment and development of cantal-intensive production could raise national income but was bound to lead to concentration of wealth income and accentuation of income disparities.
- The basic objectives of our Five-Year Plans were development along socialist lines to secure rapid economic growth and expansion of employment, reduction of disparities in income and wealth, prevention of concentration of economic power and creation of values and attitudes of a free and equal society." In order achieve these objectives, the planners formulated a strategy of planned economic development.
- Nehru-Mahalanobis model of development emerged as the driving force of the strategy of development adopted in the mid-fifties at the time of formulation of the Second Five Year Plan.

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- The LPG Model of development which was introduced in 1991 by the then Finance Minister Dr. Manmohan Singh with a big bang was intended to charter a new strategy with emphasis on liberalisation, privatisation and globalisation. (LPG) Several major changes at the domestic level were introduced.
- Dr. A.P.J. Abdul Kalam, ever since he became the President of India has been advocating his Vision 2020, and, to eradicate poverty from India, he has been emphasizing the adoption of PURA (Providing Urban Amenities in Rural Areas). In his address to the Food Security Summit on 5th February 2004, he outlined the concept and strategy of PURA as the lever of economic upliftment of the villages.
- The objective of PURA is to propel economic development without population transfers. To put in the words of late Prof. A.M. Khusro : Instead of moving human beings where infrastructure exists, it is better take infrastructure to villages where human beings live. The PURA concept is the response to the need for creating social and economic infrastructure which create a conducive climate for investment by the private sector to invest in rural areas.

2.5 Key-Words

1. Mixed economy : An economic system in which both the private enterprise and a degree of state monopoly (usually in public services, defense, infrastructure, and basic industries) coexist. All modern economies are mixed where the means of production are shared between the private and public sectors.
2. Distortion : A distortion is departure from the allocation of economic resources from the state in which each agent maximizes her own welfare. A proportional wage-income tax, for instance, is distortionary, whereas a lump-sum tax is not. In a competitive equilibrium, a proportional wage income tax discourages work.

2.6 Review Questions

1. What are the objectives of economic planning? Discuss
2. Explain the strategies and evaluation of planning.
3. India as a mixed economy? Explain.
4. What is meant by democratic socialism in India? Explain.

Answers: Self-Assessment

1. (*i*) (*a*) (*ii*) (*c*) (*iii*) (*a*) (*iv*) (*b*)

2.7 Further Readings

Books

1. Indian Economy ; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055.
2. The Indian Economy ; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001.

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Unit 3: Eleventh Five Year Plan

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Objectives

After reading this Unit students will be able to:

- Discuss the objectives of the Eleventh Five Year Plan.
- Understand the Micro-Economic Dimensions of the Eleventh Plan.
- Know the Financing the Eleventh Five Year Plan.

Introduction

The National Development Council in December 2006 approved the Approach to the 11th Plan document titled "*Towards faster and more Inclusive growth*" and directed the Planning Commission to prepare a detailed plan to assess the resources required to meet the broad objective set forth in the Approach Paper. The detailed version of the Eleventh Five Year Plan (2007-12) was approved by the National Development Council in December 2007.

3.1 Eleventh Five Year Plan

Outlining its vision, the Eleventh Plan noted that 'the economy accelerated in the Tenth Plan period (2002-03 to 2006-07) to a record average of growth of 7.6 percent – the highest in any Plan period so far.' It emphasized the fact that during the last 4 years of the Tenth Plan, average GDP growth was 8.6% making India one of the fastest growing economies in the world. The saving and investment rates have also increased. The industrial sector has responded well to face competition in the global economy. Foreign investors are keen to invest in the Indian economy.

But "a major weakness in the economy is that growth is not perceived as being sufficiently inclusive for many groups, especially SCs, STs and minorities... The lack of inclusiveness is borne out by data on several dimensions of performance."

1. "The percentage of population below the official poverty line has come down from 36% in 1993-94 to 28% in 2004-05. However, not only this is high, the rate of decline in poverty has not accelerated with GDP growth and the incidence of poverty among certain marginalized groups, e.g. the Scheduled Tribes, has hardly declined at all. Because the population has grown, the *absolute* number of poor people has declined only marginally form 320 million in 1993-94 to 302 million in 2004-05. *This performance is all the more disappointing since the poverty line on which the estimate of the poor is based is the same as in 1973-74, when per capita incomes were much lower.* " (emphasis added)

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2. Indicators of deprivation suggest that the proportion of population deprived of a minimum level of living is much higher. This is indicated by the following:
   (a) According to National Family Health Survey, 46% of the children in the 0-3 age group suffered from malnutrition in 2005-06, but the more disturbing fact is that there is no decline from the level of 47% reported in 1998.
   (b) Human Development indicators like literacy, maternal and infant morality rates also show that the progress is slow and India lags behind several other countries in Asia. While literacy rate has gone up to 64.8% in 2001, the number of illiterates still exceeds 304 million, making India the country with the largest number of illiterates. Life expectancy during 2001-06 is 63.9 years for males and 66.9 years for females, is still below 72 years for China. Adverse sex ratio with only 933 women for 1,000 men is another cause for concern. More disturbingly, the child sex ratio (ages 0-6) has declined sharply from 962 in 1981 to 927 in 2001. Infant mortality rates are higher than those of countries in East Asia.
3. Agriculture growth continues to be sluggish and was of the order of 2.1 percent during the 10th Plan, despite a target of 4% growth.
4. Current daily status unemployment rate increased from 7.3% in 1999-00 to 8.3% in 2004-05, despite the higher GDP growth of 7.6% during the 10th Plan. Moreover, the entire increase in employment has taken place in the unorganized sector. A very disturbing feature of the employment situation is : "Permanent employment in the organized sector has decreased, although organized sector firms may be increasing their informal employment." This indicates deterioration in the quality of employment.

3.2 Objectives of the Eleventh Plan

The Plan envisages a high growth of GDP of the order of 9 percent for the country as whole. This implies that per capita GDP would grow at about 7.5% per year to double in 10 years.

However, the Plan document hastens to add that the target is not just faster growth but also inclusive growth which ensures broad based improvement in the quality of life of the people, especially the poor SCs/STs, OBCs and the minorities.

Vision for the Eleventh Plan

The broad vision of the 11th Plan includes several inter-related components:

1. Rapid growth that reduces poverty and creates employment opportunities;
2. Access to essential services in health and education especially for the poor;
3. Empowerment through education and skill development;
4. Extension of employment opportunities using National Rural Employment Guarantee Programme;
5. Environmental sustainability;
6. Reduction of gender inequality; and
7. Improvement of governance.

3.3 Financing the Eleventh Plan

Table 1 provides us an idea of the Tenth Plan Realizations and the Eleventh Plan projections of financing. During the Tenth Plan, for the public sector total realizations of ₹ 16,53,865 crores, 73.9 percent were obtained from market borrowings and 34.9 percent were contributed by public sector undertakings. However, balance from current revenues (both Centre and States) were negative to the tune of 9.6 percent of total plan resources.

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Table 1 : Eleventh Plan Projection of Resources

₹ Crores

	Tenth Plan Realizations			Eleventh Plan Projection		
	Centre	State	Total	Centre	State	Total
1. Balance from current Revenues	-1,27,166 (-13.5)	-31,722 (-4.5)	-1,58,888 (-9.6)	6,53,989 (30.3)	3,85,050 (25.9)	10,39,039 (28.5)
2. Borrowings including MC ₹	8,50,382 (89.9)	3,71,779 (52.5)	12,22,161 (73.9)	7,67,722 (35.6)	6,49,423 (43.6)	14,17,145 (38.9)
3. Net inflow from abroad	16,121 (1.7)	—	16,121 (1.0)	—	—	—
4. Gross Budgetary Support (1+2+3)	73,937 (78.2)	3,40,057 (48.0)	10,79,394 (65.3)	14,21,711 (65.9)	10,34,473 (69.5)	24,56,184 (67.4)
5. Central Assistance to States & UTs.	-2.52,539 (-26.7)	+2,48,677 (35.2)	-3,862 (-0.2)	-3,24,851 (-15.1)	+3,24,851 (21.8)	-
6. Net budgetary support (4 + 5)	4,86,798 (51.5)	5,88,734 (83.2)	10,75,532 (65.1)	10,96,860 (50.8)	13,59,324 (91.3)	24,56,184 (67.4)
7. Resources of Public sector undertakings	4,58,530 (48.5)	1,19,003 (16.8)	5,77,533 (34.9)	10,59,710 (49.2)	1,28,824 (8.7)	11,88,534 (32.6)
8. Total Resources for Public Sector (6 + 7)	9,45,328 (100.0)	7,07,737 (100.0)	16,53,865 (100.0)	21,56,571 (100.0)	14,88,147 doo.6)	36,44,718 (100.0)

As against this picture of Tenth Plan realizations, the Eleventh Plan hopes to generate ₹ 10,39,039 crores – 28.5 of the resources from balance from current revenues. The Planning Commission states : "This outcome is the consequence of tighter fiscal discipline imposed by fiscal responsibility framework, both at the Centre and the States and an optimistic revenue outlook driven by buoyancies in revenue collections during the last three years of the Tenth Plan reflects the robust performance of the economy." The planners are conscious of the fact that this optimism may not be realized because there are certain uncertainties associated with the impact of Sixth Pay Commission recommendations. Equally important is the upward pressure on subsidies, particularly fertilizer and petroleum subsidies. The hike in the international price of petroleum above $115 per barrel is already pushing the petroleum subsidy very sharply. Similarly, fertilizer subsidies are also increasing. There is an urgent need to undertake reform of the subsidies. However, the Central Government is not taking a courageous step to control them, fearing backlash in the impending General Election due in 2009. This may upset the optimistic calculations of the Planning Commission which will force the planners either to cut the size of the Plan or take greater resort to market borrowing.

Resources of surplus from public sector undertakings are continuing their forward march and all likely to finance 32.6% - or nearly one-third of the total public sector plan. But subsidies provided to petroleum products may reduce resources generation by public sector oil companies – a major source of resource generation. Actual realization from PSUs will be affected by two factors : (a) international price of oil, and (b) the policy of the Central government on petroleum subsidies. If the realization from PSUs decline in the Eleventh Plan, the country may witness a higher dose of market borrowing to finance the Plan.

It is, therefore, difficult to agree with the rosy picture presented by the Planning Commission about the financial pattern of the Eleventh Plan. A similar optimistic outlook was presented at the time of the formulation of the Tenth Plan, but its financial pattern went haywire. In the absence of bold policies in view of the problems of coalition government, actual realizations in the Eleventh Plan may vary sharply from projected figures on various components.

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Employment Perspective in the Eleventh Plan

Eleventh Plan rightly states : "Generation of productive and gainful employment, with decent working conditions, on a sufficient scale to absorb our growing labour force form a critical element in the strategy for achieving inclusive growth."

Weaknesses of Past Experience

"The basic weakness in our employment performance is the failure of the Indian economy to create a sufficient volume of additional high quality employment to absorb new entrants into the labour force while also facilitating the absorption of surplus labour that currently exists in the agricultural sector into higher wage non-agricultural employment."

The following major weaknesses were noticed in the Eleventh Plan :

- The rate of unemployment has increased from 6.1% in 1993-94 to 7.3% in 1999-00 and further to 8.3% in 2004-05.
- Unemployment among agricultural labour house-holds has risen from 9.5% in 1993-94 to 15.3% in 2004-05.
- While non-agricultural employment expanded a robust rate of 4.7% during the period 1999-00 to 2004-05, this growth was largely in the unorganized sector.
- Despite fairly healthy GDP growth, employment in the organized sector actually declined, leading to frustration among the educated youth.
- Although real wages of casual labour in agriculture continue to rise during 2000-2005, growth has decelerated strongly as compared to 1994-2000 which reflects poor performance in agriculture.
- Growth of real wage rates in non-agricultural employment during 1999-00 to 2004-05 has been negligible.
- Real wages stagnated or declined even for workers in the organized industry although managerial and technical staff did secure large increase.
- Wage share in the organized sector has halved after 1980s and is now among the lowest in the world.

During the Tenth Plan, as against a target of 50 million employment opportunities, 47 million employment opportunities were created which indicates that the employment target was more or less achieved. More over, employment growth rate improved from 1.25% during 1993-94 to 1999-00 to 2.62% during 1999-00 to 2004-05. The annual increase in employment rose form 4 million per annum to 9.3 million per annum during 1999-00 to 2004-05.

Table 2 : Employment scenario during 1993-94 to 2004-05

Current daily status

	All India	1993-94	1999-00	2004-05	Growth rate during 1993-94 to 1999-00	Growth rate during 1999-00 to 2004-05
		(Million Persons)				
1.	Population	893.4	1005.0	1092.8	1.98	1.69
2.	Labour	334.2	364.9	419.6	1.47	2.84
3.	Workforce	313.9	338.2	384.9	1.25	2.62
4.	No. of employed (2-3)	20.3	26.7	34.7	4.69	5.40
5.	**Unemployment rate (%) (4/2*100)**	**6.1**	**7.3**	**8.3**		

Notes

Table 3 : Sector wise share of employment by current daily status

		1993-94	1999-00	2004-05
(1)	**Agriculture**	**61.0**	**56.6**	**52.1**
	(a) Mining & Quarrying	0.8	0.7	0.6
	(b) Manufacturing	11.1	12.1	12.9
	(c) Electricity, water etc.	0.4	0.3	0.4
	(d) Construction	3.6	4.5	5.6
(2)	**Industry (a+b+c+d)**	**15.9**	**17.6**	**19.5**
	(e) Trade, hotel & Restaurant	8.3	11.2	12.6
	(f) Transport, storage & Comm.	3.2	4.1	4.6
	(g) Finance, insurance, real estate & business services	1.1	1.4	2.0
	(h) Community, social & personal services	10.5	9.1	9.2
(3)	**Services (e+f+g+h)**	**23.1**	**25.8**	**28.4**
	Total	**100.0**	**100.0**	**100.0**

Source : Compiled from Planning Commission (2007), *Eleventh Five Year Plan*", Vol. 1., p.71

Share of Employment in different sectors reveals the share agricultural employment declined from 61.0% in 1993-94 to 52.1% in 2004. The share of industry improved from 15.9% in 1993-94 to 19.5% in 2004-05. Services indicated the sharpest increase from 23.1% in 1993-94 to 28.4% in 2004-05.

Employment Projections for the Eleventh and Twelfth Plans

The Approach Paper of the Eleventh Plan had projected an addition to labour force of 52 million in the Plan period. However, the projections of labour force growth have been revised in view of the latest population projections made by the National Commission on Population and work done by the Eleventh Plan Working Group on Labour Force and Employment Projections. The projected increase in labour force during the Eleventh Plan is now estimated as 45 million.

Since the backlog of unemployed in 2006-07 were reckoned as 36.7 million, the total requirement of employment opportunities works out to be about 82 million.

With the generation of additional employment opportunities of the order of 58 million in the Eleventh Plan, the backlog of unemployed at the end of the

Table 4 : Population, Labour Force and Employment Projection

Million

		2004-05	2006-07	2011-12	2016-17
(a)	Population	1,092.8	1,128.1	1,208.0	1,283.2
(b)	Labour Force	419.6	438.9	483.6	524.0
(c)	Employment opportunities	384.9	402.2	460.3	518.2
(d)	Unemployed	34.7	36.7	23.3	5.8
(e)	**Unemployment Rate (%)**	**8.28**	**8.36**	**4.83**	**1.12**

Source : Planning Commission (2007), *Eleventh Five Year Plan*, Vol.1., p.71

Notes

Table 5 : Projected Growth of Population, Labour Force and Employment

	2004-05 to 2006-07	2006-07 to 2011-12	2011-12 to 2016-17
Growth rate in population	1.43	1.37	1.22
Growth rate in labour force	2.02	1.96	1.62
Growth rate in employment	1.98	2.73	2.42
Additions to labour force (million)	19.3	44.7	40.4
Additions to employment opp. (million)	17.3	58.1	57.9
Average additions to employment per year (million)	8.6	11.6	11.6

Eleventh Plan will be of the order of 23-24 million. Consequently, the rate of unemployment will decline from 8.36% in 2006-07 to 4.83% in 2011-12. Similarly, another 58 million employment opportunities will be created in the Twelfth Plan and as a consequence, the backlog unemployed will get further reduced to merely 6 million. The rate of unemployment will fall still further to 1.12% in 2016-17. If the projections and the actual realizations are achieved as per schedule, India will attain a state of full employment by 2016-17. But the Planning Commission is itself not sure of its labour force projections and employment generation capacity of the economy. To safeguard itself, it mentions :

"There are important qualifications to these projections which must be kept in mind, arising from the limitation of employment elasticity as a projection tool. The concept of employment elasticity is at best a mechanical device to project employment on the basis of projected growth of output and past relationships between employment and output. These relationships can change as a result of changing technology and change in real wages. The labour force participation rate is also subject to changes especially because of possible changes in female participation rates in urban areas associated with advances in women's education. For all these reasons, the projected decrease in unemployment rate must be treated with caution."

Table 6 presents data about additional employment opportunities created in agriculture during the Tenth Plan, the Eleventh Plan contemplates zero additional employment. To assume zero employment elasticity in agriculture when the rate of GDP growth in agriculture is sought to be stepped up from 2% to 4%, is to say the least, preposterous. This is more so when the Eleventh Plan itself recommends encouragement to employment generating sectors in the economy. If 8.84 million employment opportunities could be generated in the Tenth Plan in agriculture, it pass one's comprehension why the same order of employment opportunities, if not more, be generated during the Eleventh Plan, more so when its growth rate is to be doubled. Agriculturally backward states like Bihar, Orissa, Chhattisgarh. Rajasthan and Uttar Pradesh can certainly create more employment opportunities via extension of irrigation and watershed development. If the target of additional employment in agriculture had been kept at the same level as in the Tenth Plan i.e. 8.8 million, the employment generation in the Eleventh Plan would have reached the level contemplated by the Approach Paper (65 million). It appears that the Planning Commission intends to develop agriculture via contract farming and treating the corporate sector as the main source of agricultural growth. If that is so, it goes against the philosophy of inclusive growth.

It would be worthwhile to compare this optimism moderated with a certain degree of caution along with the observations made in the Approach to the Eleventh Five Year Plan (December 2006) : "On the supply side, the labour force will increase by about 52 million during the 11th Plan if it grows at the same rate as current projections of working age population. The increase could be much higher, around 65 million if female participation rises at the pace observed during 1999-2005. Since the increase will be over and above the present backlog of 35 million unemployed on a typical day. and since inclusiveness requires a shift from agriculture to non-agriculture, we must plan for at least 65 million additional non-agricultural opportunities in the 11th Plan."

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The basic message of the Approach Paper was that total employment requirement would be 100 million in the 11th Plan (65 million new entrants plus 35 million backlog). In case, 65 million new employment opportunities are created during the 11th Plan, then the same backlog of unemployment (35 million) will be left at the end of the 11th Plan.

Table 6 : Sectorwise Generation of Additional Employment

Additional Employment (Million)

	Tenth Plan Achievement (2000-05)	Projected for Eleventh Plan (2007-12)
Agriculture	8.84	0.00
Mining and Quarrying	0.17	0.00
Manufacturing	8.64	11.94
Electricity, water etc.	0.18	0.02
Construction	6.44	11.92
Trade, Hotels & restaurant	10.70	17.40
Transport, storage & communication	4.04	9.02
Finance, insurance, real estate & business services	3.12	3.43
Community, social & personal services	4.59	4.34
Total	**46.71**	**58.07**

Source : Planning Commission (2007), *Eleventh Five Year Plan (2007-2012)*

The Planning Commission has now reduced the estimate of new entrants to the labour force from 65 million to 45 million — a drastic reduction by 20 million in the estimate of the labour force. Even when the Planning Commission has now estimated the target of additional employment to a lower level of 58 million opportunities, it has been able to bring the backlog of unemployed at the end of the 11th Plan to 23-24 million and bring about a reduction in the rate of unemployment from 8.36% in 2006-07 to 4.83% in 2011-12. What else is this but statistically jugglery!

Another issue which has evaded the Planning Commission is : What strategy should be adopted to increase the wage share in organized sector when it has itself admitted that "it has halved after the 1980's and is now among the lowest in the world." Similarly real wages stagnated or declined even for workers in organized industry, although managerial and technical staff did secure large increase. Since inclusive growth implies that the growth process should benefit the low paid workers and provide decent work, what we observe is that growth process in industry and even in services, is helping only managerial and technical staff securing large increase in their emoluments, but the workers are left high and dry. The Planning Commission has elaborated the social security measures being introduced by the Government, but they help only marginally on account of the large labour force in the country.

Did u know? The major sources of employment generation in the Eleventh Plan are trade, hotels and restaurants (17.4 million), manufacturing (11.94 million), construction (11.92 million) and transport, storage and communications (9 million).

The fact of the matter is that profits of enterprises in the organized sector are rising fast, and wage share is declining. The Planning Commission has not applied its mind to generate a process by which wage share in organized sector should improve. Failure to do this will mean 'growth for the few' or

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'exclusive growth' and not 'inclusive growth' which is the central theme of the Eleventh Plan. Since the entire additional employment is to be generated by the unorganized sector, then to treat the corporate sector as the engine of growth is meaningless. The country should concentrate its attention towards the unorganized sector as suggested by the National Commission for Enterprises in the Unorganized Sector (2007) headed by Dr. Arjun Sengupta.

Moreover, the Planners themselves admit, "Permanent employment has decreased, although organized sector firms may be increasing their informal employment." The fact of the matter is that even without any change in chapter VB of the Industrial Disputes Act, organized sector firms have succeeded in increasing the share of informal employment to about 23 percent, which is a tacit admission of the fact that the labour laws are observed more in their breach than in compliance, but the Planning Commission is not tired of in recommending amendment of labour laws to enlarge and improve employment. But as facts stare us in face, in a labour surplus economy, the tendency to employ contract labour or casual employment is intended to enhance profits at the cost of cutting wage share in value added. This is what has happened during the last decade. Inclusive growth requires an improvement in the share of permanent jobs in the economy and increase in wage share, but what we witness and what is proposed to strengthened, is precisely the opposite.

Notes In 2004-05, the proportion of the poor was 27.5% - 28.3% for rural areas and 25.7% for urban areas.

3.5 Critique of the Eleventh Plan

The 11th Plan visualizes "Faster and more inclusive growth" as its objective. This, by itself is a welcome development that after a period of a decade and half of reforms initiated in 1991, it is being realized that the reform process has widened disparities between the rich and the poor, it has slowed down reduction of poverty to a modest figure of 0.74 percent for a period 1993-94 and 2004-05, it has resulted in a rise of unemployment from about 6 percent in 1993-94 to 7.32 percent in 1999-00 and further to 8.3 percent in 2004-05. Besides, it has sharpened the rural-urban divide as well as the regional divide between the fast growing forward states and slow growing backward states. The iniquitous growth that the reform process had generated was shaking he political foundation of the Indian society and there was a need for a course correction. Failure to do this would pose a serious threat to the UPA Government which rode to power on the plank of helping Aam Admi (Common Man).

The question arises : Does the Eleventh Plan really address the concerns which it has chosen to redress ?

Eleventh Plan has fixed a target of pushing up overall GDP growth to an average rate of 9.0 percent, this will be achieved by boosting growth of agriculture to about 4 percent after a disappointing growth of 2.1 percent during the 10th Plan, and by pushing up growth of industry to 10-11 percent and services to 9-11 percent. It would be good to recall that industry indicated a growth rate of 8.3 percent and services to 9.0 percent during the 10th Plan. Obviously, in industry and services, the 11th Plan intends to improve growth rates only marginally, it is only by doubling growth rate in agriculture that its target of 9 percent growth is likely to be achieved. This implies that the success of the 11th Plan will be determined by the success in achieving growth target in agriculture, moreso, when agriculture still continues to provide livelihood to 58 percent of our population. To that extent, the strategy indicates that the concept of 'inclusive growth' is a part of Eleventh Plan framework.

Reduction of Poverty - The Basic Issue

But inclusive growth would become a reality only if there is a rapid decline in poverty coupled with rapid reduction of unemployment in the 11th Plan.

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On the question of setting a target of poverty reduction, the Eleventh Plan mentions : "The Plan document has admitted that the percentage of poverty in 2004-05 is about 28 percent and thus, the 11th Plan intends to reduce it by 10 percentage points by 2017. This would imply a rate of reduction of poverty by about 1 percent during 2004-05 and 2016-17. This is even less than the decline in poverty observed during 1973-74 and 1986-87 when the average growth rate of GDP ranged around 5 percent."

There is another problem raised by Mohan Guruswamy et. al. about the definition of poverty line. "While the definition of hunger in terms of calories can remain constant, the definition of poverty is relative to the present levels of general prosperity...the present official poverty line is based only on calories and hence accounts for little else but the satiation of one's hunger.

It would have been more accurate to define this as a starvation line, as that is exactly what it is." (Emphasis added). The Planning Commission, thus, intends to reduce starvation line up by 10 percent by 2017. For providing a basic minimum, poverty line needs to be redefined in terms of basic needs approach. While India is aiming to become a super-economic power by 2020. it will only reduce starvation by the date. In the light of this. India should adopt the International Poverty Line of $2 per day as the basis of determining the percentage of people in poverty. As per the Human Development Report (2007/2008), on the basis of $1 per day, for the year 1999-00, people below the poverty line in India were of the order of 34.3% and if we use the norm of $2 per day, then 80 percent of the Indian population was below the poverty line. The present poverty line on the basis of calories does not even meet the rock bottom standard of poverty set at $1 per day, not to speak of reaching the standard of $2 per day basis on basic needs approach. The Planning Commission should, therefore, upgrade the poverty line to reach international standards as it intends to do in other sectors of manufacturing, services and yield of output in agriculture. It should not seek a false sense of satisfaction that it has been able to effectively reduce poverty. It is heartening to note that the Planning Commission has appointed an expert group to revise the poverty line.

Reduction of Unemployment

The Planning by reducing the estimate of new entrants to the labour force to 45 million instead of 65 million as indicated by the Approach paper and with a backlog of 35 million unemployed has reduced the total requirement of employment opportunities to 80 million. By providing the target of 58 million employment opportunities, the rate of unemployment has been reduced from 8.36% in 2006-07 to 4.83% in 2011-12. The Planning Commission is itself not sure of the projection of 45 million new entrants and to save itself from criticism, it has stated a number of qualifications. The whole approach to reduce the rate of unemployment so sharply in a span of 5 years is nothing but statistical jugglery.

Issue of Labour Flexibility

Shorn of its frills to pay homage to inclusive growth, the 11th Plan is a new avatar of the Report of the Task Force on Employment Opportunities headed by Dr. Ahluwalia in 2001. It mentions."It must be emphasized that labour flexibility does not mean"hire and fire". There are many aspects of labour laws where greater flexibility is neededand would be in the interest of labour as a whole in the sense that it would actually generate large volumes of employment in the organized sector by encouraging employers to expand employment. This flexibility is especially needed if we want to exploit the enormous opportunities offered by export markets...we should evolve a consensus on the scope of reforming key labour laws including especially the industrial Disputes Act and the Contract Labour (Regularization and abolition) Act." The statement very admirably clothes the hidden agenda of the Planning Commission. This is due to the developments taking place in the organized sector in recent years. The Textile Minister wants (i) raising of working hours from 48 to 60 per week, (ii) allowing women to work in night shifts, (iii) permitting contract labour, (iv) easy exit norms and (v) treating export industry as a public utility for the purpose of Industrial Disputes Act. To add to it. Commerce and Industry Minister wants Special Economic Zones to be exempted from labour laws. Obviously, the direction in which the UPA government intends to push labour laws is amply clear, however, it may camouflage its policy in the 11th Plan by soft words.

The Planning Commission has set the goal of inclusive growth. It notes the fact that despite sharp increase in productivity, real wages of labour have declined. ILO report on Labour and social Trends

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in Asia and the Pacific (2006) brings out the hard reality that between 1990 and 2002. there was a decline in real wages in manufacturing in India by 22 percent, despite an increase in manufacturing labour productivity of over 84 percent over the same period. Obviously, this implies that the fruits of economic reforms are pocketed by the corporate sector, while labour is denied its due. Ironically, the salaries of managerial and technical personnel have been increasing at the rate of 15% per annum. The Planning Commission's 'inclusive growth' fails to provide any strategy for improving the share of labour in the surplus generated by faster growth. Critics have serious doubts about the sincerity with which the equity objective is sought to be achieved by the 11th Plan. The determination of wages by market forces and taking away even the modicum of protection by labour laws will give the organized sector business magnates unbridled power to freely exploit and pauperize labour.

Self-Assessment

1. Choose the correct option:

(*i*) The eleventh five year plan was approved in

(*a*) 2007 (*b*) 2002 (*c*) 2006 (*d*) 2001

(*ii*) The percentage of population below the official poverty line has come down from 36% to

(*a*) 40% (*b*) 20% (*c*) 28% (*d*) none of these

(*iii*) During the Tenth Plan, All India GDP growth average was

(*a*) 5% (*b*) 6% (*c*) 7.6% (*d*) None of these

(*iv*) The planning commission's target of creating ------million jobs during the eleventh plan.

(*a*) 30 (*b*) 40 (*c*) 50 (*d*) 58

3.6 Summary

- The Eleventh Plan has set the correct goal in the form of moving 'Towards Faster and More Inclusive Growth' but it intends to chart out a course which is basically anti-labour and pro-corporate sector. This is precisely in conflict with the goal of providing secure income and employment for 'aam admi' (common man).
- The best way to achieve this is to promote small and medium enterprises (SMEs) and small peasant agriculture. But there is no clear policy of promoting SMEs.
- It sidetracks the issue of small peasant agriculture and pleads for contract farming which is capital-intensive and not labour intensive. The recommendations of the National Commission on Farmers (NCF) headed by eminent agricultural scientist Dr. M S Swaminathan regarding the setting up a fund for farmers affected by crop losses on the lines of national calamity fund, reducing interest on farm loans to 4% and not charging compound rate of interest and imposing quantitative restrictions on import of agricultural products, have not been included in the Eleventh Plan.
- The Planning Commission's target of creating 58 million jobs during the Eleventh Plan is inadequate and it would have been much better if the Commission had adhered to the target of 65 million jobs as suggested by the Approach Paper.
- The removal of poverty requires targeted attention to the poor. The Planning Commission has given a long catalogue of schemes such as National Rural Employment Guarantee Scheme, Swaran Jayanti Rozgar Yojana (SJRY), slum improvement programme, housing for the poor and skill development programmes etc. The effectivity of implementation will indicate the extent to which the targeted beneficiaries are helped.
- The Planning commission is silent on some issues like food security, strengthening price support systems, creation of price stabilization fund for agricultural commodities, universalizing crop insurance, protection to peasantry from subsidized imports of agricultural commodities and land reform.

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- Eleventh Plan is a very ambitious plan which seeks 125 percent increase over resources over the Tenth Plan. Its initiative in providing over 30 percent resources to improve the quality of social services deserves a word of appreciation. The country may able to reach the target of 9% GDP growth. However, its success will be judged by the extent to which, it is able to convert the growth process into pro-poor growth and reduce the urban-rural divide and the rich-poor divide.

3.7 Key-Words

1. Sidetracks : To divert from a main issue or course
2. Deficit : An excess of expenditure or liabilities over income or assets in a given period.
3. Surplus : An amount of something left over when requirements have been met; an excess of production or supply over demand.

3.8 Review Questions

1. Write a short note on the Eleventh five year plan.
2. What are the objectives of the Eleventh plan?
3. Discuss the macro economic dimensions of the eleventh plan.
4. Briefly explain the sectoral allocation of resources.

Answers: Self-Assessment

1. (*i*) (*a*) (*ii*) (*c*) (*iii*) (*c*) (*iv*) (*d*)

3.9 Further Readings

Books

1. The Indian Economy; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001.
2. Indian Economy; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055.

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Unit 4: Economic Reforms in India Since 1991

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Objectives

After reading this Unit students will be able to:

- Discuss the Economic Reforms in India Since 1991.

Introduction

It is now about 15 years when the reform process was initiated in 1991. There is near unanimity among political parties regarding the implementation of economic reforms. The two major political parties-Congress and the BJP have a common agenda of economic reforms. Even the left political parties - CPI, CPI (M) and Janata Dal (United) are not opposed to economic reforms. However, they stress that the interests of labour and the common man should not be ignored and the reform process should not follow the dictates of capitalist lobbies. Similarly, regional parties have also been wooing foreign capital to undertake investments in their states. Thus, every political party is keen on accelerating the pace of economic reforms to acquire higher GDP growth, enlarge investment in infrastructure, and persuade Indian big business and multinationals to promote investments. It is believed that the levels of living of the people cannot be improved unless the growth process is accelerated and the country achieves a sustained growth of GDP of 7-8% for over a decade or two in future.

4.1 Economic Reforms in India Since 1991

There is near unanimity among major political parties on the implementation of economic reforms. The agenda of the two major political parties viz., the Congress and the Bhartiya Janata Party have shown a very large consensus about economic reforms. Janata Dal, CPI, CPI(M), though indicated some shades of difference, have also accepted the reform package. Some of the regional parties like DMK. AIDMK. Samata Party, Samajwadi Party, the Rashtriya Janata Dal also woo foreign capital to undertake investments in their respective states. In nutshell, it may be pointed out that a consensus has been achieved in the country to introduce and implement economic reforms so as to accelerate the process of development.

Did u know? Economic Reforms in India were introduced in 1991 by the Congress government led by Mr. P. V. Narasimha Rao.

The reforms process has completed 17 years and this cannot be considered as too short a period to assess the impact of economic reforms. It would, therefore, be proper to undertake an appraisal of the

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achievements and shortcomings of economic reforms to understand as to whether the country is moving in the right direction, or alternatively, there is a need to reform the reform process undertaken during the nineties.

Before undertaking an appraisal of the economic reforms, it would be desirable to state the goals of the process of economic development. The reforms process while accelerating economic development should lead thus to the following ends :

(i) A higher rate of growth;

(ii) an enlargement of employment potential leading to full employment;

(iii) reduction of population living below the poverty line;

(iv) promotion of equity leading to a better deal for the poor and less well-off sections of our society; and

(v) reduction of regional disparities between the rich and the poor states of India.

It would be of interest to examine economic reforms in terms of goals of the society listed above.

1. GDP Growth and Poverty reduction

There is no doubt that economic reforms have been able to promote a relatively higher growth. After the teething troubles of the first two years viz., 1991-92 and 1992-93, the growth rate during 1993-94 to 1997-98 has averaged to more than 7 per cent per annum. After 1991 -92, the momentum of growth has been maintained providing increasing evidence that the growth potential has improved as a result of the reforms initiated in 1991.

If we compare the annual average growth rate during the pre-reform period (1980-81 to 1990-91) which was of the order of 5.2 per cent per annum, then the post-reform decade (1990-91 to 2000-01) also shows a little higher average annual growth rate of 5.8 per cent of real GDP. However, there is a distinct improvement in growth rate of GDP during the 5-year period (2000-01 to 2003-04) to an average of 6.0 per cent and further to 8.7 percent in next 5-years from 2004-05 to 2009-10.

(a) Economic Reforms and Reduction of Poverty

Dr. Gaurav Datt of the World Bank in his article "Has Poverty Declined Since Economic Reforms ?" has compared the decline in head-count index, poverty gap index and squared poverty gap index for rural and urban India in the pre-reform and the post-reform period. The main conclusions of the study are as under :

1. Mid-1980s seems to be a significant watershed in the evolution of living standards in India. ... While there was a marked decline in both rural and urban poverty rates between 1973-74 and 1986-87, there is no sign of anything comparable.
2. For the rural sector, the results indicate that while there was a significant trend decline in all the three poverty measures up to mid-1991 (at an annual rate of 2.7 per cent for the headcount index, 4.5 per cent for the poverty gap and 5.9 per cent for the squared poverty gap index), the rate of decline since then is not significantly different from zero.
3. For the urban sector, in the pre-reform period (1973-74 to 1990-91), the results indicate a declining trend in all the three poverty measures upto mid-1991 (at an annual rate of 2.2 per cent for headcount index, 2.8 per cent for poverty gap and 3.1 per cent for squared poverty gap), the same trend is continued even in the post-reform period (1990-91 to 1996-97) and all the three poverty measures register a decline (at an annual rate of 2.2 per cent for headcount index, 2.65 per cent for poverty gap and 3.7 per cent for squared poverty gap).
4. While the urban sector appears to have continued its trajectory of growth and poverty reduction through the 1990s, rural poverty reduction was choked off by lack of rural growth.

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(b) GDP Growth, Employment Growth and Poverty

The question arises : Why is it that although GDP growth rates have been very high during the recent years (especially after 1993-94), they have not been accompanied by corresponding reduction in poverty. If poverty implies either unemployment or under-employment or absence of good quality employment, then it would be of interest to study the change in employment scenario before and after the economic reforms. Data provided in Table 3 reveals that total employment increased from 3,026 lakhs in 1983 to about 3,568 lakhs in 1990-91 and then improved to about 3.829 lakhs in 1997-98. The rate of growth of employment was of the order of 2.39 per cent per annum during 1983 and 1990-91, which was just equal to the rate of growth of labour force during this period. However, it was hoped that if this rate of growth of employment is sustained in the next decade, the country would be able to reduce the backlog of unemployment significantly. But unfortunately, the period of reforms (1990-91 to 1997-98) reveals that the overall growth rate of employment was only of the order of 1.0 per cent. It may also be noted that since the reform process is limited to the organised sector, more so to the large corporate sector, the growth rate of employment in the organised sector also decelerated to 0.60 per cent during 1990-91 to 1997-98 as against 1.73 per cent per annum witnessed in the 7-year pre-reform period of 1983 - 1990-91. This was just one-third of the growth rate of the employment witnessed earlier. There was also a substantial slowdown in the employment growth rate of the unorganised sector to merely 1.1 per cent during 1990-91 to 1997-98 as against employment growth rate of 2.41 per cent witnessed during the 7-year pre-reform period (1983 to 1990-91). This leads one to the natural conclusion that the trickle down effects of the growth process did not benefit the poor. Dr. S. P. Gupta, therefore, states: "All these trends make one rethink the utility of an exclusive policy on 'GDP growth' in resolving poverty or employment. In contrast, it has been observed that high growth in employment in India has almost always been associated with some reduction in poverty. For example, the period of high growth of employment in the 1980s with a comparatively lower GDP growth has witnessed a significant reduction in poverty. In the 1990s as hypothesized, a low growth of employment is seen to be associated with an increase in poverty."

Trend of Employment in Organised Sector

Since the focus of the reform process is on organised sector employment, it would be desirable to examine the growth of employment in the organised sector.

2. Increase in Productivity and Real Wage Earning

Industrialist lobbies have frequently charged labour for not raising labour productivity, but forcing an increase in the real wage of earnings of labour. Shariff and Gomber (1999) have studied the problem of increase in labour productivity and real earnings of regular wage/ salaried employees. Their study reveals, whereas overall real labour productivity showed an increase during 1983-88 by 3.16 per cent and during 1988-94 by 3.32 per cent, the real earning of workers increased at the annual average rate of 7.0 per cent during 1983 and 1987-88, but showed a miserably low increase of 1.0 per cent during 1987-88 and 1993-94. Though the post-reform period is not long enough to arrive at any definite conclusion, but it does give some indication of the straws in the wind that the gains of productivity increase during 1988-94 by 3.32 per cent were passed on to the workers by only 1.0 per cent and the rest were pocketed by the employers. This had an unhealthy impact on labour welfare.

The upshot of the analysis given above is that the basic problem with economic reforms is not to treat labour as an asset but as a mere instrument, which can be dispensed with when in the judgment of the employer, it is no longer useful. This is a very mechanical view of labour, which is resented by trade unions on the one hand, and judiciary on the other. For the employer, it is an attempt at downsizing leading to cost reduction, for the employee, it is the loss of job. In developed countries, where social security systems have been extensively developed, the process of downsizing is much less painful, because the worker can at least get some dole and thus is

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not deprived of a basic minimum essential for livelihood, but in a developing economy like India, this restructuring and downsizing leading to retrenchment or closure results in depriving the workers of their livelihood.

3. Neglect of Agriculture — The Major Sin of Economic Reforms

A major criticism of the process of economic reforms is the neglect of agriculture. Data reveal that foodgrains production increased from 129.6 million tonnes in 1980-81 to 176.4 million tonnes in 1990-91 resulting in annual compound rate of 3.1 per cent. But during the 18-year period of economic reforms, foodgrains production increased from 176.4 million tonnes in 1990-91 to 234 million tonnes in 2008-09, indicating an annual average growth rate of 1.6 per cent, which was lower than the growth rate of population. Complacency on the foodgrains front can certainly cost the nation very dearly in the coming decade.

Various reasons have been assigned for this situation. Firstly, the reform process has emphasised the growth of manufacturing and service sectors and thus neglected agriculture.

Agricultural growth has stagnated around 2 percent during the last decade. It was 2.1 percent during the Ninth Plan (1997-2002) and is estimated to be 2.3 percent during the Tenth Plan (2002-07). *Economic Survey* (2006-07) explaining the situation states : " The structural weaknesses of the agriculture sector reflected in low level of investment, exhaustion of the yield potential of new yielding varieties of wheat and rice, unbalanced fertilizer use, low seeds replacement rate, an inadequate incentive system and post-harvest value ad-dition were manifest in the lack luster agricultural growth during the new millennium."

That total investment in agriculture as a percentage of GDP was only 2.8% in 1999-00. It fell to 2.4% of GDP in 2003-04 but improved marginally to 3.34 percent in 2008-09 but again fell to 2.97 percent in 2009-10. While the economy has indicated a sharp increase in investment to 36.5% of GDP in 2008-09. the share of investment in agriculture to a level of 2.97 % of GDP is too inadequate, more so when cognizance is taken of the fact that agriculture provides livelihood to 58 percent of population.

It may also be pointed that public sector investment in irrigation, flood control, water harvesting, rural infrastructure reclamation of degraded lands etc. has a much greater spread effect. In contrast, private sector investment in tube wells, tractors and harvesters increases the income of the landowning classes only. It has impacted to reduce employment.

This lack of development of irrigation infrastructure by withdrawing public sector investment with the hope that the private sector investment will expand irrigation, did not materialise. This was specially the case in backward states like Bihar, Madhya Pradesh and Orissa, which indicates 'very poor growth rates in foodgrains production - even lower than the national average. Last but not the least, whereas the green revolution states like Punjab, Haryana, Uttar Pradesh have reached a plateau, the country could not trigger higher yields in backward states. Dr. G. S. Bhalla and G. R. Singh (1997) in their study have pointed out "a sharp pick-up in agricultural growth experienced by the East-ern Region has been facilitated by a remarkable increase in area under irrigation triggered by a substantial private investment in pumpsets and tubewells."

If we study the implementation of the Water-Seed-Fertilizer technology (popularly known as the Green Revolution), then during the decade 1970-71 to 1980-81, irrigated area indicated an annual average growth rate of 3.6 per cent, which declined to 2.7 per cent during the decade 1980-81 to 1990-91 and further to merely 1.9 per cent during 1990-91 to 1997-98. Since irrigation is the basic input which helps the fuller utilisation other inputs - seeds and fertilizers, we also observe declining growth rates in the irrigated area under rice and wheat from seventies to eighties and nineties. In case of pulses, irrigated area growth experienced a negative growth rate of the order of 1.5 per cent per annum. A similar trend was observed in the case of extension of area under HYV in case of paddy and rice. Fertilizer consumption indi-cated a sharp decline from 8.5 per cent annual average growth rate during the eighties to just 3.7 per cent during the nineties.

In this connection, it is relevant to consider the trend in major and minor irrigation. Major irrigation acts as a supplement to minor irrigation in keeping the water table high, while minor

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irrigation provides water-security to the peasant in case of failure of rains. The slowing down of the growth rate of irrigated area under minor irrigation from 3.5 per cent during eighties to 2.3 percent during nineties is another contributing factor to slow-down of over-all agricultural growth. Economic reforms did not pay adequate attention to expansion of irrigation and this is a major sin responsible for low growth of agricultural production and productivity during the nineties.

The upshot of the entire analysis is that the major sin of economic reforms is gross neglect of agriculture— the mainstay of livelihood of over 60% of the population. This is more so in view of the fact that though India had seven good monsoon years in succession, agricultural production indicated year-to-year fluctuations. This casts a shadow on sustainability of agricultural growth, unless there is a reorientation of priorities with much greater emphasis on agriculture and rural industrialisation. The state, instead of withdrawing from investment in agriculture, irrigation and rural infrastructure, has to strengthen public sector investment in these areas.

4. Economic Reforms and Industrial Growth

Economic Reforms were mainly intended to remove the bottlenecks, which acted as obstacles in industrial production. To pursue this goal, Industrial licensing was abolished in all but 18 Industries. Later the government delicensed several others. During 1998-99, three Industries viz., (i) Coal and Lignite, (ii) Petroleum (other than crude and its distillation products), and (iii) Sugar were delicensed. Accordingly, there are only six Industries now under compulsory licensing. Two Industries, viz., Coal and lignite were taken out from the list of Industries reserved for public sector. At present, there are only four industries reserved for the public sector. Put another way, it can be stated that the reform process dismantled the system of Industrial licensing which was considered to be a main roadblock in the progress of industrial development.

Despite all this, data provided in table 9 reveals where as the eighties (1981-82 to 1990-91). general index of Industrial production recorded an annual average growth rate of 7.8 per cent, growth rate of IIP slowed down to 7.2 per cent during 1993-94 to 2009-10. In manufacturing, it increased from 7.6 per cent in the '80s to 7.7 per cent, and in electricity it declined from 9 per cent to 5.5 per cent and in mining & quarrying it slumped from 8.3 per cent to just 3.9 per cent. Thus, the expectations that growth of IIP would be stimulated did not materialise. Further if we break the period from 1993-94 to 2009-10 in two parts namely 1993-94 to 2000-01 and 2000-01 to 2009-10, we find that in the second period growth rate decelerated in case of electricity, while it accelerated in case of mining and quarrying. In manufacturing it remained at the same level.

Table 1 provides growth rates of Industrial production on the basis of use-based classification. The data reveal that but for intermediate goods, which recorded a slightly higher growth rate of 6.3 per cent in post-reform period as compared to 5.9 per cent in the eighties, in all the other sectors, growth rates recorded in the eighties were higher In the capital goods sector, growth rate slipped to 10.7 per cent in the post-reform period as against a robust growth rate of 11.5 per cent in the eighties.

Even in consumer durables, a decline in annual average growth rate was observed 9.2 per cent as against a much higher growth rate of about 13.9 per cent in the eighties.

From the index of growth rates of industrial production, it becomes evident that the performance of the industrial production during 1995-96 and 2009-10, which is generally identified as a period of wide-ranging reforms in the industrial sector, was not up to the mark. It failed even to equal the performance observed in the eighties, not to speak of improving the performance as a consequence of the reform process in post-reform period. The failure of the basic goods and capital goods sector really put a question mark on the success of the reform process.

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Table 1 : Annual Average Growth Rate of Industrial Production (Use-based Classification)

Per cent

Sector		1981-82 to 1990-91	1995-96 to 2009-10
a.	Basic Goods	7.0	5.2
b.	Capital goods	11.5	10.7
c.	Intermediate Goods	5.9	6.3
d.	Consumer Goods	6.7	7.1
	(i) Durables	13.9	9.2
	(ii) Non-durables	5.5	6.4
General Index		**7.8**	**6.7**

Source : Computed from RBI, **Handbook of Statistics on Indian Economy**, (2009-10)

5. Performance of Public Sector Enterprises

Information about the performance of the much-maligned Central Public Enterprises, reveals that gross profit as percentage of capital employed was 11.61 per cent in 1993-94, 15.88 per cent in 1995-96 and then to 21.5 per cent in 2004-05. A similar trend was observed in net profit, which was of the order of 2.84 per cent in 1993-94 but improved to 12.1 percent in 2005-06. Value added per unit of capital which indicates the efficiency of capital employed also showed an improvement from 0.26 in 1993-94 to 0.44 in 2001-02. Obviously, Central Public Sector Enterprises have shown better perfor-mance during the 12-year period of reform (1993-94 to 2005-06). The basic question which needs to be raised is : If the ground realities indicate better performance of the Central Public Sector Enterprises, is it desirable to undertake disinvestment of these enterprises ? Would it not be better to introduce reform of public sector enter-prises so that they can improve their performance still further. By 2005-06, the Government had signed Memo-randum of Understanding (MOU) with 102 PSEs. Evaluation of their performance reveals that 44 were rated as excellent, 36 very good and 14 as good. If 94 PSEs out of 102 have shown an improvement, there is a case for innovating measures to improve performance of PSEs, rather than giving them a bad name and hang them.

6. Economic Reforms and Movement of WPI and CPI

If we leave out the first two years of the post-reform period assuming them to be teething troubles and compare the relative movement of prices for the 11-years period (1993-94 to 2004-05), then the following objective reality is indicated.

Rise of prices affects the labour classes adversely as against the capitalist classes who gain disproportionately with a rise of prices. The movement of wholesale price index (WPI) reveals that in the pre-reform period (1981-82 to 1991-92), the annual average increase in WPI was of the order of 6.9 per cent and in the post-reform period (1993-94 to 2009-10), it was of the order of 6.21 percent. Obviously, the situation in the rise of WPI improved during the post-reform period.

But a better index of measuring welfare would be to study the movement of Consumer Price Index (CPI). The data reveal that CPI for Industrial Workers (CPI-IW) indicated an annual average rise of 7.1 per cent for the period 1993-94 to 2010-11 which is higher than increase of WPI. Similarly. CPI for Agricultural labourers (CPI-AL) increased annually by 6.9 per cent in the post-reform period which also indicates a relatively higher increase than WPI.

The upshot of the analysis is that in the post-reform period (1993-94 to 2009-10), the movement of the CPI was slightly higher than the movement of WPI. This indicates that retail inflation in post-reform period was slightly higher than wholesale inflation.

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7. Trend of Growth in Infrastructure

The analysis reveals that in case of saleable steel and cement, the growth rates were higher in the post-reform period than in the pre-reform period. In case of steel, the growth rate of production increased by 8.1 per cent during 1993-94 and 2010-11 as against only 4.9 per cent in the pre-reform period (1980-81 to 1990-91). Similarly, the growth of cement production also indicated sharp increase by 8.3 per cent during 1993-94 to 2010-2011 as compared to only 4 per cent in the pre-reform period. However, it should be pointed out that the momentum gained in the post-reform period for acceleration in the production of cement was the consequence of introduction of dual pricing in the case of cement introduced in 1982 with progressive reduction in the percentage of controlled cement to eventually freeing cement prices from state control. This led to massive increase in the cement capacity and output. Similarly, gradual easing of steel price control was accepted by the Government in 1983. But all these measures were taken in the pre-reform period, which helped to provide an environment to these industries to raise their capacity and output without any bottlenecks.

However, other infrastructure Industries - electricity, coal and petroleum did not fare well in the post-reform period. In the case of electricity, whereas in the eighties growth rate of generation was of the order of 9.1 percent, it was just 5.5 percent in the post-reform period. Likewise, coal production declined from 6.4 per cent in the eighties to just 4.0 per cent during 1993-94 to 2010-11. In case of petroleum, growth rate dipped from 12.2 per cent in the eighties to just 1.5 per cent during 1993-94 to 2010-2011. While the state withdrew from these sectors and did not undertake investment in infrastructure, the private sector - Indian as well as foreign - failed to fill the vacuum. Obviously, excessive dependence on private sector in the post-reform period did not yield the much-trumpeted and desired results.

8. India's Foreign Trade and Balance of Payments

Although policies of liberalisation in foreign trade were initiated in 1985-86 but their impact though felt during the period 1986-87 to 1990-91 was slow and after 1991 the new economic reforms went in for a more rapid globalisation of the Indian economy by reducing and/or abolishing quantitative restrictions and also reducing tariff barriers which hindered trade. The main implications of reform measures were intended to boost exports as well so as to facilitate developmental imports or such imports, which were vital for increasing industrial production, may be of some raw materials. It would, therefore, be appropriate to compare trend of foreign trade in the pre-reform periods i.e. 1980-81 to 1990-91 (described as the eighties) and the period 1991-92 to 2004-2005 the post-reform period.

The Reserve Bank of India has revised the data of India's balance of payments in dollar terms recently. It would, therefore, be appropriate to review the position of foreign trade on the basis of this updated information.

The decade has been divided into two sub-periods. During the first five years (1981-82 to 1985-86), India achieved a growth rate of 2.3 per cent in exports, but in imports, the growth rate was barely 2.0 per cent. India followed a restrictive import policy during this period. Consequently, as against the average annual exports of $ 9,514 million, average annual imports were of the order of $ 16,404 million. As a result, average trade deficit was $ 6,890 million. Since net invisibles were positive, the surplus from this head on the average was $ 3,474 million. Thus, surplus from invisibles was able to neutralize the trade deficit by 50.4 per cent. Consequently balance of payment deficit on current account could be restricted to $ 3,416 million. During this period, exports as a percentage of imports were only 58 per cent and thus, the situation was highly unsatisfactory.

9. Foreign Investment

Data reveal that during the 16 year period, a total of US $ 136.5 billion was invested in India in the form of foreign investment, out of which $ 72.09 billion (52.8 per cent of total) was in the form of direct investment and $ 64.44 billion (47.2 per cent) was in the form of portfolio investment. Segregated data reveal that direct investment flows remained subdued during 1991-92 to 1994-95 and in this period portfolio investment accounted for a larger share, but in the

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later period 1995-96 to 2002-03, direct investment flows picked up and they accounted for quite a significant share and from 1997-98 and 1998-99, direct investment became dominant. It may also be noted that portfolio investment is of a very undependable and volatile nature. This is witnessed by the fact that portfolio investment slumped to a level of US $ 1.83 billion in 1997-98 as against 3.31 billion in 1996-97 and became negative in 1998-99. The sudden fall of portfolio investment to a negative level resulted in the total inflow declining from US $ 6.13 billion in 1996-97 to $ 2.40 billion in 1998-99. This only highlights the fact that although foreign investment is welcome, it would be more desirable to depend on inflows of foreign direct investment. The sharp decline of portfolio investment from $ 3,026 million in 1999-00 to a low level of 979 million in 2002-03 and then a sudden spurt to $ 11,377 million in 2003-04 and again a decline to $ 9,315 million in 2004-05 is indicative of its volatile and undependable nature. Portfolio investment again sharply increased to in 2005-06 to $ 12.492 million (64%) to again decline to $ 7,003 million in 2006-07 accounting for merely 24 percent of total foreign investment, and further increased to $ 27,271 million during 2007-08. But due to economic crisis if became negative SI3.855 million during 2008-09. In 2009-10 we find a record foreign investment of $ 70,139 million as portfolio investment reached its record and direct investment was also very high at $ 37,763 million. In 2010-11 provisional figures for foreign investment was put at $ 5,84,95 million.

10. Reduction of Regional Disparities

One of the major objectives of development is to reduce regional disparities. With this end in view, State policies have been patterned to help the backward regions. It was also included as a part of the devolution of funds and higher allocations were made for the backward states so that regional disparities could be narrowed down.

The reform process initiated in 1991 has been emphasising the use of the market forces, which naturally attract investment to regions more developed in infrastructure - both economic and financial. It does not pay any attention to the question of regional imbalance.

It would be, therefore, desirable to understand the impact of economic reforms on various states.

An analysis of the growth of the Net State domestic Product (at 1993-94 prices) for the post-reform period reveals that NSDP in forward states indicated an annual average growth rate of 5.6 per cent during 1990-91 and 2002-03. but as against them in the backward states, growth rate of NSDP was merely 1.7 per cent. This only underlines the stark reality that the reform process helped the forward states much more than the backward states and could be held responsible for widening regional disparities. It may also be noted that in Bihar, the per capita NSDP growth during 12-year period (1990-91 to 2002-03) was negative to the extent of (–) 0.9 per cent per annum and in Uttar Pradesh, it was barely 0.4 per cent. These two states which account for about 27 per cent of the population pulled down the average all-India growth of per capita NSDP. The ratio of maximum and minimum per capita NSDP which was 2.7 in 1990-91 increased to 4.73 in 2004-05 which also supports the fact that the reform process widened income disparities among the states. However period after 2004-05 shows some imoprovement in the performance of backward states and this ratio declined to 4.2 in 2008-09.

Dr. N. J. Kurian of the Planning Commission who made an extensive study of the "Widening Regional Disparities in India" has indicated that more than two-thirds of investment proposals (69.2 %) in the post-reform period were concentrated in the forward states and a similar situation prevailed in terms of financial assistance disturbed by All-India Financial Institutions as well as State Financial Corporations. The All India Financial Institutions viz., IDBI, IFCI, ICICI, UTI, LIC, GIC, IRBI and SIDBI disbursed 67.3 per cent of total financial assistance to forwards states upto 31st March 1997. Even among the 9 forward states, four states, namely Maharashtra, Gujarat, Tamil Nadu and Andhra Pradesh were able to appropriate about 51 per cent of total assistance. Even in the case of State Financial Corporations, 70 per cent of total assistance was received by forward states. This analysis underlines the fact that the reform process has favoured the forward states in terms of approval of investment proposals as well as financial assistance. Consequently, the already betteroff states can further accelerate the growth process while the backward states being unfavourably treated face a retardation in growth. This explains the growing disparities in terms of growth of NSDP — both total and per capita.

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Situation seems to have worsened later. Figure of per capita state domestic product at current prices show that the ratio of per capita state domestic product of Haryana (highest per capita state domestic product of ₹ 58531) and that of Bihar (₹ 10570) was 5.5 even in 2007-08. Though rate of growth of some underdeveloped states has improved in the last few years, lot more is needed to be done to reduce regional inequalities.

11. Social Infrastructure and Human Development

Data on selected indicators of Human Development viz., life expectancy, literacy rate, infant mortality rate (IMR). If the purpose of all development is to improve the quality of life, then human development indicators are the end-products of the development process.

Wide disparities are observed among different states. Kerala and to some extent Tamil Nadu have shown that it is possible to achieve higher levels of human development even with low levels of economic development. But, by and large, better levels of per capita NSDP are associated with higher levels of human development. To achieve higher levels of human development, it is necessary that investment in educational and health infrastructure be stepped up. Among the back-ward states. Uttar Pradesh, Bihar. Rajasthan and Madhya Pradesh have very poor record in terms of literacy, especially female literacy. They have also failed in investment in health infrastructure and consequently have lower life expectancy, higher infant mortality and higher birth rate. The private sector which is the torch-bearer of economic reforms my be setting up nursing homes or elite educational institutions with higher levels of charges or fees to meet the demand of the upper middle class and affluent sections, but it does not offer anything for the welfare if the poor. Either the private sector should assume a higher social purpose or the state should invest more in education and health infrastructure.

Self-Assessment

1. Choose the correct option:

(*i*) Economic reforms in India were introduced in

(*a*) 1991 (*b*) 1978

(*c*) 1985 (*d*) None of these

(*ii*) Water seed fertilizer technology popularly known as

(*a*) Growth development (*b*) Green revolution

(*c*) Peasant reforms (*d*) None of these

(*iii*) In economy CDS stands for

(*a*) Combined defense services (*b*) Central development services

(*c*) Current daily status (*d*) none of these.

4.2 Summary

- It has to be acknowledged that the reform process will not be able to achieve its socio-economic objective, because the private sector is merely concerned with profit motive. Whereas the liberalisation process has reduced the role of the public sector investment, it has failed to fill the vacuum created by the withdrawal of public sector investment in infrastructure, more especially in the backward states. Obviously, this calls of a reform of the reform process. President W. J. Clinton while speaking in Hyderabad on March 24, 2000 on the need to harness new technologies like info-tech for eradicating poverty emphasised: "Millions of Indians are connected to the internet, but millions more are not yet connected to fresh water. India accounts for 30 per cent of the world's software engineers but also 25 per cent of the world's malnourished. So our challenge is to turn the newest discoveries into best weapons humanity has ever had to fight poverty." Mr. Clinton underlined the fact that while it was good that a lot of 25-year old multi-million-aires were being created and the latest Indian start-ups were shooting up the Nasdaq, "this whole enterprise cannot just be about higher profits, there must also be a higher purpose."

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- Most forthright criticism of the reform process came from the former President K R Narayanan on the eve of the Republic Day message on 25 January 2000 when he warned : "The fury'of the patient and long-suffering people would be unleashed if the three-way fast lane of liberalisation, privatisation and globalisation failed to provide 'safe pedestrian crossings' for the unempowered in India." This indictment of the reform process only underlines the scant care the market forces show to the poor. Mr. Narayanan has drawn attention to the tragic contradictions in our society, particularly the great regional and social inequalities in the following words :
- "We have one of the world's largest reservoirs of technical personnel but also the world's largest number of illiterates; the world's largest middle class but also the largest number of people below the poverty line; and the largest number of children suffering from malnutrition. One half of our society guzzles aerated beverages while the other has to make do with palmfuls of muddied water."
- While justifying the trajectories of modern progress such as factories, dams and satellites, Mr. Narayanan, however, cautioned against ecological and environmental devastation leading to uprooting of hu-man settlements, especially of the tribals and the poor. He, therefore, mentioned" "Ways and methods could be found for countering the harmful impact of modern technology on the lives of the populace both by the government and civil society."
- Pointing to the regional and social inequalities accompanying the country's economic growth, Mr. Narayanan cautioned : "Many a social upheaval can be traced to the neglect of the lowest tier of society, whose discontent moves towards the path of violence. Dalits and tribals are the most affected by all this".
- Prime Minister M1onmohan Singh also is of the view : "The challenge before us is to combine the Economics of growth with the Economics of equity and social justice. We have no option but to walk on two legs."

4.3 Key-Words

1. Consumption : The using up of a resource.
2. Retrenchment : (*i*) A cutting down or back; reduction.
   (*ii*) A curtailment of expenses,
   (*iii*) Entrenchment consisting of an additional interior fortification to prolong the defense.

4.4 Review Questions

1. Discuss the economic reforms in India since 1991.
2. What is the impact on labour of economic reforms? Explain.
3. Write a short note on the Foreign Investment.

Answers: Self-Assessment

1. (*i*) (*a*) (*ii*) (*b*) (*iii*) (*c*)

4.5 Further Readings

Books

1. Indian Economy; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055.
2. The Indian Economy; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001.

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Unit 5: Trends and Structure of National Income Since 1951

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Objectives

After reading this Unit students will be able to:

- Describe the Trends and Structure of National Income.
- Analyse the National Income Growth and Structure.

Introduction

In an economy, every sector utilises natural, human and material resources and contributes to the aggregate flow of goods and services during a given time period. Each specific period may be described in terms of a year. The income earned by a country's people, including labour and capital investment in a year is hence called national income. A variety of measures of national income and output are used in economics to estimate total economic activity in a country or region, including Gross Domestic Product (GDP), Gross National Product (GNP), and Net National Income (NNI). All are especially concerned with counting the total amount of goods and services produced within some "boundary". The boundary is usually defined by geography or citizenship, and may also restrict the goods and services that are counted. For instance, some measures count only goods and services that are exchanged for money, excluding bartered goods, while other measures may attempt to include bartered goods by imputing monetary values to them.

5.1 Trends and Structure of National Income

According to the National Income Committee, "A national income estimate measures the volume of commodities and services turned out during a given period, counted without duplication." Thus, a total of national income measures the flow of goods and services in an economy. National Income is a flow and not a stock. As contrasted with national wealth which measures the stock of commodities held by the nationals of a country at a point of time, national income measures the productive power of an economy in a given period to turn out goods and services for the satisfaction of human wants.

Pre-Independence Period Estimates

Several estimates of national income were prepared in the British period. Notable among the estimators were : Dadabhai Naoroji (1868), William Digby (1899), Findlay Shirras (1911, 1922 and 1931), Shah and Khambatta (1921), V.K.R.V. Rao (1925-29 and 1931-32) and R.C. Desai (1931-40).

In the pre-independence estimates, Dadabhai Naoroji, Shah and Khambatta, Findlay Shirras, Wadia and Joshi estimated the value of the output of the agricultural sector and then added a certain percentage as the income of the non-agricultural sector. The assumptions of most of these estimators

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were arbitrary and hence devoid of any scientific basis. Dr. V.K.R.V. Rao made use of a combination of census of output and census of income methods. He divided the economy of India into two categories. In the first category were included agriculture, pastures, mines, forests, fishing and hunting. Output method was to be used to evaluate the product derived from these sectors. In the second category were included industry, trade, transport, public services and administration, professions, liberal arts and domestic service. For these occupations, census of income method was used. To these two sub-totals was added the income from house property and other items which could not be covered under the above categories. From the gross aggregate income so obtained were excluded the values of goods and services consumed in the process of production. By adding the net income earned from abroad, an estimate of national income was computed.

Most of these estimates were the results of the efforts of individuals and as such they suffered from serious limitations. The arbitrary assumptions of the authors undermined the reliability of the estimates. Besides, these estimates were based on statistics from the agricultural sector which were highly undependable.

Post-Independence Period Estimates

Soon after Independence, the Government of India appointed the National Income Committee in August, 1949, so as to compile authoritative estimates of national income. The Committee consisted of Professor P.C. Mahalanobis. Professor D.R. Gadgil and Professor V.K.R.V. Rao. The final report of the National Income Committee appeared in 1954. The report was a landmark in the history of this country because for the first time, it provided comprehensive data of national income for the whole of India. The principal features of the National Income Committee report were as under :

1. During 1950-51, agriculture which also included animal husbandry, forestry and fisheries contributed nearly half of the national income.
2. Mining, manufacturing and hand trades contributed about one-sixth of the total income.
3. Commerce, transport and communications accounted for a little more than one-sixth of the total national income.
4. Other services such as professions and liberal arts, administrative services, domestic services, house property accounted for about 15 per cent of national income.
5. The share of commodity production was about two-third of the national income. The term commodity production includes material production derived from agriculture, mining, factory establishments, hand trades, etc.
6. Services accounted for about one-third of total national income. Services sector includes commerce, transport and communications, administrative services, liberal arts, domestic services etc.
7. The share of the government sector in net domestic product was 7.6 per cent in 1950-51. Along with it, the share of the government in national expenditure was 8.2 per cent.
8. The margin of error in the calculation of national income estimates worked out at about 10 per cent.

National Income Committee and C.S.O. Estimates

For the post-independence period, we have five series in national income estimates.

(1) Conventional Series : provided national income data at current prices and at 1948-49 prices for the period 1948-49 to 1964-65.

The conventional series divided the economy into 13 sectors. Income from six sectors i.e., agriculture, animal husbandry, forestry, fishery, mining and factory establishments is calculated by the output method and income from the remaining seven sectors, i.e., small enterprises, organised banking and insurance, commerce and transport, professions, liberal arts and domestic service, public authorities, house property and rest of the world is computed by census of income method.

Net Output Method : In agriculture, the output of each crop is estimated by multiplying the area sown by the yield per hectare. For obtaining the average yield crop cutting experiments

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were conducted. From the gross value of output so obtained, deductions for the cost of seed, manures and fertilisers, market charges, repairs and depreciation are made so as to derive net value of the product from agriculture.

For animal husbandry, forestry, fishery, mining and factory establishments, estimates of production are multiplied with market price so as to obtain the gross value of the output. From the gross value of output deductions are made for cost of materials used in the process of production and depreciation charges etc. to obtain net value added of each sector.

Net Income Method : In order to obtain the contribution of small enterprises an estimate for the total number of workers employed in different occupations classified under small enterprises is prepared. On the basis of sample surveys, the average earnings per head are obtained. By multiplying the total number of persons employed with the average earnings per head, the contribution of small enterprises is estimated. To provide for factor payments other than wages and salaries, an addition of 20 per cent to the money earnings is made.

For Banking and Insurance the balance sheets of the firms provide the requisite information. Wages, salaries, directors' fees and dividends (distributed and undistributed) are all added to get the net contribution of the sector.

For commerce and transport and for professions, liberal arts and domestic services, the procedure is the same as for small enterprises.

For public sector, wages, salaries, pensions, other benefits, dividends or surplus, etc., are added up to arrive at the contribution of the public sector. To this is added the contribution of government construction and this gives the total contribution of the public sector.

(2) National Income Series at 1960-61 prices : This series provided national income data at current prices and at 1960-61 prices for the period 1960-61 to 1975-76.

Another series was started with 1970-71 as base year instead of 1960-61.

Estimates based on different base years indicate differences in magnitudes, even when they are deflated at constant prices either at 1948-49 or 1960-61 or 1970-71 prices. This is due to the differences in weights used for the series.

The Central Statistical Organisation (CSO) brought out another Series on national income with 1980-81 as base year in place of the series with 1970-71 as the base year.

CSO Revised National Income Series with 1999-00 as Base Year

The Central Statistical Organisation (CSO) has revised the existing series of national accounts with 1993-94 as the base year with a new series with 1999-00 as the base year. Besides shifting the base year, the New Series incorporates improvements in terms of coverage and to the extent possible, the recommendations of the United Nations System of National Accounts, 1993 (1993 UNSNA) have been incorporated.

The improvements in terms of coverage are the following :

(a) Inclusion of production of salt through sea water evaporation and the production of betel leaf, toddy, goat, buffalo and camel milk, duck eggs and meat production from unregistered slaugh-tering.

(b) Expenditure made on few tree crops during the gestation period and setting up of wind energy systems are included in the estimates of output of construction sector.

(c) A new category of 'valuables' has been included in the gross capital formation, in line with the recommendations of 1993 UNSNA.

(d) Economic activities of other communication, renting of machinery and other equipment without operator, computer related activities in unorganized segment, coaching centres, social work with accommodation, recreational and cultural activities have been included.

5.2 Trends in National Income Growth and Structure

In order to understand the impact of planning in India, a study of trends in national income is necessary. It would be, therefore, better if the trend in national income and changes in the structure of national product are analysed over the last 57 years of planning.

Notes

(i) Trends in net national product and per capita income

Figures of national and per capita income are collected at current prices. But figures of national income at current prices do not give a correct picture about the growth of the economy, for the increase in national income at current prices reflects the combined influence of two factors viz., (a) the increase in the production of real goods and services and (b) the rise in prices. If the increase in national income is due to the first factor, it is an indicator of real growth because it implies that more goods and services become available to the people. If it is due to the second factor, it represents an unreal inflation of national income in money terms. Consequently, national income figures are deflated at constant prices to eliminate the effect of any change of price level during the period. National income figures at constant prices, therefore, become comparable, but they conceal the population effect. To eliminate the effect of growth of population, per capita national product or per capita income is calculated. Whereas the growth of the net national product at constant prices is an index of the total productive effort on the part of the community and indicates the rate of growth of goods and services in the economy, the growth of per capita income at constant prices is an indicator of the change in the standard of living of the people.

CSO has provided a series of national income data at 1999-00 from 1950-51 to 2007-08. Although this indicates slightly different growth rates for different period, but this was inevitable because of coverage and a change is procedure.

Notes During 2000-01 and 2004-05, NNP growth rate accelerated to 6.4 per cent and per capita NNP grew at the rate of 4.7 per cent per annum (at 1999-00 prices). During 2004-05 and 2010-11 we find further acceleration in the NNP growth rate to 8.4 percent and that of percapita income to 6.9 percent.(at 2004-05 prices).

(ii) Annual Growth Rates during the plans

During the First Plan, annual average growth rate of NNP was 4.4 per cent (at 1999-00 prices), which to declined 3.8 per cent during the Second Plan. However, during the Third Plan, annual average increase in national income slumped down to 2.6 per cent which was just sufficient to neutralize the growth of population. This is indicated by the fact that there was 0.4 rate of growth of per capita income during the Third Plan. This was largely the consequence of a serious drought in 1965-66 and thus the growth rate got depressed. This was followed by another drought year as also a business recession. After 1967-68 the economy started picking up and the growth rate showed signs of improvement. During the Fourth Plan (1969-74) period, the average annual rate of growth of national income declined to 3.1 per cent and that of real per capita income to 0.8 per cent per annum. The sharp increase in prices during 1972-73 and 1973-74 and the shortfalls in production on account of lower utilisation of capacity were the principal factors responsible for a lower growth rate during the Fourth Plan.

During the Fifth Plan (1974-79) the average annual increase in national income was of the order of 4.9 per cent and that of per capita income was barely 2.6 per cent. On the whole, the performance of the economy during the Fifth Plan can be considered very satisfactory.

During the Seventh Plan (1985-90), India's NNP grew on the average at the rate of 5.5 % per annum and the annual growth of per capita NNP was 3.3 %. Obviously, Seventh Plan achieved its objective of 5 per cent growth rate of NNP along with 3 % targeted growth rate of per capita NNP. This was a welcome development.

(iii) Trends in distribution of national income by industrial origin

The following broad trends in the changing composition of the domestic production are revealed:

(1) The share of the primary sector which includes, agriculture, forestry and fishery has gone down from 55.4 percent of GDP in 1950-51 to 38 percent in 1980-81 and further declined to 14.3 per cent in 2010-11. The main cause of the decline is a rapid fall in the share of

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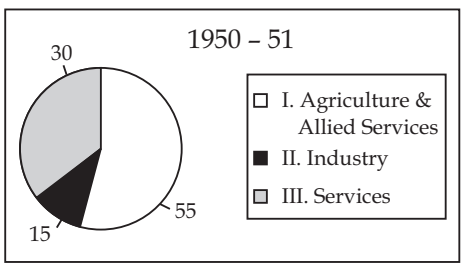
agriculture alone. There is also a contraction in the share of forestry from about 6 percent in 1950-51 to nearly 0.7 per cent in 2010-11. The share of fishery has remained more or less constant around 1 percent throughout the period.

(2) The share of industry which includes mining, manufacturing, electricity, gas & water supply and construction has shown a steady increase from 15 per cent in 1950-51 to 24 percent in 1980-81 and 27.9 per cent in 2010-11.

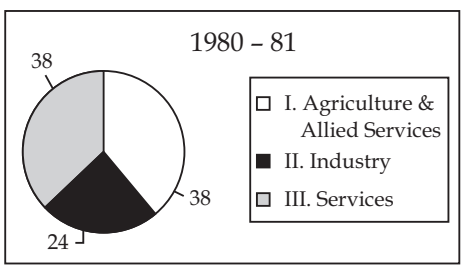
Two major components of industry are manufacturing and construction. The share of manufacturing increased form 8.9 per cent in 1950-51 to 15.8 per cent in 2010-11. Similarly, the share of construction improved from 4.4 per cent in 1950-51 to 7.9 per cent in 2010-11.

(3) The share of the service sector has three components; (a) Trade, Transport, Storage and Communication, (b) Finance, Insurance, Real Estate and Business Services and (c) Community, Social and Personal Services. The share of the service sector indicated a sharp improvement from 29.6 percent in 1950-51 to about 57.8 percent in 2010-11. There was a significant increase in the share of trade, transport and communications from only 11.3 percent in 1950-51 to 27.0 percent in 2010-11. The expansion of transport, especially road transport and communications, during the last decade of mobile revolution has been the major contributor to this increase.

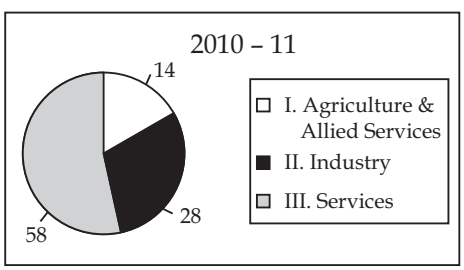
Share of Gross Domestic Product by industry of Origin (1999-00 series)



The share of finance, insurance, real estate and business services marginally declined from 7.7 percent in 1950-51 to 7.5 percent in 1980-81 and thereafter improved to 17.4 percent in 2010-11.



The process of economic development involves a rapid expansion of public administration especially a rapid expansion of economic and welfare services such as education, health and family welfare. Taking community and personal services a group, there was an improvement in its share from 10.6 percent in 1950-51 to 13.4 percent in 2010-11.



The structural change in the composition of national income by industrial origin is the consequence of the process of economic growth initiated during the plans. Since the growth process involved a rapid expansion of manufacturing in the organised sector, the share of manufacturing was bound to indicate a relatively sharp increase. However, agriculture did not indicate a fast rate of growth.

As is evident, the rate of growth of agriculture showed a decline from 3 per cent during 1950-51 and 1960-61 to 1.5 per cent during 1970-71 and 1980-81 and thereafter, it picked up to 3.4 per cent during 1980-81 and 1990-91. However, it declined to 2.6 per cent during 1990-91 and 2000-01 and then improved to 3.79 percent between 2004-05 and 2010-11.

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The theory of economic growth also supports the structural change in the composition of national product. The distribution of gross domestic product in developed countries indicates a much higher share of industry and services and a relatively lower share for agriculture. The disparity in per capita incomes between developed and underdeveloped countries is largely a reflection of the disparity in the structure of their economies.

As industrialisation spreads it brings about an improvement in the share of industry and services. Indian economy is passing through this process of transition from an agricultural economy to an industrialized one. In this process, a structural change in the composition of national income is inevitable. This structural change is taking place, though at a slow pace. The main reason for the slow rate of structural change in domestic output is the slow rate of growth of the manufacturing output.

As is expected during the process of growth, India also experienced an improvement in the share of the tertiary sector. This was largely due to an expansion in transport and communication, banking and insurance and public administration. The rate of growth in all the components of the tertiary sector was 4.9 per cent per annum during 1950-51 and 1990-91 which was higher than the overall rate of growth of gross domestic product (i.e., 4.1 per cent) in the economy. During 2004-05 and 2010-11, the growth rate of tertiary sector has picked up to more than 10 per cent.

There is a sudden jump of the Indian economy to pass on to the stage of a post-industrial 'service' economy without completing the phase of industrialisation. This only underlines the need for strengthening the manufacturing sector by stepping up the process of industrialisation.

The changing structure of national income needs to be further strengthened by stepping up the programme of industrialisation. This does not imply a neglect of agriculture, but for accelerating the growth process in agriculture, industrialisation of the economy with emphasis on agro-based industries and industries supplying inputs to agriculture is a s*ine qua non*. It is only then that the process of transition of the Indian economy from a developing to a developed economy will be accomplished.

Did u know? India's national income registered a growth rate of 5.4 per cent during the Sixth Plan (1980-85) with a per capita income growth rate of 3.1 per cent.

(iv) Trends in the share of the public sector

The share of public sector in gross domestic product was 14.9 per cent in 1970-71, it rose to 25.9 per cent in 1993-94 and then declined to 20.8 per cent in 2008-09. The gradual increase in the share of the public sector is the direct result of the expansion of the economic activities of the State, both on side of enlarging administrative services and of increasing productive activities in public enterprises during the first four decades of development. Thereafter, economic reforms intiated in 1991 stressed the need for restricting the area of operation of public enterprises. It emphasized phasing out of enterprises incurring losses and withdrawing from such sectors like consumer goods, hotels etc. which served no social purpose. The factors contributing to the increase in the share of non-departmental enterprises are the setting up of new industries, expansion of existing enterprises, nationalisation of coal mining companies, banks and insurance and the like, and merger of private electricity companies into electricity boards.

(v) Urban and Rural Income Break-up

National Accounts Statistics (1999) and (2006) and give a break-up of the net domestic product for the rural and urban sectors separately. The data reveal that as against 62.4 per cent of the total NDP being contributed by the rural sector in 1970-71, its share in NDP declined to 54.3 per cent in 1993-94. Consequently, during the 23 year period, the share of the urban sector in NDP improved from 37.6 per cent to 45.7 per cent**.** The per capita NDP for the rural sector was ₹ 529

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in 1970-71 and that of the urban sector was ₹ 1,294. Thus urban-rural disparity ratio in per capita NDP was 2.45. However, this ratio declined marginally to 2.34 in 1993-94 since per capita NDP for urban sector as ₹ 13,525 as against ₹ 5,783 for the rural sector.

However, between 1993-94 and 1999-00, the first phase after the introduction of economic reforms, witnessed a further decline in the share of rural sector to NDP to about 48 per cent. Not only this, per capita NDP in 1999-00 for rural areas was ₹ 10,683 and for urban areas stood at ₹ 30,183. The urban-rural disparity ratio increased to 2.82 in 1999-00 as against 2.34 in 1993-94. This is not a healthy trend.

(vi) Changing Structure of Rural GDP

Dr. Rajesh Shukla and K.A. Siddiqui of the National Council of applied Economic Research (NCAER) have studied the changing structure of Rural GDP. The main findings of the study are :

1. Average annual growth rate of rural GDP which was 2.3 percent during 1970-80 improved to 4.8 percent during 1980-93. It rose further to 5.0 percent in 2007-08 and declined to 4.3 percent in 2008-09 - a year in which recession adversely affected the growth rate.
2. Break-up of the sectoral shares of rural GDP reveals that whereas the share of agriculture in 1970-71 was 73.8 percent and the combined share of industry and services was 26.2 percent in rural GDP, there is a continuous decline in the share of agriculture and it came down to 42 percent in 2007-08. As against it, the share of both industry and services indicated a continuous increase and their combined share was 58 percent in 2007-08.

   These trends reveal that a structural transformation of the rural economy is taking place and the nonfarm sector is emerging as the major contributor to rural GDP. This is also borne out by the CSO's Economic Census 2005, according to which, about a fifth of nonfarm rural workforce is employed in agricultural establishments, while four-fifth worked in non-agricultural establishments.

   Such a transformation is a trend in the right direction and is very desirable because about 60 percent of India's population cannot live on the 19 percent share of India's GDP in agriculture.

(vii) Share of Organised and Unorganised Sector in NOP

Organised enterprises are defined by the CSO as all enterprises which are either registered or come under the purview of any of the Acts and/or maintain annual accounts and balance sheets. Among the Unorganised enterprises are included all unincorporated enterprises and household industries other than the Organised ones which are regulated by any of the Acts and which do not maintain annual accounts and balance sheets.

From the data given in Table 10, it is evident that the share of the organised sector has risen from 30 per cent in 1980-81 to 42.9 per cent in 2007-08. Consequently, the share of the unorganised sector declined from 70 per cent to 57.1 per cent during the same period. It may also be noted that the share of the organised sector in mining, manufacturing etc. improved from 56.8 per cent to 70.2 per cent and that in the services sector improved from about 40 per cent in 1980-81 to 46 per cent in 2007-08. On the other hand, in agriculture, forestry and fishing, the contribution of the unorganised sector slightly declined 95.2 per cent in 1980-81 to 91.2 per cent in 2007-08. The shift in the composition of NDP from the unorganised to the organised sector is a consequence of the process of development.

Limitations of National Income Estimation in India

"National income is nothing more than a simple linear aggregation of income accruing to the factors of production supplied by the normal residents of the country in question." Thus, while making an estimate of national income millions of economic quantities have to be added up. For this purpose, some basic judgements and social criteria based on the mores and traditions of a society are to be kept in mind. "Incidentally, in the literature on the System of Material Production (SMP) used to be employed by the erstwhile centrally-planned economies, the services were divided into two parts —

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material (or productive) and non-material (or unproductive) services. Material or productive services comprised transport and communication and commerce covering wholesale and retail activities, including restaurants. Essentially all other personal and most public services were excluded from the concept of material production in the SMP, whereas in the System of National Accounts (SNA), no such distinction is made and all services are said to render production activities." National Accounts Statistics in India include all services unlike the System of Material Production (SMP) followed in erstwhile socialist countries like Hungary and Soviet Russia. Similar controversy exists regarding the inclusion of Government administrative services. There is a difficult question for an estimator to answer: "which part of the government's general administration is service to business firms, enters into the value of its product and hence should not be counted and which part is service to the people as individuals and consumers and should be counted . . . Likewise, in considering what is consumption in the process of production and what is net product, the estimator merely, follows the judgement of society—which views net product as what is available either for consumption of individuals, personally or collectively or for additions to capital stock."

Besides these conceptual problems, there are a number of limitations of national income estimation which have a particular relevance in India.

(a) **The output of the non-monetised sector :** While calculating national output, the assumption normally made is that the bulk of the commodities and services produced are exchanged for money. India, where agriculture is carried on a subsistence basis, a considerable portion of the output does not come to the market for sale but is either consumed by the producers themselves or is bartered away with other producers in exchange for other goods and services. To ignore this portion of the output in agriculture would reduce the national output considerably. At present, there is no objective method of finding out the total output of food crops and the amount consumed at home. Hence, the difficulty that arises in India is to find out the imputed value of the produce of the non-monetised sector and add it to the value of the monetised sector.

(b) **Non-availability of data about the income of small producers or household enterprises :** Another limitation in India is that a very large number of producers carry on production at a family level, or run household enterprises on a very small scale. Most of these small producers or entrepreneurs are so illiterate that they have either no idea of maintaining accounts or they do not feel the necessity of keeping regular accounts. Commenting on this the National Income Committee wrote : "An element of guess-work, there-fore, invariably enters into the assessment of output, especially in the large sectors of the economy which are dominated by the small producer or the household enterprise."

(c) **Absence of data on income distribution :** The National Accounts Statistics do not generate any data on income distribution of households or persons. For this purpose, instead of making inquiries about household income or related variables, the National Sample Survey Organisation (NSSO) have used data on consumer expenditure and collected through a pilot survey on distribution of income, consumption and savings during 1983-84 in 5 selected states and 4 metropolitan cities. Al-though these surveys were questioned on the basis of the small size of their samples, it was found that household incomes (Y) based on direct enquiries were lower by 30-40 per cent than those derived indirectly as the sum of consumption and saving (C+S). Conceding that the experience was disappointing, the NSSO has suggested full-scale pilot surveys on household income, saving and consumption. There is a strong need to compile data on income distribution so that the spread effects of the growth process on low income households can be properly analysed.

(d) **Unreported illegal income :** Studies about black economy pertaining to India have shown that a significant part of the economy operates as hidden or subterranean economy and the income generated in it goes as unreported income. According to a study by Dr. Arun Kumar, black economy accounted for about 40 percent of total income generated (Gross National Product),in 2000-01. Obviously, national income estimates to that extent are under-estimates. It is also a fact that the size of the black economy has been growing over time and as such the magnitude of error on account of this factor alone has been becoming larger and larger.

Notes

Self-Assessment

1. Choose the correct option:

(*i*) The government of India appointed the national income committee in August,……..

(*a*) 1949 (*b*) 1989

(*c*) 1984 (*d*) None of these.

(*ii*) The final report of the National Committee appeared in

(*a*) 1954 (*b*) 1960

(*c*) 1965 (*d*) None of these.

(*iii*) During the perceptible improvement in growth rate during the

(*a*) Seventies (*b*) Eighties

(*c*) Nineties (*d*) None of these.

(*iv*) The chairman of National Statistical Commission was

(*a*) V.K Rao (*b*) C. Rangrajan

(*c*) Rajesh Shukla (*d*) None of These.

5.3 Summary

- According to the National Income Committee, "A national income estimate measures the volume of commodities and services turned out during a given period, counted without duplication." Thus, a total of national income measures the flow of goods and services in an economy. National Income is a flow and not a stock. As contrasted with national wealth which measures the stock of commodities held by the nationals of a country at a point of time, national income measures the productive power of an economy in a given period to turn out goods and services for the satisfaction of human wants.
- Several estimates of national income were prepared in the British period. Notable among the estimators were : Dadabhai Naoroji (1868), William Digby (1899), Findlay Shirras (1911, 1922 and 1931), Shah and Khambatta (1921), V.K.R.V. Rao (1925-29 and 1931-32) and R.C. Desai (1931-40).
- Soon after Independence, the Government of India appointed the National Income Committee in August. 1949, so as to compile authoritative estimates of national income. The Committee consisted of Professor P.C. Mahalanobis. Professor D.R. Gadgil and Professor V.K.R.V. Rao. The final report of the National Income Committee appeared in 1954.
- The Central Statistical Organisation (CSO) has revised the existing series of national accounts with 1993-94 as the base year with a new series with 1999-00 as the base year. Besides shifting the base year, the New Series incorporates improvements in terms of coverage and to the extent possible, the recommendations of the United Nations System of National Accounts, 1993 (1993 UNSNA) have been incorporated.
- In order to understand the impact of planning in India, a study of trends in national income is necessary. If would be, therefore, better if the trend in national income and changes in the structure of national product are analysed over the last 57 years of planning.
- Figures of national and per capita income are collected at current prices. But figures of national income at current prices do not give a correct picture about the growth of the economy, for the increase in national income at current prices reflects the combined influence of two factors viz., (a) the increase in the production of real goods and services and (b) the rise in prices.
- There was a very perceptible improvement in growth rate during the eighties. During 1980-81 and 1990-91, net national product showed a growth rate of 5.2 per cent per annum and the per capita NNP (at 1999-00 prices) improved on an average by 3.0 per cent per annum.
- The process of economic development involves a rapid expansion of public administration especially a rapid expansion of economic and welfare services such as education, health and

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family welfare. Taking community and personal services a group, there was an improvement in its share from 10.6 percent in 1950-51 to 13.4 percent in 2010-11.

- The theory of economic growth also supports the structural change in the composition of national product. The distribution of gross domestic product in developed countries indicates a much higher share of industry and services and a relatively lower share for agriculture. The disparity in per capita incomes between developed and underdeveloped countries is largely a reflection of the disparity in the structure of their economies.
- National Accounts Statistics (1999) and (2006) and give a break-up of the net domestic product for the rural and urban sectors separately. The data reveal that as against 62.4 per cent of the total NDP being contributed by the rural sector in 1970-71, its share in NDP declined to 54.3 per cent in 1993-94.
- "National income is nothing more than a simple linear aggregation of income accruing to the factors of production supplied by the normal residents of the country in question." Thus, while making an estimate , of national income millions of economic quantities have to be added up.
- The National Statistical Commission headed by Mr. C Rangarajan, former Governor of the Reserve Bank of India has drawn attention to major gaps in the Indian Statistical System due to the absence of certain key datasets at the state level. These include cost of cultivation studies for most crops, Index of Industrial Production (IIP), Wholesale Price Index (WPI) and Consumer Price Index (CPI).
- The Commission noted that the states of Karnataka and Rajasthan have recently constituted expert groups to develop State Domestic Product and to bring about improvement in the compilation of these estimates. Other states should also undertake similar exercises.

5.4 Key-Words

1. Disparity : The condition or fact of being unequal, as in age, rank, or degree; difference
2. Inflation : In economics, inflation is a rise in the general level of prices of goods and services in an economy over a period of time. When the general price level rises, each unit of currency buys fewer goods and services. Consequently, inflation also reflects an erosion in the purchasing power of money - a loss of real value in the internal medium of exchange and unit of account in the economy.

5.5 Review Questions

1. What do you mean by national income ? How it estimate.
2. Examine the Trends in National Income Growth and Structure.
3. Describe the limitations National Income Estimation in India.
4. Explain the reason for the slow rate of Growth of the Indian Economy.
5. Discuss the trends and structure of national income.

Answers: Self-Assessment

1. (*i*) (*a*) (*ii*) (*a*) (*iii*) (*b*) (*iv*) (*c*)

5.6 Further Readings

Books

1. The Indian Economy; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001.
2. Indian Economy; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055.

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Unit 6: Critique of Indian Economy Policies— Pre and Post Reforms

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6.2 Need for Economic Policy in India
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Objectives

After reading this Unit students will be able to:

- Explain the Critique of Indian Economy Policies — Pre and Post Reforms.
- Discuss need and the Process of Economic Policy.

Introduction

The economic reforms in India were ushered in 1991 before which it was a highly regulated economy. At that time, a number of sanctions had to be acquired before starting a unit of production in any industry which may take over three years. It gave way to corruption in which the principal beneficiary was the bureaucracy. Earlier, the country relied heavily on the public sector which was considered as the engine of development. However, over a period of four decades, the private sector did acquire sufficient resources to undertake heavy investment and also wanted to enter areas hitherto reserved for the public sector. There was disenchantment with the functioning of the public sector which was plagued by inefficiencies and high cost of operation. Moreover, soon after independence, to help the growth of industry, the infant industry argument was used to protect Indian industry in hitherto unknown and newly emerging areas by using various trade barriers. This resulted in the growth of sheltered markets for Indian businessmen. Therefore, every time, the Government thought of reducing trade barriers, the damage to national industrial interest's argument was used to stall them. Finally, it was in 1991 that the Government under pressure from World Bank/IMF was forced to reduce trade barriers. The objective was to expose Indian industry to face world competition. The main aim of economic reforms was to enter an era of globalisation where there was free flow of goods and services, free flow of technology, free flow of capital, and free movement of human beings. This means economic reforms needed integrating the Indian economy with world economy. Therefore, the emphasis in economic reforms was shifted to export-led growth strategy, instead of depending on import-substitution strategy of growth. In this way, economic reforms constitute three fundamental policy changes, namely, Liberalisation, Privatisation and Globalisation (LPG) model of development in India.

6.1 Critique of Indian Economy Policies — Pre and Post Reforms

The Industrial Policy, 1991 provided the rationale of economic reforms. The major objectives of the policy are given below :

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(i) To free the Indian industrial economy from the unnecessary bureaucratic procedures;

(ii) To liberalise the Indian economy in order to integrate it with the world economy;

(iii) To free the domestic entrepreneur from the restrictions of Monopolies and Restrictive Trade Practices (MRTP) Act and attract direct foreign investment; and

(iv) Disinvestment of public sector enterprises which were incurring losses.

Liberalisation of the Economy

Removal of Industrial Licensing : Under liberalisation, all industrial licensing was abolished. However, 18 industries sector were to continue under the reservation list which was related to security and strategic concerns, social reasons, hazardous chemicals and over-riding environmental reasons and items of elitist consumption industries reserved for the small scale. Now, only five industries need industrial licensing.

Dereservation of SSI Items : Now, even the Small-Scale Industry (SSI) has been forced to face both domestic and international competition. It is true to begin with the Government decided to continue reservation of items under the SSI sector. Subsequently, it withdrew reservation in several SSI items every year.

Withdrawing MRTP Restrictions : The process freed big business houses to undertake expansion and establishment of new undertakings and to undertake mergers, amalgamations and takeovers. The thrust of policy in future would be more on controlling unfair or restrictive business practices in the country.

Privatisation of the Economy : There are two ways to view privatisation. Broadly, it means the enlargement of the scope of the private sector in the growth of the economy. However, in a narrow sense, it means the induction of private ownership in a public sector undertaking. After 1991, the private sector is considered as the engine of growth. The new environment has assigned an increasing role for the private sector and restricted role of public sector. The scope of the public sector will now be narrowed down to providing infrastructure such railways, electricity, roads and in providing social infrastructure in health and education. Privatisation in economic sphere may include the following :

(a) Total Denationalisation : It means complete transfer of ownership of a public enterprise to private hands.

(b) Joint Venture : It is the partial induction of private ownership from 25 to 50% or even more in a public sector enterprise. There are three kinds of proposals as given below :

(i) The private sector to have 26% ownership and workers also to be included to the extent of 5% equity to be transferred to them.

(ii) 51% equity and sells with the Government and 49% equity to the private sector.

(iii) Private sector to be transferred 74% of the equity, while the Government to retain 26% with Government veto power.

The main objective of the transfer of ownership is that it will enable the joint venture to improve productivity of assets and convert them into profitable concerns. In the first variant, doubts have been raised as if it will be able to achieve the desired results since the Government continues its domination with 74% ownership. In the second variant, there is substantial transfer of ownership (49%) of the share to the private sector. Here, the private sector, being a big partner, is likely to acquire a significant role in the decision-making process. In the third variant, the basic structure of enterprise gets transformed and transfers 74% ownership to the private sector which means that decision-making power in all policy matters is transferred to the private sector. At the same time, the Government has the veto power but it cannot use it frequently. It is the private sector which will occupy a dominant position in the management and operation of the enterprise under the third variant.

(c) Workers' Cooperative : The transfer of ownership of a loss-making concern to the workers is yet another form of privatisation. The reason for the proposal is that workers besides receiving wages for work, would also be entitled to a share in ownership dividend. It is assumed that

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since workers' personal interest is linked to the interest of the enterprise, the workers are likely to work hard to increase productivity so that they can earn more. For example, in Kamani Tubes, Central Jute and Mewar Textiles, Hoist O' Mech and Kolkata Chemicals etc these schemes were introduced. However, this form of privatisation did not assume a significant role in reforms.

(d) Token Privatisation : It is also referred to as 'deficit privatisation' which means the sale of 5% or 10% shares of a profit-making public sector enterprise in the market with the objective of obtaining revenue to reduce budget deficit. Similarly, it has also been called 'disinvestment' as Finance Ministers used to set targets for disinvestment during a year.

Among the above, the most acceptable form of privatisation is the joint venture in which the share of the private sector is kept at either 49% or 74%. However, other supporting measures such as linking wages to productivity, changing promotion policy and changing the organisation culture of the enterprise are significant factors in creating a competitive environment.

Globalisation to Integrate the Indian Economy with the World Economy : The process of integrating the various economies of the world without creating any hindrances in the flow of goods and services, technology, capital and even labour or human capital is called gloalisation. Globalisation has many meanings depending on the context and on the person who is talking about. Though the precise definition of globalisation is still unavailable a few definitions are worth viewing, Guy Brainbant : says that the process of globalisation not only includes opening up of world trade, development of advanced means of communication, internationalisation of financial markets, growing importance of MNCs, population migrations and more generally increased mobility of persons, goods, capital, data and ideas but also infections, diseases and pollution. The term globalisation refers to the integration of economies of the world through uninhibited trade and financial flows, as also through mutual exchange of technology and knowledge. Ideally, it also contains free inter-country movement of labour. In context to India, this implies opening up the economy to foreign direct investment by providing facilities to foreign companies to invest in different fields of economic activity in India, removing constraints and obstacles to the entry of MNCs in India, allowing Indian companies to enter into foreign collaborations and also encouraging them to set up joint ventures abroad; carrying out massive import Liberalisation programmes by switching over from quantitative restrictions to tariffs and import duties, therefore globalisation has been identified with the policy reforms of 1991 in India. In fact, globalisation is an extension of the process of liberalisation in the international domain.

Role of the Public Sector

Redefining the Role of the Public Sector : In order find a solution to the problems of the public sector, the Government adopted a new approach towards it. We can see the main elements of the new approach to be the following :

(i) The Government decided to progressively reduced budgetary support to public enterprises;

(ii) Market discipline for PSUs, competition from the private sector, and disinvestment of part of the equity in selected enterprises;

(iii) To avoid areas where social considerations were not paramount or to invite the private sector where it would be more efficient than PSUs;

(iv) Greater managerial autonomy to enterprises in areas where continued public sector involvement was found appropriate;

(v) Long time sick public enterprises not be allowed to incur heavy losses to the exchequer.

The following measures were taken in the light of the new approach :

(a) Chronically sick PSUs and unlikely to be redeemed referred to the Board for Industrial and Financial Reconstruction (BIFR) for rehabilitation or restructuring.

(b) Industries reserved for the public sector was reduced from 17 to 8.

(c) Disinvestment of upto 20% of Government equity in selected public enterprises.

(d) Monitoring was strengthened with primary emphasis on profitability and rate of return to the enterprise.

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6.2 Need for Economic Policy in India

In order to understand the worth of economic policies in India, we should understand its need in India. This would help us to develop a perspective about economic policies and plans of the Government. It may be noted that market system is not perfect, however, and in some situations, our economic well-being can be raised by regulating it or even by side-stepping it altogether. Thus, failure of market is the most important reason that we make economic policy. The competitive markets generate a Pareto optimal solution and an economy that reaches a Pareto optimal solution is believed to be efficient. If one or more of the assumptions of Pareto optimal solution does not hold good, the market system does not give rise to an efficient outcome and the condition is called market failures. Some of the reasons for market failures are under-provision of public goods, choices through time, presence of externalities, existence of common property resources, imperfect competition, asymmetric information, etc. which need some kind of Government intervention. Such intervention is in the form of economic policies and programmes. Moreover, under Pareto optimal solution the distribution may not be equitable one. Thus, state can give a direction to the resource allocation in more efficient manner in the larger public interest through participation in the production activities. Apart from this, the Government can try to shift the economy from one Pareto optimal solution to another by redistributing purchasing power and then allowing people to trade in competitive markets. In India, the framers of the Constitution provided certain Directive Principles to solve the social and economic backwardness of the country. The directive principles says that the state shall ensure to all its citizens the right to an adequate means of livelihood; to ensure a fair distribution of the material resources of the country for the common good; and to distribute the wealth in such a way that the wealth is not concentrated in the hands of a few people. This also calls for an economic policy.

Aims of Economic Policy in India

The economic policy in a developing country like India aims to accelerate the process of economic development. This ensures swift economic development. The concept of economic development is distinct from the concept of economic growth. The objectives of economic development are as follows:

1. **Full Employment :** The economic growth of a country is directly related to the goal of full employment since it yields the individual security, which, in turn, promotes progress, contributes to human dignity and weakens non-functional discrimination in the population.
2. **Better Distribution of Income :** Inequalities in income lead to misallocation and misutilisation of resources. We market mechanism promotes inequalities which lead to a serious breach of social welfare. Thus, economic policy may provide better distribution of income and wealth in country.
3. **Stability of Prices and Rates of Foreign Exchange :** The rate of foreign exchange keeps fluctuating and affects international trade. This causes uncertainty in the economic life for which an economic policy is needed as a powerful instrument to ensure stability in the country.
4. **Human Development and Decent Work :** Education and illiteracy rate, life expectancy, the level of nutrition, consumption of energy per head etc. are involved in the measurement human development. This is an indicator of improvement in the quality of life and is considered an important objective of economic development. Consequently, decent work has emerged another goal of economic development. Work and employment itself, rights at work, security, and representation and dialogue are the four dimensions of decent work.
5. **Maintenance of Fair Competition :** Effective anti-monopoly policy brings competitive conditions which are essential for welfare maximisation.
6. **Avoidance of Cyclical Fluctuations :** Free market economies are characterised by business cycles or trade cycles which an economic policy must overcome.
7. **Rapid Economic Growth :** The main aim of economic policy in a developing economy is to ensure rapid economic growth of the country.

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Instruments of Economic Policy in India

The instruments of economic policy vary according to the types of economic policies. Moreover, there are two types of economic policies : macro and micro-economic policies.

1. **Macro-economic Policies :** The big aggregative macro variables, such as employment, national output, general price level, investment, rate of exchange, and saving are dealt in the macro-economic policies.
2. **Micro-economic Policies :** These are sectoral policies which direct and contribute to the growth in the individual sectors of the economy.

1. **Macro-economic Policies :** These policies include the whole spectrum of economic activity where the state has to employ different weapons to achieve the targeted goals. However, these different weapons cannot be seen in isolation.

   The main instruments of macro-economic policy are given below :

   (i) Fiscal Policy : It is among the main instruments and is also called the budgetary policy. It operates through the budgetary operations wherein public revenue (taxes) and public expenditure form the core constituents of budget. In addition to the taxes of different type Governments can and do raise large sums of money by way of borrowings. Subsidies, economic and social sector, etc. are the main items on the expenditure side. The items whether on the revenue side and the expenditure side have the potential to influence the course of economic activity.

   (ii) Monetary Policy : The volume and price of money in an economy is dealt by the monetary policy.

   Both excess and inadequate supply money in the economy is bad. An inadequate quantity of money may fail to provide the required liquidity for the growing volume of transactions and an excessive supply of money may prove inflationary.

   (iii) Commercial Policy : Government's attitude towards the external sector of the economy is defined by the commercial policy. It is the policy towards investment by foreign capital in the host country, policy towards inflows and outflows of foreign exchange, goods and services. There may be a total open-door policy or restrictive or a mild protection in the economy.

2. **Micro-economic Policies :** The micro-economic policies refer to individual sectors like agriculture, industry, and services of different types. Thus, the state may permit and promote certain lines of activity in agriculture, industry and services. At same time, the state may also prohibit and discourage certain lines of action. The micro-economic policies may have instruments such as export control, import control, industrial licensing, quota-permit system, competition or anti-monopoly policy, policy of buffer stocks, procurement policy and policy of minimum support prices among others.

10.3 Process of Economic Policy Formulation

People of different inclination and interest are involved in the process of formulation of economic policy in India. First, legislatures as political institutions are mainly responsible for policy-making. In the India, the political decision-making is supreme. The Government constitutes a committee or a task-force to generate policy options, makes 'necessary political changes' in those recommendations, and, then, announces its decision at appropriate forums either in the form of an executive order or a legislative resolution. The character of political system plays a crucial role in identifying and prioritising problems. Gradually, an environment of 'more consultative and responsive' process of policy formulation has evolve in India. Today, political parties are speaking about creating 'village business hubs'. The role of mass-media and non-governmental organisations advocating new policy options got acceptance in policy-making process. The National Advisory Council (NAC) is an example of widening of consultative process. It consists of non-governmental activists and headed by chairperson

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of the ruling coalition. However, the task of detailing the policy documents still lies with the bodies consisting of specialists and bureaucrats within administration some of which are given below :

Planning Commission of India : The Planning Commission is an institution in the Government of India, which formulates India's Five-Year Plans, among other functions. After India gained independence, a formal model of planning was adopted, and the planning commission, reporting directly to the Prime Minister of India was established. Accordingly, the Planning Commission was set up on 15 March 1950, with Prime Minister Jawaharlal Nehru as the Chairman. Planning Commission though is a non statutory as well extra constitutional body, i.e. has been brought by an executive order. The Commission has the responsibility of making assessment of all resources of the country, augmenting deficient resources, formulating plans for the most effective and balanced utilisation of resources and determining priorities for the country.

Disappointing Outcomes

India is a democratic country where the economic policies of local and national Governments set the direction and parameters for the formulation of laws, Governmental programmes and budgets. When the policy is finalised and programmes are launched, the role of bureaucracy becomes significant as it is the implementing agency. There are various reasons due to which the outcomes of policies enunciated by the Government were invariably disappointing. For instance, at formulation stage, the political interests get precedence over economic reasoning. Moreover, the failure to articulate precise and operational goals, objectives, procedures, and plans leaves enough scope for task ambiguity for implementing agencies in the country. Sometimes, the policy-makers have poor information on the effort the bureaucracy is making and have no mechanism to monitor performance of this agency. Consequently, there is under-achievement of the policy goals. Moreover, the large structure of bureaucracy also acts as a hurdle where there is enough scope for buck passing. Within administration, there is no proper system of reward for extra efforts and/or penalty for non-performance. In addition to all this, the multiplicity of similar type of schemes is another important reason responsible for failure of schemes. Thus, similar kinds of benefits compete to reach to same segment of beneficiaries and success of one programme leads other programmes to failure. For all this, the policy-makers have to develop tools and technique to check performance and suitability of implementing agencies. The 'deviations' should be easily and instantly observed. Finally, technical expertise of politicians on economic issues should be enhanced.

Critique of Economic Reforms

Liberalisation, privatisation and globalisation are means to accelerate growth process. The aims of economic development have been defined in the First and the Second Five-year Plan itself. The major aims are as follows :

(i) GDP growth – 7-8% per annum;

(ii) Increasing the employment and striving for full employment;

(iii) Reduction of poverty;

(iv) Promotion of equity or distributive justice;

(v) Reduction of regional disparities; and

(vi) Human development in terms of health and education to be improved.

Below is a critique of economic reforms based on the success of economic reforms in achieving these goals of the country.

Here, the actual growth rate achieved during the reform period, its effect on balance of trade and balance of payments, industrial growth, foreign investment, economic and social infrastructure, employment and poverty reduction, labour, agriculture, and its effect on in reducing regional disparities between states have been discussed.

GDP Growth, Employment and Poverty : The reform process, say the advocates of reform, has the potential of accelerating economic growth. However, if we compare the annual average growth rate during the pre-reform period (1980-81 to 1990-91) which was of the order of 5.6% per annum, then

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the post-reform 12-year period (1990-91 to 2002-03) also suggests an average growth rate of 5.5%. Thus, the claim of the advocates of reforms is not borne out by facts. It means the reform process has yet to establish its distinct superiority over the pre-reform period in the country.

Economic Reforms and Reduction of Poverty : According to Dr. S.P. Gupta, former member, Planning Commission, the poverty reduction over 1983 to 1990-91 was around 3.1% per annum, but it reversed to 1% in the 1990s (1990-91 and 1997). However, the GDP growth in India between 1983 to 1990-91 was around 5.6 % and between 1990-91 and 1997, this is expected to go beyond 5.7%. In this way, Dr. Gupta, showed the pro-elitist bias of economic reforms. Dr. Gaurav Datt of the World Bank has also drawn similar conclusions as given below :

1. In the urban sector, index of poverty declined at the annual average rate of 2.2% during 1973-74 and 1990-91 and the same trend is continued in the post-reform period (1990-91 to 1996-97).
2. In the rural sector, headcount index of poverty declined at the annual rate of 2.7% for the period 1973-74 and 1990-91 but the rate of decline is not significantly different from zero since then.
3. In both rural and urban poverty rates, there was a marked decline in 1973-74 with no such comparison later.
4. The march of poverty reduction in the process of growth continues in the urban sector but rural poverty was choked off by lack of rural growth in the country.

According to Dr. Gaurav Datt, stagnation in rural growth is the basic cause of slowdown in poverty reduction.

GDP Growth, Employment Growth and Poverty : Although GDP growth during the 1990s (especially after 1993-94) was quite high, it did not result in a corresponding decline in poverty. This was because of slow down of employment growth. The total employment increased from 3,026 lakhs in 1983 to about 3,568 lakhs in 1990-91 and then rose further to 3,829 lakhs in 1997-98. The rate of growth of employment works out to be 2.39% per annum during 1983 and 1990-91. So far as employment is concerned, a very disappointing situation arose in the postreform period (1990-91 to 1997-98). During this period, the growth rate of employment sharply declined to a mere 1.0% per annum. The reform process concentrated at the corporate yet the growth rate of employment in organised sector was simply 0.6% which was just one-third of the growth of employment witnessed in the pre-reform period. In the unorganised sector, the growth rate of employment which was of the order of 2.41 per cent during the pre-reform period (1983 to 1990-91), also declined to 1.1 per cent in the post-reform period. Thus, the trickle down effects of growth did not benefit the poor. According to Dr S.P. Gupta, high growth in employment in India has almost always been associated with some reduction in poverty. In the 1990s, a low growth of employment is seen to be associated with an increase in poverty in the country.

Economic Reforms and Industrial Growth : Among the reforms, industrial licensing was abolished in all but 15 industries. As a result, the reform process was able to dismantle the system of industrial licensing in order to accelerate industrial production growth. However, we don't see any sharp acceleration of industrial production. The main reason for decrease in the growth of Index of Industrial Production (IIP) was a sharp decline in electricity generation from 9.0% during the pre-reform period to 5.7% in the post-reform period. At the same time, in mining and quarrying, the index of production slumped from 8.0% to 3.8%. Thus, although the wide-ranging industrial reforms were aimed at boosting industrial growth, but the ground reality as revealed by the data only points to the failure of the reform process. Moreover, the failure was more pronounced in basic and capital goods sectors as also in consumer durables in the economy.

Performance of Public Sector Enterprises : In the PSUs, gross profit as a%age of capital employed was 11.61% in 1993-94, it improved to 15.88 per cent in 1995. This further improved to 17.5% in 2002-03. This type of trend was noticed in net profit which improved from 2.84% in 1993-94 to 7.7% in 2003-04. It shows an improvement in the performance of Central Government Enterprises. Thus, it is not considered desirable to undertake disinvestment of CPSUs. It would be far more rewarding if the Government gave them greater autonomy to undertake business decisions.

Economic Reforms, India's Foreign Trade and Balance of Payments : Boosting exports to improve India's balance of trade position has been one of the major objectives of india's economic reforms.

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Thus, during the five-year period (1990-91 to 1995-96), exports increased from $18,477 million in 1990-91 to $32,311 million in 1995-96, indicating a growth rate of 11.8%. Similarly, imports grew from $27,194 million in 1990-91 to $43,670 million in 1995-96, indicating a growth rate of 9.3%. It may noted that balance of payments was adverse to the extent of an annual average of $3,028 million and the situation worsened during 1996-97 and 2000-01. at the same time, trade balance was unfavourable to the extent of $15,156 million but India was able to get a favourable net invisibles balance of $10,667 million. During the period, the annual growth of exports was of the order of 6.3 per cent. However, the situation took a turn during the three-year period (2001-02 to 2003-04) and annual average growth of exports was 12.9% and that of imports was 10.5%. India had a positive balance on current account of the annual average of $5,896 million. A liberal import policy, removal of all quantitative restrictions and reduction of import tariffs has resulted, in a deepening of adverse trade deficit. It means that during the 13-year period of economic reforms, India was able to increase her exports from $18.26 billion in 1991-92 to $79.59 billion in 2004-05, but as against them, imports had shot up from $21.06 billion in 1991-92 to $106.12 billion in 2004-05. Obviously, foreigners have been able to penetrate the Indian market much more than India has been able to extend her reach to foreign markets. But, India has gained on account of net invisibles and the positive balance of net invisibles has continued its upward trend. At present, there is a sharp increase in net software exports rising to $11.75 billion in 2003-04.

Economic Reforms and Foreign Investment Inflows : Foreign investment helps to increase capital formation of the economy without creating foreign debt. Thus, raising it was a major objective of economic reforms. Foreign investment flows take two forms -foreign direct investment and portfolio investment. During the 13-year period (1991-92 to 2003-04), out of a total foreign investment of $70.98 billion, foreign direct investment accounted for $35.35 billion (49.8%) and portfolio investment was $35.63 billion (51.2%). However, China has been able to attract a much higher level of foreign investment than India. Moreover, the gap between actual flows and approvals is another problem in India. There is bound to be a gap between actual flows and approvals because it does take time to actualise a promise, but the gap is too wide in the case of India. Therefore, it must be bridged and taken care of.

Economic Reforms and Infrastructure Growth : The base year of infrastructure data for post-reform period (1993-94 to 2003-04) is 1993-94. Thus, the growth rates are not strictly comparable with the pre-reform period. In case of saleable steel and cement, growth rates in the post-reform period were higher than in the pre-reform period. Similarly, for steel, growth rate during 1993-94 to 2002-03 was 9.5% as against only 4.9% in the 1980s. Moreover, for cement, growth rate in the post-reform period was 8.2% as against 4.0% in the prereform period. In the post-reform period, the withdrawal of state control in pricing carried out in the 1980s was responsible for the uptrend. At the same time, we find that other infrastructure industries like electricity, coal and petroleum showed lower growth rates in the post-reform period than in the pre-reform period. Similarly, the sharpest decline was noticed in petroleum from 12.2% in the eighties to merely 2.2% in the post-reform period. It may be noted that the much trumpeted claim that foreign private investment could boost infrastructure growth could not be realized.

Economic Reforms and Reduction of Regional Disparities : The objective of development must include reduction of regional disparities. As such, government has been supporting the backward states with higher locations. The reform is now emphasising the use of market forces to attract Investments and it has been observed that the relatively developed regions are able to attract more resources. Thus, the issue of reducing regional disparities is sidelined. Looking at the data, we find that NSDP in forward states indicated a growth rate 6.0% per annum during the period 1990-91 to 2000-01, but as against them, it grew in backward states at merely 1.4%. Thus, the period of economic reforms has resulted in increasing regional disparities. It was found that approval of investment proposals and grant of financial assistance helped the forward states to further accelerate growth.

Economic Reforms and Human Development : Economic reforms should step up investment in education and health infrastructure for the progress of human development. There are examples of Kerala and Tamil Nadu which have achieved higher levels of human development even with relatively lower levels of economic development, yet, by and large, better levels of per capita NSDP are associated with higher levels of human development in terms of education and health. It may be noted that

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most of the backward states have poor record in health indicators like infant mortality, birth and death rates. However, among the forward states, Haryana indicates a poor record in terms of infant mortality and birth rates, though it enjoys a third rank in per capita NSDP. Moreover, among the backward states Bihar, Uttar Pradesh and Rajasthan have very poor record in literacy, particularly female literacy. At the same time, the forward states—Haryana, Gujarat and Andhra Pradesh have a very poor record in female literacy *per se*.

Self-Assessment

1. Choose the correct option

(*i*) Given that the consumer price index for each of three years is:

Year 1 = cpi = 100

Year 2 = cpi = 180

Year 3 = cpi = 198

The inflation rate for year 3 is:

(*a*) 198% (*b*) 18% (*c*) 9%

(*d*) 10% (*e*) cannot be calculated with the data given

(*ii*) If the interest rate offered to depositors by banks in Year 1 is 7% and the banks expected the 3% inflation that occurred, the banks would experience:

(*a*) A disappointing cost for deposits of 7%

(*b*) A disappointing cost for deposits of 4%

(*c*) An expected nominal cost for deposits of 4%

(*d*) An expected real cost for deposits of 3%

(*f*) An expected real cost for deposits of 4%

(*iii*) The purchasing power of the dollar will:

(*a*) increase if there is unanticipated inflation.

(*b*) increase if there is unanticipated inflation but not if there is expected inflation.

(*c*) decrease if there is unanticipated inflation but not if there is expected inflation

(*d*) decrease if there is unanticipated inflation or expected inflation

(*e*) increase if there is anticipated inflation and decrease if there is unanticipated inflation

(*iv*) When rational consumers expect inflation to occur, they are more likely to

(*a*) Buy expensive goods sooner

(*b*) Postpone the purchase of expensive goods.

(*c*) Hoard dollars.

(*d*) Invest in newly issued fixed rate bonds that have not accounted for the expected inflation.

(*e*) Adapt consuming habits that will discourage inflation.

(*v*) Which of the following entities is most likely to benefit by unexpected inflation?

(*a*) A bank that has substantial loans out.

(*b*) A worker who has a 5 year contract without a cola adjustment.

(*c*) A government that has substantial debt.

(*d*) A retired worker on a fixed income

(*e*) A homeowner with an adjustable rate mortgage.

6.4 Summary

- The main aim of economic reforms was to enter an era of globalisation where there was free flow of goods and services, free flow of technology, free flow of capital, and free movement of human beings. This means economic reforms needed integrating the Indian economy with

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world economy. Therefore, the emphasis in economic reforms was shifted to export-led growth strategy, instead of depending on import-substitution strategy of growth. In this way, economic reforms constitute three fundamental policy changes, namely, Liberalisation, Privatisation and Globalisation (LPG) model of development in India.

- The process of integrating the various economies of the world without creating any hindrances in the flow of goods and services, technology, capital and even labour or human capital is called gloalisation. Globalisation has many meanings depending on the context and on the person who is talking about. Though the precise definition of globalisation is still unavailable a few definitions are worth viewing, Guy Brainbant : says that the process of globalisation not only includes opening up of world trade, development of advanced means of communication, internationalisation of financial markets, growing importance of MNCs, population migrations and more generally increased mobility of persons, goods, capital, data and ideas but also infections, diseases and pollution. The term globalisation refers to the integration of economies of the world through uninhibited trade and financial flows, as also through mutual exchange of technology and knowledge.
- In order to understand the worth of economic policies in India, we should understand its need in India. This would help us to develop a perspective about economic policies and plans of the Government. It may be noted that market system is not perfect, however, and in some situations, our economic well-being can be raised by regulating it or even by side-stepping it altogether. Thus, failure of market is the most important reason that we make economic policy.
- The economic policy in a developing country like India aims to accelerate the process of economic development. This ensures swift economic development. The concept of economic development is distinct from the concept of economic growth.
- People of different inclination and interest are involved in the process of formulation of economic policy in India. First, legislatures as political institutions are mainly responsible for policy-making. In the India, the political decision-making is supreme. The Government constitutes a committee or a task-force to generate policy options, makes 'necessary political changes' in those recommendations, and, then, announces its decision at appropriate forums either in the form of an executive order or a legislative resolution.
- The reform process, say the advocates of reform, has the potential of accelerating economic growth. However, if we compare the annual average growth rate during the pre-reform period (1980-81 to 1990-91) which was of the order of 5.6% per annum, then the post-reform 12-year period (1990-91 to 2002-03) also suggests an average growth rate of 5.5%. Thus, the claim of the advocates of reforms is not borne out by facts. It means the reform process has yet to establish its distinct superiority over the pre-reform period in the country.
- Among the reforms, industrial licensing was abolished in all but 15 industries. As a result, the reform process was able to dismantle the system of industrial licensing in order to accelerate industrial production growth. However, we don't see any sharp acceleration of industrial production. The main reason for decrease in the growth of Index of Industrial Production (IIP) was a sharp decline in electricity generation from 9.0% during the pre-reform period to 5.7% in the post-reform period.
- Economic reforms should step up investment in education and health infrastructure for the progress of human development. There are examples of Kerala and Tamil Nadu which have achieved higher levels of human development even with relatively lower levels of economic development, yet, by and large, better levels of per capita NSDP are associated with higher levels of human development in terms of education and health. It may be noted that most of the backward states have poor record in health indicators like infant mortality, birth and death rates.

6.5 Key-Words

1. Hyperinflation : It is the most extreme inflation phenomenon, with yearly price increases of three-digits percentage points and an explosive acceleration.

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2. Moderate inflation	:	It can be differently defined around the world, given the different inflation histories. As an indication only, one could consider an inflation as moderate when it ranges from 5% to 25-30%. For some countries, the higher part of this range is already "high inflation".
3. Low inflation	:	It can be characterized from 1-2% to 5%. Around zero there is no inflation (price stability). Below zero, a country faces deflation.
4. Hyperinflation	:	It is the most extreme inflation phenomenon, with yearly price increases of three-digits percentage points and an explosive acceleration.
5. Extremely high inflation	:	It could range anywhere between 50% and 100%. High inflation is a situation of price increase of, say, 30%-50% a year. Both kinds can be stable or dangerously accelerate to enter in an hyperinflation condition.
6. Deflation	:	In economics, deflation is a decrease in the general price level of goods and services. Deflation occurs when the inflation rate falls below 0% (a negative inflation rate). This should not be confused with disinflation, a slow-down in the inflation rate (i.e. when inflation declines to lower levels). Inflation reduces the real value of money over time; conversely, deflation increases the real value of money - the currency of a national or regional economy. This allows one to buy more goods with the same amount of money over time.

6.6 Review Questions

1. Discuss the role of Public Sector.
2. Why is there a need for economic policy? Explain.
3. What do you mean by pre an post reforms
4. Critically examine the Indian Economy Policies.

Answers: Self-Assessment

1. (*i*) (*e*) (*ii*) (*e*) (*iii*) (*d*)
   (*iv*) (*d*) (*v*) (*c*)

6.7 Further Readings

Books

1. Indian Economy; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055.
2. The Indian Economy; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001.

Unit 7: Poverty: Concept, Cause and Government Policies

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Objectives

After reading this Unit students will be able to:

- Describe the Concept of Poverty.
- Explain the Causes of Poverty.
- Discuss the need for Redefining the Poverty Line.

Introduction

The Indian planning has expanded and diversified the country's economy considerably. During the 1960s and 1970s, the Gross Domestic Product (GDP) grew at the average annual rate (compound rate) of 3.2%. In 1980s and 1990s, the economy moved to a higher growth path, that is, to 5.8% and 5.7% per annum, respectively. The first half of the first decade of 21st century more or less maintained this momentum of growth. It may be noted that the share of the agricultural sector in total GDP has declined from about 55% to about one fourth and that of the services sector has increased from about 30% to over 50% over the 50 years. This chapter deals with fact as to how much has such economic expansion and diversification led to the socio-economic well-being of the people of the country. The impact is easily discernible as about one-fourth of the Indian population of over a billion is poor and a substantial proportion of labour force remains unemployed. In India, there are gross inequalities in distribution of income which are considered while discussing the level of economic development in the country.

7.1 Poverty: Concept, Causes and Government Policies

Poverty can be defined as a social phenomenon in which a section of the society is unable to fulfil even its basic necessities of life. When a substantial segment of a society is deprived of the minimum level of living and continues at a bare subsistence level, that society is said to be plagued with mass poverty. The countries of the third world exhibit invariably the existence of mass poverty, although pockets of poverty exist even in the developed countries of Europe and America.

Attempts have been made in all societies to define Poverty, but all of them are conditioned by the vision of minimum or good life obtaining in society. For instance, the concept of poverty in the U.S.A.

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would be significantly different from that in India because the average person is able to afford a much higher level of living in the United States. There is an effort in all definitions of poverty to approach the average level of living in a society and as such these definitions reflect the existence of inequalities in a society and the extent to which different societies are prepared to tolerate them. For instance, *in India, the generally accepted definition of poverty emphasises minimum level of living rather than a reasonable level of living*. This attitude is borne out of a realization that it would not be possible to provide even a minimum quantum of basic needs for some decades and, therefore, to talk about a reasonable level of living or good life may appear to be wishful thinking at the present stage. Thus, political considerations enter the definitions of poverty because programmes of alleviating poverty may become prohibitive as the vision of a good life widens. The upshot of the entire argument is that the absolute standard of poverty expressed in terms of minimum requirements of cereals, pulses, milk, vegetables, butter or calorie intake is conditioned by the relative levels of living prevalent in the country. The deprivation of a significant section of the society of minimum basic needs in the face of a luxurious life for the elite classes, makes poverty more glaring.

Two types of standards are common in economic literature : the absolute and the relative. In the absolute standard, minimum physical quantities of cereals, pulses, milk, butter, etc. are determined for a subsistence level and then the price quotations convert into monetary terms the physical quantities. Aggregating all the quantities included, a figure expressing per capita consumer expenditure is determined. The population whose level of income (or expenditure) is below the figure, is considered to be below the poverty line. According to the relative standard, income distribution of the population in different fractile groups is estimated and a comparison of the levels of living of the top 5 to 10 per cent with the bottom 5 to 10 percent of the population reflects the relative standards of poverty. The defect of the latter approach is that it indicates the relative position of different segments of the population in the income hierarchy. Even in affluent societies, such pockets of poverty exist. But for underdeveloped countries, it is the existence of mass poverty that is the cause for concern.

7.2 Economic Reforms and Reduction of Poverty

A natural question arises : what has been the impact of economic reforms initiated since 1991 on "poverty reduction ? Dr. Gaurav Datt of the World Bank in his article "Has Poverty Declined since Economic Reforms ?" has drawn the following conclusions :

1. While there was a marked decline in both rural and urban poverty rates between 1973-74 and 1986-87, there is no sign of anything comparable thereafter.
2. For the rural sector, for the period 1973-74 and 1990-91, headcount index of poverty declined at the annual rate of 2.7 per cent, the rate of decline since then (i.e. in the post-reform period) is not significantly different from zero.
3. For the urban sector, during 1973-74 and 1990-91, head count index of poverty declined at the annual average rate of 2.2 per cent, the same trend is continued in the post-reform period (1990-91 to 1996-97) at the annual average rate of 2.2 per cent.
4. While the urban sector seems to have continued its march of poverty reduction in the process of growth, rural poverty reduction was choked off by lack of rural growth. (Refer table 16).

Dr. Gaurav Datt has identified stagnation in rural growth as the basic cause of slowdown in poverty reduction. This naturally puts a question mark on the very nature of the reform process in terms of rural welfare.

Planning Commission's Estimate of Poverty on the basis of 61st Round of NSS-2004-05

NSSO results on the basis of large sample survey data oh household consumer expenditure (NSS 61st Round) for 2004-05 are the basis of poverty estimates. The data were collected on uniform recall period (URP) using 30-days for all items. The data was also available using 365 days for 5 frequently purchased non-food items namely, clothing, footwear, durable goods, education and institutional medical expenses and 30-days recall period for the remaining items, known as mixed recall period

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(MRP), the Planning Commission, using the Expert Group methodology has estimated poverty in 2004-05 using both the distributions.

1. Poverty estimates based on URP indicate 28.3% of rural population and 25.7% of the urban population was below the poverty line. For the country as a whole, 27.5% of total population was below the poverty line in 2004-05.
2. The corresponding figures obtained from MRP indicate 21.8% in rural areas, 21.7% in urban areas and 21.8% for the country as a whole was in poverty in 2004-05.

The Planning Commission in its Approach to the 11th Five Year Plan (December, 2006) states : "Using the methodology of the Expert Group on Estimation of Proportion and Number of Poor 1993, the percentage of population below the poverty line is provisionally estimated at 27.8% in 2004-05. Thus the average decline in percentage of population below the poverty line over the period 1993 to 2004 is 0.74 percentage points per year, much less than implied by the official 1999-2000 data. Because of the slower pace of reduction in the percentage of the poor, the estimated number of poor is now estimated be approximately 300 million in 2004-05, larger than the official estimate of 1999-2000."

It may be recalled that the official estimate for poverty in 1999-2000 was 26.1% for the country as a whole and 260 million were estimated as poor.

Table 1 provides state level data on poverty ratios during 2004-05. The lowest poverty ratio was 5.4% for Jammu and Kashmir and highest poverty ratio was for Orissa (46.4%). States with poverty ratio of less than 15% were Jammu & Kashmir, Punjab, Haryana, Himachal Pradesh, Delhi and Andhra Pradesh. As against them, states with poverty ratio above 30% were Maharashtra, Uttar Pradesh, Bihar, Jharkhand, Madhya Pradesh Chattisgarh, Uttarakhand and Orissa.

Five States, namely, Uttar Pradesh, Maharashtra Bihar, West Bengal and Orissa accounted for 166 *mm* poor (about 55% of the total poor estimated at million). This shows the high concentration of poor these 5 states.

Table 1 : Poverty Estimates based on URP

	1993-94	2004-05
Rural	37.3	28.3
Urban	32.4	25.7
Total	36.0	27.5

Source : Planning Commision, Press Release March, 2007.

Dev and Ravi's Study on Porverty

S. Mahendra Dev and C. Ravi have also analyse depth the data of the 61st round of NSS (2004-05) and compared it with the period 1983-1993. Major finding of are study are :

1. The study has estimated the 'very poor' defined 'as those who are below 75 percent of poverty line. There was a decline in the proportion of the very poor from 15.5% in 1993-94 to 10.3% in 2004-05. This implies the very poor accounted for 115 million among the total poor reckoned at about 316 million. Obviously, the share of hard core or chronic poor is quite high, around 37 percent of the total poor.
2. Data provided in Table 16 & 17 reveals that poverty continued to decline from 44.9% in 1983 to 36.0% in 1993 and further to 28.3% in 2004-05. This phenomenon was also observed in both rural and urban areas. However, it was noted that total poverty declined at the rate of 0.85 percentage points in the pre-reform period (1983-93), while the corresponding figure for the post-reform period was 0.70 percentage points per annum. From this, it can be inferred that the rate of decline in total poverty was slower in the post-reform period than in the pre-reform period. The same pattern was observed in the rural as well as , urban areas.

This implies that though the GDP growth was higher in the post-reform period, yet it failed to impact poverty reduction rate significantly and a result, a higher rate of poverty reduction than observed in the pre-reform as normally expected, did not take place.

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7.3 Need for Redefining Poverty Line

The debate about redefining poverty has two schools of thought. Among the first school of thought are those economists who are of the view that attempts at upgrading poverty line from time to time have followed a wrong methodology which has resulted in developing a false notion that reduction of poverty is going at a fairly good pace and that by the year 2006-07, as targeted by the Tenth-Plan, India would be able to reduce poverty to a level of 19.34 percent for the country as whole and this implies the total number of poor at end of 2006-07 will be 220 million - about 170 million in the rural areas and 50 million in the urban areas. The Tenth Plan Approach Paper "mandated reduction in the poverty rate by 5 percentage points during the Tenth Plan and another 10 percentage points during the Eleventh Plan." This will still leave more than 11 percent of population, or about 130 million people, below the poverty line in 2012." Professor Utsa Patnaik has contested the methodology adopted for deriving these estimates. A second school of thought includes a group of economists who argue for redefining the poverty line. Mohan Guruswamy & R. S. Abraham have raised the question of relative poverty in India since India is expected to be a super-economic power by 2020. It would be desirable to understand the poverty scenario during the last 30 years or so.

Poverty Scenario in India

The absolute level of poverty is estimated by standardizing the minimum physical quantities of cereals, pulses, milk, butter etc. for a subsistence level and then multiplying the physical quantities by price quotations to arrive at a figure of per capita consumer expenditure. It may be noted that as prescribed by the Indian Council of Medical Research, these physical quantities should lead to the provision of 2,400 calories per capita or the rural areas and 2,100 calories per capita in urban areas. Obviously, the stipulation of per capita consumer expenditure should result in providing the recommended energy intake in the form of Required Daily Allowance (RDA). This procedure was accepted by the Planning Commission in 1969 and poverty line was fixed at ₹ per capita monthly expenditure at 1960-61 prices. Dandekar and Rath used the criterion of ₹ 15 for rural areas and ` 22.5 for urban areas at 1960-61 prices.

Later, the Planning Commission appointed Expert Group under the Chairmanship of Professor Dr Lakdawala which submitted its report in 1993. The Expert Group estimated a monthly expenditure of ₹ 40 for rural and ₹ 57 for urban areas at 1973-74 prices. The Expert Group used the Consumer Price Index for Agricultural Labourers (CPIAL) for rural areas and a simply average of Consumer Price Index for Industrial Worker (CPIIW) and the Consumer Price Index for Non-Manualy Employees (CPINM) for urban areas. This methodology has been used for updating poverty line.

Methodological Issue

Utsa Patnaik on the basis of National Sample Survey data on per capita monthly expenditure and calorie intake per day has challenged the poverty estimates of the Planning Commission. Patnaik criticizes the Planning Commission for only using expenditure group data to arrive at the number of persons below the poverty line, but just glosses over the caloire intake to ensure that the associated energy intake meets the calorie norm as the basic criterion for determing the lever of expenditure are at which this can be ensured. Patnaik mentions :" Thus the current data are being used selectively, with only the distribution of persons by expenditure classes being used, and the associated energy intake part being ignored completely ... For example the official price-index adjusted poverty line for 1999-00 for rural areas was ₹ 328 only and this has been applied to the first and last column of table 21 to read the population below this line which came to 27%. No attention was paid to the fact that at this expenditure a person could access only 1,890 calories, over 500 calories per day below the RDA (Required Daily Allowance). " However, if the norm of 2,400 calories is applied, it is reveled that 74.5 percent of population for rural areas was below the poverty line. Thus, the official method of estimation poor leaves out 47.5 per cent of total population or around 350 million persons who are actually poor.

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Table 2 : Percentage of Poor and Total Number of poor in India Since 1973

Year	Percentage of poor (%)	Number of poor (million)	Average Annual Rate of Decline
1973-74	54.9	321	–0.59
1977-78	51.3	329	0.31
1983	44.5	323	0.31
1987-88	38.9	307	1.25
1993-94	36.0	320	–0.70
1999-00	26.1	260	3.40
2004	23.6	250	0.82

*Based on the estimated population of 2004 and poverty ratio calculated using latest NSS data in 2004.

Source : National Institute of Rural Development (2004) : Rural Development Statistics (2002-03)

An Estimate of the Rural Poor has been made on the basis of official estimates and MPCE (Monthly per Capita Expenditure) providing 2,400 calories. Since the norm of MPCE for 1973-74 was correctly applied, the estimate of poverty by both the methods works out to be 56.4%. But for year 1993-94 and 1999-00, the official estimates were much lower than that based on MPCE providing 2,400 calories.

Utsa Patnaik concludes her critique with the following observation : "Sometime to justify the indirect method, it is argued in an illogical manner that the original consumption norm of 2,400 calories was 'too high'. First, it is not 'too high' because the average intake of those below it works out to less than 1,900 calories which is lower than in any other country in the world except the least developed countries. Second, even if it is accepted for the sake of argument that it is 'too high', it does not justify comparing 1999-00 'poverty' figures which are of all those persons below 1,890 calories intake , to those below 1,970 calories in 1993-94 and below 2,400 calories intake in 1973-74."

Table 3 : Poverty distribution of Persons by Per capita Monthly Expenditure and Calorie intake, 1999-00, All India

Monthly Per capita Expenditure ₹) (1)	Calorie intake per day (2)	Percentage of total persons (3)	Cumulative percentage (4)
Rural			
Below 225	1,383	5.1	5.1
225-255	1,609	5.0	10.1
255-300	1,733	10.1	20.2
300-340	1,868	10.0	30.2
340-380	1,957	10.3	40.5
380-420	2,054	9.7	50.2
420-470	2,173	10.2	60.4
475-525	2,289	9.3	69.7
525-615	2,403	10.3	80.0

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615-775	2,581	9.9	89.9
775-900	2,735	5.0	94.9
900 & more	3,178	5.1	100.0
All	**2,149**	**100.0**	
Urban			
Below 300	1,398	5.0	5.0
300-500	1,654	5.1	10.1
350-425	1,729	9.6	19.7
425-500	1,912	10.1	29.8
500-575	1,968	9.9	39.7
575-665	2,091	10.0	49.7
665-675	2,187	10.1	59.8
675-915	2,297	10.0	69.8
915-1120	2,467	10.0	79.8
1120-1500	2,536	10.1	89.9
1500-1925	2,736	5.0	94.9
1925 & more	2,938	5.1	100.0
All	**2,156**	**100.0**	

Note : Poverty Line ₹ 327.6 for Rural Areasand ₹ 454.1 for Urban Areas

Source : National Sample Survey Organization (1999-00), Report No. 471, *Nutritional Intake in India* for calorie intake data by expenditure groups and Report No. 454, *Household Consumer Expenditure in India* - Key *Results for the distribution of persons*.

Redefining Poverty Line - Basic Needs Approach

Table 4 : Rural Poor and Percent of Rural Population

	1973-74 %	1993-94 %	1999-00 %	MPCE*		
				1973-74	1993-94	1999-03
Applying Official Definition (Those with less than MPCE giving 2400 Calories	56.4	74.5	74.5	49	325	576
Official Estimates	56.4	37.3	27.1	49	206	328
Corresponding Calorie Intake	2400	1970	1890			

Source : Calculated from **NSS Reports on Consumer Expenditure,** 50th *Round* 1993-94 and 55th *Round* 1999-2000.

* MPCE is Monthly Per Capita Expenditure

Note that base year 1973-74 is the only year the official definition was correctly applied ; in all later years, the nutrition norm is diluation.

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Mohan Guruswamy and Ronald Joseph Abrabham of the Centre for Policy Alternatives, New Delhi have highlighted the distinction between poverty and hunger. Guruswamy et.al. state :"Poverty is an economic condition. Hunger is a physical condition that arises out of severe economic condition. While the definition of hunger in terms of calories can remain constant, the definition of poverty is relative to the present levels of general prosperity.... The present official poverty line is based only on calories and hence accounts for little else but the satiation of one's hunger. It would have been more accurate to define this as a *starvation line*, as that is exactly what it is." (Emphasis Added)

The official poverty line should be renamed as 'starvation line' since apart from providing 650 grams of foodgrains per day, it makes very little provision for the other essentials of life, such as nutrition and balanced diet, provision for health, electricity and cooking fuels, clothing and miscellaneous expenditure pertaining to education, shelter and other minimum levels of expenditure to sustain life, such as travelling, washing and stitching of clothes, durable consumer goods, some expenditure on furniture, etc. A realistic and proper definition of poverty line should, therefore, include all the basic needs of human life so as to ensure a minimum level of quality.

Thus, the claim made by the Government that poverty ratio has declined from 54.9 percent in 1973-74 to about 25 percent in 2004 is spurious and gives a false sense of satisfaction to Indian polity. A dynamic concept of poverty line should, therefore, incorporate basic human needs approach and should not limit itself to minimum calorie intake needed for subsistence.

Guruswamy and Abraham have made the following components of basic human needs to arrive at a new poverty line for India which is claimed to be one of the fastest developing economies of the world.

1. **Nutritional Norms and Cost involved :** On the basis of the recommendations of National Institute of Nutrition (NIN) under the aegis of Indian Council Medical Research, it is highly important that balance diet be provided so as the prevent underweight children under age 5. It may be noted that as per *Human Development Report* (2005), 47 per cent child under age 5 are underweight. Similarly, 21 per cent total population is undernourished in 2000-02. It is also be observed that in China, only 10 per cent child are underweight and 11 per cent of total population undernourished during 2000-02. Obviously, India lagging behind China in nutritional status. Guruswamy has made an effort to determine the cost a balanced nutritious diet for an average Indian to be 573 person.
2. **Expenditure on Health :** India spends of 1.3 percent of GDP on the provision of public health, the private expenditure on health is 4.8 percent of in 2002. Since according to the Health Ministry,branch 20 percent of Indian population is covered by healthcare, the poor are forced to take recourse to private sector. The 'Universal Insurance Scheme' which is targeted to meet the needs of the poor to pay annual Rs 365 per person and an individual can get insured all inpatient medical-care upto a sum of ₹ 30,000. The implies that Rs 365 per annum or Rs 30 per month is cost of health expenditure for the poor in India. Guruswarn includes a sum of ₹ 30 per person per month as the legitimate expenditure for obtaining healthcare.
3. **Expenditure on Clothing :** In fact, cloths requirements of children, men and women necessitive different norms for clothing. Similarly, weather connections necessitate different norms for summer and winter. In the estimate prepared by Guruswamy, seasonal requirements have been disregarded for the sake simplicity. The clothing requirements have been calculate at ₹ 207 per person per annum or ₹ 17 per amount.
4. **Energy consumption :** A housing unit with two bedrooms, a kitchen is the basis of Guruswamy calculate energy consumption. It is assumed that house has an electric connection. On the basis of minimum needs approach, each home needs a few basic electric fittings - four bulbs and two fans. It is further assumed the ceiling fans work for 12 hours a day - 8 hours during night and 4 hours during day. On the basis of these minimum requirements, per capita monthly expenditure on electricity has been calculated as ₹ 175 per family. Assuming a norm of 5 members of the this works out to be Rs 35 per month per person.

   The other component of energy consumptions is cooking fuel. National Family Planning Survey (1998-99) shows that at the all- India level nearly 74 percent of the population uses wood, crop

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residues, dung cakes and coal as cooking fules, This proportion is 91 percent for rural areas and 30 per cent for urban areas. But all theses fuels cause indoor pollution and cause such diseases as arbeculosis, asthma, heart diseases and respiratory disorders. But the poor cannot afford LPG which is considered as a clean cooking fuel, as this fuel is the prerogative of the middle class and the affluent sections.

Moreover, state support towards LPG has been using over time but kerosene has been witnessing a education in state support. Kerosene is a more affordable institute for the poor. The monthly per capita expenditure on kerosene has been calculated at ₹ 20 per capita per month. This is based on the assumption that a family gets 10 to 12 litres of kerosene per month on ration cards.

For a family of 5 person, a typical family consumes 2.2 litres per head and it is being sold at a subsidized price of ₹ 9 per litre. Assuming that all families are able to obtain their quota of kerosene on ration cards, the monthly expenditure on kerosene comes to ₹ 20 person.

Thus, the total per capita monthly energy requirements entail an expenditure of ₹ 55 — for electricity assumption ₹ 35 and for cooking fuel ₹ 20.

5. **Miscellaneous Expenditure** includes cost on travel purchase of books and stationery for school going children, expenditure on certain social ceremonies like birth, death or festivals etc, purchase of consumer goods, furniture, fixtures for family needs etc., it is expected that miscellaneous expenditure works out at Rs. 820 per family per month or ` 164 per capita.

These calculations are based on the basic needs approach at minimum levels. The purpose is not to provide only for subsistence, but to move towards a more humane level of life.

Summing up, the minimum costs on the assumption of basic needs approach work out to be ₹ 840 per month or ₹ 4,200 per month per family. [(i) Balanced autritious diet Rs. 573; (ii) Health Insurance Expenditure ₹ 30; (iii) Clothing ₹ 17; (iv) Energy consumption ₹ 55 and (v) Miscellaneous Expenditure ₹ 164.]

On the basis of the holistic approach regarding the poverty line inclusive of basic needs, Mohan Guruswamy has calculated that" 69% of India's population is below the poverty line i.e. over 71 crore persons. This has to be seen against the official figure of 26 per cent persons below the poverty line i.e. nearly 2.65 times. The situation in rural India is appalling with 84% of the rural population below the more holistic poverty line; it is certainly better in urban India at a round 42 per cent".

World Bank on the basis of the international poverty lines at the rate of $1 per day has calculated in its *World Development Report (2005)* that in India for the year 1999-00, people below this poverty line were of the order of 34.7% and if we use the norm of $2 per day, then 80% of he Indian population was below the poverty line.

7.4 Definition of Poverty and Right to Food : Emerging Issues

As noted above different figures are being presented by the Government about poverty. Therefore it is difficult to understand that how many people in India are poor.

Table 5 : Poverty Estimates and Poverty Lines for 1993-94

State	Poverty Line (₹)		Poverty		
	Rural	Urban	Rural	Urban	Total
Andhra Pradesh	244.1	282.0	48.1	35.2	44.6
Arunachal Pradesh	285.1	297.1	60.0	22.6	54.5
Assam	266.3	306.8	54.9	27.7	51.8
Bihar	236.1	266.9	62.3	44.7	60.5
Chhattisgarh	229.1	283.5	55.9	28.1	50.9
Delhi	315.4	320.3	16.2	15.7	15.7

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Goa	316.2	306.0	25.5	14.6	20.8
Gujarat	279.4	320.7	43.1	28.0	37.8
Haryana	294.1	312.1	40.0	24.2	35.6
Himachal Pradesh	272.7	316.0	36.7	13.6	34.6
Jammu & Kashmir	289.1	281.1	32.5	6.9	26.3
Jharkhand	227.7	304.1	65.9	41.8	60.7
Karnataka	266.9	294.8	56.9	34.2	49.5
Kerala	286.5	289.2	33.9	23.9	31.3
Madhya Pradesh	232.5	274.5	49.0	31.8	44.6
Maharashtra	268.6	329.0	59.3	30.3	47.8
Manipur	322.3	366.3	64.4	67.2	65.1
Meghalaya	284.1	393.4	38.0	23.0	35.2
Mizoram	316.5	355.7	16.6	6.3	11.8
Nagaland	381.7	409.6	20.1	21.8	20.4
Orissa	224.2	279.3	63.0	34.5	59.1
Pondicherry	220.3	264.3	28.1	32.4	30.9
Punjab	286.9	342.3	20.3	27.2	22.4
Rajasthan	271.9	300.5	40.8	29.9	38.3
Sikkim	266.6	362.2	33.0	20.4	31.8
Tamilnadu	252.6	288.2	51.0	33.7	44.6
Tripura	275.8	316.6	34.3	25.4	32.9
Uttar Pradesh	244.3	281.3	50.9	38.3	48.4
Uttarakhand	249.5	306.7	36.7	18.7	32.0
West Bengal	235.5	295.2	42.5	31.2	39.4
All India			50.1	31.8	45.3

Note : The estimates of Chhattisgarh. Madhya Pradesh, Bihar, Jharkhand, Uttar Pradesh and Uttaranchal are for state as they exist after bifurcation in 2001. The estimates for 1993-94 have been calculated form the unit data using district and state boundaries of the divided states in 1993-94.

Source : Report of the Expert Group to Review the Methodology for Estimation of Poverty, Planning Commission, Government of India, November, 2009.

Periodically varying definitions of the poverty line tend to complicate the matter further. In the absence of an appropriate definition, efforts to remove poverty cannot be meaningful. In the past various measures have been adopted by the Government to tackle the menace of poverty in the Country. Cheap grain, other foods and kerosene through the PDS, rural and urban employment programs, free education and health facilities, etc., are some key government programmes in this direction. Government has also proposed food security legislation, according to which, for all people living below poverty line, the provision would be made for access to necessary food at affordable prices.

But absence of appropriate definition is coming in way of a judicious poverty elimination programme. Recently Supreme Court has questioned the basis of defining the poverty line according to which only 36 percent of the population is living below poverty line. It may be noted that some time back Expert Group headed by Prof. Suresh D. Tendulkar, had suggested an improved definition for measuring poverty, on the lines of which formula for measuring poverty has also been suggested. The same has also been accepted by the Planning Commission. Before the report of the Expert Group, the government assessment of poverty was that in 2004-05 only 28 percent people were poor and the

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same has dropped to only 20 percent in 2007. According to new definition of poverty, necessary expenditure on health and education has also been included while assessing poverty.

But Supreme Court has questioned even this 'improved definition' of poverty. According to Prof. Tendulkar's definition, a person would be treated as poor, as on 2004-05, if his monthly income is less than Rs. 446.68 in rural areas and Rs. 578.8 in urban areas. Considering the data submitted by the Planning Commission, Supreme Court questioning the methodology, has asked the Planning Commission how a person would be able to consume 2400 cal rural areas and 2100 calories in urban areas than ₹ 20 a day in urban areas and less than ₹ 15 in rural areas. It may be noted that as per the definition of poverty, intake of 2100 calories in areas and 2400 for urban areas has been the drawing the poverty line in India. As per this 56 percent of population was estimated to be below poverty line in 1973-74. Before 1973-74, line was defined in such a way that the estimation poverty line was based on the requisite expenditure attain the desired quantum of calories. But estimation poverty in 1993-94 and 1999-00 were devoid of sense of proportion and statisticians at Plan Commission were able to bring down the number poor by statistical jugglery and change in definite poverty. Critics believe that as per the calorie stand had the price data been properly used poverty figure rural areas would have been 80 percent and in areas it would have been 50 percent.

Table 6 : Population below the Poverty line in Selected Countries

Country	National Poverty Line					International Poverty Line		
	$ per day (2005)*	Survey year	Rural %	Urban %	Total %	Survey year	Population below $ 1 a day	Population below $ 1 a day
Bangladesh	1.03	2000	53.0	36.6	49.8	2000	41.3	84
Brazil	5.92	2002-03	41.0	17.5	21.5	2004	7.5	21.
China	0.57	1998	4.6	< 2	4.6	2004	9.9	34.
Egypt	1.76	1999-00			16.7	1999-00	3.0	43.
India	0.82	2004-05*	28.3	25.7	27.5	2004-05	34.3	80.
Indonesia	1.07	1999	34.3	16.1	27.1	2002	7.5	52.
Mexico	6.32	2004	27.9	11.3	17.6	2004	3.0	11.6
Nepal	0.87	2003-04	34.6	9.6	30.9	2003-04	24.1	68.5
Pakistan	1.67	1998-99	35.9	24.2	32.6	2002	17.0	73.6
Sri Lanka	1.49	1995-96	27.0	15.0	25.0	2002	5.6	41.6

* **Sources :** Poverty line ₹ 356.0 in rural areas and ₹ 538.6 in urban areas (Per capita monthly expenditure, Planning Commission Release. March 2007

For other countries, except India, population below poverty—national and international are taken from World Bank, *World Development Report* (2008)

† Ravillion, Chen and Sangrula (2008); "*Dollar a-day revisted*", *Policy Research Paper 4620, World Bank, Washington D.C.* Planning Commission.

If we accept the data presented by the Plan Commission, we find that a person getting daily in of Rs. 20 or more in urban areas and ₹ 15 or more in areas would not be called poor. If we look at internationally most commonly accepted definition poverty, it is US$ 1.25 a day. If we convert the same rupees, it would amount to ₹58 per day. Though this is lower than what is required for subsisted a definition which gives poverty line with an which is nearly one third of this amount seemsl inappropriate. If Planning Commission's definition poverty itself calls for a minimum consumption of calories in rural areas and 2100 calories in urban and how can this be achieved with less than ₹ 20 an areas and ₹ 15 in rural areas, answer to this question, has been sought by the Supreme Court from

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Some time ago, the government constituted a committee for the unorganized sector under the chairmanship of Arjun Sengupta, which reported that more than 77 percent of the countrymen are managing with less than ₹ 20 a day or less. It is easily understandable that is not possible to meet minimum requirement of a person's food, shelter and clothing with so little. It means that more than 77 percent of the countrymen cannot even meet their basic needs, whereas poverty measured as per the mathematical method gives a figure of merely 36 Per cent. Such varying figures about the number of poor create confusions and make the task of elimination of poverty difficult. Though Tendulkar's report has tried to correct the definition of poverty by including requisite expenditure on education and health, but even that has failed to address to the realities. To make it real poverty

line, government has to take a realistic view of poverty. If the government has to implement right to food earnestly, it must correct its assessment of poverty.

The conclusion emerges from the analysis of poverty line. Firstly, the procedure of upgrading poverty line on the basis of price index needs a review and this would be accompanied by the norm of calorie intake. Secondly, the basis of poverty line was decided four decades ago in 1969. For a developing economy with an aspiration of becoming a super-economic power by 2020, it as all the more necessary to develop a basic needs approach poverty line, instead of a uni-dimensional poverty line based on calorie intake of food primarily which is only a starvation line. This will entail greater effort on the part of the state to take steps so that the of rapid economic growth reach 'aam adami' (common man) to use a phrase of the Congress manisto. Then, it will shake us out of our complacency about poverty in India. We have miles to go before we sleep.

7.5 International Comparison of Poverty

Since the national poverty lines vary sharply from $0.57 a day for China to 32 a day for Mexico, may be noted that China's national poverty line has derived from $0.57 day as against that of India at 82 a day, the Chinese national poverty line at $0.57 a the Chinese figure of population below poverty states the position. This has been sought to be directed by adopting standards of $1 a day and $2 a day the uniform basis of comparison in the international poverty line on the Purchasing Power Parity criterion. It would, therefore, be useful to compare international poverty lines for a better comparison of the relative state below population poverty line in different countries.

Secondly, broadly speaking. $1 a day poverty is based on what may be described as the minimum required in terms of calories per day, which is described in Indian jargon as the 'starvation line', but $2 a day poverty line takes into account besides food, other items as cloth, education, health or other minimum needs for life which is described 'basic needs line'. It may be noted that the World Development Report does not indicate any basis for both the lines used in its explanatory notes. It only mentions: "Population below $1 a day and population below $2 a day are the percentages of population living on less that $ 1.08 a day and $ 2.15 a day at 1993 international prices."But we are treating them as 'starvation line' or 'basic needs poverty line' on the basis of estimation of scholars that 'basic needs poverty line' is approximately double the 'starvation line'.

On the basis of the data provided in table 24 about 10 selected countries, on the basis of $1 a day, the performance of Brazil, China, Egypt, Indonesia and Sri Lanka is far better than that of India, Bangladesh, Nepal and Pakistan. The proportion of population below $1 a day poverty line at 34.4% for 2004-05 is really a very disappointing considering the impact on reduction of poverty programmes by over five decades of development planning. This implies that nearly 381 million persons were living below the poverty line of $1 a day in 2004-05 which is very disturbing. On the basis of $2 a day, 80.4% of our population or about 892 million do not satisfy the basic needs criterion of $2 a day. This is also in conformity with figure of 77% of Indian population who are poor and vulnerable based on consumer expenditure level of 20 per day on the basis of purchasing power parity equivalent to below nearly $2 per day as the criterion in 2004-05 by the National Commission for Enterprises in the Unorganised Sector. Making a strong indictment of the growth process, the Commission mentions : " there is no doubt that this "Shining India" has expanded in the past and is still expanding at a very high rate. But this picture is spoiled by a virtually stagnant consumption expenditure and miserable

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working and living conditions of the 77 percent of out population who are poor and vulnerable... this is the other world which can be characterized as the India of the common people, constituting more than three-fourths of the population (836 million) and consisting of all those whom the growth process has, by and large, by passed."

Recent Revised Estimate of Poverty by the World Bank

Martin Ravallion and Shaohua Chen of the World Bank have updated the World Bank Poverty Line of $ 1.08 per person per day at 1993 Purchasing Power Parity dollars with a new international poverty line of $1.25 per person per day for 2005 based on the new Purchasing Power Parity prices for 2005, replacing those for 1993. As a consequence, 41.8 percent of India's population was below the new international poverty line in 2005. This implies that 461 million persons were living in poverty as per the revised estimate - a huge number indeed.

Food Price Inflation and Increase in Poverty

Food price inflation implies a sharper increase in the prices of food articles relative to that of manufactures and other non-food articles. Recent price trends indicate that while the overall rate of inflation in the Wholesale Price Index (WPI) has dropped to 8.4 percent in November 2008 from its peak of 13 percent in August 2008, but rate of inflation of food articles has gone up from 8.84 percent to 10.43 percent during the same period. However, a poor family in India spends 60-70 percent of its family income on food-related items. Higher food prices will thus impose a greater burden on the poor and may also push more persons below the poverty line. Hence, there is a need to control the increase in prices of food articles such as cereals, fruits and vegetables, eggs etc.

Towards A Solution of The Problem of Poverty

This requires a two-pronged strategy - (i) The expansion of sectors which promise higher labour absorption and (ii) Empowering the poor with education, skill formation and health so that they can enter sectors which require higher competence and provide better remuneration which enable the poor to cross the poverty line, the following strategy can solve the problem of poverty.

1. **Adopt a strategy of pro-poor growth instead of emphasizing liberalization and GDP growth**

   Former Prime Minister Atal Bihari Vajpayee in his Independence Day Message (15th August 2001) candidly stated : "The fruits of liberalization have not adequately reached the poor and the people living in rural areas. Inequalities have increased." It would be, therefore, futile to pursue the failed strategy of liberalization which has a focus on only 8 percent of labour force in the organized sector. The need of the hour is to take care of the 92 percent of labour force engaged in the unorganized sector. Liberalization has driven more and more people from the organized sector to the unorganized sector. There is a need to reverse this process and more and more units in the unorganized sector are enabled to graduate and join the ranks of the organized sector". The government should re-appraise them and give priority removal of unemployment and recognizing the right work' as a basic human right. For this, a new development reconciling GDP growth and employment should be developed.

   In this model, emphasis should be laid on opment of irrigation and watershed development people's participation. Similarly, degraded and lands should be developed through participatory of panchayats. Agricultural co-operatives should strengthened to undertake food processing and KVIC should assigned the task of marketing sector should be helped on the lines suggested. Gupta Study Group. Greater emphasis should be on housing for the poor and Economically Weaker. Rural infrastructure in the form of roads, prove of power in rural areas should be strengthened programme of social infrastructure should be taken.

   Besides, there is a need for promoting sector which is major source self-employment and sorption of casual labour.

2. **Stimulating Agricultural Growth**

   Indian Government has been fixing the targent agricultural growth during the Ninth and the Tenth at 4 percent per annum, but in practice realized the 9th Plan and only 1.7% in the Tenth

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Plan. To idea the causes of sluggish growth of agriculture, it approach a high power Commission under the Chairmanship M S Swaminathan, world renowned agricultural tist. The National Commission on Farmers suggest following 5-point action Plan :

1. Undertake Soil health enhancement through tegrated measures in improving organic and macro-and-micro nutrient.
2. Promote water-harvesting, conservatio and suitable use by-empowering panchayats come 'pani panchayats.' A sustainable harvesting system should be established in fed areas lacking assured irrigation.
3. Keeping in view, the decline in profitability farmer's distress, the Government should duce the rate of interest on crop loans percent.
4. Bridge the growing gap between scientific how and field-level do-how both in production and post-harvest phase of farming. This accomplished by training farmers throughout agency of Krishi Vigyan Kendras (Agriculture Science Centers) in both production and harvest technologies.
5. The gap between what the rural produce and the urban consumer pays should be rowed down, as has been done in the case of by Dr. V. Kurien.

Besides, the National Commission on placing the unfinished agenda in land reform first list of five factors central to the present agrarian states "The first and foremost task of the National on Farmers should be in the area of land reform with reference to tenancy laws, distribution of ceiling surplus land, attention to common property and at wasteland resources and consolidation of holdings.... Giving access to land and homesteads not only reduces poverty but is the best way to bring dignity in the lives of today's excluded." (Quoted by the *Approach Paper of the 11th five Year Plan*, *p.*29).

3. Increasing the productivity and job quality of the unorganized sector

The NDA government appointed 'Special Group on Targeting Ten Million Employment Opportunities', under the chairmanship of Dr. S P Gupta, the then member of the Planning Commission which submitted its report in 2002. The Special Group emphasized a shift in the strategy of development by emphasizing the growth of unorganized sector as the surest method to reduce employment and poverty.

To quote : "The only answer to this situation is to increase productivity and job quality of the unorganized sector. It means that all attempts should be made to implement those policies which will release the basic town constraints and by ensuring a level playing field for this sector.... In the attempt to increase the labour productivity, more emphasis should be on the growth of sector rather than for substituting labour by capital. Further, to improve the job quality and its security, major changes in legislation will be needed regarding basic social security measures, working conditions, minimum wages and protection of labour interests."

There is a need to immediately implement the recommendations of the special group so that reduction the rate of poverty reduction with higher GDP growth is halted and a reverse trend is generated.

Empowering the poor through provision of housing

There is a need to remove the shortage of permanent houses in the rural as well as urban areas. Not only that, an effort has to be made to provide the basic amenities of life such as drinking water, toilets and electricity. The country must launch a massive programme to provide housing and basic civic amenities.

The situation is much worse in rural areas than in urban areas. Government should subsidize housing for the poor and weaker sections of the society and recover the cost as part of rent and installments over a period of 20 years. At present, the amount of ₹ 30,000 being given for the construction of a house under Indira Aawas Yojana is too meagre in view of the rising cost of construction to provide a two roomed house, with a kitchen and toilet. This should be the minimum that is required by a family. This requires the limit of ₹ 30,000 to be revised.

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Since rural areas are not offering enough employment opportunities, there is a push factor working and as a consequence, the urban population is increasing. In the urban areas, housing property has become so costly that it is beyond the reach of the majority of population. Most important is the price of land whose price has been sky-rocketing. The way out is that the government acquires land and does not add it as a charge from the poor and lower middle classes and starts a massive programme of housing. Construction cost should be charged from the people and price paid by the government to acquire land be treated as a subsidy for housing. It is only such an affordable price which can help the country to achieve the target of "housing for all" in a period of 20 years. This will also generate massive employment and thus raise the income of the poor who will be drawn to build houses.

In case, this is not done, the poor will usurp some land and put up *jhuggies* and this will lead to further growth of slum population.

Self-Assessment

1. Choose the correct option:

1. The planning commission constituted in September in
   (*a*) 1989 (*b*) 1975
   (*c*) 1985 (*d*) None of these
2. The National Rural Employment Guarantee came into force in
   (*a*) 2006 (*b*) 2005
   (*c*) 2007 (*d*) None of these.
3. The shortcomings of NREGA is
   (*a*) Lack of adequate professional staff (*b*) Lack of project planning
   (*c*) lack of transparency (*d*) All of the above
4. According to the 2001 census, India is the …… largest country in the world with the total population of 102.7 crore.
   (*a*) First (*b*) Second
   (*c*) Third (*d*) Fourth

7.6 Summary

- Poverty can be defined as a social phenomenon in which a section of the society is unable to fulfil even its basic necessities of life. When a substantial segment of a society is deprived of the minimum level of living and continues at a bare subsistence level, that society is said to be plagued with mass poverty. The countries of the third world exhibit invariably the existence of mass poverty, although pockets of poverty exist even in the developed countries of Europe and America.
- Several economists and organisations have conducted studies on the extent of poverty in India. It would be worthwhile to study some of the important estimates.
- The Planning Commission constituted in September 1989 an 'Expert Group' to consider methodological and computational aspects of estimation of proportion and number of poor in India.
- Gaurav Datt of the World Bank has made a study of poverty in India for the period 1951-1992 using NSS date. The poverty line is based on a nutritional norm of per capita daily intake of 2,400 calories in rural areas and 2,100 calories for urban areas.
- More recent evidence by the World Bank suppose the view that the proportion of persons below the poverty line come down from 52.4 per cent in 1970 to 42.5 cent in 1983 and further to 39.6 per cent in 1988 Gaurav Datt and Martin Ravallion also estimate that per cent below the poverty line are 43.9 per cent — 40 per cent urban and 45 per cent in rural areas.
- Two factors account for this high incidence of poverty among rural labour households. Firstly,

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there is a considerable degree of unemployment and under-employment among rural labourers. It has been established that incidence of unemployment is the highest among casual labourers

- The planning Commission has accepted the Lakdawala Expert Group estimates for poverty with minor modifications. There is very marginal difference between the estimates of the Planning Commission and the Expert Group.
- Dr. Gaurav Datt has identified stagnation in rural growth as the basic cause of slowdown in poverty reduction. This naturally puts a question mark on the very nature of the reform process in terms of rural welfare.
- As noted above different figures are being presented by the Government about poverty. Therefore it is difficult to understand that how many people in India are poor.
- This requires a two-pronged strategy - (i) The expansion of sectors which promise higher labour absorption and (ii) Empowering the poor with education, skill formation and health so that they can enter sectors which require higher competence and provide better remuneration which enable the poor to cross the poverty line, the following strategy can solve the problem of poverty.
- As a consequence of sustained growth in expenditure on education, there has been a remarkable growth in educational institutions at all levels - Primary, secondary and tertiary. The country was able to achieve a Gross Enrolment Ratio of 96% at the primary level, though the drop-out rate for class I to VIII was 51 percent which is quite high.
- In view of the increasing use of computers and Information Technology in all walks of life, the demand for skilled labour is on the increase. Since this requires access to higher education and vocational training, only those who can afford costly education and vocational training, are able to benefit from the expanding opportunities of employment.

7.7 Key-Words

1. Diversification : The act of introducing variety (especially in investments or in the variety of goods and services offered);
2. Poverty line : The estimated minimum level of income needed to secure the necessities of life.

7.8 Review Questions

1. What is the concept of poverty?
2. Discuss the causes of poverty.
3. Why do we need to redefine the poverty line? Explain.
4. How will you empower the poor through provision of housing?

Answers: Self-Assessment

1. (*i*) (*a*) (*ii*) (*a*) (*iii*) (*d*) (*iv*) (*b*)

7.9 Further Readings

Books

1. The Indian Economy; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001.
2. Indian Economy; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055.

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Unit 8: Unemployment in India: Concept, Causes and Government Policies

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Objectives

After reading this Unit students will be able to:

- Explain the Concept and Causes of Unemployment.
- Describe the Government Policies for Employment.

Introduction

The total population of an area, region or country has three components : the workforce (the employed), the unemployed and the non-workers. Taken together, the workforce and the unemployed together make up the labour force. A person who participates in any economic activity is called a worker and his or her human capital endowment is utilised by the economy. In the process, he or she earns a living. Thus, all workers constitute the workforce or the employed. On the contrary, those who are not workers are called non-workers. Among the non-workers, there may be some who are looking for work or are available for work and are called the unemployed. While the worker is engaged in economic activity and produces the national product, the unemployed is available for being engaged in such activity but the economy is unable to utilise it and the non-worker is not available for utilisation in economic activity of the society. This unit explains how the three components of the population enumerated and what their proportion in the population is.

8.1 Concept of Unemployment in India

India is a developing economy, the nature of unemployment, therefore, sharply differs from the one that prevails in industrially advanced countries. Lord Keynes diagnosed unemployment in advanced economies to be the result of a deficiency of effective demand. It implied that in such economies machines become idle and demand for labour falls because the demand for the products of industry is no longer there. Thus Keynesian remedies of unemployment concentrated measures to keep the level of effective demand sufficiently high so that the economic machine does not slacken the production of goods and services.

This type of unemployment caused by economic fluctuations did arise in India during the depression in the 1930's which caused untold misery. But with the growth of Keynesian remedies, it has been possible to mitigate cyclical unemployment. Similarly, after the Second World War, when war-time industries were being closed, there was a good deal of frictional unemployment caused by retrenchment in the army, ordnance factories, etc. These workers were to be absorbed in peacetime

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industries. Similarly, the process of rationalization which started in India since 1950, also caused displacement of labour. The flexibility of an economy can be judged from the speed with which it heals frictional unemployment.

But more serious than cyclical unemployment or frictional unemployment in a developing economy like India is the prevalence of chronic under-employment or disguised unemployment in the rural sector and the existence of urban unemployment among the educated classes. It would be worthwhile to emphasize here that unemployment in developing economies like India is not the result of deficiency of effective demand in the Keynesian sense, but a consequence of shortage of capital equipment or other complementary resources.

Notes The total number of persons requiring employment during the Eight Plan would be around 65 million. It is expected that during 1995-2000, labour force would increase by 41 million.

8.2 Causes of Unemployment in India

It is obvious that the unemployment situation is grim indeed. It has, therefore, to be tackled with appropriate measures and on an urgent basis. However, before we discussed the ways and means of removing unemployment, it is necessary that we understand the causes that given rise to it. The major causes which have been responsible for the wide spread unemployment can be spelt out as under.

(1) Rapid Population Growth

It is the leading cause of unemployment in Rural India. In India, particularly in rural areas, the population is increasing rapidly. It has adversely affected the unemployment situation largely in two ways. In the first place, the growth of population directly encouraged the unemployment by making large addition to labour force. It is because the rate of job expansion could never have been as high as population growth would have required.

It is true that the increasing labour force requires the creation of new job opportunities at an increasing rate. But in actual practice employment expansion has not been sufficient to match the growth of the labor force, and to reduce the back leg of unemployment. This leads to unemployment situation secondly; the rapid population growth indirectly affected the unemployment situation by reducing the resources for capital formation. Any rise in population, over a large absolute base as in India, implies a large absolute number.

(2) Limited land

Land is the gift of nature. It is always constant and cannot expand like population growth. Since, India population increasing rapidly, therefore, the land is not sufficient for the growing population. As a result, there is heavy pressure on the land. In rural areas, most of the people depend directly on land for their livelihood. Land is very limited in comparison to population. It creates the unemployment situation for a large number of persons who depend on agriculture in rural areas.

(3) Seasonal Agriculture

In Rural Society agriculture is the only means of employment. However, most of the rural people are engaged directly as well as indirectly in agricultural operation. But, agriculture in India is basically a seasonal affair. It provides employment facilities to the rural people only in a particular season of the year. For example, during the sowing and harvesting period, people are fully employed and the period between the post harvest and before the next sowing they remain unemployed. It has adversely affected their standard of living.

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(4) Fragmentation of land

In India, due to the heavy pressure on land of large population results the fragmentation of land. It creates a great obstacle in the part of agriculture. As land is fragmented and agricultural work is being hindered the people who depend on agriculture remain unemployed. This has an adverse effect on the employment situation. It also leads to the poverty of villagers.

(5) Backward Method of Agriculture

The method of agriculture in India is very backward. Till now, the rural farmers followed the old farming methods. As a result, the farmer cannot feed properly many people by the produce of his farm and he is unable to provide his children with proper education or to engage them in any profession. It leads to unemployment problem.

(6) Decline of Cottage Industries

Employment particularly of the landless people. They depend directly on various cottage industries for their livelihood. But, now-a-days, these are adversely affected by the industrialisation process. Actually, it is found that they cannot compete with modern factories in matter or production. As a result of which the village industries suffer a serious loss and gradually closing down. Owing to this, the people who work in there remain unemployed and unable to maintain their livelihood.

(7) Defective education

The day-to-day education is very defective and is confirmed within the classroom only. Its main aim is to acquire certificated only. The present educational system is not job oriented, it is degree oriented. It is defective on the ground that is more general then the vocational. Thus, the people who have getting general education are unable to do any work. They are to be called as good for nothing in the ground that they cannot have any job here, they can find the ways of self employment. It leads to unemployment as well as underemployment.

(8) Lack of transport and communication

In India particularly in rural areas, there are no adequate facilities of transport and communication. Owing to this, the village people who are not engaged in agricultural work are remained unemployed. It is because they are unable to start any business for their livelihood and they are confined only within the limited boundary of the village. It is noted that the modern means of transport and communication are the only way to trade and commerce. Since there is lack of transport and communication in rural areas, therefore, it leads to unemployment problem among the villagers.

(9) Inadequate Employment Planning

The employment planning of the government is not adequate in comparison to population growth. In India near about two lakh people are added yearly to our existing population. But the employment opportunities did not increase according to the proportionate rate of population growth. As a consequence, a great difference is visible between the job opportunities and population growth.

On the other hand it is a very difficult task on the part of the Government to provide adequate job facilities to all the people. Besides this, the government also does not take adequate step in this direction. The faulty employment planning of the Government expedites this problem to a great extent. As a result the problem of unemployment is increasing day by day.

8.3 Government Policies for Employment

Following the publication of the Bhagwati Committee report in 1973, the Government took the following measures to provide employment and alleviate under-employment.

Rural Works Programme : The emphasis under the programme was on the construction of civil works of a permanent nature as would contirbute to the mitigation, if not the total eradication, of the scarcity condition in the areas concerned.

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Marginal Farmers and Agricultural Labourers : Under the scheme, families were to be assisted with subsidised credit support for agricultural and subsidiary occupations like dairy, poultry, fishery, piggery-rearing, horticultural operations, etc.

Small Farmers Development Agencies : The object of the scheme was to make available to small farmers credit to enable them to make use of the latest technology to practise intensive agriculture and divrsify their activities.

Integrated Dry Land Agricultural Development : Under the scheme, permanent works like soil conservation, land development and water harnessing were undertaken. These programmes were labour-intensive and were expected to generate considerable employment opportunities.

Agro-service Centres : The schemes provided for assistance for self-employment to the unemployed graduates and diploma-holders in mechanical, agricultural and electrical engineering and allied fields and graduates in agriculture and science with experience in industry or agriculture. It aimed to help in establishing work-shops, organising agricultural machinery, repairing and hiring facilities and other technical services like supply of spare parts, inputs, etc.

Area Development Schemes : These schemes related to the development of adequate infrastructure facilities like roads, market complexes, etc. in areas commanded by ten major irrigation projects.

Crash Programme for Rural Employment : The primary objective of the scheme was to generate additional employment through a network of rural projects of various kinds which are labour-intensive and productive. The scheme had a two-fold purpose. Firstly, a project in each block was to provide employment to 100 persons on an average ccontinuously over a working season of 10 months in a year. Secondly, each project was to produce works or assets of durable nature in consonance with the local development plans. The various types of projects included schemes relating to minor irrigation, soil conservation and afforestation, land reclamation, flood protection and anti-waterlogging, pisciculture, drinking water and construction of roads.

The various schemes under the Fourth Five-Year Plan or the Crash Plan could not succeed in removing rural unemployment and under-employment because efforts were not made to organise the army of the rural unemployed into appropriate supply camps to be shifted to places of demand al the desired minimum wage. The Auditor-General in his report to the Lok Sabha presented in August 1974 brought out the tragic fact that the various 'crash' and rural employment programmes on which the Central Government had spent ₹ 170 crores during the Fourth Plan had been wholly infructuous.

Employment Guarantee Scheme of Maharashtra

Maharashtra Government introduced the, Employment Guarantee Scheme (EGS) in 1972-73. The scheme was the first of its kind to give recognition to the ''right to work' enshrined in the Constitution. It embodied a commitment by the State to provide work to a person who comes forward to offer labour.

The main objectives of the Schemes were as under :

(a) To provide gainful and productive employment to an individual in approved rural works which raise the productivity of the economy.

(b) The works undertaken should produce durable community assets in the area.

(c) Productive works of labour-intensive nature like minor irrigation, water and soil conservation, nalla bunding, canal excavation, land development, afforestation, etc. should be undertaken.

(d) The works should be implemented departmentally and not through contractors so that at least 60 per cent of the works expenditure is incurred on wages to workers and 40 per cent in the form of materials, equipment, supervisory experts and administrative services.

The scheme was intended to provide employment guarantee only in rural areas. The guarantee was restricted to the provision of unskilled manual work and was limited to adults, i.e., men and women over 18 years of age.

The scheme was particularly designed to help the economically weaker sections of rural society. It is this potential group which would demand employment under the Employment Guarantee Scheme.

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A review of the progress of the scheme during the 10-year period (1972-73 to 1982-83) revealed that while the expenditure incurred on the implementation of various programmes under EGS has been increasing, the number of mandays of employment generated as a result of these programmes has declined continuously over the years. During the first seven years, the progress of the scheme was good in as much as the mandays of employment generated increased from 45 lakhs in 1972-73 to 20.54 crores in 1979-80 along with the increase in expenditure from ₹ 1.89 crores in 1972-73 to Rs. 102.2 crores in 1979-80. However, since 1980-81, the trend of mandays of employment generated declined to l2.8 crore mandays with an expenditure of ₹ 130 crores in 1982-83. As against an expenditure of ₹ 5.3 per manday of employment generated in 1979-80, this increased to ₹ 10.2 in 1982-83.

Since the average daily wage of an unskilled labourer was raised to ₹ 6 per day, part of the explanation for the reduction in mandays of employment generated could be found in it. The other part of the explanation was provided by the rise in prices. A part of the rise in expenditure per manday of employment might be also due to leakages and malpractices that have become a part of our administrative culture.

Only productive works with unskilled wage component of more than 60% were taken up under EGS. Modifications of the scheme permitted individual beneficiary schemes to be also taken up in the case of lands owned by small and marginal farmers. In such cases, 50 per cent of the expenditure was be borne by the concerned cultivator/ beneficiary. Besides this, a horticulture programme covering a total of 10 lakh hectares was launched during the Eighth Plan (1992-97) at Government cost on lands of SC/ST/ small cultivators. On other lands, Government and the beneficiaries were to bear the expenditure on materials in the ratio of 75 : 25.

According to the Eighth Plan, "the scheme has resulted in a significant reduction in the incidence of unemployment in rural areas. Average daily unemployment rates in rural Maharashtra have declined from 7.20% in 1977-78 to 3.17% in 1987-88. It would have also contributed to some extent towards the decline in rural poverty from 60.4 per cent in 1977-78 to 36.7 per cent in 1987-88. The scheme has also helped in keeping an upward pressure on wages in rural areas. The EGS has benefitted a large number of women too, with nearly 60 per cent of the workers on EGS sites being women."

National Rural Employment Programme

The Food for Work Programme was restructured and renamed as National Rural Employment Programme (NREP) from October, 1980. This was implemented as centrally sponsored programme with 50 per cent central assistance. Additional employment of the order of 300-400 million mandays per year for the unemployed and underemployed was envisaged under the NREP. Besides this, the NREP aimed to create community assets for strengthening rural infrastructure. These included drinking water wells, community irrigation wells, village tanks, minor irrigation works, rural roads, schools and Balwadi buildings, panchayat ghars etc.

A critical assessment of the projects undertaken brought out the following shortcomings :

(i) "Works implemented through NREP are often, not coordinated or integrated with the requirements of families identified for assistance under IRDP. Potentiality of NREP worked to assist newly liberated bonded labourers or to support the attempts of agricultural workers to secure minimum wages fixed under the law is also not always appreciated. Stereo-typed earth excavation works mainly relating to Kachcha village roads, reminiscent of the old famine relief works, are undertaken ignoring the fact that this programme has a crucially supportive role to play for the beneficiary oriented development programme of IRDP and other area development programmees."

(ii) There is a tendency to go in for building construction with high material components. This runs counter to the basic objectives of NREP. The principal purpose of NREP is to utilise local resources, both in terms of materials and manpower towards the generation of more employment.

Rural Landless Employment Guarantee Programme

The Rural Landless Employment Guarantee Programme (RLEGP) was launched on the 15th August, 1983 with the objective of generating gainful employment, creating productive assets in rural areas and improving the overall quality of rural life.

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The programme was funded by the Central Government on 100% basis. Resources were allocated to the States/Union Territories on the basis of the prescribed criteria giving 50% of weightage to number of agricultural labourers, marginal farmers and marginal workers and 50% weightage to incidence of poverty. Wages were paid to the workers under the Schedule of employment in the Minimum Wages Act. Part of the wages were required to be paid in the form of subsidized foodgrains. It was also stipulated that the wage component on a project should not be less than 50% of the total expenditure on the project. The programme included projects of social forestry, Indira Awaas Yojana and Million Wells Scheme.

The progress of RLEGP during the Seventh Plan (1985-86 to 1988-89) revealed that during the first four years, a sum of ₹ 2,412 crores was utilized and this helped to generate employment to the tune of 1,154 million mandays.

As a result of the RLEGP, social forestry programme 5.2 lakh hectares of land was covered and 533 million plants were planted during the 3-year period. Besides this, 4.27 lakh houses at a cost of ₹ 425.5 crores were constructed upto Dec. 1988. The cost per dwelling unit worked out at ₹ 9,954.

The Government decided to merge NREP and RLEGP. The merger was based on the premise that the objectives and implementation in the field of these two programmes were by and large similar. But it may be pointed out that merger of NREP and RLEGP is merely tinkering with the problem. A much more serious consideration should be given to develop a much tighter administration of rural employment scheme to eliminate malpractices so that real beneficiaries can be helped to cross the poverty line. Improving effectivity of implementation is the crux of the matter and not administrative reorganisation.

IRDP, NREP, Rural Poverty—an Employment

A multiplicity of agencies have been carrying on the task of providing rural employment. They included : Employment Guarantee Schemes, Food for Work Programme, Small Farmers Development Agency (SFDA), Marginal Farmers and Agricultural Labourers (MFAL), Drought Prone Area Programme (DPAP) and Desert Development Programme (DDP), Command Area Development Programme (CADP), etc. The Sixth Plan (1980-85) proposed that "such multiplicity of programmes for the rural poor operated through a multiplicity of agencies should be ended and replaced by one single integrated programme operative throughout the country." This programme was named as the Integrated Rural Development Programme (IRDP).

Philosophy behind the IRDP Programme

A large body of economic experts have shown in their studies that whereas economic growth may be able to raise per capita incomes in developing countries, it may not be accompanied by a reduction of poverty as well as elimination of unemployment and under-employment. Rather the process of economic growth in third world countries, India being no exception, has benefitted relatively developed areas and better-off people. In other words, the percolation of benefits of economic growth to backward areas and the poor people have not taken place.

To remedy this situation, it was thought necessary that a direct attack on poverty should be made. This necessitated progammes for alleviating rural poverty by endowing the poor with productive assets or skills so that they can employ themselves usefully to earn greater incomes and thus cross the poverty line. To achieve this objective, the Sixth Plan conceived of two important programmes—IRDP and NREP. The basic strategy was to promote self-employment of the poor households through IRDP so that with the transfer of productive assets, they may earn incomes that help them to cross the poverty level. The NREP (National Rural Employment Programme) was to provide wage employment to fill in the periods of seasonal and sporadic underemployment. It was also intended to enlarge absorptive capacity of labour in rural areas in non-agricultural occupations by creating infrastructure—social and economic—which help to increase the productive capacity of the economy.

Targets and Achievements

The IRDP was initiated on October 2, 1980 in all the 5,011 blocks in the country. During the 5-year period (1980-85) in each block 600 poor families were to be assisted. In this way, a total of 15 million

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families of about 75 million persons below the poverty line were targeted to be beneficiaries. For each block a uniform allocation of ₹ 35 lakhs was to be shared between the Centre and the States on a 50-50 basis.

The programme was based on a graded scheme of subsidies which amounted to 25 per cent of the capital cost of small farmers, 33.3 per cent for marginal farmers, agricultural labourers and rural artisans and 50 percent for tribal beneficiaries. Following the Antyodaya principle, the programme was intended to reach the poorest households first and later to reach other poor people in an ascending order.

Community works were eligible for 50 per cent subsidy. Nearly 20 percent of the outlay was to be utilised for administrative and infrastructural support and the balance of 80 percent is meant for subsidies to beneficiaries for acquisition of assets.

The major weaknesses of the programme were as under :

(i) Selection of ineligible families, though thd Government claims to be below 8 per cent, is in fact larger.

(ii) Training was not imparted to majority of the beneficiaries.

(iii) In about 22% cases, no incremental income was generated.

(iv) Adequate infrastructure facilities were not available to beneficiaries. The input facility was available to barely 40% cases, marketing in 14% cases and repair facility in 5% cases.

The programme assisted a total of 108 lakh families, out of which 50% of belonged to SC/ST categories, thus achieving the target set for the plan. But the percentage of women beneficiaries was only 34%, which was below the target of 40%.

Besides this, the Government decided to introduce the Family Credit Plan by enlarging its magnitude. Under the scheme, multiple assets could be given to more than one member of the family to enable the household to cross the poverty line. The level of investment per family was targetted at ₹ 20,000-25,000 under the scheme. With a view to encourage higher levels of investment per family, security norms for IRDP were enhanced. Banks were earlier required not to obtain mortgage of land as security for loans up to ₹ 2,000. This limit was raised to ₹ 5,000. In addition, banks were not to obtain collateral security for moveable assets up to ₹ 15,000.

According to the Mid-term Appraisal of Ninth Five Year Plan (1997-2000) published in October 2000, since the inception of the programme till 1998-99, 53.50 million fami lies have been covered under IRDP at an expenditure of ₹ 13,700 crores. During the first two years of the Ninth Plan (1997-98 and 1998-99), about 3.37 million families reported to have been covered.

The average investment per family remained at subcritical levels, too inadequate to generate income of ₹ 2,000 per family per month as the programme had envisaged. At the beginning of the Ninth Plan, an investment of ₹ 16,753 per family was not much higher in real terms as compared with ₹ 7,889 at the beginning of the Eighth Plan. Such low-level per family investment cannot finance self-employment projects to yield adequate income on a sustained basis.

Did u know? The IRDP was started in 1980-81 in all blocks of the country and continued as a major self-employment scheme till April 1. 1999. Then, it was restructured as the Swaranjayanti Gram Swarozgar Yojna (SGSY) which aimed at self-employment of the rural poor.

Jawahar Rozgar Yojana

Prime Minister Rajiv Gandhi announced on 28th April, 1989 the launching of the Jawahar Rozgar Yojana (JRY). All the existing rural wage employment programmes were merged into JRY. This implies that National Rural Employment Programme (NREP) and Rural Landless Employment Guarantee Programme (RLEGP) have been merged so as to be brought under this umbrella programme referred to as Jawahar Rozgar Yojana.

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Main features of the Scheme

(i) As a result of the operation of NREP and RLEGP during 1980-81 to 1988-89, rural employment programmes reached only 55 per cent of the village panchayats around the country. JRY aimed at reaching every single panchayat.

(ii) The scheme will be administered by the village panchayats to implement rural employment programmes benefitting 440 lakh families living below the poverty line in India.

(iii) Whereas in the earlier rural employment programmes. Central and State assistance was provided on 50 : 50 basis, JRY has stipulated that Central assistance will finance 80 per cent and the States share will be 20 per cent.

Objectives of JRY

Primary Objective : Generation of gainful employment for the unemployed and under-employed, men and women in rural areas.

Secondary Objectives : JRY had several secondary objectives :

(i) creation of sustained employment by strengthening the rural infrastructure;

(ii) creating community and social assets;

(iii) creating assets in favour of the poor for their direct and continuing benefits;

(iv) to produce positive impact on wage levels; and

(v) to bring about over-all improvement in quality of life in rural areas.

Target Groups and Special Safeguards

JRY was specially targetted to help people below the poverty line. Preference was to be given to Scheduled Castes, the Scheduled Tribes and freed bonded labourers. At least 30 per cent of the employment was to be provided to women under the JRY.

Modification under JRY

Based on the experience gained in the implementation of the Jawahar Rozgar Yojana (JRY) and to achieve the objective of providing 90-100 days of employment per person in backward districts, JRY was modified from 1993-94 and was implemented in the following three streams :

First Stream: On the existing pattern with two sub-schemes, namely Indira Awaas Yojana (IAY) and Million Wells Scheme (MWS)

Second Stream : An intensified JRY in 120 identified backward districts with additional allocations

Third Stream : Special and innovative projects

First Stream of JRY

Under this stream of JRY, two sub-schemes, viz.. Indira Awaas Yojana (IAY) and Million Wells Scheme (MWS) were implemented. 10 per cent of the total resources of JRY were earmarked for the IAY and 30 per cent for the MWS.

Works to be undertaken under first stream of JRY

1. Social forestry works on Government and community lands belonging to panchayats etc. road side plantations, plantations along canal banks or on wastelands or on sides of railway lines etc.
2. Soil and water conservation works
3. Minor irrigation works, such as, construction of community irrigation wells, drains and field channels
4. Construction/renovation of village tanks for providing irrigation as well as drinking water
5. Construction of community sanitary latrines

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6. Construction of houses for scheduled castes/scheduled tribes and freed bonded labourers
7. Construction of rural roads.
8. Land development and reclamation of waste lands or degraded lands.
9. Construction of community centres, panchayat ghars, Mahila Mandals, Market yards, dispensaries, anganwadis, balwadis etc.
10. Construction of school buildings, etc.

Million Wells Scheme (MWS)

The Million Wells Scheme was launched as a sub scheme of NREP/RLEGP during 1988-89 to provide open irrigation wells, free of cost, to poor small and marginal farmers belonging to SCs/STs and freed bonded labourers.

Since the beginning of the programme in 1988-89, a total 10.0 lakh wells were constructed with an expenditure of ₹ 4,021 crores by 1996-97. Additional 1.9 lakh wells were constructed during 1997-98 and 1998-99 at a cost of ₹ 937 crores.

Indira Awaas Yojana (LAY)

Indira Awaas Yojana was aimed at providing houses, free of cost, to the members of the SC/ST. freed bonded labourers. From 1993-94, the scheme was extended to other poor categories (besides SC/ST) as well. The permissible expenditure for each house under IAY which was fixed at ₹ 14,000 was enhanced to ₹ 20,000 with effect from Ist August 1996 in view of the rise in the cost of building materials.

Under Jawahar Rozgar Yojana, during 1989-90 to March 2001, a total of 67.5 lakh houses were constructed with a total expenditure of ₹ 11,324 crores. Average cost of construction of a house was ₹ 16,776.

Third Stream — Innovative and Special Employment Projects

Under the third stream of JRY, special and innovative projects which aim at prevention of migration of labour, enhancing women's employment, special programmes through voluntary organisations aiming at drought proofing as well as watershed development/wasteland development resulting in sustained employment were undertaken. Besides this. Operation Black Board was undertaken to provide assistance for construction of class rooms and school buildings. During the 5 year period (1989-90 to 1993-94), as against the target of 4,332 million mandays, the States generated employment of the order of 4,283 million mandays, nearly 97 per cent of the target. The total expenditure incurred was ₹ 14.010 crores. This implies that ₹ 32.7 per manday were spent for the purpose. This was a very encouraging achievement.

Employment Assurance Scheme (EAS)

On the model of the Employment Guarantee Scheme of Maharashtra, the Government introduced Employment Assurance Scheme (EAS) with effect from 2nd October 1993 in rural areas in 1,778 blocks of 261 districts. The scheme aimed at providing assured employment of 100 days of unskilled manual work to the rural poor who are in need of employment and seeking it. The assurance of 100 days extends to all men and women over 18 years and below 60 years of age. A maximum of two adults per family were to be provided employment under the scheme.

The average employment provided per person was 41.3 days in a year, as against the target of 100 days of employment. To make the scheme more enduring to enable beneficieries to cross the poverty line, it would be more desirable to reach the target of 100 days of employment per year.

Evaluation of Jawahar Rozgar Yojana (JRY)

During 1992, the Government of India undertook concurrent evaluation of JRY through reputed research institutions covering all districts in the country. More concerns of the concurrent evaluation were:

Areas of Concern pointed out by the Report are :

(a) In majority of cases, panchayat heads were not given any training for undertaking JRY works.

(b) The workers who belonged to the category of 'ineligibles' also took advantage of the programme.

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To sum up, Jawahar Rozgar Yojana made some headway in providing employment but the target of providing 90-100 days of employment for every registered person is a distant goal judged by the achievement made so far. The total absence of voluntary organisations in its implementation was a serious weakness of JRY. To improve the quality of construction of houses, more liberal amount per house should be provided, failing which the poor quality houses would after a few years need heavy repairs.

Under the programme, all works that can result in the creation of durable assets are taken up. Under the scheme, during 2000-01, with a Central allocation of ₹ 1,650 crores, 88.5 million mandays of employment was generated.

Swaran Jayanti Gram Swarozgar Yojana (SGSY) was introduced in April 1999 as a result of restructuring and combining the Integrated Rural Development Programme (IRDP) and Million Wells Scheme (MWS) into a single self-employment programme. It aimed at promoting micro-enterprises and helping the rural poor into self-help groups. It was implemented as a Centrally Sponsored Scheme on cost sharing ratio of 75 : 25 between the Centre and the States.

Swaran Jayanti Shahari Rozgar Yojana (SJSRY) : The Urban Self-employment Programme and Urban Wage-Employment Programmes of the Swaran Jayanti Shahari Yojana, which substituted in December 1997 various programmes operated earlier for poverty alleviation. SJSRY was funded on 75 : 25 basis between the Centre and the States. During the 3-year period (1997-98 and 1999-2000), a total of ₹ 353 crores were spent of SJSRY generating 21.8 million mandays of employment.

Notes **Jawahar Gram Smridhi Yojana (JGSY)** was introduced in April 1999 as a successor to Jawahar Rozgar Yojana (JRY) is being implemented as acentrally sponsored scheme on a cost sharing ratio of 75 : 25 between the Centre and the States.

Employment Policy in the Ninth Plan

Labour Force Growth and Employment Requirements

Job opportunities will need to be created for 53 million persons during 1997-2002 as a consequence of labour force increase, for 58 million during 2002-07 and thereafter for 55 million during 2007-12.

Table 1 : Combined Incidence of Unemployment and Under-employment

Activity Status	Proportion of labour force	Remarks
1. Labour force	100.00	Working or seeking work on usual status basis.
2. Employed	89.55	Usual status employed staying in workforce when classified by their weekly status.
3. Unemployed	2.02	Incidence of open unemployment on usual status basis.
4. Under-employed	8.43	Usual status employed going out of work when classified by their weekly status.
5. Unemployed & underemployed	10.45	Open unemployment on usual status and the incidence of loss of work by the usually employed when classified by their weekly status.

Source : Compiled from Planning Commission, **Ninth Five Year Plan (1997-2002),** Vol. I, February 1999.

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Strategy of Employment Generation in the Ninth Plan

The basic problem, which keeps people in a state of poverty, is the poor quality of employment in terms of inadequate level of income for workers. The educational level of the workers reveals that 70 per cent of the workforce is either illiterate or educated below the primary level. In industries other than agriculture, where skill development for higher productivity necessitates a reasonable level of educational standard, 52 per cent of workforce was below the primary level of education, 26 per cent being illiterate. (Refer table 2). The Ninth Plan, therefore, as a part of its strategy intended to focus on the growth of sectors which have high employment absorption capacity of a relatively less educated labour force. It mentioned, "The focus on agriculture, trade and transport and construction reflect this imperative."

It is really a sad commentary on our planning process that even after five decades of planned development, nearly 84 per cent of the workforce engaged in agriculture is either illiterate or with an educational level below primary. It is, therefore, vitally necessary that education and skill development programmes which are essential features of empowerment be strengthened.

Table 2 : Percentage Distribution of Labour Force by Level of General Education (1993-94)

	Illiterate	Literate upto primary	Middle and above	Total	Share in workforce
Agriculture	60.8	22.8	16.4	100.0	56.6
Other than Agriculture	25.8	26.0	48.2	100.0	43.4
All industries	45.6	24.2	30.2	100.0	100.0

Note : Ususal status principal and subsidiary workers

Source : Compiled from NSS 50th Round Data on Employment and Unemployment.

As a part of enlarging employment and increasing the quality of employment, the Ninth Plan emphasized, "It is necessary to increase public investment in agriculture especially for strengthening irrigation and other rural infrastructure in backward areas so that sustained agricultural growth, and, therefore, acceleration of employment growth is facilitated." Besides this, the Ninth Plan intended to emphasise horticulture - an employment intensive sector.

The Ninth Plan underlined the fact that Rural Non-farm Sector has increased its share of productive employment from about 15 % in 1978 to 22 % in 1987-88 and further to 23 % in 1993-94. This sector has registered an employment growth rate of 5 per cent between 1987-88 and 1993-94, which is very heartening. This trend should be strengthened. This necessitates a decentralized pattern of industrialisation so that rural areas can undertake small business and manufacturing on an increasing scale.

An Assessment of the Employment Strategy

However, it may be mentioned that the Ninth Plan does not make employment as a central objective of the policy, though it speaks of generating it as a corollary of the growth process. The Macro Dimensions of the plan are couched in the traditional paradigm of saving, investment, GDP growth rates. In this connection, it would be relevant to heed the advice given by the **Human Development Report** (1996) which states that a **clear political commitment to full employment is the essential condition for development.** The Report mentions : "Where employment creation has been most successful, it has been the result of a deliberate strategy. Rather than assuming that employment would materialise automatically, political leaders have identified it as a central policy objective." It further emphasises : "Employment needs to be restored to its place among the top policy concerns of

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economic management. The macro-economic framework agreed to between governments and the Bretton Woods Institutions need to focus on employment — not just inflation, GDP growth, short and medium term reforms and shoit-term fiscal and budgetary targets. They need to set employment targets, which are essential to human development and to sustained future growth."

Self-Assessment

1. Choose the correct option:

(*i*) Consider the following statements:

I. Bulk of employment is in rural areas.

II. The disguised unemployment in agricultural sector is perennial

III. Industrialisation rendered several people jobless in India

Which of the statement given below is/are correct:

(*a*) I and II (*b*) I and III

(*c*) I and III (*d*) I, II and III

2. Which is not one of the salient features of Anapurna Scheme?

(*a*) It was launched by the ministry of consumer affairs, Food and public distribution in 2001-2002.

(*b*) The beneficiaries of the scheme are indigent senior citizens of 65 years of age or above.

(*c*) 10 kg of food grains per month are supplied free of cost to the target group.

(*d*) From 2002-2003, the scheme has been transferred to state plan along with the national social assistance programme.

3. PDS means distribution of essential commodities to a large number of people through the network of fair price shops on a recurring basis. The commodities distributed under PDS are:

I. Wheat II. Rice

III. Sugar IV. Pulse

V. Kerosene

Select the correct option

(*a*) I, II and IV (*b*) I, II, III and IV

(*c*) I, II, III, and V (*d*) all of the above

4. The central nodal agency for implementing the price support operations for commercial crops is

(*a*) NAFED (*b*) NABARD

(*c*) TRIFED (*d*) FCI

8.4 Summary

- India is a developing economy, the nature of unemployment, therefore, sharply differs from the one that prevails in industrially advanced countries. Lord Keynes diagnosed unemployment in advanced economies to be the result of a deficiency of effective demand. It implied that in such economies machines become idle and demand for labour falls because the demand for the products of industry is no longer there.
- That a large number of workers are forced to remain jobless both in rural and urban areas is true beyond dispute.
- The Committee of Experts on Unemployment under the chairmanship of B. Bhagwati in its report submitted to the Government in May 1973, observed : On the basis of the data, the likely number of unemployed in 1971 may be reasonably taken at 18.7 million including 9 million

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who are without any job whatesoever and 9.7 million who work for less than 14 hours per week may be treated at par with the unemployed.

- It is obvious that the unemployment situation is grim indeed. It has, therefore, to be tackled with appropriate measures and on an urgent basis. However, before we discussed the ways and means of removing unemployment, it is necessary that we understand the causes that given rise to it. The major causes which have been responsible for the wide rise to it.
- It is true that the increasing labour force requires the creation of new job opportunities at an increasing rate. But in actual practice employment expansion has not been sufficient to match the growth of the labor force, and to reduce the back leg of unemployment. This leads to unemployment situation secondly; the rapid population growth indirectly affected the unemployment situation by reducing the resources for capital formation. Any rise in population, over a large absolute base as in India, implies a large absolute number.
- The method of agriculture in India is very backward. Till now, the rural farmers followed the old farming methods. As a result, the farmer cannot feed properly many people by the produce of his farm and he is unable to provide his children with proper education or to engage them in any profession. It leads to unemployment problem.
- The various schemes under the Fourth Five-Year Plan or the Crash Plan could not succeed in removing rural unemployment and under-employment because efforts were not made to organise the army of the rural unemployed into appropriate supply camps to be shifted to places of demand al the desired minimum wage.
- Maharashtra Government introduced the, Employment Guarantee Scheme (EGS) in 1972-73. The scheme was the first of its kind to give recognition to the ''right to work' enshrined in the Constitution. It embodied a commitment by the State to provide work to a person who comes forward to offer labour.
- The Food for Work Programme was restructured and renamed as National Rural Employment Programme (NREP) from October, 1980. This was implemented as centrally sponsored programme with 50 per cent central assistance. Additional employment of the order of 300-400 million mandays per year for the unemployed and underemployed was envisaged under the NREP.
- The Rural Landless Employment Guarantee Programme (RLEGP) was launched on the 15th August, 1983 with the objective of generating gainful employment, creating productive assets in rural areas and improving the overall quality of rural life.
- The progress of RLEGP during the Seventh Plan (1985-86 to 1988-89) revealed that during the first four years, a sum of ₹ 2,412 crores was utilized and this helped to generate employment to the tune of 1,154 million mandays.
- A multiplicity of agencies have been carrying on the task of providing rural employment. They included : Employment Guarantee Schemes, Food for Work Programme, Small Farmers Development Agency (SFDA), Marginal Farmers and Agricultural Labourers (MFAL), Drought Prone Area Programme (DPAP) and Desert Development Programme (DDP), Command Area Development Programme (CADP), etc.
- A large body of economic experts have shown in their studies that whereas economic growth may be able to raise per capita incomes in developing countries, it may not be accompanied by a reduction of poverty as well as elimination of unemployment and under-employment.
- Various evaluation studies about the programme were made which reveal that the actual percolation effect of the programme was much less in terms of poverty alleviation as compared with the impressive figures doled out by Government reports in terms of subsidies, bank credit and poverty line crossers.
- Prime Minister Rajiv Gandhi announced on 28th April, 1989 the launching of the Jawahar Rozgar Yojana (JRY). All the existing rural wage employment programmes were merged into JRY. This implies that National Rural Employment Programme (NREP) and Rural Landless Employment Guarantee Programme (RLEGP) have been merged so as to be brought under this umbrella programme referred to as Jawahar Rozgar Yojana.

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- Indira Awaas Yojana was aimed at providing houses, free of cost, to the members of the SC/ST. freed bonded labourers. From 1993-94, the scheme was extended to other poor categories (besides SC/ST) as well. The permissible expenditure for each house under IAY which was fixed at ₹ 14,000 was enhanced to ₹ 20,000 with effect from Ist August 1996 in view of the rise in the cost of building materials.
- During 1992, the Government of India undertook concurrent evaluation of JRY through reputed research institutions covering all districts in the country. More concerns of the concurrent evaluation were :
- Job opportunities will need to be created for 53 million persons during 1997-2002 as a consequence of labour force increase, for 58 million during 2002-07 and thereafter for 55 million during 2007-12.
- The basic problem, which keeps people in a state of poverty, is the poor quality of employment in terms of inadequate level of income for workers. The educational level of the workers reveals that 70 per cent of the workforce is either illiterate or educated below the primary level.
- Regarding the service sector, Ninth Plan stated that the growth rate of employment in this sector has been of the order of 5.39 % per annum during 1987-88 to 1993-94 compared to barely 1.84 % per annum between 1983 and 1987-88. But the irony of the strategy of employment outlined in the Ninth Plan is not to compute the employment growth in education and health sector if policies of building human capital, as suggested by Nobel Laureate Amartya Sen, have to be buttressed.

8.5 Key-Words

1. Endowment mortgage : An endowment mortgage is a mortgage loan arranged on an interest-only basis where the capital is intended to be repaid by one or more (usually Low-Cost) endowment policies. The phrase endowment mortgage is used mainly in the United Kingdom by lenders and consumers to refer to this arrangement and is not a legal term. If the individual dies during the endowment mortgage period then the mortgage provider retains the property.
2. Piggery-rearing : Intensive piggeries (or hog lots) are a type of animal husbandry specialized in the raising of domestic pigs up to slaughter weight. They are also known as an AFO or CAFO in the U.S. In this system of pig production, grower pigs are housed indoors in group-housing or straw-lined sheds, whilst pregnant sows are housed in sow stalls (gestation crates) or pens and give birth in farrowing crates.

8.6 Review Questions

1. What is the concept of Unemployment? Discuss.
2. Discuss the causes of Unemployment in India.
3. Write a short note on the government policies for employment.

Answers: Self-Assessment

1. (*i*) (*a*) (*ii*) (*a*) (*iii*) (*c*) (*iv*) (*a*)

8.7 Further Readings

Books

1. The Indian Economy; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001.
2. Indian Economy; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055

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Unit 9: Inflation: Nature and Extent

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Objectives

After reading this Unit students will be able to:

- Understand Inflation.
- Discuss the Nature and Extent of Inflation.
- Explain the Types of Inflation.

Introduction

The problem of inflation is as old as market system. But, a persistent, continuous and high rate of inflation—generally, 5% or more—has emerged during the post-War II period as the most intractable economic problem for both theoreticians and policy-makers all over the world. The problem of inflation has received a more serious attention since the early 1970s. A continuous rise in the general price level over a long period of time has been the most common feature of both developed and developing economies. For example, the US is currently facing the problem of rate of inflation (around 5 percent) even though the US economy is facing recession. India, a fast developing nation—growing at the rate of 9% per annum was facing a high rate of inflation—over 12% in the 2nd half of 2008 which had created economic, social and also political problems of the country. Persistent inflation is perhaps the second most serious macroeconomic problem confronting the world economy today—second only to hunger and poverty in the 'third world.' Some authors consider inflation as the 'dominant economic problem' in modern times. The persistent inflation and the problems associated with inflation have claimed more attention of the economists, policy makers and politicians than any other macroeconomic problem. This has led to abounding increase in the literature on inflation. In this introductory Chapter, we discuss three main aspects of inflation—meaning, measurement and effects of inflation. The theories of inflation and the relationship between inflation and unemployment are discussed in two subsequent chapters.

9.1 Inflation: Nature and Extent

In a broad sense of the term, inflation means a considerable and persistent rise in the general price level over a period of time. However, there is no universally acceptable definition of inflation. The definition of inflation has been, in fact, a matter of opinion on price rise and its causes. Let us look at some widely quoted *early definitions* of inflation and their implications.

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According to Coulborn, inflation is a situation of "too much money chasing too few goods." According to Kemmerer, "Inflation is ... too much currency in relation to physical volume of business." Crowther defined inflation as, "a state in which the value of money is falling, that is, prices are rising." The general drawback of these definitions is that they tell the cause of inflation rather than telling what inflation is. The definitions of this orientation do not capture the full implications of the inflationary situation. Besides, despite being theoretically unsound, these definitions are alleged to be of little use in the formulation of anti-inflation policies, especially under modern economic conditions characterized by complexity of factors causing inflation.

Did u know? "Inflation exists when money income is expanding more than in proportion to increase in earning activity."

Consider *some recent* and more appropriate definitions of inflation. According to Ackley, "Inflation is a persistent and appreciable rise in the general level or average of prices." Harry G. Johnson defines inflation as "a sustained rise in prices." According to Samuelson, "Inflation denotes a rise in the general level of prices". Bronfenbrenner and Holzman have suggested a number of alternative definitions of inflation which are mostly modified versions of the earlier definitions. Their alternative definitions make things more fuzzy rather than adding clarity to the concept of inflation.

What Rate of Price Rise is Inflation?

If one goes by the definition of inflation given by some modern economists, *any rise* in the general price level is *not* inflation. In their opinion, only a 'persistent', 'prolonged' and 'sustained' and a 'considerable' and 'appreciable' rise in the general price level can be called 'inflation'. Though the terms 'persistent', 'prolonged' and 'sustained' are not defined precisely, it implies that if price rise is not 'persistent', prolonged or sustained, it is not inflation whatever the rate of rise in the general price level. Nor do the economists specify what rate of price rise is 'considerable' or' appreciable' - 1%, 5%, 10%, 20% or what ? They do not provide a specific answer to this question too. It may thus be concluded that modern economists do not provide a definite answer to the question as to 'what rate of increase in price rise is inflation'.

However, if one goes by Samuelson-Nordhaus definition of inflation, 'a rise in the general level of prices' is inflation. It means that *any* rise in the general price level over and above the baseyear level is inflation. This is the concept of inflation which is generally used in the analysis of price behaviour. For instance, the rate of price rise in India during April-May 2009 was below 1% and had gone down to 0.13% in the last week of May 2009 - the lowest in 30 years. This almost zero rate of rise in the general price was called inflation in public report. This is the practice, in fact, in all other countries and adopted also by the international organizations like World Bank and IMF.

Now a question arises here : What is the desirable rate of inflation ? The economists' point of view on this question is discussed below.

What is Desirable Rate of Inflation?

The question as to what is a desirable rate of inflation can be answered by linking it to the economic and social needs of the country. In general, a **moderate rate of inflation is considered to be desirable and acceptable** for at least three reasons.

(i) A moderate rate of inflation keeps the economic outlook optimistic, promotes economic activity and prevents economic stagnation.

(ii) It is helpful in the mobilization of resources by increasing the overall rate of savings and investment—inflationary financing has, in fact, been widely used to finance economic growth of the underdeveloped countries.

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(iii) It is historically evident that, despite intermittent deflation, the general price level has exhibited a rising trend, and some increase in the general price level is inevitable in a dynamic and progressive economy.

A rate of inflation higher than the *desirable* rate of inflation is considered to be 'considerable'.

Now the question arises : **What is the Moderate Rate of Inflation ?** This question cannot be answered in specific percentage terms because desirability of inflation depends on the need and the absorption capacity of a country which are subject to variation from time to time. The capacity of a country to absorb inflation may be defined in terms of the limit of the price rise beyond which the economy gets overheated and macro variables like savings, investment, growth of output, BOP position, and employment get adversely affected. The absorption capacity, so defined, varies from country to country and from time to time depending on their growth potentials. Therefore, the desirable limit or the moderate limit of inflation has to be determined for each country and for different periods of time. There is no definite rule in this regard. However, based on the past experience, it is some times suggested that 1-2 percent inflation in developed countries and 4-6 percent inflation in less developed countries is the appropriate and desirable limit of moderate inflation.

As regards the desirable rate of inflation for India, the Chakravarty Committee (1985), a Committee set up by the RBI to review the monetary system of the country, considered a 4-percent rate of inflation in India socially desirable and conducive to economic growth. Some economists consider a lower rate of inflation to be desirable. "Some people who regard inflation as an economic evil believe that a price level rising at a rate of around 1.5 percent ... assists in achieving and maintaining full employment and a satisfactory rate of growth." However, if one goes by the recent record of inflation, inflation rate of 1.5 percent appears to be too low to maintain "full employment and a satisfactory growth rate."

To conclude, **a price rise of 2-3 percent per annum in the developed economy and 4-5 percent per annum in the developing economies is generally considered as the desirable rate of inflation.** Therefore, a price rise in excess of 2-3 percent in developed countries and 4-5 percent in developing countries can be regarded as 'considerable' and undesirable. This definition may not be theoretically defendable but it is empirically defendable. Also, it has an important policy implication, i.e., so long as (i) the general level of price rises at an annual average rate of a 2-3 percent in developed countries and 4-5 percent in less developed countries, and (ii) macrovariables are not adversely affected by the price rise, an anti-inflationary policy is not advisable as it may distort the price system and affect adversely the employment and growth process.

9.2 Methods of Measuring Inflation

There are two common methods of measuring inflation : (i) percentage change in Price Index Numbers (PIN), and (ii) change in GNP Deflator. The two methods of measuring inflation are discussed below.

Measuring Inflation by PIN

The following formula is used for measuring the rate of inflation through the change in the PIN.

$$\text{Rate of Inflation} = \frac{PIN_t - PIN_{t-1}}{PIN_{t-1}} \times 100$$

where PIN_t in the price index number in the year selected for measuring inflation and PIN_{t-1} is the price index number in the preceding year.

The two widely used PINs are Wholesale Price Index (WPI), also called Producer Price Index (PPI), and Consumer Price Index (CPI). WPI is used to measure the general rate of inflation and CPI is used to measure the change in the *cost of living*.

In order to illustrate the measurement of inflation, let us use price index numbers in India in the early 1990s. The WPI (1999-2000 = 100) for 'all commodities' increased from 134.6 in 2005-06 to 141.9 in 2006-07. The rate of inflation between 2005-06 and 2006-07 can be obtained by using the above formula as follows.

Notes

$$\text{Rate of Inflation} = \frac{141.9 - 134.6}{134.6} \times 100$$

$$= 5.4 \text{ percent}$$

The annual average rate of inflation over a period of time (say 5, 10 or 20 years) is computed by taking average of the annual rates of inflation. For example, consider the annual average rate of inflation in India during the period from 2001-02 to 2005-06 as given in Table 1. As the table shows, 5-year annual average rate of inflation in India during 2001-06 was 4.7 percent.

Table 1: The Annual Average Rate of Inflation in India : 2001-02 to 2005-06

Year	Annual Inflation Rate (%)
2001-02	3.6
2002-03	3.4
2003-04	5.5
2004-05	6.5
2005-06	4.4
Annual average	4.7

Which of the two methods is better ?

As discussed above, inflation rate can be measured by using WPI or GNP deflator, called also as national income deflator. A question arises here : which of the two methods is a better method ? In the opinion of the economists, GNP deflator gives a more appropriate measure of inflation. The reason is that GNP takes into account all the goods and services and, therefore, GNP deflator takes into account prices of all the goods, whereas WPI is based on only wholesale prices which exclude value added at retail stage. Therefore, WPI gives only a partial measure of inflation. That is why economists consider GNP deflator as a better measure of inflation than WPI. In general however, WPI is more commonly used to measure the Inflation in India.

9.3 Types of Inflation

Inflation is generally classified on the basis of its rate and causes. While rate-based classification of inflation refers to the severity of inflation or how high or low is the rate of inflation, cause-based classification of inflation refers to the factors that cause inflation. In this section, we discuss the types of inflation classified on the basis of its rate. The types of inflation classified on the basis of its cause will be discussed in the next Chapter under the causes of inflation. On rate basis, inflation is classified as : (i) Moderate inflation, (ii) Galloping inflation, and (iii) Hyper inflation. There main feature are described below.

(i) Moderate Inflation

When the general level of price rises at a moderate rate over a long period of time, it is called moderate inflation or creeping inflation. The 'moderate rate' of inflation may vary from country to country. However, 'a single digit' rate of annual inflation is called 'moderate inflation' or 'creeping inflation.' An important feature of moderate inflation is that it is 'predictable.' During the period of moderate inflation, the people continue to have faith in the monetary system and confidence in 'money as a store of value.' Money continues to work as a medium of exchange and people continue to hold money as asset.

(ii) Galloping Inflation

The economists have different views on galloping inflation. For example, according to Baumol and Blinder, "Galloping inflation refers to an inflation that proceeds at an exceptionally high rate." They do not specify what rate of inflation is 'exceptionally high.' Samuelson and Nordhaus

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define 'galloping inflation' more precisely. According to them, "Inflation in the double- or triple-digit range of 20, 100 or 200 percent a year is labeled galloping inflation." This definition is not less imprecise because double and triple-digit inflation ranges between 10 and 999 percent and economic effects of inflation in this range will be immensely different. A country with a 900 percent annual inflation will have devastating effects whereas a country with 20-30 percent inflation can manage without pressing the alarm bell.

However, the post-War I inflation in Germany is often cited as a classic example of galloping inflation though some would call it *hyper inflation*. The wholesale prices in Germany increased 140 percent in 1921 and a colossal 4100 percent in 1922. In 1923, prices increased in Germany at an average rate of 500 percent per month. In recent times, Argentina, Brazil, Mexico, Peru and Yugoslavia (former) had galloping inflation during the 1970s and 1980s. The annual average rate of inflation in these countries during 1980-91 was exceptionally high : Argentina—416.9 percent; Brazil—327.6 percent; Peru—287.3 percent; former Yugoslavia—123.0 percent; and Mexico—66.5 percent. Incidentally, these cases are also cited as the examples of hyper inflation.

(iii) Hyper Inflation

In general, a price rise at more than three-digit rate per annum is called 'hyper inflation'. According to some economists, however, "Hyperinflation is often defined as inflation that exceeds 50 percent per month.....An inflation rate of 50 percent per month implies a more than 100-fold increase in the price level over a year" During the period of hyper inflation, paper currency becomes worthless and demand for money decreases drastically. Germany suffered from hyper inflation in 1922 and 1923 when wholesale price index shot up by "100 million percent between December 1922 and November 1923." November 1923 was the worst period of hyper inflation in Germany— "from January 1922 to November 1923, the price index rose from 1 to 10,000,000,000." Hungarian inflation of 1945-46 is the worst case of hyper inflation ever recorded : the "rate of inflation averaged about 20,000 percent per month for a year and in the last month prices skyrocketed 42 quadrillion percent."

The price rise in zillion and quadrillion percentage makes the meaning of hyper inflation obscure. It goes beyond the mental vision of the number. The following anecdotes about German hyper inflation would reveal what happens during the period of hyper inflation.

- People carried basket-load of money to the market and brought goods in pocket.
- It was cheaper to burn currency notes to make tea rather than buying it in the tea-shop.
- Price of a house in pre-inflation period was just sufficient to pay a day's rent in post-inflation period.
- At the time of entering the cafe, the price of a cup of coffee was 4,000 marks, which rose to 8000 marks before one could finish his coffee.

In the recent past, Argentina, Brazil, and Peru had hyper inflation in 1989 and 1991. The rates of inflation in these countries in 1989 and 1990 are listed in Table 2.

Table 2: Rate of Inflation in Argentina, Brazil and Peru-1989 and 1990

Country	1989	1990
Argentina	3079.8 percent	2314.0 percent
Brazil	1287.0 percent	2937.8 percent
Peru	3398.6 percent	7481.7 percent

(**Source :** CMIE, *World Economy & India's Place In It*, October 1993,)

Notes

More recently, according to prediction made by some economists, the inflation rate in Yugoslavia was to reach 2,50,000 percent in December 1993 (TOI, 27/12/1993). The Yugoslav treasury had issued the biggest currency notes with denomination of 500 billion dinars to facilitate transactions.

Notes In the modern world economy *open inflation* is a rare phenomenon. Countries facing inflation have suppressed inflation. For example, the 7-8 percent inflation in India in 2008 was virtually a suppressed inflation.

(iv) Open and Suppressed Inflation

In the contemporary writings on the subject, one often comes across the terms 'open inflation' and 'suppressed inflation.' When there is no control on the rising prices and prices are free to find their own level, the inflation under this condition is called **open inflation**. In the post-War II period, control and regulation of prices by direct and indirect measures has become a common feature of economic policy of most developed and developing economies. In addition to indirect measures including monetory and fiscal control measures, direct price control measure in the form of statutory fixation of the price or fixation of a price ceiling; rationing the consumption of scarce goods, controlled distribution of goods through public distribution system; subsidization of commodities with inflation potentials, etc. are used to control the price rise. In spite of these control measures, prices do rise and inflation does take place but at a rate lower than the potential rate in the open system. This kind of inflation is called **suppressed inflation**.

9.4 Inflation, Disinflation and Deflation

Before we proceed to discuss further aspects of inflation, let us understand the difference between *inflation* and *disinflation* and between *inflation* and *deflation*. **Inflation** refers to a persistent increase in the general price level. **Disinflation** means decline in the rate of inflation. **Deflation** means fall in the general price level below the base-year level. The conceptual difference between these terms is illustrated below with hypothertical price data.

As can be seen from the above table, when PIN rises from 100 in base-year 2000-01 to 110 in year 2001-02, it means there 10% **inflation**. When PIN decreases from 110 in year 2001-02 to 105 in year 2002-03, **inflation** rate on year-to-year basis has declined from 10% to 4.5% but still remains above the base-year level. This is the situation of **disinflation**—the fall in the rate of inflation. When PIN declines below the base-year PIN=100, this means **deflation**. Thus, **deflation** means that the general price level has gone down below the *base-year price level*.

Measuring Inflation, Disinflation and Deflation

(Base year = 2000-01)

Year	Price Index Number (PIN)	% Change in Price (Year-to-Year)	Nature of Price Change
2000-01	100	–	–
2001-02	110	10	Inflation (10%)
2002-03	105	4.5	Disinflation (5.5%)
2003-04	100	(-) 5.0	Disinflation (5.0%)
2004-05	100	0.0	Zero Rate of Inflation
2004-05	95	- 5.0	Deflation

Notes

Inflation, Disinflation and Deflation in India

Looking at the Indian data, the weekly rate of inflation (based on WPI) had shot up to 13.1% in the 2nd week of August 2008 - the highest rate of inflation during the past 16 years - and the *annual* inflation rate had gone up to 12.81% in 2008. This was a matter of great concern for both the MOF and the RBI. Thereafter, however, inflation rate started declining setting a *disinflationary* trend. In the 2nd week of September 2008 inflation rate declined to 12.14%. Over the following period of three months, inflation rate had sharply declined to 6.61% in the 2nd week of December 2008 due mainly to the recession in the economy caused by the impact of global recession. This decline in the inflation rate was, in fact, **disinflation**. The disinflationary trend continued and inflation rate declined to 0.13% in the last week of May 2009, i.e., inflation rate had fallen to a near-zero level. The price level continued to decline and fell to - 1.61% in the first week of June 2009 and -1.31% in the last week of June. This marked a situation of **deflation** in India.

9.5 Inflation in India : A Long-Term View

The historical record of inflation in India is given in Table 3. As the table shows, India has had inflation almost continuously over a period of six decades, though the rate of inflation has been changing - sometimes low, sometimes high - and in some years there was deflation. The inflation rate during the First Plan period (1951-56) was very low (1.5%), rather insignificant. But, the price rise picked up during the Second Plan period (1955-56 to 1960-61) when prices had increased at the rate of 6.3 percent per annum. As can be seen in Table 9.4 the five-year average rate of inflation in India remained limited to one digit during most of the period of the past five decades, except, of course, in 1970s. It was only during the first half of 1970s and the first half of 1990s that the rate of inflation had crossed one-digit rate.

Table 3 : Annual Average Rate of Inflation in India : 1960-2001

(Base : 1993-94 = 100)

Period	52-week annual average	Point to Point (March end)
1950-51 to 1955-56*	1.5	---
1956-56 to 1960-61	6.3	5.2
1961-62 to 1965-66	5.8	5.9
1966-67 to 1970-71	6.7	5.7
1971-72 to 1975-76	12.0	10.8
1976-77 to 1980-81	8.5	11.0
1981-82 to 1985-86	6.5	5.5
1986-87 to 1990-91	7.8	8.5
1991-92 to 1995-96	10.6	9.3
1096-97 to 2000-01	5.0	5.3

* Figures taken from CMIE, *Basic Statistics Relating to the Indian Economy*, 1994,

Source : *Economic Survey*—2001—2002, Ministry of Finance, Government of India, p.111.

Notes

Table 4 presents the inflation rates in India for the period 2000-01 to 2008-09.

Table 4: Annual Inflation Rate : 2000-01-2008-09

(Year-on-year : 1999-2000 = 100)

Year	Inflation Rate
2000-01	7.2
2001-02	3.6
2002-03	3.4
2003-04	5.5
2004-05	6.5
2005-06	4.4
2006-07	5.4
2007-08	4.7
2008-09	8.4

Source : *Economic Survey*-2008-09, MOF, GOI, Table 4.1, p.64

Conclusion : From the data presented in Tables 3 and 4, it can be concluded that the Indian economy has been prone to inflation. However, in view of the fact that it is a fast growing economy, inflation rate has been within the range of moderate inflation. Besides, a comparison of inflation rates in pre-economic reform period (pre-1990 period) and post-reform period shows that the inflation rate tended to decline in the post-reform period. It may be the result of faster growth rate of the economy, i.e., 5% plus. Inflation in India will be analysed in a greater detail in the next chapter, in the light of the theories of inflation.

9.6 Economic Effects of Inflation

The economic effects of inflation are all pervasive. It affects all those who depend on the market for their livelihood. The effects of inflation may be favourable or unfavourable, and low or high depending on the rate of inflation. For example, a galloping and hyper inflation have devastating effect on the economy and have serious social and political implications too. In this section, however, we will discuss only economic effects of inflation on certain major aspects of the economy, viz., (i) distribution of income, (ii) distribution of wealth, (iii) different sections of the society, (iv) output and economic growth, and (v) employment of labour.

1. Effect of Inflation on Distribution of Income

The effect of inflation on income distribution depends on how it affects the price received and price paid by different sections of the society, especially the consumers and the producers. *Prices received are the same as incomes* defined crudely. For example, households receive their incomes in the form of factor prices-wages and salaries, rents and royalties, dividend, interest, profits and income from self-employment. Similarly, *actual prices paid represent the expenditures on consumer goods and production inputs. Inflation changes the income-distribution-pattern only when it creates a divergence between total price received and total prices paid by different sections of the society.* For example, let us consider only two major forms of incomes-wage incomes and profits. When price rise is so evenly distributed that wages increase proportionately to the rise in profit incomes, the income distribution remains generally unaffected. When output prices increase faster than input prices, profits rise faster than wage incomes, which is generally the case, incomes get redistributed in favour of the profit earners—the employers. However, if inflation is predictable and consumers are able to adjust consumption pattern and wage earners can move from low-wage jobs to high-wage jobs, then the impact of inflation on income distribution is considerably mitigated.

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What happens in general, however, is that product prices increase first and at a faster rate, and input prices (especially wages) increase later and at a lower rate. It is so because, there is always a time-lag between the rise in output prices and input prices. For example, prices of goods and services increase first, in general, and wages of labour after a time gap—we know that when prices of consumer goods increase, dearness allowance is paid after a time gap. This is the general case.

As a result, wage incomes flow to producers of wage-goods first and at a faster rate than the reverse flow. Consequently, inflation cause redistribution of income in favour of the producers. Consequently, rich (firms) get richer and poor (labour) get poorer.

2. Effect of Inflation on Distribution of Wealth

From the view point of analysis here, let us look at wealth as accumulated assets. Assets can be classified as : (i) price variable assets, and (ii) fixed value assets. *Price-variable assets* are those whose prices change with change in the general price level. The money value of price-variable assets increases, during the period of inflation. Price-variable assets can be further classified as: (a) *physical assets* including land, building, automobiles, gold, jewellery, etc., and (b) *financial assets* including shares and stocks. The *fixed-value assets*, on the other hand, are those assets whose money value remains constant even if the general price level changes. *Fixed-value assets* include bonds, term deposits with banks and companies, loans and advances, etc. Like assets, there are liabilities also. *Liabilities* are mostly of fixed claim nature like house loans, car loans, bank loans, and mortgage of property. Let us assume, for the sake of simplicity in the analysis, that fixed value assets and fixed value liabilities cancel out.

Empirical Evidence : It has been argued above that inflation can, at least theoretically, affect the distribution of income and wealth under certain conditions. Let us now turn to the question whether inflation really affects income and wealth distribution. The economists have devoted a considerable effort and attention to examine the effect of inflation on the distribution of wealth.

A voluminous literature is available on the subject. Empirical studies do not produce conclusive evidence on the effect of inflation on the distribution of income and wealth. To quote Samuelson and Nordhaus, "The summary wisdom of these studies indicates that the overall impact is highly unpredictable."

3. Effects of Inflation on Different Sections of Society

As noted above, the overall impact of inflation is unpredictable. However, inflation has certain definite and predictable effect on the income of certain sections of society. These are briefly discussed below.

Wage Earners : It is a common belief that wage earners are hurt by inflation. Some authors consider this belief as a myth. In fact, whether wage earners lose or gain by inflation is again a matter of labour-market conditions. In developed countries labour is, by and large, organized and labour market is competitive. According to Baumol and Blinder "the average wage typically rises more or less in step with prices." This contradicts the 'popular myth' that wage earners are, in general, losers during the period of inflation. They have used US data to show that real wage "is not systematically eroded by inflation." They add, "The fact is that in the long-run, wages tend to outstrip prices as new capital equipment and innovation increase output per worker."

Fixed income class : The people of the fixed-income category are the net losers during the period of inflation. The reason is that their income remains constant even during the period of inflation, but the prices of goods and services they consume increase. As a result, the purchasing power of their income gets eroded in proportion to the rate of inflation. For example, suppose that a person earns a fixed annual income of ₹ 100,000 and that the rate inflation is 10 percent. It means that if he spends his total income, he can buy goods and services worth only ₹ 90,000 at the prices in the current year. If prices continue to increase at the rate of 10 percent per annum, his purchasing power will be reduced to goods and services worth ₹ 81,000 in the second year and to worth ₹ 72,900 in the third year, and so on.

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Borrowers and lenders : In general, borrowers gain and lenders lose during the period of inflation. For example, suppose a person borrows ₹ 5 million at 12 percent simple rate of interest for a period of five years to buy a house. Suppose also that escalation in property prices is such that property prices double every 5 years. After 5 years, the borrower would pay a total sum of ₹ 8 million whereas the price of house rises to ₹ 10 million. The borrower gains by ₹ 2 million. The lender loses by the same amount in the sense that had he bought the house himself, his asset value would have risen to ₹ 10 million.

The government : The government is a net gainer during the period of inflation. In order to analyze the government's gain from inflation, let us consider the *government as a taxing and spending unit and as a net borrower*. As regards the effects of inflation on tax revenue, inflation increases revenue yields from both, the direct and indirect taxes. Consider first the direct taxes, *viz*., personal and corporate income taxes.

Inflation increases tax yields from **personal income tax** in at least three ways. *One*, inflation redistributes income generally in favour of higher income groups. This kind of income transfers enlarge the tax base for the personal income tax. As a result, the yield from the personal income tax increases. *Two*, inflation increases the nominal income at the rate of inflation, real income remaining the same. As a consequence, an income which was non-taxable prior to inflation becomes taxable after inflation. This also enhances the tax base and, therefore, the tax revenue. *Third*, with the increase in the nominal income due to inflation, incomes taxable at lower rates becomes taxable at a higher rates. This increases the yields from personal income tax.

4. Effect of Inflation on Economic Growth

The effect of inflation on economic growth can be examined at both theoretical and empirical levels. Let us first examine the issue of inflation and economic growth at theoretical level. *Theoretically*, the rate of economic growth depends primarily on the rate of capital formation which depends on the rate of saving and investment. Therefore, whether inflation affects economic growth positively or negatively depends on whether it affects savings and investment positively or negatively. Most economists hold the view that there is a positive relationship between inflation and saving and investment and, therefore, *inflation is conducive to economic growth*. Two arguments are put forward in favour of this proposition.

First, during the period of inflation, there is a time-lag between the rise in output prices and rise in input prices, particularly the wage rate. This time-lag between the rise in output prices and the wage rate is called wage-lag. When the wage-lag persists over a long period of time, it enhances the profit margin. The enhanced profits provide both incentive for a larger investment and also the investible funds to the firms. Firms plaugh back their profits for higher profits. This results in an increase in investment, production capacity and a higher level of output.

Second, inflation tends to redistribute incomes in favour of higher income-groups whose incomes consist mostly of profits and non-wage incomes. This kind of inflation-induced redistribution of incomes increases total savings because upper-income groups have a *higher propensity to save*. The increase in savings increases the supply of investible funds and lowers the rate of interest. Since investment is the function of interest rate, other factor given, a lower rate of interest increases investment. With increase in investment, production capacity of the economy increases. This causes an increase in the total output, which means economic growth.

5. Effect of Inflation on Employment

Economic growth and employment go hand in hand. It may thus be construed that inflation has promotional effect on employment. It is a widely accepted view that a moderate rate of inflation helps economic growth which creates additional employment opportunities. Since inflation affects growth variables—savings, investment and profits—favourably, it affects employment favourably too. The economists have found that the greater the rate of investment, the greater the rate of employment till the economy reaches the full employment level.

However, a very strong conflict arises between growth and employment at a high rate of inflation. While a high rate of inflation increases employment, it affects growth adversely. Besides, inflation as a means to growth and employment involves severe economic and social costs in terms of

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distortions in relative prices, malallocation of resources, and social and political unrest. Therefore, it cannot be allowed to go uncontrolled. If it is controlled, it will limit the employment and cause unemployment. The policy-makers are therefore often faced with a situation of dilemma. If inflation is allowed to go on a high rate, it will affect growth adversely, and if it is controlled, it will affect employment adversely and there may be a high rate of unemployment. The policy-makers are therefore required to find *a trade-off between inflation and unemployment*. This issue has received a great deal of attention in recent times.

Self -Assessment

1. Choose the correct option

(*i*) Which of the following statements best describes inflation:

(*a*) Any increase in the price level.

(*b*) An increase in price of a major industry.

(*c*) An increase in the rate of upward change of the price level.

(*d*) A decrease in the rate of upward change of the price level.

(*e*) An increase in the rate of downward change of the price level.

(*ii*) The price level is the :

(*a*) weighted average price of all goods

(*b*) weighted average price of all goods and services

(*c*) weighted average price of all services

(*d*) weighted average price of exported goods and services

(*e*) weighted average price of all non-agricultural products and services

(*iii*) Unexpected inflation:

(*a*) creates less problems for an economy than expected inflation.

(*b*) hurts all individuals in an economy.

(*c*) helps banks and individuals who have loaned money.

(*d*) helps debtors.

(*e*) effects all assets equally.

(*iv*) Inflation always has a negative affect on:

(*a*) currency

(*b*) gold

(*c*) debtors

(*d*) wages with cost of living adjustments

(*e*) gold speculators

(*v*) When events such as 9/11 occur the price of gold will frequently increase. The most plausible explanation of this increase in gold is:

(*a*) People fear that the production of gold will decrease and sell their gold.

(*b*) People expect inflation to occur and sell their gold.

(*c*) People fear the loss of purchasing power and hold more paper money.

(*d*) People expect deflation to occur and buy gold.

(*e*) People expect inflation to occur and buy more gold

(*vi*) Which of the following is the best measure of how inflation affects consumers?

(*a*) The increase in the price of gold

(*b*) The increase in the consumer price index

(*c*) The increase in the price of a single product

(*d*) The decrease in the consumer price index

(*e*) The increase in the purchasing power of the dollar

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(*vii*) Given that the consumer price index for each of three years is:

Year 1 = CPI = 100 Year 2 = CPI = 180 Year 3 = CPI = 198

The inflation rate for year 2 is:

(*a*) 180% (*b*) 80% (*c*) 40%

(*d*) there is no inflation because deflation has occured.

(*e*) cannot be calculated with the given information

9.7 Summary

- In a broad sense of the term, inflation means a considerable and persistent rise in the general price level over a period of time. However, there is no universally acceptable definition of inflation. The definition of inflation has been, in fact, a matter of opinion on price rise and its causes.
- "Inflation is a persistent and appreciable rise in the general level or average of prices." Harry G. Johnson defines inflation as "a sustained rise in prices."
- If one goes by the definition of inflation given by some modern economists, *any rise* in the general price level is *not* inflation. In their opinion, only a 'persistent', 'prolonged' and 'sustained' and a 'considerable' and 'appreciable' rise in the general price level can be called 'inflation'.
- There are two common methods of measuring inflation : (i) percentage change in Price Index Numbers (PIN), and (ii) change in GNP Deflator.
- Inflation is generally classified on the basis of its rate and causes. While rate-based classification of inflation refers to the severity of inflation or how high or low is the rate of inflation, cause-based classification of inflation refers to the factors that cause inflation.
- Before we proceed to discuss further aspects of inflation, let us understand the difference between *inflation* and *disinflation* and between *inflation* and *deflation*. **Inflation** refers to a persistent increase in the general price level. **Disinflation** means decline in the rate of inflation.
- Looking at the Indian data, the weekly rate of inflation (based on WPI) had shot up to 13.1% in the 2nd week of August 2008 - the highest rate of inflation during the past 16 years - and the *annual* inflation rate had gone up to 12.81% in 2008.
- The economic effects of inflation are all pervasive. It affects all those who depend on the market for their livelihood. The effects of inflation may be favourable or unfavourable, and low or high depending on the rate of inflation.
- The effect of inflation on income distribution depends on how it affects the price received and price paid by different sections of the society, especially the consumers and the producers. *Prices received are the same as incomes* defined crudely.
- As noted above, the overall impact of inflation is unpredictable. However, inflation has certain definite and predictable effect on the income of certain sections of society.
- The government is a net gainer during the period of inflation. In order to analyze the government's gain from inflation, let us consider the *government as a taxing and spending unit and as a net borrower*. As regards the effects of inflation on tax revenue, inflation increases revenue yields from both, the direct and indirect taxes. Consider first the direct taxes, *viz*., personal and corporate income taxes.
- Economic growth and employment go hand in hand. It may thus be construed that inflation has promotional effect on employment. It is a widely accepted view that a moderate rate of inflation helps economic growth which creates additional employment opportunities.

9.8 Key-Words

1. Hyperinflation : It is the most extreme inflation phenomenon, with yearly price increases of three-digits percentage points and an explosive acceleration.

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2. Moderate inflation	:	It can be differently defined around the world, given the different inflation histories. As an indication only, one could consider an inflation as moderate when it ranges from 5% to 25-30%. For some countries, the higher part of this range is already "high inflation".
3. Low inflation	:	It can be characterized from 1-2% to 5%. Around zero there is no inflation (price stability). Below zero, a country faces deflation.
4. Hyperinflation	:	It is the most extreme inflation phenomenon, with yearly price increases of three-digits percentage points and an explosive acceleration.
5. Extremely high inflation	:	It could range anywhere between 50% and 100%. High inflation is a situation of price increase of, say, 30%-50% a year. Both kinds can be stable or dangerously accelerate to enter in an hyperinflation condition.
6. Deflation	:	In economics, deflation is a decrease in the general price level of goods and services. Deflation occurs when the inflation rate falls below 0% (a negative inflation rate). This should not be confused with disinflation, a slow-down in the inflation rate (i.e. when inflation declines to lower levels). Inflation reduces the real value of money over time; conversely, deflation increases the real value of money - the currency of a national or regional economy. This allows one to buy more goods with the same amount of money over time.

9.9 Review Questions

1. Define inflation. Can any price rise be called inflation ? What is the acceptable or desirable limit of inflation ?
2. How is inflation measured ? Explain the methods of measuring inflation with examples.
3. What is meant by national income deflator ? How is national income deflator used to measure inflation ?
4. Why is a moderate rate of inflation considered to be desirable for the economy ? What are the limits of desirable rate of inflation for the developed and developing nations ?
5. What are the types of inflation ? How do they differ from one another ?
6. What is meant by inflation tax ? Under what conditions is inflation tax used as a source of financing growth ?
7. How does inflation affect economic growth ? How can inflation be used to make the economy grow?
8. Explain the relationship between inflation and employment. Is achieving a high rate of employment by means of inflation always desirable ?

Answers: Self-Assessment

1. (*i*) (*c*) (*ii*) (*b*) (*iii*) (*d*)
   (*iv*) (*a*) (*v*) (*e*) (*vi*) (*b*)
   (*vii*) (*b*)

9.10 Further Readings

Books

1. The Indian Economy; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001.
2. Indian Economy; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055.

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Unit 10: Demographic Features and Indicators of Development

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Introduction
10.1 Demographic Features and Indicators of Development
10.2 Nature of the Population Problem in India
10.3 Summary
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Objectives

After reading this Unit students will be able to:

- Explain about the demographic Features and Indicators of Development.
- Discuss the Nature of Population Problem in India.

Introduction

The growth in population explains the difference in the growth of national income and the per capita income since human resources have a major role in generating aggregate flow of goods and services. Thus, the demographic features and indicators of development are closely related. For instance, human resources have a two-pronged relationship with economic growth. We see that as a resource, people are available as factors of production to work in combination with other factors of production such as land, capital and enterprise. Moreover, as consumers, human beings make demand on the national product of the economy. In this way, the size of population is a significant determinant of economic growth. It may be noted that a large population may not necessarily contribute to economic growth. Thus, a large fast-rising population may find itself in a situation of over-population. We may discuss whether economic growth alone constitutes economic development and see that it is not the case. Therefore, we must know about economic development and the indicators of economic development.

10.1 Demographic Features and Indicators of Development

With the help of Indian census data, a concise demographic profile of the country can be prepared. In 1872, the country's first all India Census was completed. Decennial censuses have been organised then on in 1881, 1891, 1901, 1911, 1921, etc. The 14th census was completed in March, 2001. It may be noted that the census in India is conducted under the Census Act, 1948, which makes it obligatory for the public to provide all answers correctly and fully for a correct analysis.

Trends in Population Growth

However, India has got only 2.4% of the total land area of the world. Thus, India has been seriously handicapped a large proportion of the world population is found jam-packed in a small area of the country. Major trends of Indian population are given as under :

1. Since 1951, the upward trend in population growth rate was maintained which got reversed during the decades 1981-2001.
2. The increase in population after the country's independence was more rapid. Before that the census of 1931 and the following census of 1941 recorded an increase of the magnitude of about

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2.76 crore and 3.97 crore respectively. In this way, while India's population had increased by about 12 crores during the first fifty years of the present century, i.e. during 1901-51, it increased by about 32.5 crore during the three decade period of 1951 to 1981 itself.

3. The year 1921 is known as the 'Year of Great Divide'. Here, it may be noted that before 1921, the growth of population was very slow. A decline was caused by famines and epidemics during the 1911-21.

Distribution of Population by States : Different States of India have different number of inhabitants with a large gap. For instance, Uttar Pradesh has a population as large as 16.60 crore while Sikkim has barely 5.40 lakh people. Some relatively large states have a population of more than 5 crore such as Bihar, Maharashtra, West Bengal, Andhra Pradesh, Madhya Pradesh, Tamil Nadu, Gujarat, Karnataka and Rajasthan. There are other states with less than 5 crore population.

Did u know? According to the 2001 census, India is the second largest country in the world with the total population of 102.7 crore constituting about 16% of the total population of the world.

Growth Rate of Population

The change in population caused by net migration as a proportion of total population of the country is almost insignificant and, therefore, can be easily ignored. The birth and death rates in India have followed the general trends indicated in the theory of demographic transition. The following conclusions may be made for India's population growth :

1. The natural growth rate of population picked up to reach the maximum at 22.20 per thousand or about 2.22% per annum during 1971-1981 (and 21.1% during 1981-91). The crude death rate showed a marked decline in the decade 1921-31 and ever since has been continuously declining. However, during this period lasting till the mid-1970s, there was hardly any fall in the birth rate.
2. The stage for the third phase of transition was set with the beginning with the 1970s when the birth rate registered a fall. However, this has been neutralised by declining mortality. Here, it may be noted that the growth rate of population during 1981-1991 and 1991-2001 has been less than that in 1971-1981 which is an indication of third stage of transition.

Density of Population

The density of population in the country is 324 (Census 2001). It is calculated as a ratio of the number of persons per *sq. km.* of land area. It may be noted that a country like Myanmar with a density of population of only 75 has a per capita income of only $200 as against $530 in India. However, Japan with a density of 349 has a per capita income of $34,510. In this way, the density of population helps to determine the magnitude of the burden that land is being called upon to carry and to determine the future potentials of growth in the country.

Inter-State Variations : Generally, the density is generally high in industrially-developed states or in those regions which have a better climate, rainfall and irrigation facilities. India is an economy where the agrarian sector dominates and hence the above factors exercise an influence on the density of population in the country.

Life Expectancy

The occurrence of high death rate and/or death at an early age means life expectancy will below. However, if the death rate is low and/or death occurs at an advanced age, life expectancy will be high for a given area. It has been observed that in the last few decades, the death rate in India has recorded a perceptible fall which is reflected in the rising life expectancy. At present, life expectancy at birth is 63.87 years for males and 66.91 years for females. We see that rising life expectancy has

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social implications. For instance, it creates pressure on the job market. As persons reaching retirement age remain fit to work, they seek extension of their jobs or fresh employment. Moreover, as the elderly continue to live longer, the number of joint or multi-generational families tends to increase. But we know that the average size of households has not increased significantly over the last five decades and the total number of households has risen sharply for the period.

Age and Sex Composition : The consequence of past trends in fertility and mortality is reflected in the age and sex composition. If high birth and death rates persist for a fairly long time it would result in a bottom-heavy age pyramid. For India, the age distribution indicates that every one person, on an average, has to earn for himself and for one dependent also. Here, the dependency ratio of the population is about 64.07%. A high dependency ratio acts as a serious drag on production and improvement of living standards of the population.

Notes The difference between the birth rate and the death rate measures the growth rate of population.

Literacy

A person may be called literate if he or she can read and write with understanding in any language. In India, a substantial progress in literacy has been made during the 1951-2001.

At the same time, sex differentials in literacy rates are narrowing down. For instance, in 1951, the female literacy rate as a percentage of male literacy rate was about 33 which has gone upto 71.40 in 2001.

10.2 Nature of the Population Problem in India

India has a large population and is densely populated. Moreover, since the 1950s, the growth rate of population has been consistently high. It is due to persistence of high fertility and declining mortality. Apart from this, persistence of high birth and death rate for fairly long time has resulted in a bottom-heavy age pyramid; the dependency ratio in the economy has been very high. Further, the country shows a rising masculinity with the proportion of women in the total population gradually falling. The rural sector dominates the economy. Finally, about one-third of the total population is illiterate.

Effects on Economic Development : The fast growth of population in India has caused a number of problems as given below :

1. **Coale and Hoover's Argument :** Coale and Hoover say that the GNP per capita would be lower under higher fertility than under lower fertility. Undoubtedly, per capita product in India is lower than it would have been had population been growing more slowly, because of three reasons given below :
   - Due to the smaller number of workers, the amount of capital per worker would have been greater.
   - The labour force would have been little smaller in size in case the fertility had been lower for a longer period. However, the number of people it had to support would have been much smaller during the period.
   - If the effect of diminishing returns in agriculture was equivalent to a lower average productivity of capital, the capital itself would have been more productive.
2. **Cassen's Argument :** According to **R.H. Cassen,** there are two main relationships through which population growth affects the economy : savings effect and composition of investment effect.
   (a) Savings Effect : According to this, savings are reduced by population growth because of the increase of burden of dependency. As all must consume while relatively fewer produce, consumption per head rises and savings per head falls.

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(b) **Composition of Investment Effect :** With an increasing population, a share of investible resources has to be utilised towards reproducing for additional people 'unproductive' facilities of the economy.

Thus, the pressures of population growth have become progressively more intense.

Population Policy in India

The population problem in India needs a policy which aims at a rapid reduction in the birth rate of the country. The focus of the population policy should be :

1. To increase the rate of employment at a rate that it will do away with unemployment among population of working age.
2. To control the growth of population through family planning.

National Population Policy, 2000

The National Population Policy, 2000 has the following aims :

1. The immediate objective is to meet the "unmet" needs for contraception, health care infrastructure, health personnel and integrated service delivery in the country.
2. The mid-term objective is to bring the total fertility to replacement levels, that is, two children per couple.
3. The long-term objective is aimed at stabilisation of population by 2045.

In the policy, 16 promotional and motivational measures have been outlined to implement it. Some of the important are given below :

1. For couples below poverty line, with two living children, who undergo sterilisation, a health insurance cover of Rs. 5,000 has been fixed.
2. Panchayats and Zila Parishads to be rewarded for promoting small family norm.
3. Child Marriage Restraint Act and Pre-natal Diagnostics Techniques Act, to strictly enforced.
4. Provision of funds and soft loans for providing ambulance services in rural areas.
5. Abortion facilities scheme to be strengthened.
6. Couples below poverty line, who marry after legal age, have first child after the mother reaches 21, accept small family norm and undergo sterilisation after birth of two children are to be rewarded.

Government has established a National Commission on Population, headed by the Prime Minister, to monitor the new policy measures.

Indicators of Development

National income estimates (and the corresponding per capita income estimates) are used as indicators of economic growth. There is another concept called economic development which is a broader concept than economic growth.

Economic Growth and Economic Development : An increase in real terms of the output of goods and services that is sustained over a long period of time, measured in terms of value added may be defined as economic growth. On the other hand, the concept of economic development focuses on the achievement of the following three aims :

1. Increasing the availability and widening the distribution of basic life sustaining goods.
2. Enhancing the levels of living.
3. Widening the range of economic and social choice to individuals and nations by freeing them from servitude and dependence not only in relation to other people and nation-states, but also to the forces of ignorance and human misery in society.

Keeping the above three objectives in mind, the quality of life is regarded as an important index of development. Several factors are involved in the measurement of such 'quality'. For example, life expectancy, the level of nutrition, education and literacy rates, consumption of energy per head and

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so on. While some of these factors are 'non-monetary', others are 'monetary'. In this direction, at least two most important indices are Human Development Index and Economic Development Index.

Human Development Index : A process of enlarging people's choices may be called Human development. The United Nations Development Programme prepares the Human Development Index (HDI) annually. In theory, the choices can be infinite and change over time.

Computation of HDI : There are three indicators of HDI. First, longevity, as measured by life expectancy at birth (25 years and 85 years); second, educational attainment, as measured by a combination of adult literacy (two-thirds weight) (0% and 100%) and combined primary, secondary and tertiary enrolment ratios (one-third weight) (0% and 100%); and third standard of living, as measured by real GDP per capita (PPP$) ($100 and $40,000 (PPP$)).For each of these indicators, fixed minimum and maximum values have been set in order to construct the index :

General formula for computing individual for any component of the HDI :

$$\text{Index} = \frac{\text{Actual}_{xi}\,\text{value} - \text{Minimum}_{xi}\,\text{value}}{\text{Maximum}_{xi}\,\text{value} - \text{Minimum}_{xi}\,\text{value}}$$

Accordingly, the HDI is a simple average of the life expectancy index, educational attainment index and adjusted real GDP per capita (PPP$) index. Thus, it is derived by dividing the sum of these three indices by 3. According to the Human Development Report, 2004 India ranked 127 in the group of 177 countries.

Economic Development Index (EDI) : National Council of Applied Economic Research (NCAER) of New Delhi has developed a new measure called EDI. We may note that the EDI develops further on the HDI and is based on three components the health attainment index, the education attainment index, and per capita GDP of the economy. NCAER's model can analyse policy changes in Government expenditure on health and education and changes in public investment and tax rates on macro-economic variables such as output, prices and the current account balance as well as on human development in the country.

Self-Assessment

1. Choose the correct option:

1. The first census was completed in
   (*a*) 1890 (*b*) 1872
   (*c*) 1860 (*d*) None of these
2. The year ..... is known as the 'Year of Great Divide'.
   (*a*) 1921 (*b*) 1940
   (*c*) 1930 (*d*) None of these.
3. The country's first all India census was completed in
   (*a*) 1880 (*b*) 1872
   (*c*) 1890 (*d*) None of these.
4. The 14th census was completed in
   (*a*) 2002 (*b*) 1991
   (*c*) 2001 (*d*) 2010

10.3 Summary

- With the help of Indian census data, a concise demographic profile of the country can be prepared. In 1872, the country's first all India Census was completed. Decennial censuses have been organised then on in 1881, 1891, 1901, 1911, 1921, etc. The 14th census was completed in March, 2001.

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- According to the 2001 census, India is the second largest country in the world with the total population of 102.7 crore constituting about 16% of the total population of the world.
- Since 1951, the upward trend in population growth rate was maintained which got reversed during the decades 1981-2001.
- Different States of India have different number of inhabitants with a large gap. For instance, Uttar Pradesh has a population as large as 16.60 crore while Sikkim has barely 5.40 lakh people.
- The difference between the birth rate and the death rate measures the growth rate of population. The change in population caused by net migration as a proportion of total population of the country is almost insignificant and, therefore, can be easily ignored. The birth and death rates in India have followed the general trends indicated in the theory of demographic transition.
- The density of population in the country is 324 (Census 2001). It is calculated as a ratio of the number of persons per *sq. km.* of land area. It may be noted that a country like Myanmar with a density of population of only 75 has a per capita income of only $200 as against $530 in India. However, Japan with a density of 349 has a per capita income of $34,510. In this way, the density of population helps to determine the magnitude of the burden that land is being called upon to carry and to determine the future potentials of growth in the country.
- The social health of an economy is strongly indicated by its sex ratio. Sex ratio tells a lot about the state of gender relations. In India, we find a higher ratio of males in the population and a rising tendency towards masculinity.
- India has a large population and is densely populated. Moreover, since the 1950s, the growth rate of population has been consistently high. It is due to persistence of high fertility and declining mortality. The population problem in India needs a policy which aims at a rapid reduction in the birth rate of the country. Government has established a National Commission on Population, headed by the Prime Minister, to monitor the new policy measures.

10.4 Key-Words

1. Discrimination : Recognition and understanding of the difference between one thing and another.
2. Economic Development : Economic development is the increase in the standard of living in a nation's population with sustained growth from a simple.

10.5 Review Questions

1. Examine the basic demographic Features of India. Also examine their relevance for India economic policy for development.
2. From the perspective of economic policy for growth, examine the nature of different indicators of economic development.
3. Discuss the demographic features of Development.
4. How will you measure the birth rate and death rate? Illustrate by examples.
5. Discuss the reasons for the decline in sex ratio.

Answers: Self-Assessment

1. (*i*) (*b*) (*ii*) (*a*) (*iii*) (*b*) (*iv*) (*c*)

10.6 Further Readings

Books

1. Indian Economy; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055
2. The Indian Economy; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001

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Unit 11: Sectoral Performance I: Agriculture: Growth Productivity Trends and Crop Patterns

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11.2 Crop Patterns in India Since Independence
11.3 Summary
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11.6 Further Readings

Objectives

After reading this Unit students will be able to:

- Explain the Agriculture Growth and Productivity Trends.
- Discuss about the Crop Patterns in India.

Introduction

Agriculture in India is one of the most important sectors of its economy. It is the means of livelihood of almost two thirds of the work force in the country and according to the economic data for the financial year 2006-07, agriculture accounts for 18% of India's GDP. About 43% of India's geographical area is used for agricultural activity. Though the share of Indian agriculture in the GDP has steadily declined, it is still the single largest contributor to the GDP and plays a vital role in the overall socio-economic development of India. One of the biggest success stories of independent India is the rapid strides made in the field of agriculture. From a nation dependent on food imports to feed its population, India today is not only self-sufficient in grain production but also has substantial reserves. Dependence of India on agricultural imports and the crises of food shortage encountered in 1960s convinced planners that India's growing population, as well as concerns about national independence, security, and political stability, required self-sufficiency in food production. This perception led to a programme of agricultural improvement called the Green Revolution.

Did u know? The monsoons play a critical role in determining whether the harvest will be rich, average, or poor.

11.1 Agriculture: Growth and Productivity Trends

Agriculture has always been the backbone of the Indian economy and despite concerted industrialisation in the last six decades, agriculture still occupies a place of pride. It provides employment to around 60 per cent of the total work force in the country. The significant of agriculture in the national economy can be berifly explained by considering the role of agriculture under different heads.

Notes

(i) Share of Agriculture in the National Income

Table 1 : Share of Agricultural Sector in Total Gross Domestic Product (At 1999-00 Price)

(*in percentage terms*)

Year	Agriculture
	(2)
1950-51	56.5
1970-71	45.9
1990-91	34.0
2000-01	24.7
2005-06	19.55
2006-07	18.51
2007-08	
(2004-05 Prices)	17.8
2008-09	15.7
2009-10(QE)	14.6
2010-11 (RE)	14.4

Note : Agriculture includes agriculture, forestry and fishing.

Source : Economic Survey 2007-08, Statistical Abstract India 2008. CSO, National Accounts Statistic 2010, (2004-05 Prices)

QE: Quick Estimates; RE: Revised Estimates

Figures provided by the Central Statistic Organisation (CSO) reveal that in 1950-51, the share agriculture in GDP was around 55 per cent (Table 1). At the process of industrialisation and economic growth gathered momentum under the Five Year Plans with manufacturing and service sectors growing rapidly and agricultureal sector limping along, the percentage share of agriculture in GDP declined and reached a level of 14.4 per cent in 2010-11.

Two important facts must be emphasised here;

(a) Agriculture contributed a major share of the national income in India at one time.

(b) The share of agriculture in national income however, has been decreasing continuously while the shares of the manufacturing and service sectors are increasing.

Comparison can be made between the position of agriculture in India with that in the other countries as regards the share of agriculture in national income. In the United Kingdom and United States, only 2 to 3 per cent of the working population is engaged in agriculture; in France, the proportion is about 7 per cent; and in Australia, this is about 6 per cent.

It is only in backward and less developed countries that the working population engaged in agriculture is quite high. For instance, it is 35 percent in Egypt, 59 per cent in Bangladesh, 50 per cent in Indonesia and 68 per cent in China.

(ii) Indian Agriculture and Pattern of Employment in the Country : Agriculture dominates the economy to such an extent that a very high proportion of working population in India is engaged in agriculture.

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Table 2 : Population and Agricultural Workers

(*in million*)

	1951	2001		
Total Population of India	361	1029		
Total Working Population	140	(100)	401	(100)
Population employed on land *of which*	98	(70%)	235	(59%)
Cultivators	70	(50%)	128	(32%)
Agricultural Labourers	28	(20%)	107	(27%)

Source : *Agricultural Statistics at a Glance (2007).*

Data provided by the Census of India reveals that in absolute terms, agriculture provided employment to 98 million persons in 1951; the number of people working on land (cultivators and agricultural labourers) increased to 235 million in 2001. In terms of percentage, however, people working on land came down from 70 to 59 during the five decades between 1951 and 2001.

The Tenth Plan (2002-07) estimates that the agricultural sector still provides employment to 57 per cent of India's work force and is the single largest private sector occupation. It is, however, really disturbing that the proportion of agricultural labourers has increased from 20 to 27 per cent between 1951 and 2001 but that of cultivators registered a decline from 50 percent to 32 percent. This shows clearly the growing pauperisation of the rural peasantry.

(iii) Importance of Agriculture for Industrial Development : Indian agriculture has been the source of supply of raw materials to our leading industries. Cotton and jute textile industries, sugar, flour mills vanaspati and plantations-all these depend on agriculture directly. There are many other industries which depend on agriculture in an indirect manner. Many of our small-scale and cottage industries like handloom weaving, oil crushing, rice husking, etc., depend upon agriculture for their raw materials-together they account for 50 per cent of income generated in the manufacturing sector in India.

But then, in recent years, the significance of agriculture to industries is going down as many new industries have come up which are not dependent on agriculture. Under the Five-Year Plans, iron and steel industry, chemicals, machine tools and other engineering industries, automobiles, information technology etc., have come up in a big way.

However, in recent years, the importance of food processing industries is being increasingly recognised both for generation of income and for generation of employment.

(iv) Role of Agriculture in the Field of International Trade : Importance of Indian agriculture also arises from the role it plays in India's trade. Agricultural products-tea, sugar, oilseeds, tobacco, spices, etc.-constituted the main items of exports of India. Broadly speaking, the proportion of agricultural goods which were exported came to 50 per cent of our exports, and manufactures with agricultural content (such goods as manufactured jute, cloth and sugar) contribute another 20 per cent or so; and the total comes to 70 per cent of India's exports in 1950-51. But with diversification of exports, more especially after the introduction of agricultural exports which were 18.5% in 1990-91 rose to 20.3% in 1996-97 and thereafter indicated a continuous decline and were of the order of only 10.6% in 2009-10.

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Table 3 : Agricultural Exports as a percentage of Total Exports

₹ crores

	Agril. Exports (1)	Total Exports (2)	(1) as % of (2)
1990-91	6,013	32,527	18.5
1996-97	24,161	118,817	20.3
2000-01	28,657	201,356	14.2
2005-06	61,194	456,418	10.8
2006-07	62,411	571,779	10.92
2007-08	79,040	6,55,864	12.05
2008-09	85,952	8,40,755	10.22
2009-10	87,523	8,45,125	10.59

Source : *Agricultural Statistics at a Glance (2010), Economic Survey 2009-10.*

(v) Role of Agricultural Sector in Economic Planning : Importance of agriculture in the national economy is indicated by many facts. For example, agriculture is the main support for India's transport systems, secure bulk of their business from the movement of agricultural goods. Internal trade is mostly an agricultural products.

Further, good crops implying large purchasing lower with the farmers lead to greater demand for manufactures and, therefore, better prices. In other words, prosperity of the farmers is also the prosperity of industries. Likewise, bad crops lead to a depression an business. Generally, it is the failure in the agricultural front that has led to failure of economic planning in particular periods.

Agricultural Development Essential for Economic Growth

The significance of agriculture in India arises also from the fact that the development in agriculture is an essential condition for the development of the national economy. Ragnar Nurkse argues that the surplus pelation in agriculture should be shifted to the newly stated industries. Nurkse's thesis is that agricultural productivity will be increased on the one hand and on the other industrial units would be set up with the use of surplus labour.

The Nurksian thesis, though widely welcome one time, has been questioned recently :

(a) Industrialisation does not consist only shifting of workers from agriculture to industries requires a particular set of motives and values which agricultural economy cannot supply. A change agriculture itself is essential before such motivative and values are evolved.

(b) The marketable agricultural surplus will have to be increased considerably to feed the growing under population and to provide raw materials to industries.

(c) New uses have been discovered for foodgrain and other agricultural crops. With fossil oils become increasingly expensive, ethanol is being used as an alternative fuel. Corn, sugarcanes, beetroot and other crops increasingly converted into ethanol and alcohol.

(d) The new industries and the fast growth services sector, however fast they may develop, will be able to provide adequate employment for the even growing millions in India. There is a limit to capacity of employment in industries in the short pride Necessarily, therefore, increased employment will have to be found in agriculture and in rural industries.

In other words, rapid economic development require rapid agricultural development either to prector to go hand in hand with it. Indian planners learnt a big lesson during the Second and Third Five-Year Plan cods and in recent years, during 2002-03, for example, when failure of the agricultural sector spelt disaster to the entire planning process.

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Thus, any change in the agricultural sector positive or negative—has a multiplier effect on the entire economy. The agricultural sector acts as a bulwark maintaining food security and in the process, nation security as well. Recognising the crucial role played by agricultural sector in enabling the widest dispersal economic benefits, the Tenth Plan emphasised that **agricultural development is central to rapid economic development of the country.**

The unfortunate thing is that most of the economic plans failed continuously to achieve agricultural target. In fact, agricultural development has always been given lower priority at the expense of industries and service sectors.

Progress of Agriculture under the Five-year Plans

On the eve of the First Plan (1951-56), agriculture was in a hopeless and deplorable condition. Our farmers were in heavy debt to the village money-lenders. They were having small and scattered holdings. They had neither the money nor the knowledge to use proper equipment, good seeds and chemical manures. Except in certain selected irrigated areas, they were dependent upon rainfall and upon the vagaries of the monsoons. Productivity of land as well as of labour had been declining and was generally the lowest in the world. In spite of the fact that over 70 per cent of our working population was engaged in cultivation, the country was not self-sufficient in foodgrains but had to depend on imports of foodgrains. Besides, the partition of the country in 1947 worsened the agricultural situation, as India was allotted more people but less land to support them.

Objectives of Economic Planning for the Agricultural Sector

While planning to develop the agricultural sector, the Planning Commission has generally kept four broad objectives in view :

(a) Increase agricultural production : The aim has always been

(i) to bring more land under cultivation,

(ii) raise the per hectare yield through intensive application of such agricultural inputs as irrigation, improved seeds, fertilisers, etc. and thus

(iii) bring about increased agricultural production.

(b) Increase employment opportunities : Apart from increase in production, the agricultural sector has to generate additional employment opportunities and provide scope for increasing the incomes of the poorer sections in our villages.

(c) Reduce the pressure of population on land : Another basic objective of planning in the agricultural sector has been to reduce the number of people working on land, on the assumption that there are too many people working on land. The surplus labour on land should be shifted to secondary and tertiary sectors, preferably in rural and semi-urban areas.

(d) Reduce inequality of incomes in the rural sector : The Government should remove the exploitation of tenants, and should distribute surplus land among small and marginal farmers in such a way that there would be some degree of equality and justice in the rural areas.

All these four objectives are generally followed in all our five year plans but in practice, agricultural planning in India has come to mean increase in agricultural production, viz., the achievement of the first objective; all other objectives have either been ignored or given lower priority.

Strategy used in the Agricultural Sector

To bring about increase in agricultural production and also increase in rural employment, the Five Year Plans use various programmes such as : setting up of community development programmes and agricultural extension services throughout the country, expansion of irrigation facilities, fertilisers, pesticides, agricultural machinery, high-yielding varieties of seeds and expansion of transportation, power, marketing and of institutional credit.

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To reduce the pressure of population on land, the strategy used by the Planning Commission was rural development i.e., set up agro-based industries and handicrafts in rural areas, to promote rural transport and communications and to encourage the movement of people from agriculture to industries and service sectors.

Finally, to bring about equality and justice in rural India, the strategy used by the Planning Commission was land reforms which included the removal of intermediaries, like the Zamindars, the protection of tenants through tenancy legislation, ceiling of land holdings and distribution of surplus land among landless labourers and small and marginal farmers.

Pattern of Investment in the Agricultural Sector

At the outset, a word of explanation is necessary about the meaning and content of "agricultural sector". In the first three Plans, "agricultural sector" was composed of agriculture and allied sectors (horticulture, animal husbandry and fisheries) and irrigation and flood control. In the succesive Plans, "rural development" and "special area programmes, were added and "irrigation and flood control" was omitted. In Table 4, outlay on agriculture is composed of agriculture and allied sectors, special area programmes and rural development, irrigation and flood control.

It would be clear that the total outlay in each Plan had increased and, correspondingly, the outlay on agriculture allied sectors had also increased. However, the percentage of plan outlay on 31 per cent and 14.9 per cent from the First Plan to the Tenth Plan.

Table 4 : Pattern of Government Outlay on Agriculture and Allied Sectors

(₹ crore)

Plans			Periods	Total Plan Expenditure (Actual)	Agriculture and allied sectors	% age of agriculture and allied sectors to total outlay
I	Plan	(Actual)	1951-56	1,960	600	31
II	Plan	"	1956-61	4,670	950	20
III	Plan	"	1961-66	8,580	1,750	21
IV	Plan	"	1969-74	15,800	3,670	24
V	Plan	"	1974-79	39,430	8,740	22
VI	Plan	"	1980-85	1,09,300	26,100	24
VII	Plan	"	1985-90	2,18,730	47,100	23
VIII	Plan	"	1992-97	4,75,480	1,01,590	21
IX	Plan	"	1997-02	8,59,200	1,76,217	20.5
X	Plan	"	2002-07	15,25,639	3,05,055	20.0
XI	Plan	(Plan)	2007-12	36,44,718	6,74,105	18.5

Source : *Planning Commission, Various* ***Five-Year Plan Documents.***

Economic Survey, 2006-07 (Tables) and Eleventh Five Year Plan (2007-12)

The Indian Planning Commission specified various programmes for increasing agricultural production such as irrigation, soil conservation, dry farming and land reclamation, supply of fertilisers and manures, improved agricultural implements, adoption of scientific practices, etc. The Government gave considerable attention to institutional changes such as the setting up of community development programme and agricultural extension services throughout the country, the use of land reforms, expansion of rural transportation, power, marketing and other basic facilities, improvement of the system of co-operative credit, etc. From the Third Plan onwards, the greatest emphasis was laid on irrigation- fertilizer-seed technology which led to the green revolution.

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Actual outlay on the agricultural sector ranged between 18 and 24 per cent of the total Plan outlay (except during the first Plan, it was as high as 31 percent). During Eleventh Plan it has declined to only 18.5 percent.

We shall describe the progress made by India in the field of agriculture under the first nine plans. In the next section, we shall take up the progress of agriculture under the Tenth Plan separately.

Agricultural Progress under the Five Year Plans

First three Plans (1951-61)

The First Five Plan (1951-56) aimed at solving the food crisis India was facing at that time and also ease the critical agricultural raw material situation, particularly the acute shortage of raw cotton and raw jute. Accordingly, the First Plan gave the highest priority to agriculture, specially food production, by allottin 31 per cent of the total Plan outlay on agriculture.

The production target in foodgrains during the First Plan was exceeded—for instance, as against the target of about 62 million tonnes, actual production of foodgrains came to nearly 67 million tonnes (Table 5). However, the targets fixed for sugarcane, cotton and jute were not achieved.

The Planning Commission wanted the Second Plan to lay the foundations of industrialisation. Out of total outlay of ₹ 4,600 crores during the Second Plan, a sum of ₹ 950 crores or about 20 per cent was spent on agriculture. Despite the percentage reduction in Plan outlay on agriculture, the progress on the agricultural front was significant. For example foodgrain production recorded nearly 80 million tonnes in 1960-61, as against the target of 81 million tonnes. Likewise, the production of oilseeds, sugarcane and cotton was much more in 1960-61 than in 1955-56. There was, however, a shortfall in the production of all groups of commodities, as against the target fixed, except in the case of sugarcane in which there was remarkable progress.

Experience in the Second Plan had showed clearly that the rate of growth in agricultural production was a major limiting factor in the progress of the Indian economy.

As the Government felt that the success of the agricultural sector was an essential condition for the success of the entire Plan, the Third Plan fixed ambitious targets of production for all agricultural crops.

Table 5 : Achievements in the Agricultural Sector in the Various Plans

	Foodgrains		Oilseeds		Sugarcane		Cotton		Jute	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
First Plan	62	67	5.5	5.6	63	60	4.2	4.0	5.4	4.2
Second Plan	81	80	7.6	6.5	78	104	6.5	5.4	6.5	4.0
Third Plan	100	72	9.8	6.4	100	127	7.0	4.6	6.2	4.5
Fourth Plan	129	104	10.5	8.7	150	140	8.0	5.8	7.4	6.2
Fifth Plan	125	132	12.0	8.9	165	165	8.0	7.1	7.7	7.1
Sixth Plan	154	146	11.1	13.0	215	170	9.2	8.5	9.1	7.8
Seventh Plan	180	171	18.0	17.0	217	210	9.5	10.5	9.5	7.9
Eighth Plan	210	199	23.0	25.0	275	277	14.0	14.3	9.5	11.0
Ninth Plan	234	211	30.0	20.7	336	300	15.7	10.1	—	11.6
Tenth Plan	234	216	30.0	24.0	336	345	16.0	23.0	—	11.0

Note : 1. Production of foodgrains, oilseeds and sugarcane in million tonnes.

2. Production of cotton in millions of bales of 180 Kgs each.

3. Production of jute in millions of bales of 170 kgs each.

Source : *Plan documents and* ***Economic Surveys.***

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The Government introduced the new agricultural technology known as Intensive Agricultural District Programme (IADP), which was soon followed by a programme of using improved seeds, viz., High Yielding Varieties Programme (HYVP). The new agricultural technology was expected to usher in the green revolution. However, as a result of the extensive and serious drought conditions in 1965-66, agricultural production was adversely affected.

(a) None of the agricultural targets—except sugarcane—was achieved during the Third Plan period; and

(b) The actual output at the end of the Third Plan in the case of foodgrains, oilseeds and raw cotton was lower than the output at the end of the Second Plan, indicating that the Third Plan was a wash-out as far as agriculture was concerned.

As a consequence of the shortfall in food production and serious famine conditions in many parts of the country, the Government was forced to import foodgrains extensively during the last year of the Third Plan. Besides, *for the first time, the public lost interest in the planning process and the Government adopted "plan holiday" for three years.*

The experience of the Third Plan made the Planning Commission realise the bitter fact that **economic planning would be a failure unless agricultural production was increased rapidly.** Accordingly, the Planning Commission assigned high priority to agriculture in the successive plans.

Progress from the Fourth Plan Onwards

The approach paper to the Fourth Plan emphasised the necessity to create favourable economic conditions for the promotion of agriculture and a systematic effort to extend the application of science and technology to improve agricultural practices. Ambitious targets were fixed for the Fourth Plan.

Table 5, however, reveals clearly that none of the targets fixed in agriculture in the Fourth Plan was realised. For example, the target for foodgrains was 129 million tonnes for 1973-74 but the actual production in that year was only 104 million tonnes—the highest level of production during the Fourth Plan was 108 million in 1970-71.

Consider further the targets fixed and actual production of oilseeds, sugarcane, cotton and jute during the Fourth Plan. It would be clear that the Fourth Plan failed to achieve the agricultural targets.

The Fifth Plan (1974-1979) was prepared with great care, with total Plan outlay at ₹ 39,430 crores out of which outlay on agriculture and allied sectors would be ₹ 8,740 crores (which was 24 per cent of the total Plan outlay). The targets for production of various crops and the necessary inputs to achieve these targets were also clearly set out. Unfortunately, all the financial calculations went wrong because of the serious inflationary situation during 1973-74. However, after the declaration of emergency (1975) agricultural progress was steady and plan targets were almost realized.

The Janata Party which came to power in 1997, however, suspended the Fifth Plan midway – rather foolishly - and started preparing the Sixth Plan. It will be clear from Table 4 that the actual production of foodgrains in the last year (1978-79) of the Fifth Plan was 132 million tonnes, as against the target of 125 million tonnes. In fact, apart from the First Plan the Fifth Plan was the only period when the actual production of foodgrains exceeded the targeted production.

Progress since the Sixth Plan

Of all the Plans, the Sixth Plan (1980-85) was hailed as a great success, particularly because of the success on the agricultural front. As against the annual growth rate of 3.8 per cent for agriculture, the actual growth rate was 4.3 per cent. The production of foodgrains in 1983-84 was 152 million tonnes (against the target of 154 million tonnes) and was hailed by the Indian Government as the **Second Green Revolution.** While the First Green Revolution from 1967-68 arose from the introduction of new high yielding varieties of Mexican wheat and dwarf rice varieties, the Second Green Revolution from 1983-84 was said to be from expansion in supplies of inputs and services to farmers, agricultural extension and better management.

While the First Green Revolution was confined mainly to Punjab, Haryana and Western U.P., the Second Green Revolution had spread to eastern and central states including West Bengal, Bihar,

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Orissa, Madhya Pradesh and eastern U.P. These states had made tremendous progress in recent years.

However, it is important to emphasise the fact that, despite all the great claims of the Government, none of the targets (except in oilseeds) of agricultural production was achieved during the Sixth Plan.

The Seventh Plan (1985-90), the Eighth Plan (1992-97) and the Ninth Plan (1997-2002) targeted 4 per cent annual rate of growth and laid emphasis on specific projects in the field of agriculture. They included a special rice production programme in the eastern region, national watershed programme for rainfed agriculture, national oilseeds development project, social forestry, etc.

The Seventh Plan was not successful in the sense that the targets fixed for various sectors (except cotton) were not achieved. However, the level of production at the end of the Seventh Plan was much higher than at the beginning of the Seventh Plan.

The Eighth Plan (1992-97) was basically sound in its approach in the strategy of development and in the targets of agricultural crops. Fortunately, weather and climate conditions were favourable and broadly many of the targets could be fulfilled. For instance, the actual outputs in 1996-97 (the last year of the Eighth Plan) of oilseeds, of sugar cane, of cotton and of jute were higher than the targets for these crops in the Eighth Plan. The only exception was foodgrains - the Eighth Plan target was 210 million tonnes but the actual production was 199 million tonnes. In fact, the production of foodgrains at 199 million tonnes was the highest output registered by India till then.

The Ninth Plan (1997-2002) was not much a success, as far as the agricultural targets were concerned. For instance, the Ninth Plan fixed the target foodgrain production at 234 million tonnes in 2001-02 but the actual production was only 211 million tonne. The same story of under-achievement was to be note in other sectors of agriculture also. One is again inclined to ask the question : why should the planners unrealistic and unrealisable targets ?

Agriculture Sector Under the Tenth Plan

Growth Projection in the Tenth Plan

The Tenth Plan adopted the prescriptions of theNational Agricultural Policy, 2000 (NAP, 2000). The Tenth Plan, particularly, emphasised the following types of growth envisaged by NAP, 2000.

(i) growth that was based on efficient use of resources and conservation the soil, water and bio diversity of the country;

(ii) growth with equity i.e. growth which was widespread across regions and covered all farmers.

(iii) growth that was demand driven and catere to domestic markets as well as maximised benefits from exports of agricultural products in the face of the challenges arising from economic liberalisation and globalisation; and

(iv) growth that was sustainable technologically environmentally and economically.

The NAP, 2000 envisaged a growth rate exceeding 4 percent per annum in the agricultural sector. The Tenth Plan also targeted a 4 per cent rate of growth. Towards this purpose, the Tenth Plan visualised :

(a) the estimated foodgrains requirement at the end of the Tenth Plan : 230 million tonnes.

(b) the estimated supply position is expected to be between 225 and 243 million tonnes.

The Tenth Plan planned to achieve this volume of production of foodgrains through

(i) adequate thrust on maize cultivation which has good scope for increasing production of mine cereals to 43 to 48 million tonnes; and

(ii) thrust on commercialisation of hybrid rice of a large scale and improved technologies in wheat.

Pattern of Outlay on Agriculture in the Tenth Plan

The Tenth Plan targeted 8 per cent rate of growth in GDP and accordingly, estimated the required level of investment (at 2001-02 prices) of ₹ 15,92, 300 crores in the public sector - this was 67 per cent

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increase over the Ninth Plan outlay. As regards agriculture, the Tenth Plan set a target growth rate of 4 per cent per annum during the Plan period, and raised Plan allocations on agriculture and allied sectors, rural development, special area programmes and irrigation and flood control.

The public sector outlay on agriculture and allied activities irrigation and flood control, rural development and special area programme which was of the order of ₹ 1,76,217 crores in the Ninth Plan, incerased to ₹ 3,05,055 crores in the Tenth Plan which was 20 percent of the total

Table 6 : Tenth Plan Allocation on Agriculture

		Ninth Plan		Tenth Plan		Eleventh Plan	
		Amount (₹ crores)	%	Amount (₹ crores)	%	Amount (₹ crores)	%
1.	Agriculture and allied activities, rural development, special area Irrigation and flood control	1,76,217*m*	20.5	3,05,055	20.0	6,74,105	18.0
2.	Total Plan outlay	8,59,200	100.0	15,25,639	100.0	36,44,718	100.0

Source : Tenth Five Year Plan, 2002-07 ; Vol. II. and *Eleventh Five Year Plan* (2007-12) Vol. I.

Note : Tenth and Eleventh Plan figures are at 2006-07 prices.

Plan outlay; this was almost the same as that in the Ninth Plan. In fact, as emphasised earlier, public sector outlay on agriculture irrigation and others has ranged between around 20 and 24 per cent of the total outlay in all the Plans. It may be noted that if we take agriculture and allied activities alone, public sector outlay has been handly 4.9 percent of total outlay in ninth plan, 3.9 percent in tenth plan proposed expenditure an agriculture and allied activities in merely 3.7 percent of total plan outlay in 11th plan.

Targets of Crop Production in the Tenth Plan

The Tenth Plan was the first Plan which did not fix targets of crop production.

For every Plan, the Planning Commission used to fix

(a) the rate of growth in the agricultural sector as a whole,

(b) the planned target growth of production in each major crop viz., cereals, pulses, oilseeds, sugarcane, cotton, jute and so on.

(c) the targets of production of major inputs such as seeds, fertilisers, irrigation etc., and

(d) the strategy to be adopted to achieve the targets of crop production in general and the rate of growth in agriculture in particular.

The Tenth Plan was a clear departure from this traditional presentation. It described the achievement/ non-achievement of the Ninth Plan (Table 7).

The Planning Commission must have been clearly ashamed of its target projections in the Ninth Plan. It is clear from Table 6 that the actual production of foodgrain for the year 2001-02 (final year of the Ninth Plan) was 212 million tonnes, as against the planned target of 234 million tonnes—a huge shortfall of 22 million tonnes. In the case of oilseeds the actual output in 2001-02 was 21 million tonnes as against the targeted figure of 30 million tonnes. This was also the case of sugarcane and cotton.

What was really pathetic was that the act production of oilseeds and cotton during the Ninth Plan was not only less than the target production *but less than the base level (1996-97) output.* This was define negative rate of growth. It is unfortunate that we could achieve Ninth plan targets even at the end of Tenth Plan.

Table 7 gives agricultural achievement during and 10th Plans. During the Tenth Plan period(2002-07 foodgrain production had increased to 216 million tonnes - it may be mentioned that the target of foodgrain production was fixed at 234 million tonnes for the Ninth Plan period (2001 -02). There was,

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however, clear growth in oilseeds, sugarcane and cotton. In general, it is estimate that the annual rate of growth in agriuclture was 2.3 per cent, as against the targeted 4 per cent.

Agriculture in the Eleventh Plan (2007-12)

During the 11th Plan also, the Planning Commision has fixed the target of 4 per cent, rate of growth in agriculture, as if this is the first time such a "high" rate of growth has been fixed. The Planning Commission has appointed a special Agricultural Commission to monitor this rate of growth.

Table 7 : Crop Production During Ninth and Tenth Plans

Crop	Base Level (1996-97) Output	Plan Target (2001-02)	Actual Output in 2001-02	2006-07
All foodgrains (*m.* tonnes)	199	234	213	216
Oilseeds (*m.* tonnes)	24	30	21	24
Sugarcane (*m.* tonnes)	278	336	297	345
Cotton (*m.* bales of 170 *kg.*)	14	16	10	23

Source : Five Year Plan documents and Economic Survey, 2008-09 and Ministry of Agriculture.

*3rd Advance Estimates

Table 8 : Some key Indicators of Agriculture Progress

		1950-51	1964-65	1990-91	2006-07	2007-08	2008-09	2009-10	Ratio between 1950-51 & 2009-10
1. Foodgrains	(*m.*tonnes)	51	89	176	216	231	234	218	4.27
Rice	"	21	39	74	93	96	99	89	4.24
Wheat	"	6	12	55	75	78	81	81	13.5
2. Oilseeds	"	5	9	19	24	29	28	25	5.0
3. Sugarcane	"	57	122	241	345	341	274	278	4.88
4. Cotton *	(*m.*bales)	3	6	7	23	25	23	24	8.00
5. Jute & mesta **	(*m.*bales)	3	4	8	11	11	10	11	3.67
6. Potato	(*m.*tonnes)	3	4	15	24	*n.a*	29	*n.a*	9.67@

Source : Economic Survey, 2009-10. Note : * Cotton : million hales of : 170 *kg* @ for 2008-09 Agricultural Statistics At a Glance, 2010 ** Jute : million hales of : 180 *kg*

The corporate sector is actively encouraged to go for contract farming in fruits, vegetables and other crops. It is encouraged to provide seeds, fertilisers and assured marketing. At the same time, the Government is encouraging the setting up of Special Economic Zones (SEZ) by buying large tracts of a agricultural land for setting up industries and service sectors. There is considerable confusion in the agricultural sector in India.

The volatile variation in crop production from year to year shows that there is very little planning in Indian agriculture. The old saying that "Indian agriculture is a gamble in the rains" holds good even today, after nearly six decades of planning. In simple terms, agricultural planning has been a failure.

The data pertaining to 2007-08 reveals that renewed efforts to boost agricultural production has shown concrete results. Total foodgrains production will be of the order of 231 million tonnes – a

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record upto this time. Rice production touches 96 *m.* tonnes, wheat 78 *m.* tonnes, coarse cereals 41 *m* tonnes and pulse 15 *m.* tonnes. Oil seeds and cotton have also yielded higher production. It appears that agriculture is turning the corner. There is a need to strengthen this process further.

After showing improvement in production of different crops, crops failure in different crops affected all crops except rice in 2008-09.

International Comparison of Agricultural Productivity

It will be useful to make a comparison of year per hectare of some selected crops in India with in other countries of the world so as to show much India lags behind the other countries of the world.

Table 10 shows :

(a) the actual yield per hectare of major food non-food crops in India in the year 1999;

(b) the actual yield in the country which is largest producer of each specific crop; and

(c) the highest yield per hectare in the world.

In the case of rice, the highest yield in the world nearly 94 quintals per hectare recorded by Egypt. In case of wheat, the highest yield is recorded by England over 78 quintals per hectare.
China which is the single largest producer both rice and wheat in the world records with average yields of 60 quintals and 39 quintals respectively.

Now, compare with average annual yield in India –only 30.0 quintals of rice and 26.2 quintals of wheat. Rice is India's major crop but the annual yield is only one-third of that of Egypt and a little less than one-half of the annual yield of China.

Even in the case of wheat – the crop which has recorded the highest increase in India in the last 50 years – India's average annual yield is much lower as compared to the U.K. (world's highest yield in wheat) and China (world's largest producer of wheat).

In fact, when we compare carefully the average annual yield of every crop mentioned in Table 9, we find that the average yield in India generally ranges between 30 and 50 per cent only of the highest average yield in the world — this shows the enormous scope for, as well as challenge to, India to increase its annual yield. This fact demonstrates clearly that the increase in yield recorded by India under the green revolution and the introduction of modern technologies are not particularly unique to India; in fact, it is much less in India than the increase recorded by other developing countries like China.

For instance, against the actual yield of 30.0 quintals per hectare in rice, India has the potential to produce between 40 and 58 quintals of rice per hectare. In the case of wheat, India can produce up to 60 to 68 quintals, but the average yield is around 26 quintals per hectare. Even if we assume that India could register the minimum of the potential yield, the total output of rice in India should be 168 million tonnes per year (42 million hectares *x* 40 quintals or 4 tonnes per hectare); but the actual production of rice ranged between 82 and 93 million tonnes in between 1997 and 2007. Likewise, the total output of wheat in India should be 156 million tonnes (26 million hectares *x* 60 quintals or 6 tonnes per hectare); however, the actual production of wheat ranged between 69 and 75 million tonnes between 1997 and 2007.

It would thus be clear that if India could achieve the **minimum of potential yield** of only these two cereals, the total production would be around 324 million tonnes. It may be mentioned here that the total production of all cereals and pulses came to 199 million tonnes in 1996-97 and 213 million tonnes in 2006-07. The gap between the actual yield and potential yield in all our crops and the gap between the average yield in India and the average yield in many other countries of the world — these pose a challenge and an opportunity for India — vast scope for second and third green revolution.

Some agricultural economists have expressed their doubts about the possibility of India ever reaching the levels of yield attained in cold countries. There is no doubt that some scope of increasing yield exists, but to hope that it can be raised to 3 to 5 times is not feasible due to the fact that the semi-dwarf HYV varieties of wheat in India have a duration of 140 days, while in the cold countries long duration wheat crop of 10 months duration helps to obtain higher yields.

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There is another point to remember here. In the span of a year, the Indian farmers can grow another rice crop or a crop of potato or legume or short-duration vegetables. Thus the farmer in India, by shifting from a mono-cropping to a multi-cropping system, is more concerned with the *over-all yield from* **all crops** *during a year,* rather than in terms of productivity per hectare of individual crops. Dr. M. S. Swaminathan, the eminent agricultural scientist, responsible for green revolution in India asserts: "It is unscientific to make comparisons purely on the basis of individual crops, but it would be more scientific to compare the cropping system as a whole." Obviously, the sharp differences shown in Table 10 do not take into account these factors.

Present Status of Indian Agriculture: Looming Agricultural Crisis

During the last 56 years of planning, India's agricultural development — more commonly called the Green Revolution — has been applauded the world over and many developing countries have started considering India their role model. Initially, India remained a food deficit country for almost two decades since Independence. But with the Green Revolution, India became not only self-sufficient in foodgrains but accumulated a huge food surplus - about 58 million tonnes in January 2002.

The agricultural situation started improving after the middle of 1960s with the introduction of high-yielding varieties (HYVs) of crops and the development of agriculture infrastructure for irrigation, credit, other input supply, storage and marketing. The high production potential, input-responsive HYVs motivated Indian farmers to adopt improved and modern technologies. The Government came out with minimum support prices (MSP) and procurement of agricultural commodities and expanded the storage, marketing and distribution of foodgrains at the national level.

The major factors for the all-round success of agriculture were : increase in the net area sown, expansion of irrigation facilities, land reforms, specially consolidation of land holdings — this was the first phase (1947-65) of agricultural development since Independence; development and introduction of high-yielding seeds, extensive use of chemical fertilisers, pesticides and improved crop production technologies — this was the second phase (1965-85) of development in the agriculture sector; price policy based on MSP and procurement operations, infrastructure for storage/cold storage, increase in investments — this could be broadly called the third phase of agricultural development in India.

In spite of the spectacular achievements, various constraints and disturbing trends have always continued to hamper the requisite growth of the agricultural sector :

(i) **Agriculture, Still a Gamble in the Monsoons :** Despite almost 6 decades of planning, agriculture in India has continued to be a gamble in the monsoons : failure of rainfall in some parts of the country and excessive rains and consequent floods in certain other areas of the country. It appears that the Planning Commission should have devoted more attention and more resources to the control of the vagaries of the monsoons. During the first decade of planning (1951-61) the main emphasis on extension of irrigation and in fact, even in the successive decades, considerable importance was given to the cumulative increase in the area brought under irrigation. In none of the Plans, however, the irrigation targets had been fulfilled. Besides, even the irrigation potential created during a plan was not fully utilised for various reasons.

(ii) **Limited Use of New Agricultural Technology :** Since 1961, the emphasis shifted to the use of seed-fertiliser-water technology, known as the new agricultural strategy. But the new strategy succeeded only in wheat and to a small extent in rice; other food and nonfood crops did not show perceptible improvement in production. Dry land cultivation was not touched at all by the new agricultural strategy.

(iii) **Decline in Investment in Agriculture :** We have generally been given to understand that government investment was significant in boosting growth in agriculture. Besides, the role of the Government was not only to raise investment but also induce private investment in agriculture. The figures published by the Government in the **Economic Survey** are quite revealing.

In the early stages of technology breakthrough and green revolution, there was some improvement in private investment in farm assets like irrigation pumps, wells, tractors etc. Thereafter, private investment declined. Since 1980-81 however, there has been some buoyancy

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in private investment in agriculture — from 70% to 82%. The rising trend in private investment probably reflects the improved incentives for agriculture and favourable change in the trade policy.

Table 9 : Gross Investment in Agriculture

(₹ Crores) (at 1980-81 prices

Year	Public	Private	Total	% Share	
				Public	Private
1960-61	590	1,080	1,670	35	
1970-71	790	1,970	2,760	29	
1980-81	1,800	2,840	4,640	39	
1990-91	4,400	10,440	14,840	30	
1999-00	6,670	41,480	50,150	17	
2004-05	23,039	86,967	1,10,006	20	
2008-09	24,452	1,14,145	1,38,597	18	
2009-10	NA	NA	1,33,377	NA	NA

Note : 1. The figures for 2004-05 onwards are based 2004-05 prices.

2. The figures given by the Government of India guesstimates. Figures from 1960-61 to 1980 are based on 1980-81 prices. Figures for 1990 and subsequent years are based on 1993-94. Hence, these figures are not really comparison.

Source : Economic Survey 2004-05. Agricultural Statistical at a Glance (2007), Central Statistical Organisation.

The worrying aspect is that private investment in agriculture is almost completely concentrated in northern regions particularly Punjab, Haryana and Western Uttar Pradesh and almost completely absent in out parts of the country.

Public investment, on the other hand, is a disappointment. After showing an uptrend in the seventies, public investment in real terms (i.e. in 1980 prices) has generally declined — probably due to division of resources from investment to current expenditure in the form of increased inputs and input subsidies.

The share of agricultural sector's capital formation in GDP declined from 1.92 percent in the early 1990 to 1.28 per cent in the early 2000s. *This was real disturbing*. This decline was really due to decline stagnation in public investment in agriculture since the middle 1990s. This has improved to 2.12% in 2006.

(iv) Failure of Land Reforms : Till the middle of land the 1970s the Government hoped to implement reforms, specially tenancy legislation and ceiling on land holdings. The Government failed to implement the land reform measures and there was very little of and redistribution in favour of marginal farmers and landlords labourers or protection of tenants from exploitation from eviction. The Government reconciled itself to failure to push forth progressive land reforms and shift the emphasis to technological changes. Since the Seven Plan, for instance, there is no mention of land reforms. The bitter conflict between landlords and the landless Bihar, Andhra Pradesh and other states - the rape expansion of the Naxalite movement—is in the result the failure to implement land reforms.

(v) Growing Exploitation of the Tenants : From the very beginning, the growth prospects of Indian agriculture were vitally dependent on the role of public investment in irrigation, drainage and flood control, in land shaping and land consolidation, in prevention of soil erosion and salinity, in the development of a widespread research and extension network and in rural electrification and provision of institutional credit. But technological change is not a substitute for institutional

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change in agriculture. It is only a fusion of technological and institutional changes that can optimise the process of agricultural growth from the point of view of maximising production as well as distributive justice. However, this fusion has not taken place yet. As a result, the technological progress in the agricultural sector has been accompanied by growing inequality. Although as a consequence of rapid agricultural growth, the wages of agricultural labourers have risen in the green revolution areas of Punjab and Haryana. It has also been observed that land is being treated by the rich farmers as a very valuable asset. Exploitation of tenants has not declined and consequently, the fruits of agricultural progress are being pocketed by the rich peasantry. This is the paradox of growing agricultural production and growing inequalities and injustices.

(vi) **Failure to control growth of rural population :** The Government failed to arrest the rapid growth of population in rural areas and also to create non-agricultural employment in the rural sector so that those who could not be provided land in the programme of land redistribution could be provided non-agricultural employment to eke out a living. A programme of enlarging non-agricultural employment, if it could grow faster than the increase in total labour force, could, after a period of time, help to reduce the excessive pressure of population on land.

Basically, the Planning Commission failed to appreciate the fact that the process of agricultural transformation should emphasise not only higher growth rate in agriculture but should also stress the need for a decentralised industrial pattern of growth with greater emphasis on labour-intensive technology.

(vii) **Unbalanced agricultural development :** Bulk of the increase in output, particularly foodgrains had been concentrated in a few progressive regions which were already enjoying high levels of consumption of foodgrains. As a result, the marketable surplus of foodgrains had been rising at a high rate in these states resulting in the accumulation of large stocks with the Government with the attendant problems of storage and distribution and the cost of storage and distribution.

Many regions had continued to be poor and backward, indicating the necessity for a **balanced growth of agriculture** as between different regions. Crop yields were low in these areas and, therefore, the use of modern inputs in these areas would raise agricultural productivity considerably.

Likewise, a break through in dry-land farming would help to raise the output of millets, pulses and oilseeds and thus help to correct inter-crop imbalance. Small and marginal farmers predominate in the dry-land farming regions and naturally, they will benefit most through watershed programmes and national pulse and oilseed development programmes.

The various weaknesses of the agricultural sector mentioned above indicate the main concerns and thrusts of the successive Five Year Plans. Outlining the strategies of agricultural development during the Seventh Plan, the Planning Commission wrote : "Broadening the base of agricultural growth and modernisation through infrastructure development e.g. irrigation, drainage, roads, markets and credit institutions in the less developed regions, extension of new technology, particularly break-through in dry-land farming, afforestation and appropriate price and procurement policies for crops are essential for accelerating the growth of agricultural output, reducing annual fluctuations in output and for correcting inter-regional, inter-crop and inter-class disparities. Such a pattern of growth can also provide the necessary impetus to rural development through the dispersal of agro-industries. This is how agriculture can contribute more effectively to the fulfilment of the national objectives of self-reliance, removal of poverty, increase in productivity and eco-preservation."

11.2 Crop Patterns in India Since Independence

Crop Pattern Before Independence

By cropping pattern is meant the proportion of area under different crops at a point of time. A change in cropping pattern implies a change in the proportion of area under different crops. At the begining of the century, more than 83 per cent of land was put under food crops and about 17 per cent under

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non-food crops. By 1950-51, area under food crops had coeme down to 74 per cent and area under non-food crops had increased to 26 per cent. This shift in crops from foodgrains to non-foodgrains was mainly due to the higher price of non-foodgrains, commonly known as cash crops. It reflected a change from subsistence cropping to commercial cropping.

Table 10 shows the share of different categories of crops in the total area sown. The acreage figures from 1960-61 show a reversal of the above trend, and a definite shift from non-foodgrains to foodgrains. By 1970-71, the ratio of foodgrains to non-foodgrains was 74 : 26 and by 2006-07, the share of foodgrains has her further declined and stand at 64 : 36. Two important reasons may be given to explain this shift in favour of foodgrains.

(a) Prices of foodgrains have been rising quite fast and the farmers have started growing foodgrains for the market, in the same way they grow oilseeds, cotton and other commercial crops. In other words, the traditional classification between food crops and commercial crops is losing its significance.

(b) The cultivation of foodgrains has become highly remunerative and productive under the impact of the new technology.

Table 10 : Nature of Crop Distribution of Area Since 1951

	Crops	1950-51	1970-71	2006-07
(a)	All Crops	100	100	100
(b)	Foodgrains	75	74	64
(c)	Non-foodgrains	26	26	36

Source : Agricultural Statistics at a Glance 2008.

Among foodgrains, the largest increase in area has been recorded by wheat, with an increase of 150 per cent. While the increase in the case of rice has been quite modest (36%), coarse cereals have recorded only marginal increase, indicating a positive shift from minor to major crops. Increase in acreage under pulses has been modest.

The traditional commercial crops, viz., oilseeds, cotton, jute, sugarcane, etc., have made impressive increases in acreage, much more than food crops (with the exception of wheat). Of these, the most spectacular was the increase in acreage under potato, viz., by over 300 per cent between 1951 and 2005. By 2004-05, the ratio of foodgrains to non-foodgrains was 64 : 36.

Factors Affecting Cropping Pattern in India

At one time many believed that cropping pattern in India could not be changed. S.N. Sinha, for instance, gave expression to such an opinion when he wrote : "In a tradition-ridden country with a very low-level of knowledge, the peasants are unwilling to make experiments. They accept everything with a spirit of resignation and a sense of fatalism. For them, agriculture is a way of life rather than a commercial proposition. ...In an agricultural community where the members are illiterate and tradition-ridden, there is hardly any possibility of crop shifts." This opinion is not correct any more as is clear from the change in cropping pattern in Punjab. It is widely agreed that the crop pattern of a country like India can be changed and should be changed.

1. Physical and Technical Factors and Cropping Pattern

Cropping pattern of any region depends upon physical characteristics as soil, climate, weather, rainfall, etc. For instance, in a dry area where the rainfall is scanty and where there is high uncertainty of monsoons, there will be a greater dependence on jowar and bajra, as these crops can be managed with a small quantity of rainfall. Water-logging in parts of Ludhiana and Sangrur districts in Punjab has led to an increase in area under rice; for rice can stand the extra water better than other crops. In the newly reclaimed lands of Madhya Pradesh, millets are grown for a few years after which rice is cultivated.

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Apart from soil and climatic conditions, the cropping pattern of a region will depend upon the nature and availability of irrigation facilities. Wherever water is available, not only can a different crop be grown, but even double or triple cropping will be possible. When new irrigation facilities are provided, the whole method of cultivation may change. A superior crop can be grown; a new rotation of crops where there was none, or a better rotation over what prevailed may be possible. One of, the important factors responsible for increase in the cultivation of sugarcane, tobacco, etc., is the extension of irrigation facilities. It is possible that because of lack of capital, agricultural pre-requisites, better implements, improved seeds and finance for getting fertilisers, it might not have been the right crop that was being grown; but given these facilities, the cropping pattern may change.

2. Economic Factors and Cropping Pattern

Economic motivations are the most important in determining the cropping pattern in a country. Whatever may have been the position in India in the past there are very clear indications that Indian farmers are being clearly influenced by economic factors now. Among economic factors affecting crop pattern, the following are important :

(i) Price and income maximisation : According to a study of inter-crop price parities undertaken by the Ministry of Food and Agriculture, "It seems that prices influence the acreage under the crops in two ways. One is that the variations in the inter-crop price parities led to shifts in acreage as between the crops. Another is that the maintenance of a stable level of prices for a crop ... provides a better incentive to the producer to increase the output" Fixed procurement price of wheat and rice and other Government controls have induced farmers to shift to cash crops like sugarcane.

According to some authorities, income maximisation pull has greater influence in changing the crop pattern, that is, the farmer would choose that combination of crops which would give him maximum of income. Dr. Raj Krishna, however, argues that relative profitability per acre is the main consideration which influences the crop pattern.

(ii) Farm Size : There is a relationship between farm size and the cropping pattern. The small farmers are first interested in producing foodgrains for their requirements. They would go in for cash crops only after they have met their requirements of foodgrains. Small holders, therefore, devote relatively small acreage to cash crops than large holders. This point has be brought out in many empirical studies. But a of Deoria district of Uttar Pradesh brings out clearly fact that almost all farmers, big and small, try to some cash crops. In fact, in recent years it is the small farmers who have been increasing their sugarcane a more than large farmers.

It is true that the need for subsistence traditionally dominated the cropping pattern of the small farmer. But his need for money income cannot be less than that of the large farmer. And, as economy grows, we should expect the small farmers to make very significant adjustments in his crop pattern in order to maximise his income.

(iii) Insurance against risk : The need minimise the risk of crop failures not only explain diversification but also some specific features of patterns. For instance, the persistence of millets many regions which puzzles many economists can understood mainly as insurance against bad seasons dry areas.

(iv) Availability of Inputs : As already indicated, crop pattern is also dependent upon the availability of such inputs as seeds, fertilisers, water storage an marketing, transport, etc. Of the additional facilites most rewarding would be irrigation. The availability groundnut seed was one of the important factors which induced many farmers to increase the area under the crop in Madhya Pradesh. Another reason why farmers prefer groundnut to cotton is that the former is quit yielding, while cotton is on the field for a long time and does not easily satisfy the need for quick cash.

(v) Tenure : Under the crop sharing system, the landlord has a dominant voice in the choice of the cropping pattern and this helps in the adoption of income-maximising crop adjustments.

3. Government Action and Crop Pattern

Government can influence crop pattern through legislative and administrative measures. Steps may be taken by the Government to ease or subsidise the supplies of the farm inputs and

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knowledge. The provision of irrigation facilities or the supply of seeds and fertilisers, etc., may be related to the adoption of a given crop pattern by the farmers.

Apart from the personal prejudices, and inadequate financial and other resources of the farmers there may be factors like recurrent drought or pest infestation that prevent them from opting for a more remunerative set of crops. In those situations if more of irrigation, institutional credit fertilizers pesticides etc. are made available, it would be possible for them to change the crop-structure and so earn larger returns from their land. To the extent it is not possible for a farmer to acquire all these by himself, the Government could come to his help and procure these for him.

To other possibilities of helping the farmer to improve the cropping pattern are building of new roads which will improve the flow of commodities to the market where they will fetch better prices and help to stabilish industries or townships nearer to their land.

Self- Assessment

1. Choose the correct option

(*i*) Where did crop circles first appear?

(*a*) Peru (*b*) England

(*c*) Russia (*d*) Zambia

(*ii*) Who or what was discovered to have created those early crop circles?

(*a*) Ball lightning (*b*) Wind vortices

(*c*) Pranksters (*d*) Aliens

(*iii*) What is the science of studying crop circles called?

(*a*) Cereology (*b*) Agronomy

(*c*) Terralogy (*d*) Anomology

(*iv*) Wiltshire County, England, is the center of the crop circle phenomenon. What else is Wiltshire home to?

(*a*) Tower of London (*b*) Canterbury Cathedral

(*c*) Windsor Castle (*d*) Stonehenge

(*v*) What form have some crop circle artists included in their work to prove the designs are not natural occurrences?

(*a*) Triangle (*b*) Straight line

(*c*) Perfect circle (*d*) Zigzag

11.3 Summary

- Agriculture has always been the backbone of the Indian economy and despite concerted industrialisation in the last six decades, agriculture still occupies a place of pride. It provides employment to around 60 per cent of the total work force in the country. The significant of agriculture in the national economy can be briefly explained by considering the role of agriculture under different heads.
- Indian agriculture has been the source of supply of raw materials to our leading industries. Cotton and jute textile industries, sugar, flour mills vanaspati and plantations-all these depend on agriculture directly.
- Importance of Indian agriculture also arises from the role it plays in India's trade. Agricultural products-tea, sugar, oilseeds, tobacco, spices, etc.-constituted the main items of exports of India.
- The significance of agriculture in India arises also from the fact that the development in agriculture is an essential condition for the development of the national economy. Ragnar Nurkse argues that the surplus pelation in agriculture should be shifted to the newly stated industries. Nurkse's thesis is that agricultural productivity will be increased on the one hand and on the other industrial units would be set up with the use of surplus labour.

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- The First Five Plan (1951-56) aimed at solving the food crisis India was facing at that time and also ease the critical agricultural raw material situation, particularly the acute shortage of raw cotton and raw jute.
- The Government introduced the new agricultural technology known as Intensive Agricultural District Programme (IADP), which was soon followed by a programme of using improved seeds, viz., High Yielding Varieties Programme (HYVP). The new agricultural technology was expected to usher in the green revolution.
- The Tenth Plan targeted 8 per cent rate of growth in GDP and accordingly, estimated the required level of investment (at 2001-02 prices) of ₹ 15,92, 300 crores in the public sector - this was 67 per cent increase over the Ninth Plan outlay.
- So, far we have explained agricultural progress under reach Five Year Plan. We shall give the progress of agriculture as a whole during the last 58 years. The progress of the agricultural sector, summarised in Table 8, brings out the tremendous progress the country has achieved since the First Plan, **even though, the targets fixed in each Plan might not have been fully met.**
- It will be useful to make a comparison of year per hectare of some selected crops in India with in other countries of the world so as to show much India lags behind the other countries of the world.
- By cropping pattern is meant the proportion of area under different crops at a point of time. A change in cropping pattern implies a change in the proportion of area under different crops. At the begining of the century, more than 83 per cent of land was put under food crops and about 17 per cent under non-food crops.
- The traditional commercial crops, viz., oilseeds, cotton, jute, sugarcane, etc., have made impressive increases in acreage, much more than food crops (with the exception of wheat). Of these, the most spectacular was the increase in acreage under potato, viz., by over 300 per cent between 1951 and 2005. By 2004-05, the ratio of foodgrains to non-foodgrains was 64 : 36.
- The most important consideration affecting cropping pattern is the economic consideration. Even in a country like India which is dominated by farmers steeped in poverty and conservatism and where farmers hold tiny bits of land, cropping pattern can be changed through appropriate change in economic motive.

11.4 Key-Words

1. Domestic product : The total market value of all the goods and services produced within the borders of a nation during a specified period
2. Crop production : The produce of cultivated plants, esp. cereals, vegetables, and fruit

11.5 Review Questions

1. What is the importance of agriculture in the Indian economy.
2. Do you consider the agricultural sector in India as the backbone of the economy.
3. Trace the growth of production in the agricultural sector in India.
4. What are the main features of cropping pattern in India ?

Answers: Self-Assessment

1. (*i*) (*b*) (*ii*) (*c*) (*iii*) (*a*) (*iv*) (*d*) (*v*) (*b*)

11.6 Further Readings

Books

1. The Indian Economy; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001.
2. Indian Economy; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055.

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Unit 12: Green Revolution

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Objectives

After reading this Unit students will be able to:

- Understand the Green Revolution.
- Discuss the new thrust areas in agriculture.
- Explain Green Revolution and its Future Prospects..

Introduction

Productivity in agriculture is the key to its efflorescence. And how productive is our agriculture is the basic point of contention. Improved productivity per capita and per hectare is the key to any agricultural revolution anywhere in the Third World. This, on a national average, is very low in India due to heterogeneous factors.

12.1 Green Revolution

Since the mid-1960's, the traditional agricultural practices are gradually being replaced by modern technology and farm practices in India and a veritable revolution is taking place in our country. Initially, the new technology was tried in 1960-61 as a pilot project in seven districts and was called Intensive Agricultural District Programme (IADP). Later, the High-Yielding Varieties Programme (HYVP) was also added and the strategy was extended to cover the entire country. This strategy has been called by various names : modern agricultural technology, seed-fertiliser-water technology, or simply green revolution.

As a result of the new agricultural strategy, area under improved seeds has gone up since 1966. The new varieties are of a short-term duration and consequently, instead of growing one crop, two crops and sometimes, even three crops are grown. In the case of wheat, unprecedented enthusiasm has prevailed among farmers in Punjab, Haryana, Delhi, Rajasthan and Western U.P. for the new Mexican varieties like Lerma Rojo, Sonara-64, Kalyan and P.V. 18 and a situation developed in which the demand for seeds by the farmers exceeded the supply.

Traditional agriculture relies heavily on indigenous inputs such as the use of organic manures, seeds, simple ploughs and other primitive agricultural tools, bullocks, etc. Modern technology, on the other hand, consists of chemical fertilisers, pesticides, improved varieties of seeds including hybrid seeds, agricultural machinery, extensive irrigation, use of diesel and electric power, etc. Since 1966, the use of modern agricultural inputs has increased at a compound rate of 10 per cent per annum in contrast to the traditional inputs rising at the rate of only one per cent per annum during the same period.

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The new agricultural technology uses such resources like fertilisers, pesticides, agricultural machinery, etc., which are produced outside the agricultural sector. As a result, industries supplying the modern farm inputs are growing at a rapid rate. Massive programmes of farm mechanisation and irrigation have also led to an increase in the consumption of electricity and diesel in rural areas.

Achievements of the New Agricultural Strategy

(i) Boost to the production of cereals : The major achievement of the new strategy is to boost the production of major cereals, viz., wheat and rice. Table 1 gives the production of the principal food crops during the last 50 years. A close look at the table reveals the increase in rice production from 35 million tonnes in 1960-61 to 99 million tonnes in 2008-09, signifying a break-through in this major crop of India. (Due to bad monsoon rice production declined in 2009-10). The yield per hectare has also recorded an improvement from a little more than 11 quintals in 1960-61 to nearly 22 quintals now.

Table 1 : Progress in Foodgrain Production

(million tonnes)

	1960-61	1990-91	2008-09	2009-10
Rice	35	75	99	89
Wheat	11	55	81	80.8
Coarse cereals	23	32	40.0	33.6
(a) Total Cereals	69	162	220	203.4
(b) Total Pulses	13	14	15	14.7
(c) Total foodgrains (a + b)	82	176	235	218.1

Source : Ministry of Agriculture, Government of India, 2009, Economic survey 2010-11.

The production of wheat, which stood at 11 million tonnes in 1960-61, rose to 81 million tonnes in 2008-2009. Part of the increase in wheat production can be attributed to an extension of the area, but the yield per hectare rose from 8.5 quintals to 28.06 quintals per hectare, signifying 3.5 times rise in the last 50 years.

It is interesting to observe that the ratio of wheat to rice (Table 2) has steadily increased from one-third in 1960-61 to 84 per cent in 1999-2000. This means that, even though rice continues to be the most important cereal in the country, wheat is catching up fast.

Table 2 : Production of Rice and Wheat

Year	Rice (million tonnes)	Wheat (million tonnes)	Percentage of wheat to rice
1960-61	35	11	31
1980-81	54	36	67
1999-00	90	76	84
2006-07	93	75	81
2007-08	96	78	81
2008-09	99	81	82
2009-10	89	81	91

Source : Agricultural Statistics at a Glance, 2008. Economic Survey 2010-11.

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Green revolution did not cover coarse cereals like maize, jowar, barley, ragi, and minor-millets. The green revolution did not cover pulses. The output of pulses fluctuated violently from year to year till it declined to an all time low of 8 million tonnes in 1979-80. From 13 million tonnes in 1960-61. Even now the production of pulses fluctuates between 13 and 15 million tonnes per year.

The green revolution was thus confined only to High Yielding Varieties (HYV) cereals, mainly rice, wheat, maize and jowar.

While rice output increased at a relatively slower rate, the singular crop which showed a continuously rising trend was wheat. This was true of potatoes. The very fact that the cash crops in general and pulses in particular have not so far been brought within the ambit of new technology forces the conclusion that quite a substantial part of the agricultural output has not even been touched by the green revolution.

(ii) Increase in the production of commercial crops : The green revolution was mainly directed to increase the production of foodgrains. It did not affect initially the production of commercial crops or cash crops such as sugarcane, cotton, jute, oilseeds and potatoes; these crops did not record any significant improvement initially. However, significant improvement in the output of sugarcane took place after 1973-74. Likewise, there was considerable improvement in the production of other cash crops such as oilseeds, potatoes etc. (Table 3).

Table 3 : Production of Cash Crops in India

	1960-61	1990-91	1999-2000	2007-2008	2008-2009
Oilseeds (m. tonnes)	7	19	21	29	28
Sugarcane	110	254	299	341	285
(m. tonnes) Cotton	6	10	12	26	22.3
(m. bales) Jute	4	8	11	11	10.4
(m. bales) Potatoes	3	15	25	28.5	29
(m. tonnes)					

Source : Economic Survey, 2009-10.

(iii) Significant changes in crop pattern : As a result of the green revolution, the crop pattern in India has undergone two significant changes. Firstly, the output of cereals has risen at the rate of 3 to 4 per cent per annum but the output of pulses has remained stagnant or even declined. This has resulted in a decline in the importance of pulses in foodgrain output from 16 per cent in 1960-61 to 6 per cent in 2008-09. Cereals, on the other hand, have risen in importance from 84 per cent to 94 per cent during the same period. The *stagnant production of pulses* and the consequent rise in prices of pulses has a disastrous effect on the health of the poor who have generally given up the use of pulses - a major source of protein.

Secondly, among cereals, the proportion of rice in total cereal output has come down from 48 per cent to 44 percent between 1950-51 and 2009-2010. During the same period, however, the importance of wheat has more than doubled, i.e., from 15 per cent to 40 per cent (Table 4). The share of coarse grains has gone down from 37 per cent to 16 per cent of total cereals. The rising output of wheat indicates a substitution of coarse grains with wheat, on the side of production as well as consumption. This trend had begun even before the green revolution ushered in, but it has now strengthened.

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Table 4 : Percentage distribution of cereals output

Year	Rice	Wheat	Coarse grains	Total cereals
1950-51	48	15	37	100
1960-61	50	16	34	100
1990-91	46	34	20	100
2006-07	46	37	17	100
2007-08	45	36	19	100
2008-09	45	37	18	100
2009-10	44	40	16	100

Source : Economic Survey 2010-11. Agricultural Statistics at a Glance (2008).

(iv) Boost to agricultural production and employment : The successful adoption of the new agricultural technology has led to continuous expansion in area under crops, increase in total production and rise in agricultural productivity. Impressive results have been achieved in wheat, rice, maize, potatoes, etc. The adoption of new technology has also given a boost to agricultural employment because of diverse job opportunities created by multiple cropping and shift towards hired workers. At the same time, there has been displacement of agricultural labour by the extensive use of agricultural machinery.

(v) Forward and backward linkages strengthened : The new technology and modernisation of agriculture have strengthened the linkages between agriculture and industry. Even under traditional agriculture, the forward linkage of agriculture with industry was always strong, since agriculture supplied many of the inputs of industry; but backward linkage of agriculture to industry — the former using the finished products of the latter was weak. Now, however, agricultural modernisation has created a larger demand for inputs produced and supplied by industries to agriculture and thus the backward linkage has also become quite strong. In this way, the linkage between agriculture and industry has got strengthened.

Weaknesses of the New Strategy

The new agricultural technology has made the farmer market-oriented. The farmers are largely dependent on the market for the supply of inputs and for the demand for their output. At the same time, the demand for agricultural credit has also increased as the new technology has increased the cash requirements of the farmer. Besides, modern technology has definitely proved its superiority over the traditional technology only in those areas where appropriate conditions prevail. But as mentioned above, these conditions prevail only in certain selected areas and the rest of the country is not yet suitable for advanced technology. What is, therefore, wanted is the evolution of a low-cost technology which can be adopted by all small farmers and which can use and exploit the local resources.

(1) Indian Agriculture is still a gamble in the monsoons : When the new agricultural strategy was introduced in the early 1960's, it was hoped that the trend of rising output of foodgrains would continue (Table 4). The then record achievement of 108 million tonnes of foodgrains in 1970-71 was hailed that green revolution had materialised and imports were immediately stopped. The euphoria was cut short in 1972-73 when production of foodgrains slumped to 95 million tonnes. Sharp fluctuations in foodgrain output were observed in the later years too. From a low level of about 100 million tonnes in 1974-75, foodgrains output rose gradually to 132 million tonnes in 1978-79. There was a steep decline in production just next year due to adverse weather conditions; foodgrains output in that year was 109 million tonnes in 1979-80 which was almost the same as 1970-71 output.

After many fluctuations, the output of foodgrains rose to 176 million tonnes in 1990-91 and touched 213 million tonnes in 2001-02. On account of extensive drought conditions, the output of foodgrains declined steeply to 174 million tonnes during 2002-03 (decline of 38 million tonnes

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in one year). It is only in 2008-09, that the trend has been reversed and foodgrain output touch a record level of 235 million tonnes. But in the next year it again plunged to 218 million tonnes.

Table 5 : Trend in the production of foodgrains in India

(million tonnes)

Year	Production	Year	Production
1970-71	108	2002-03	174
1978-79	132	2003-04	212
1990-91	176	2006-07	216
2001-02	213	2007-08	231
		2008-09	235
		2009-10	218

Source : Economic Survey (various issues). Agricultural Statistics at a Glance, 2010

Two conclusions can be drawn from the sharp fluctuations of output of cereals in India since the introduction of new agricultural strategy.

(a) Output of cereals (as well as other agricultural products) is still subject to weather conditions as in the past; and

(b) The maximum and minimum total outputs, however, are now much higher than in the past.

(2) Growth of Capitalistic Farming in Indian Agriculture : The new agricultural strategy consisting of IADP and HYVP necessitated heavy investment in seeds, fertilisers, pesticides and water. These heavy investments are beyond the capacity of small and medium farmers. In India, there are about 81 million farm households but just 6 per cent of the big farmers account for 40 per cent of all cultivated land; they alone are making heavy investment in the installation of tubewells. pumping sets, use of fertilisers and agricultural machinery required for the purpose. Consequently, the new agricultural strategy has helped the growth of capitalist farming in India and has led to concentration of wealth in the hands of the top 6 per cent of the rural population. The poor and marginal peasants have not directly benefited from green revolution.

A recent study of Punjab by Ashok Rudra and others revealed evidence of the growth of gentlemen farmers, comprising ex-servicemen, retired civil servants, and urban-based businessmen deriving their income from industry and commerce and who have recently taken up agriculture as an industry. In Punjab, they constitute about 3 per cent of the total number of farmers, command 8.5 per cent of the total number of farms and cover 27 per cent of the total cultivated area. It is this group of farmers called as "progressive farmers" and "gentlemen farmers" who are able to make huge investments in the form of tractors, tubewells and pumping sets and other equipment.

The vast majority of rural households with little or no land, with poor finances and poor creditworthiness have not gone in for the new technology in a big way and have benefited the least from the green revolution. Regions which have been well endowed with resources (like Punjab, Haryana and Western U.P.) have benefited the most from the use of modern technology and have prospered. Other regions have remained backward and underdeveloped. Regional disparities have thus increased.

(3) Sidetracking the need for institutional reforms in Indian agriculture : The new agricultural strategy does not recognise the need for institutional reforms in agriculture. The bulk of the peasant population does not enjoy ownership rights. Large-scale evictions have already taken place. As a result, the tenants are being forced to accept the position of sharecroppers. Minhas and Srinivasan studied the effects of crop sharing arrangements in fertiliser use. Their basic assumption was that the cost of fertilizers was met by the cultivator by borrowing, and interest charges amounted to 10 per cent of the cost. Basing their judgement on the capitalist principle

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of profit maximisation, the owner-farmers reaped a profit of 180 per cent on irrigated lands in the case of wheat and 183 per cent in the case of rice. Against this, the tenant cultivators on a 50 per cent basis reaped a profit of only 65 per cent in wheat and 67 per cent in rice. The return was further reduced to a level of 42 per cent in the case of share-cropping on a 40 per cent basis. Profit maximisation criterion clearly indicates that larger dosages of fertilisers will be absorbed by owner farmers than by tenants. Thus, the conclusion is inescapable that tenancy cultivation poses itself as a big obstruction in the way of fertilizer use.

(4) Widening disparities in income : Technological changes in agriculture have had adverse effects on the distribution of income in rural areas. From his study of technological changes and distribution of gains in Indian agriculture, C.H. Hanumantha Rao concluded : "Technological changes have contributed to widening the disparities in income between different regions, between small and large farms and between landowners on the one hand and landless labourers and tenants on the other. In absolute terms, however, the gains from technological change have been shared by all sections. This is indicated by the rise in real wages and employment and in incomes of small farmers in regions experiencing technological change".

(5) New Strategy and Socio-economic relations in rural areas : Francine Franknel, USAID expert, undertook a study of the impact of the new strategy on the socio-economic relations of the peasantry. The main conclusions of this study are :

(a) Overwhelming majority of the cultivators having uneconomic holdings of 2-3 acres have managed to increase per acre yield from the application of small doses of fertilisers, but aggregate gains in output have been insufficient to create surplus capital for investment in land development.

(b) Often small and marginal farmers are forced to take some land on lease; in some cases, they are pure tenants. Rising rentals in recent years (in response to the sharp spurt in land values), and/or the tendency of landowner to resume land for personal cultivation (with the introduction of more profitable techniques), has actually led to an absolute deterioration in the economic condition of the small owner-cum-tenant cultivator class.

(c) Only the small minority of cultivators with holdings of ten acres or more have been in a position to mobilize surplus capital for investment in land development, especially minor irrigation, as an essential precondition for the efficient utilisation of modern inputs. Moreover, this class has prided its gains by using increased profits to buy more land, improve land already under cultivation, and purchase modern equipment.

(d) Farmers with twenty acres or more have made the greatest gains, partly by mechanising farm operations to take up double or multiple cropping, and partly by diversifying their cropping pattern to include more profitable commercial crops.

(6) Problems of labour displacement : Very few studies are available to assess the impact of the mechanisation introduced under the garb of green revolution in terms of displacement of labour. Uma K. Srivastava, Robert W. Crown and Earl O. Heady have examined the effects of two types of technological innovations introduced under the Green Revolution — (i) biological and (ii) mechanical.

The term 'biological innovations' refers to the changes in inputs that increase productivity of land. The introduction of high yielding seed varieties and use of fertilisers, fall in this category. In this sense, green revolution is described as transformation of seed-fertiliser technology. The mechanical innovations refer to the introduction of new appliances which displace human or bullock labour. Thus, whereas biological innovations are labour-absorbing, mechanical innovations are labour-saving. It is therefore appropriate to describe the green revolution as a biological-mechanical revolution. It is the net effect of the labour-absorbing and labour-saving innovations which will determine the extent to which mechanisation need be introduced to check further displacement of labour. The study concludes : "Since mechanisation may dampen the increase in labour demand, resulting from the expanding factor of seed-fertilisers, the policies that encourage premature mechanisation in surplus labour economies, such as India's, do not seem conducive to solving the problem of growing unemployment."

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12.2 New Thrust Areas in Agriculture

As a consequence of the new agricultural technology, India 1 as achieved relative self-sufficiency in foodgrains and its imports became negligible. India is also able to accumulate large buffer stock of rice and wheat so that she could face any eventuality resulting from drought in a particular year or successively in two or three years.

But the achievements in agriculture cannot and should not make the Government complacent, because there are still many thrust areas in which we must orient our agricultural policies in the interests of agricultural growth with emphasis on sustainability and equity, Major thrust areas are the following:

(i) **Output and area under coarse cereals has shown negligible improvement :** Neither area nor production of coarse cereals showed any significant improvement. Sufficient attention was not paid so far to develop better HYV strains of these crops. Since major inputs were directed towards wheat and rice, coarse cereals remained neglected and to improve their production should be a major thrust area now.

(ii) **Stagnation in the output of pulses :** The production of pulses in 1970-71 was around 12 million tonnes. In 1990-91, the peak year of foodgrains production, production of pulses was 14 million tonnes. After 16 years in 2006-07 too the production of pulses is still 14 million tonnes. In most years, however, production has been stagnant around 13 to 14 million tonnes. The per capita consumption of pulses, which was 69 *gm* per day in 1971, has come down to 36 to 37 *gm* now. This sharp decrease in the consumption of pulses is a cause of serious concern, more so for the poor for whom pulses are the major source of protein.

Pulses are mostly grown under unirrigated conditions on poor soils and with low inputs. Out of about 23 million hectares of area under pulses, only 2 to 3 million hectares are irrigated. Pulses do not require large doses of fertilizers and pesticides. The development of short duration varieties and improved dry farming technology has raised new hopes of raising the production of pulses. Researches over the last decade have produced new varieties of pigeon-pea (Arhar) which is ideally suited for poor farmers and it is possible to produce 2 to 3 tonnes per hectare of pulse besides 6 to 8 tonnes per hectare of dry stalks for fuel. Similarly, the productivity of Chickpea (Bengal gram), the dominant pulse crop, can also be increased by improved deep black soil management technology. Both Arhar and gram taken together account for 60 per cent of total production of pulses and if efforts are concentrated in improving their productivity, in the coming years, there is considerable scope for making a break-through in the productivity of pulses.

(iii) **Another thrust area is to boost the production of edible oils :** India is not self-reliant in the production of edible oils. The major oil seeds grown in India are groundnut, rape-seed, mustard, sesamum. safflower, sunflower, and soyabean. The principal problem in oilseeds production is low productivity. Not only India is way behind the developed countries, its productivity per hectare does not compare favourably even with respect to that of China and other developing countries. Imports of edible oils were barely of the order of ₹ 23 crores in 1970-71 but with increasing domestic demand and our failure to meet it with domestic production, imports of edible oils had gone up from ₹ 700 crores to ₹ 1,000 crores a year during the 1980s and exceeded ₹ 11,680 crores in 2003-04 but declined thereafter.

The Government of India set up the Technology Mission on Oilseeds which has proposed the target of raising production of oilseeds to 16 to 18 million tonnes by 1989-90 and raising it further to 26 million tonnes, by the year 2000-01.

These targets were to be achieved by (a) bringing additional oilseed areas under irrigation, (b) modern crop technology, (c) crop substitutions, (d) better dry farming and (e) promoting oil palm cultivation in 6,00,000 hectares.

The short term target for oilseed production (i.e. 16 to 18 million tonnes by 1989-90) was fulfilled. The long range target (of 26 million tonnes by 2000 A.D.) was, however, achieved in 2004-05. Between these two years, production oilseeds ranged between 21 million tonnes and 16 million tonnes, forcing the Indian Government to resort to large import of oilseeds. Production of Safflower and Soyabean, however, has been the most promising.

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(iv) New Strategies of Irrigation and Water Management : The total foodgrains production from a gross area of 163 to 165 million hectares was around 212 million tonnes in 2001-02 (as against the Ninth Plan target of 234 million tonnes for that year. Our average foodgrains production is about 1.3 tonne (or 13 quintals) per hectare. As against this, China produces 4 tonnes or 40 quintals of foodgrains per hectare. If India is to meet the needs of its growing population of over 1,000 million people it must produce 240 to 250 million tonnes of foodgrains per year. This will necessitate the adoption of new strategies of irrigation.

The total available water reserves is of the order of 100 million hectare metres (*mhm*) during the next 12 to 15 years. Since water is a scarce resource, it is vitally necessary that emphasis be shifted on its more efficient use. As things stand today, 90 per cent of water available is allocated to irrigation. This is, according to experts, wasteful use of water. It would, therefore, be useful to develop irrigation strategies which economise water use. The target should be to reduce water use for irrigation to 77 per cent of total available water in the next 10 to 12 years, so as to meet the rising demand for water for industrial and municipal needs. The new strategy of irrigation should be directed towards the following :

(i) control and proper method of irrigation in canal and tank command areas, specifically for paddy;

(ii) repair and maintain the traditional system of water harvesting and recharge of surface water.

(iii) conjuctive use of surface and ground water;

(iv) using sprinkler irrigation in canal/tank command areas;

(v) introducing drip irrigation in well irrigated areas;

(vi) Biwal irrigation for closely spaced crops like sugarcane, vegetables and cotton; and

(vii) training farmers and extension officers in water management.

In major irrigation projects, there is frequently over-irrigation, with its adverse effects on production. For instance, famers use 1,500—3,000 of water for paddy, as against the requirement of only 800 *mm*. Moreover, absence of proper channels to take water to various fields leads to water logging and makes the land saline or alkaline.

Use of sprinkler irrigation can bring about 30-35 per cent of saving in water use. This should be used in all closely spaced crops like millets, groundnuts. pulses and wheat.

Drip irrigation is suitable for row crops and can result in a water saving of 50-70 per cent, simultaneously raising yield by 60-70 per cent in various crops. It helps in economic use of water and is specially suitable for irrigation by wells.

Biwall irrigation is being recently experimented in Maharashtra. In this system, water is delivered from the main chamber with a distribution chamber through evenly spaced supply orifices provided by lazer beams. It is then slowly released through the emission orifice.

The education of the farmers and the extension workers is vital in this thrust area of water management. For this, demonstrations, group discussions, seminars of farmers and other mass media be pressed into service. This is a thrust area which promises much better results with marginal addition of costs.

During the first eight Five Year Plans, much greater emphasis was laid on major and medium irrigation works. It is now being increasingly realised that this obsession with major irrigation works or big projects has raised the irrigation costs per hectare to prohibitive levels (₹ 60,000 per hectare on an average). Because of its cheapness and quick benefits the new thrust should be in favour of minor irrigation works.

(v) The use of bio-fertilizers has to be expanded : Recent researches in bio-technology and genetic engineering have demonstrated that certain micro-organisms such as bacteria and blue green algae can act as nitrogen fixers and provide nutrient to cropplants. The most commonly used bio-fertilizer is **Rhizobium** which colonizes the roots of specific legumes to form root nodules. These nodules act as factors of ammonia production. The **Rhizobiums** legume association can fix 100-300 *kg* of nitrogen per hectare in one crop season and even leave substantial quantities

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of nitrogen for the next crop. The great break-through in nitrogen generation by micro-organisms, for which the bill is paid by nature, is a great advance in agricultural research that promises a second green revolution.

With new bio-technology, for algae, the cost of inoculant at the rate of 10 *kg./ha.* is around ₹ 20 and its nitrogen contribution in terms of fertilizer is ₹ 200-400 per hectare. If agricultural production is encouraged on these lines, it has the potential to generate income to the farmers of the order of ₹ 5,000—7,500 from one hectare of land through sale of the produce. The new bio-technology is, therefore, the answer to the problems of the small farmers in cutting down their costs of fertilizer use.

Whereas bio-technology in fertilizers has been successfully exploited in developed countries, several factors have hampered its use and propagation in India. They are : lack of trained personnel, lack of appreciation of the benefits of innoculation and absence of industrial support. The Ministry of Agriculture of the Government of India is sponsoring national projects on these subjects. This should give a major thrust in agricultural development in future.

(vi) Emphasis should shift to dry farming : Out of total cultivated area of 163 million hectares in India, dry farming is carried on in 100 million hectares i.e. in 60 per cent of the total arable land. But the contribution of dry land farming to agricultural production is less than 30 per cent.

There is no doubt that irrigation has brought about national self-sufficiency in foodgrains, but the gap between the rich and the poor farmers has widened because of the use of irrigation. About two-thirds of dryland farmers own less than two hectares and even this is available in scattered and fragmented holdings. Since the country has to carry on with dryland farming for many years to come, it is vitally necessary that dry-farming technology be developed, so that the possibilities of raising the potential output of vast dry-land areas be exploited. For this purpose, problems of different dryland areas have to be studied and region-specific technology have to be developed. Moderate use of fertilizers, improved seeds and better conservation of rain water and its judicious use can contribute to 40 to 50 per cent increase in yields in rain-fed areas.

12.3 Green Revolution—The Future Prospects

Green Revolution initiated in the 1960's centered around the use of semi-dwarf high yielding varieties responsive to irrigation and chemical fertilizers yielded good results in giving a big boost to the production of wheat in the first stage and the production of rice in the next stage. But more recently, it has been felt that high-yielding varieties have reached a plateau and the scope for future increase in production appears to be very limited. In other words, the seed-water-fertilizer technology has probably exhausted its potential and is now at a point of diminishing returns.

The Planning Commission set a target of foodgrains production of the order of 300 million tonnes by 2007-08 but the actual production was 216 million tonnes. The question raised is : What are the prospects of realising this target ?

Some like Harish Damodaran do not subscribe to the view that agricultural production has reached a plateau.

Table 6 : Average Foodgrain Yield

Kgs per

	1960s	1970s	1980s	1990s
Foodgrains	719	894	1,156	1,490
Wheat	950	1,382	1,921	2,449
Rice	1,000	1,158	1,470	l,827

* Advanced estimates for 2008-09.

Source : Harish Damodaran, Green Revolution Fatig Business Line, May 27 & 28, 1999.

Economic Survey : 2009-10, Agricultural Statistics Glance 2010.

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Data given in Table 6 indicates that food yield has continued to increase from 719 Kgs. in to 1,490 Kgs. during 1990's and to 1,798 in 2009-10 increase in yield has been more pronounced in the of wheat from 950 Kgs. in 1960s to about 2,450 Kgs. 1990s and 2,830 in 2009-10, although in rice too has gone up from 1,000 Kgs. in 1960s to 2130 Kgs. 2009-10. While bringing more areas under High Yield Varieties, highest yield rates may have shown signs of stagnation.

It would, therefore, be necessary to understand theoretically obtainable maximum yield and the and realisable maximum. It may be noted that the first Green Revolution variety Sharbati Sonora had demonstrate yield potential of about 3.4 tonnes per hectare. The jump in yield variety came from Kalyansona in 1970 4.2 tonnes. For a major breakthrough, the country hati wait till 1994 when new rust-resistant varieties UP2338 jacked up yields to 5.1 tonnes and PBW 343 1995 to boost it further to 5.4 tonnes per hectare.

However, in rice, the picture has not been very encouraging. Consequently, the skeptics believe the traditional Green Revolution breeding techniques have come to a dead end. Whatever success has been achieved in rice is the consequence of extending the pioneering varieties to more and more areas so that the country can realise the potential.

But this does not signify that we have exhausted all the latent potential of the existing HYV varieties. Field trials in Punjab confirm the demonstrated potential of 5.5 tonnes per hectare, but actual mean yields are around 4.25 tonnes per hectare. Obviously, one tonnne of unharvested yield potential exists in Punjab. Similarly, the situation in other wheat growing states indicates the gap between attainable and actual yields to rise to over two tonnes per hectare. Mr. Harish Damodaran, therefore, concludes : "Even with the current high yielding varieties, it is possible for farmers in the Indo-Gangetic plain, which accounts for 18 million hectares out of 26 million hectares under wheat to produce an additional 25 million tonnes of wheat by adopting improved crop management practices and ensuring timely supply of inputs, attractive prices and so on. A half-a-tonne increase in average per hectare rice yield can similarly generate an additional 20 million tonnes from the country's 42 million-odd hectares area planted under paddy."

A Point often made by critics that as against average yield of 4 to 4.5 tonnes of wheat in Punjab, the farmers in cold countries like Netherlands raise about 8 tonnes per hectare, but this comparison ignores one important difference in the cropping systems of the two countries.

The eminent agricultural scientist Dr. M.S. Swaminathan emphasises that it is unscientific to make comparisons purely on the basis of individual crops, but it would be more scientific to compare the cropping system as a whole. For instance, a farmer in Punjab may obtain only 4 to 4.5 tonnes per hectare yield on spring wheat of 140 days duration, but his counterpart in Netherlands obtains 8 tonnes per hectare on a 10-month winter wheat crop. The difference is made up by the Punjab farmer by raising a rice crop during the same year providing ayield of 3 to 3.5 tonnes per hectare. He may also be raising a crop of potato or legume or some short-duration vegetable. Obviously, for the Indian farmer, the more important consideration *is the total yield during the year, rather than simply yield per crop.* Thus, the transformation from amonocropping to multi-cropping system has enabled the development of rice or wheat varieties of different maturities, which have been integrated in the phenomenon described as the Green Revolution. Obviously, the success of the Green Revolution should be judged in terms of the over-all yield (income) generated by the farmers per hectare in a year rather than in terms of productivity per hectare of a single crop.

12.4 The National Commission on Farmers and Second Green Revolution

The UPA Government, after coming to power in 2004, appointed the National Commission on Farmers under the chairmanship of Dr. M.S. Swaminathan, eminent agricultural scientist. The Commission has made recommendations which promise to rejuvenate agriculture and thereby improve the lot of millions of farmers.

For the purpose of suggesting policy measures, *the term " Farmer" includes landless agricultural labourers, sharecroppers, tenants, small, marginal and sub-marginal cultivators, farmers with larger holdings, fishermen and women, dairy, sheep, poultry and other farmers involved in animal husbandly, pastoralists, as well as those rural and tribal families engaged in a wide variety of farming related occupations such as sericulture, vermiculture, production of bio-fertilizers and bio-pesticides, and agro-processing."*

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"The term also includes tribal families sometimes engaged in shifting cultivation, and in the collection and use of non-timber forest products. In all cases, both men and women should receive equal attention."

Statement of the Problem of Farmers

Farmers have to face the fury of nature in the form of drought, unseasonal and heavy rain which causes extensive damage to crops.

Institutional support to small farmers is weak. Even now in many parts of India, paddy is spread on the roads for drying. The loss due to lack of proper storage and maintenance due to spoilage is as heavy as 30 per cent in the case of fruits and vegetables.

The cost of production is invariably higher than the minimum support price, due to ever-increasing price of diesel and other inputs.

Capital formation in agriculture and allied sectors as percentage of Gross Domestic Product (GDP) started declining in the 80's and is only now being reversed. This has adversely affected irrigation and rural infrastructure. As a consequence, small farm families commit suicides and the number of suicides has been growing in India during the last five years. The situation is particularly alarming in Vidarbha region of Maharashtra. The government has identified 31 districts where farmer suicides have been reported. These are spread over Maharashtra. Andhra Pradesh, Karhataka and Kerala. The Prime Minister felt so much disturbed that he undertook a visit of Vidarbha and declared a package of Rs 4,000 crores to improve the lot of farmers and to alleviate their pathetic condition decided to waive off heavy loans undertaken by them. The Government agreed to provide a subsidy to banks and co-operative credit institutions to enable them to accommodate the impact of loan waiver by making a provision in the budget. The loan waiver cannot be restricted to one state only, but will have to be provided to all states affected by farmers' distress.

Since the cost-risk structure of farming is becoming adverse, indebtedness is growing among farmers. According to NSS Survey - 59^{th} round, 55 percent of the farm households are in debt in 2003. The average per capita monthly consumption expenditure of farm households across India was ₹ 503 in 2003.

Endemic hunger (i.e. chronic malnutrition) is high both in families without assets like land or livestock, as well as those with small land holdings without access to irrigation.

Only 10 per cent of farmers are covered by crop insurance. Farm families are also not covered by health insurance.

Women, by and large, have been denied the benefit of Kisan Credit Card System.

Strategy to Improve the Economic Condition of Farmers

Outlining the basic philosophy of the National Commission on Farmers, the recommendations emphasize the need to increase farm productivity and profitity in perpetuity without ecological harm. If the co-adopts this strategy, the present agricultural crisis then be converted in an opportunity for not only rever the decline, but for taking our agricultural evolve forward. For this purpose, it would be essential to be the gap between potential and actual yields in agriculture. This will require the intensive introduction of muti reinforcing packages of technology, services and public policies.

This **Agricultural Renewal Action Plan has** components which include the following :

(1) Soil health enhancement : Agricultural versities, research institutes, Krishi Vigyan Kend fertilizer companies, states department of agriculture farmers' associations should aim at increasing the productivity potential of the soils by paying adequate attend to the chemistry and physics of soils (macro and nutrients) and microbiology. Dry farming areas receive special attention.

(2) Irrigation Water Supply Augmentation Demand Management : National Commission on Farmers made a very forthright declaration : Water is a good and a social resource and not private property privatization of its distribution is fraught with and could lead to water wars in local comunit Improving supply through rainwater harvesting and charge of aquifers should become mandatory.

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10 million hectares of new area under irrigation should be developed under Bharat Nirman.

All existing wells and ponds should be renovation.

Sea water farming should be promoted in areas through the cultivation of mangroves, salicons casuarinar and appropriate halophytic plants.

Demand management through improved irrigated practices, including sprinkler and drip irrigations show receive priority attention.

(3) Credit and Insurance : The National Commission on Farmers considers : '"Credit reform is the primary pathway to enhancing small farm productivity and ending farmer suicides."

Firstly, the difference between lending and deposit interest rate is high in India by international standard. This needs to be reduced. Keeping in view, the decline in profitability and the farmers' distress, it would be deshable for the government to reduce the rate of interest on crop loans to 4 per cent.

On account of droughts and floods and the high interest on farm loans, the farmers become defaulters and thus the credit system pushes them out of its network. To meet natural calamities, the Central and Stale governments must step in to create an Agriculture Risk Fund to provide relief. This may be in the form of full/part waiver of the loan and interest.

(4) Technology : Agriculture scientists should state the performance of new varieties and technologies in terms of *net income per hectare*, and not just in terms of yield per hectare.

Moreover, there is a need for proper integration of production and post-harvest technologies. For this purpose the Commission suggests that a post-harvest techanlogy wing should be added to Krishi Vigyan Kendras. Also, lab-to-land demonstrations should be organized in dry farming areas where millets, pulses, oilseeds and cotton are grown. Value addition to biomass will help to generate skilled jobs in the non-farm sector.

Rice covers the largest area in the country and there are opportunities for creating more jobs and income by establishing rice bio-parks. Similarly, eco-boards can be produced from cotton stalks as a replacement for plywood from timber.

Acadre of Rural Farm Science Managers should be developed by training some members in every panchayat to manage these new technologies. It would be necessary to establish a professional National Biotechnology Regulatory Authority without further delay.

(5) Market : Ultimately, it is only opportunities for assured and remunerative marketing that will determine the economic viability of farming both as a way of life and as a means to livelihood. Market reform should begin with production planning, so that every link in the cultivation-consumption-commerce chain receives aquate and timely attention.

A Land Use Advisory Service is needed so that informed decisions are taken with ecological, meteorological marketing factors being kept in view.

National Commission on Farmers and Second Green Revolution

Dr. M.S. Swaminathan, the architect of India's first green revolution listed five components of Agricultural Renewal in his report as Chairman of the National Commission on Farmers. These five components suggested by the Commission are : Soil health enhancement; water harvesting and sustainable and equitable use of water; access to affordable credit and crop and life insurance reform; development and dissemination of appropriate technologies and improved opportunities; infrastructure and regulation for marketing of agricultural produce.

Inaugurating the 93rd Indian Science Congress on June 3, 2006, Prime Minister Manmohan Singh added two more components : (a) application of science and biotechnology to the improvement of seeds and utilization of herbal and other plants; and (b) application of science to animal husbandry to improve productivity of livestock and poultry. It may, however, be mentioned that these two components were already covered by the National Commission on Farmers. For instance, Dr. Swaminathan mentions : "Had we adopted a pro-small farmer biotechnology strategy, we would by now have had Bt-cotton varieties whose seeds farmers could keep and replant, unlike in the case of

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the hybrids marketed by private companies." NCF has, therefore, made a categorical case for vesting in the Indian farmers the right to use their own seeds developed by them, rather than remain dependent on private companies and multinationals to get them patented and then deny this right of use to Indian farmers.

Although, Prime Minister Manmohan Singh has given a call for a "Second Green Revolution," it would be of interest to understand why the first green revolution has run out of steam. Two reasons were ascribed by the Prime Minister : First, it did not benefit dryland farming. Second, it was not scale-neutral and had thus benefited only large farms and big farmers. This implies that 62 percent of marginal holdings accounting for 17 percent of operated area and 31 percent of small holdings of size 1 to 4 hectares accounling for 55 percent of area operated were bypassed by the first green revolution. Although, production of foodgrains and other crops substantially improved in India but the spread of green revolution in reducing poverty remained rather limited. It is due to this reason that it is now being argued and rightly so by the Prime Minister that he Second Green Revolution should concentrate on the small and marginal farmers.

Self-Assessment

1. Choose the correct option

(*i*) Green Revolution resulted in significant increase of agricultural productivity due to

(*a*) High yielding variety of grains (*b*) Use of pesticides

(*c*) Improved management techniques (*d*) All the three

(*ii*) The region, once hailed, home of Green Revolution in India, was

(*a*) Punjab (*b*) Gujarat

(*c*) Haryana (*d*) Bihar

3. Of all the high yielding crops, which grain produced the best result?

(*a*) Wheat (*b*) Maize

(*c*) Rice (*d*) Corn

4. The major results of the benefits of Green Revolution were experienced mainly in North and Northwestern India between the years

(*a*) 1960-1965 (*b*) 1970-1985

(*c*) 1965-1980 (*d*) 1975-1988

12.5 Summary

- Since the mid-1960's, the traditional agricultural practices are gradually being replaced by modern technology and farm practices in India and a veritable revolution is taking place in our country.
- As a result of the new agricultural strategy, area under improved seeds has gone up since 1966. The new varieties are of a short-term duration and consequently, instead of growing one crop, two crops and sometimes, even three crops are grown. In the case of wheat.
- The new agricultural technology uses such resources like fertilisers, pesticides, agricultural machinery, etc., which are produced outside the agricultural sector.
- The advocates of the new strategy considered the intensive approach as the only means of making a breakthrough in Indian agriculture in the shortest possible time.
- The new agricultural technology has made the farmer market-oriented. The farmers are largely dependent on the market for the supply of inputs and for the demand for their output. At the same time, the demand for agricultural credit has also increased as the new technology has increased the cash requirements of the farmer.
- The green revolution caused by the new strataegy was initially limited to wheat, maize and bajra only. The major crop of India, i.e., rice, responded to the impact of the high-yielding varieties much later.

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- Dr. M.S. Swaminathan, the eminent agricultural scientist, analysing the success of green revolution in Punjab stated : "The Green Revolution in Punjab is not a miracle.
- As a consequence of the new agricultural technology, India 1 as achieved relative self-sufficiency in foodgrains and its imports became negligible. India is also able to accumulate large buffer stock of rice and wheat so that she could face any eventuality resulting from drought in a particular year or successively in two or three years.
- The annual rate of growth in foodgrains output during nineties was just about 1.7 per cent, which is much lower than 3.5 percent annual growth recorded in the eighties. The yield rates have more or less plateaued in major wheat and rice growing areas.
- Green Revolution initiated in the 1960's centered around the use of semi-dwarf high yielding varieties responsive to irrigation and chemical fertilizers yielded good results in giving a big boost to the production of wheat in the first stage and the production of rice in the next stage.
- Scientists in India have been making efforts to develop hybrid varieties of rice and wheat so that the yield barrier operating at present can be broken. In the case of rice, on-farm-trials of hybrid rice in Andhra Pradesh Tamil Nadu and Karnataka have been found to yield an average of 6.8 tonnes per hectare as against 5.2 tonnes obtained from conventional pure-line rice varieties.
- India should make an effort to bring down the seed costs by standardizing hybrid rice seed production techniques. The Government should also provide hybrid rice seed at subsidised rates to farmers.
- The UPA Government, after coming to power in 2004, appointed the National Commission on Farmers under the chairmanship of Dr. M.S. Swaminathan, eminent agricultural scientist.

  Farmers have to face the fury of nature in the form of drought, unseasonal and heavy rain which causes extensive damage to crops.
- Capital formation in agriculture and allied sectors as percentage of Gross Domestic Product (GDP) started declining in the 80's and is only now being reversed. This has adversely affected irrigation and rural infrastructure.
- Outlining the basic philosophy of the National Commission on Farmers, the recommendations emphasize the need to increase farm productivity and profitity in perpetuity without ecological harm. If the co-adopts this strategy, the present agricultural crisis then be converted in an opportunity for not only rever the decline, but for taking our agricultural evolve forward.

12.6 Key-Words

1. Green revolution : A large increase in crop production in developing countries achieved by the use of fertilizers, pesticides, and high-yield crop varieties.
2. Indebtedness : The state of being indebted.

12.7 Review Questions

1. Discuss the new strategy implemented to improve agricultural sector.
2. What do you mean by Green Revolution? Discuss.

Answers: Self-Assessment

1. (*i*) (*d*) (*ii*) (*a*) (*iii*) (*a*) (*iv*) (*b*)

12.8 Further Readings

Books

1. Indian Economy; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055.
2. The Indian Economy; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001.

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Unit 13: Recent Issues in Indian Agriculture

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Objectives

After reading this Unit students will be able to:

- Describe the Recent Issues in Indian Agriculture.
- Understand Agricultural challenges in India.
- Discuss the opportunities in the challenges.

Introduction

The contribution of rapid growth in productivity in ensuring a sustained growth of production is important as has been discussed in previous chapter. Here, the discussion would be on the issues and concerns relating not only to sustained growth of production but also those relating to an institutional and organisational support system. This support system helps in generating impulses of sustained agricultural growth and in weeding out forces that tend to inhibit such growth. The knowledge of the issues and concerns will enable us to clearly understand their significance in relation to the agricultural sector. Their impact would also be our focus and we would draw inferences related to the desirable nature and extent of change for the benefit of the sector. The following issues and concerns will be discussed in this chapter : shrinking land base and declining access to land; irrigation system, credit system, availability of inputs like festilisers, seeds and pesticides; prices, costs and profitability; marketing system; agreement onagriculture under WTO; and investment in agriculture.

13.1 Recent Issues in Indian Agriculture

"Agriculture development is central to our growth strategy. Measures taken during the current year have started attracting private investment in agriculture and agro-processing activities. This process has to be deepened further."

With nearly 12 percent of the world's arable land, India is the world's third-largest producer of food grains, the second-largest producer of fruits and vegetables and the largest producer of milk; it also has the largest number of livestock. Add to that a range of agro climatic regions and agri-produce, extremely industrious farmers, a country that is fundamentally strong in science and technology, a government committed to Indian agriculture and an economy that is on the verge of double-digit growth, and you should have the makings of a bumper harvest.

Yet the comprehensive outlook for Indian agriculture is far more complex than those statistics might suggest. The sector supports an estimated 70 percent of the Indian population, but is also the most sluggish, having just extricated itself from a period of negative growth - of -0.1 percent in 2008-2009-to

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rise to an unspectacular 0.4 percent in 2009-2010 with around 5.4 percent expected for 2010-11. Adjusted for inflation, even this 5.4 percent growth looks unexciting when compared to the growth rates in services and manufacturing. Today, agriculture accounts for 14.2 percent of the country's gross domestic product, compared to 51 percent in the 1950s. Worse, India is amongst the world's largest wasters of food and faces a potential challenge to provide food security to its growing population in light of increasing global food prices and the declining rate of response of crops to added fertilizers.

Table 1 : Agriculture Sector : Key Indicators

(per cent)

S. No.	Item	2008-09	2009-10	2010-11 (Advance Estimates)
1	GDP–Share and Growth (at 2004-05 prices)			
	Growth in GDP in agriculture & allied sectors	-0.1	0.4	5.4
	Share in GDP–Agriculture and allied sectors	15.7	14.6	14.2
	Agriculture	13.3	12.3	
	Forestry and logging	1.6	1.5	
	Fishing	0.8	0.8	
2	Share in Total Gross Capital Formation in the Country (at 2004-05 prices) Share of Agriculture & Allied Sectors in total Gross Capital Formation	8.3	7.7	
	Agriculture	7.7	7.1	
	Forestry and logging	0.07	0.06	
	Fisheries	0.56	0.54	
3	Agricultural Imports & Exports (at current prices)			
	Agricultural Imports to national imports	2.71	4.38	
	Agricultural exports to national exports	10.22	10.59	
4	Employment in the agriculture sector as share of total workers as per census 2001	58.2		

Source : Central Statistics Office and Department of Agriculture and Cooperation.

The root causes of a poorly-performing agriculture sector that continues to be the primary engine for sustaining the largest segment of the Indian people are primarily two-fold : (a) India's economic growth trends are not inclusive in character and are being driven more by services and manufacturing; and (b) something has gone terribly awry with Indian planning for agriculture.

Conversely, for technology companies, those with the wherewithal to "green" Indian agriculture or those who wish to engage at the grassroots either from a business or CR perspective, it is in agriculture's myriad problems that opportunities exist.

From the point of view of international investors some of the longer-term opportunities arise on account of a number of factors including,

- India's large land mass
- A multi-product basket with enormous export potential
- Year-round cropping

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- 70 percent of the population dedicated to farming and allied activities
- Excellent domestic demand
- Global game-changers operating in this space
- Enormous funding commitments from the government
- Considered policy support from the government : four-pronged strategy covering agricultural production, reduction in wastage of produce, credit support to farmers, and a thrust to the food-processing sector

Nevertheless, the challenges cannot be wished away. In the following sections, eight of the key challenges that face Indian agriculture are discussed. Later, some ideas on innovative opportunities for investors which fit well with what India requires are explored.

13.2 Agricultural Challenges in India

The story of Indian agriculture today is one of farmers at the grassroots stymied for money, advice, basic technology, energy and water. The government, on the other hand, is more focused on the larger though very real issues around food processing, warehousing and logistics.

The **main** issue is that India faces food insecurity even as it wastes large amounts of food. The problem may broadly be examined under the following eight headings and solutions sought under them.

Fertilizer Abuse

What was traditionally the food bowl of India - the Punjab-Haryana belt - has been devastated by **fertilizer abuse** and consequent soil degradation that has made agriculture an unprofitable business. Fertilizer use has jumped up from merely 0.58 kg per hectare in the early 1950s to 7 kg at the onset of the Green Revolution in 1966-1967 with the adoption of high-yielding varieties of paddy and wheat Fertilizer consumption increased from 784,000 tonnes during 1965-1966 to 1,539,000 tonnes during 1967-1968 to 24,909,000 tonnes in 2008-09. In 2010 the sale of urea in *kharif* (summer or monsoon crop) 2010 season, up to July 31st, was 7.36 million tonnes, up from 6.81 million tonnes in the corresponding period last year.

The fertilizer subsidy bill doubled over the first seven years of the current millennium. The subsidy growth has clearly overtaken the crop growth, with some estimates saying that at least one-third of the subsidy goes to fertilizer producers. The worry is compounded by food productivity not keeping up with the continuous increase in fertilizer application, while soil quality has been simultaneously degraded. Yet another aspect of the fertilizer crisis is around the use of potash. Plants need more potash than any other nutrient, but Indian soils are being continuously mined by crop plants while soils are getting depleted of potash at an alarming rate. Global stocks of mineral potash are not expected to last beyond 30 to 40 years. The implications are grave for Indian agriculture.

Long-term use of synthetic fertilizer has resulted in nutrient imbalance, micro-nutrient deficiency and the deterioration of soil health, causing low agricultural productivity.

Reducing Arable Land

Further anxiety derives from the **industrial assault on agricultural land** that has led to nationwide turmoil -leading to the impending exit of the Leftists from West Bengal (where they have held sway for more than three decades) and even in Gujarat, which has handled the changing land use professionally. Indeed, the ratio of agricultural land to India's farming population has shrunk to 0.3 hectares per person in India. In advanced nations the area is more than 11 hectares per person.

In a developing country such as India, the dilemma between growth and preservation of the natural habitat will continue to be posed for some time. However, the focus has to be on improving agricultural yields through tried and tested technology, knowledge-sharing and access to energy, credit and decent infrastructure.

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Fragmentation of Agricultural Land

The **third** associated area of concern is the **fragmentation of agricultural land,** with the average size of the holdings shrinking from 1.69 hectares in 1985-1986 to 1.33 hectares in 2000-2001. The proportion of marginal landholdings (less than a hectare) increased from 57.8 percent in 1985-1986 to 62.3 percent in 2000-2001. More importantly, about 19 percent of the other holdings are in the small farms category: between one and two hectares.

Agricultural Indebtedness

It is little wonder then that **agricultural indebtedness** has been the bane of the sector. Indeed, at least 10,000 farmers committed suicide every year; the five worst affected states being Maharashtra, Andhra Pradesh, Karnataka, Madhya Pradesh and Chhattisgarh. The government's US$ 1.4bn (INR 71,000 crore) farm loan waiver scheme last year helped large and medium farmers more than small and marginal farmers who are indebted to local moneylenders.

Moreover, increased funding for agriculture and rural development is a partial misconception (see table). Standard credit delivery mechanisms do not help farmers because these banks - even the inept co-operative banks - are not accessible by the bulk of farmers and, when they are, there is no collateral to produce for loans. Finally, when the loans come, they are inherently risky given the vagaries facing Indian agriculture. No out-of-the-box thinking has been deployed in this calamitous space, and the substantial hikes in credit to the farmer have been commandeered by the better-placed agro industry sector.

As far as the small farmer is concerned, increasing credit flows without a supporting policy framework that safeguards farmers' rights to land and improves the profitability of agriculture may well be of limited value. Short-term loans for high-cost, high-input agriculture are likely to increase indebtedness for small farmers. In Madhya Pradesh, the local press has indicated the farmers had availed of credit for financing land leases and the purchase of agricultural inputs. When frost destroyed their crop, they had no means of repaying the loans.

The finance minister admitted as much in his latest budget speech. Micro-finance as it is practiced in India - despite its promise - has failed to deliver. The gaps in institutional credit, which were to be covered by micro-finance, have thus attracted tremendous interest in recent years. The Andhra Pradesh experience shows that the delivery costs are very high, pushing interest rates up to unacceptable levels in the absence of consumer protection regulation and a perceived absence of a cap on micro-finance interest rates. A proposed plan for the direct transfer of subsidies (proposed in the recent Union Budget) may ensure the subsidy reaches the intended beneficiaries more efficiently.

Water Waste

The fifth area of concern is the sinister waste of water resources. India's annual precipitation of a handsome 4,000 *cu km* gets slashed into an effective water availability of no more than 1,123 *cu km* (utilizable water resources 690 *cu km* and utilizable ground water 433 *cu km*). No more than 28.3 percent of the rainwater is utilized, thanks to India's creaking water management infrastructure, lopsided policies, illogical spending patterns on large irrigation projects that pay poor dividends and a comprehensive lack of perspective that haunts the water industry. There is a lack of realization that water has an economic value in all its competing uses and should be recognized as an economic good and supported with sound planning for conservation and efficient allocation.

The rainfall in India is not evenly spread - nearly 80 percent of it coming in the four-month monsoon season from June to September. A sizable part of this water is allowed to flow away wastefully to the seas, eroding precious soil on its way. India needs to conserve this water for year-round use by storing it either in the surface reservoirs or in the sub-surface (underground) water aquifer. None of this is happening to the required extent. The surface water storage capacity created in India through major and medium reservoirs and millions of small ponds, tanks and other water bodies is insufficient to hold enough water to meet the annual needs of the country. Contrast this with the United States, for instance, with water storage capacity good enough to meet three to five years' requirement.

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Low Soil Fertility

Soil fertility is also an area of concern. Maps of India show that only about 11 percent of soils are high in available nitrogen. Similarly, about 20 percent of soils are high in available phosphorus and about 50 percent in potassium. With intensive cropping using only NPK (Nitrogen, Phosphorus and Potassium) fertilisers and limited use of organic manures, soils and crops became deficient in a large numbers of elements even as food production increased with time.

The major issues around soil health today are :

- Physical degradation of soil - compaction, crusting and other effects caused by excessive cultivation
- Chemical degradation of soils due to wide gap between nutrient demand and supply
- High nutrient turnover in soil-plant system coupled with low and imbalanced fertiliser use
- Emerging deficiencies of secondary nature and micronutrients
- Poor nutrient use efficiency
- Insufficient organic resource use because of competitive uses
- Acidification and aluminium toxicity in acidic soils
- Irrigation induced water-logging
- Biological degradation by organic matter depletion and loss of soil fauna and flora
- Soil degradation due to water and wind erosion
- Soil pollution from industrial wastes, excessive use of pesticides and heavy metal contamination

Climate Change

Indian agriculture is particularly vulnerable to climate change which A. K. Singh, deputy director-general, natural resource management, of the Indian Council of Agricultural Research, believes could cause yield drops of between 4.5 and 9 percent by 2039. Crop yields may fall by 25 percent or more by 2099.

India has had a taste of what is to come : rain-fed tracts have been experiencing three to four droughts every 10 years. Of these, two to three droughts are generally of moderate intensity and one is severe. Furthermore, there has been a fluctuating weather cycle with unpredictable cold waves, heat waves, floods and heavy one-day downpours. In 2008, the groundnut crop in the Rayalaseema (Andhra Pradesh) was subject to high as well as low rainfall at different stages of crop growth. While heavy rainfall early in the season adversely affected the development of pegs (which bear groundnut pods below the soil), the relatively drier spell at the later stage hit the development of pods. The impact of these dramatic weather cycles on agriculture is baneful.

Climate change affects the small and marginal farmers the most because they can least afford irrigation. Indeed some 80 million hectares (net sown area of around 143 million hectares) is irrigation-deprived and depends on the errant rains, but more than 85 per cent of the pulses and coarse cereals, more than 75 percent of the oilseeds and nearly 65 percent of cotton are produced from land characterized by low yields, usually in semi-arid zones.

Food Wastage

The most inexplicable issue around Indian agriculture is the continued waste of food that has promoted the Supreme Court to castigate heavily the government. The food ministry has admitted that foodgrains of USD 6 billion have gone waste in 2010, most of it in state warehouses.

Given a production (in 2010) of around 80 million tonnes but the combined storage space of the Food Corporation of India, State Warehousing Corporations and other agencies of just 60 million tonnes, some 20 million tonnes of food is left out for the elements to ravage. The estimated loss was around INR 270 billion rupees (US $6 billion). Between 1.2 million metric tonnes of rice and wheat was wasted in Punjab alone, forcing the Supreme Court to order the Centre to distribute free food grains, especially to those in the drought and flood-hit areas. The highest court also directed the Centre to

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establish a large state run Food Corporation of India (FCI) warehouse in every state and small warehouses in all districts. In addition, the recent introduction of a negotiable warehouse receipt (WR) system and effective enforcement by a Warehousing Development and Regulatory Authority (WDRA) is likely to add new storage capacity through private-sector participation.

The Agriculture Produce Marketing Committee (APMC) Act is another tangled web. The anti-retail and land acquisition lobby has, however, strongly opposed the Act, which allows private companies to procure produce directly from farmers. Those for the change allege that the Act forces farmers to sell perishable items like fruits and vegetables only to a limited number of licensed traders at APMC *mandis* (wholesale markets), thereby encouraging cartel activity in agricultural marketing. However, the traders' lobby insists that "the Act does not require any amendment," says Ashok Walunj, head of the onion-potato market at Vashi APMC : "Trade cannot survive without middlemen. Were it not for us, the farmers would not be paid a fair price for their goods on the spot. Exports should rather be resumed so farmers get a better deal."

The APMC Act of most states does not encourage direct marketing and contract farming, and the prohibitions under the APMC Act do not allow investment by the private sector for improving the infrastructure. They do not facilitate procurement of agricultural produce directly from the fields. The purchaser has to be a registered agent at the wholesale market.

13.3 Opportunities in the Challenges

It is encouraging to note that marketing reforms are expected to become one of the top priorities in the 12th five-year plan. The APMC Act has been repelled in Bihar and amended in a further 16 other states. Industry bodies are lobbying hard to delist perishables such as fruits and vegetables from Schedule 1 of the APMC Act and allow for competition. In the states where APMC has been amended, the government is providing financial incentives to set up Terminal Market Complexes with a hub-and-spoke model in the public-private partnership (PPP) mode.

The latest Union budget has thus focused on aspects of food preservation, storage and logistics. Mukherjee has talked of the need to have warehousing and cold chains. On January 1st, 2011, the food grain stock in the Central pool reached 4.7 million metric tonnes, 2.7 times higher than 1.74 million metric tonnes on January 1st, 2007, and the storage capacity for such large quantities requires augmentation.

The process to create new storage capacity of 1.5 million metric tonnes through private entrepreneurs and warehousing corporations has been fast-tracked. The decision to create 0.2 million metric tonnes of storage capacity under the Public Entrepreneurs Guarantee (PEG) Scheme through modern silos has been taken. The addition will reach 4 million tonnes by March 2012. During 2010-2011, another 2.4 million metric tonnes of storage capacity has been created under the Rural Godown (Warehouse) Scheme.

A CRISIL Research study estimates allowing foreign direct investment in multi-brand retail could reduce wastage by about US$ 12 billion (INR 630 billion) in the fruit and vegetable subsectors alone every year, or about 30 percent of total output.

Foreign retailers who want entry into India, such as Wal-Mart, say foreign investment is key to minimising waste and lowering prices to consumers.

While the government permits foreign investment in the supply chain, foreign retailers have been unwilling to commit large sums of money, as there are still restrictions in multi-brand retail.

Bharti-Wal Mart estimates that it could take a decade to build a supply chain of international quality in India, and indeed numerous presentations have been made to move India from an indigent-farmer model to one that relies on cold chains.

While all this looks encouraging on paper, there is enormous confusion at a policy-making level because agriculture is a state responsibility and central decisions often get ignored. Indeed, pan-Indian solutions may sometimes be difficult to implement at the state level and for Indian agriculture to get out of its moribund state, it is important for growth and development impulses to flow from the ground upward.

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The problem lies in the disconnect between the farmer, the administration and the agriculture knowledge worker, which is why critical information does not travel to the small farmer even though there is a multiplicity of agencies at the policy-making levels.

Essential Commodities Act

The other obstructive legislation is the Essential Commodities Act (ECA), which was put in place in 1955 after Independence to control the production, supply and distribution of essential agricultural commodities. India was then facing acute food shortages, and the Act was meant to ensure the availability of food products. Conditions have changed since, and there is recognition that controlling the movement of products by licensing of dealers, limits on stocks and control on movements will hamper the growth of the agricultural sector and the promotion of food-processing industries. This Act was amended in 2003 to encourage free movement of agricultural commodities across regions.

The larger issues are around the fact that India's growing population has to be fed, and that will need some drastic and dramatic changes in the way agriculture is being run. It needs to be borne in mind that with economic growth, the diet of large segment of India's population is changing : there is far greater demand for dairy and meat products, and this is an area that will demand special attention. It also means that the rate of increase in food consumption will be higher than the rate of population growth. Furthermore, Indian agriculture will have to grow amidst unsustainable increases in the price of inputs, with petroleum costs making all food grain and input movements expensive and food, therefore, dearer.

Self-Assessment

1. Choose the correct option:

(*i*) The Black rust of disease of wheat is caused by-

(*a*) Xanthomonas graminis (*b*) Puccinia graminis

(*c*) Puccinia recondita (*d*) None of these

(*ii*) A crop grown in zaid season is

(*a*) Soyabean (*b*) Water melon

(*c*) Jute (*d*) Maize

(*iii*) The adoption of High Yielding Variety Programme in Indian Agriculture started in -

(*a*) 1966 (*b*) 1965

(*c*) 1968 (*d*) 1967

(*iv*) Which of the following is a food crop?

(*a*) Palm (*b*) Jute

(*c*) Cotton (*d*) Maize

(*v*) Which of the following is an oilseed ?

(*a*) Cardamom (*b*) Garlic

(*c*) Clove (*d*) Mustard

(*vi*) Which one of the following makes a case for intensive, modern farming?

(*a*) Cropping pattern (*b*) Higher output using organic method

(*c*) Remunerative price (*d*) None of these

(*vii*) Which of the following is not an agricultural product?

(*a*) Alum (*b*) Cotton

(*c*) Jute (*d*) Rice

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(*viii*) Crop rotation helps to

(*a*) lessen use of pesticides (*b*) yield more crops

(*c*) produce a greater choice of plant products

(*d*) eliminate parasites which have selective hosts

13.4 Summary

- With nearly 12 percent of the world's arable land, India is the world's third-largest producer of food grains, the second-largest producer of fruits and vegetables and the largest producer of milk; it also has the largest number of livestock. Add to that a range of agro climatic regions and agri-produce, extremely industrious farmers, a country that is fundamentally strong in science and technology, a government committed to Indian agriculture and an economy that is on the verge of double-digit growth, and you should have the makings of a bumper harvest.
- The story of Indian agriculture today is one of farmers at the grassroots stymied for money, advice, basic technology, energy and water. The government, on the other hand, is more focused on the larger though very real issues around food processing, warehousing and logistics.
- What was traditionally the food bowl of India - the Punjab-Haryana belt - has been devastated by **fertilizer abuse** and consequent soil degradation that has made agriculture an unprofitable business.
- The fertilizer subsidy bill doubled over the first seven years of the current millennium. The subsidy growth has clearly overtaken the crop growth, with some estimates saying that at least one-third of the subsidy goes to fertilizer producers.
- Long-term use of synthetic fertilizer has resulted in nutrient imbalance, micro-nutrient deficiency and the deterioration of soil health, causing low agricultural productivity.
- In a developing country such as India, the dilemma between growth and preservation of the natural habitat will continue to be posed for some time. However, the focus has to be on improving agricultural yields through tried and tested technology, knowledge-sharing and access to energy, credit and decent infrastructure.
- Moreover, increased funding for agriculture and rural development is a partial misconception (see table). Standard credit delivery mechanisms do not help farmers because these banks - even the inept co-operative banks - are not accessible by the bulk of farmers and, when they are, there is no collateral to produce for loans.
- The finance minister admitted as much in his latest budget speech. Micro-finance as it is practiced in India - despite its promise - has failed to deliver. The gaps in institutional credit, which were to be covered by micro-finance, have thus attracted tremendous interest in recent years.
- The fifth area of concern is the sinister waste of water resources.
- The rainfall in India is not evenly spread - nearly 80 percent of it coming in the four-month monsoon season from June to September. A sizable part of this water is allowed to flow away wastefully to the seas, eroding precious soil on its way.
- The other side of the problem is around the quality and price of water. Low water rates - there has been no revision for years - and a lack of uniform pricing across states and projects adds to the abuse of water.
- The Central Ground Water Authority has issued regulatory directives for more than 100 ground water blocks, and a 2010 World Bank report has warned that if indiscriminate exploitation of the ground water continues unabated, as many as 60 percent of all the ground water blocks will be in a critical condition by 2025.

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- Soil fertility is also an area of concern. Maps of India show that only about 11 percent of soils are high in available nitrogen. Similarly, about 20 percent of soils are high in available phosphorus and about 50 percent in potassium.
- Indian agriculture is particularly vulnerable to climate change which A. K. Singh, deputy director-general, natural resource management, of the Indian Council of Agricultural Research, believes could cause yield drops of between 4.5 and 9 percent by 2039. Crop yields may fall by 25 percent or more by 2099.
- Climate change affects the small and marginal farmers the most because they can least afford irrigation. Indeed some 80 million hectares (net sown area of around 143 million hectares) is irrigation-deprived and depends on the errant rains, but more than 85 per cent of the pulses and coarse cereals, more than 75 percent of the oilseeds and nearly 65 percent of cotton are produced from land characterized by low yields, usually in semi-arid zones.
- The most inexplicable issue around Indian agriculture is the continued waste of food that has promoted the Supreme Court to castigate heavily the government. The food ministry has admitted that foodgrains of USD 6 billion have gone waste in 2010, most of it in state warehouses.
- The APMC Act of most states does not encourage direct marketing and contract farming, and the prohibitions under the APMC Act do not allow investment by the private sector for improving the infrastructure.
- It is encouraging to note that marketing reforms are expected to become one of the top priorities in the 12th five-year plan. The APMC Act has been repelled in Bihar and amended in a further 16 other states.
- The latest Union budget has thus focused on aspects of food preservation, storage and logistics. Mukherjee has talked of the need to have warehousing and cold chains. On January 1st, 2011, the food grain stock in the Central pool reached 4.7 million metric tonnes, 2.7 times higher than 1.74 million metric tonnes on January 1st, 2007, and the storage capacity for such large quantities requires augmentation.
- The larger issues are around the fact that India's growing population has to be fed, and that will need some drastic and dramatic changes in the way agriculture is being run. It needs to be borne in mind that with economic growth, the diet of large segment of India's population is changing : there is far greater demand for dairy and meat products, and this is an area that will demand special attention.
- The answer to these issues lies in science and technology and in research. Merely copying Western solutions will not suit the Indian need. In any event, unlike in the corporate sector - where multinationals and their technology could gain easy entry because Indian companies were at par or nearly at par with them - agriculture is one area where global technologies will encounter resistance and, in many cases, for good reason.
- There are also opportunities in the dairy and livestock sectors through bio-technology to strengthen conventional breeding methodology by evolving plant varieties resistant to pest and diseases, tolerant to adverse weather conditions, with better nutritional value and enhanced durability. Here too, appropriate PPP models are being examined.

13.5 Key-Words

1. Infrastructure : Infrastructure is basic physical and organizational structures needed for the operation of a society or enterprise, or the services and facilities necessary for an economy to function. It can be generally defined as the set of interconnected structural elements that provide framework supporting an entire structure of development. It is an important term for judging a country or region's development.

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The term typically refers to the technical structures that support a society, such as roads, bridges, water supply, sewers, electrical grids, telecommunications, and so forth, and can be defined as "the physical components of interrelated systems providing commodities and services essential to enable, sustain, or enhance societal living conditions.

2. Nutritional value : The nutritional value of food defines what a food is made of and its' impact on the body. Because of disease and weight control, it's particularly important to understand the nutritional value of food due to the impact on the body as it relates to cholesterol, fat, salt, and sugar intake. The food label is the primary tool enabling consumers to understand nutritional values in order to make informed decisions about consumption.

13.6 Review Questions

1. Identify the recent issues in Indian Agriculture.
2. What are the challenges we are facing in agriculture in India? Explain.
3. Discuss the opportunities in the challenges.

Answers: Self-Assessment

1. (*i*) (*b*) (*ii*) (*b*) (*iii*) (*a*)
   (*iv*) (*d*) (*v*) (*d*) (*vi*) (*a*)
   (*vii*) (*a*) (*viii*) (*d*)

13.7 Further Readings

Books

1. The Indian Economy; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001.
2. Indian Economy; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055.

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Unit 14: Rural Credit and Marketing

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Objectives

After reading this Unit students will be able to:

- Explain the Rural Credit in India.
- Discuss the Rural Marketing or Agricultural.

Introduction

Farmers often borrow from their own relatives in cash or kind in order to tide over temporary difficulties. These loans are generally contracted in an informal manner; they carry low or no interest and they are returned soon after the harvest. Farmers, particularly small farmers and tenants, depend upon landlords and others to meet their financial requirements. This source of finance has all the defects associated with money-lenders, traders and commission agents. Interest rates are exorbitant. Often the small farmers are cheated and their lands are appropriated. The landless labourers are forced to become bonded slaves. What is worse, this source of finance is becoming more important.

Marketing of his produce is the most important activity of a farmer. This is particularly tore in the case of small farmers who have surpluses for marketing.

14.1 Rural Credit in India

The financial requirements of the Indian farmers can be classified into three types depending upon the period and the purpose for which they are required :

Period of Credit

(a) Farmers need funds for short periods of less than 15 months for the purpose of cultivation or for meeting domestic expenses. For example, they want to buy seeds, fertilisers, fodder for cattle, etc. They may require funds to support their families in those years when the crops have not been good or adequate for the purpose. Such short-period loans are normally repaid after the harvest.

(b) The farmers require finances for medium period ranging between 15 months and 5 years for the purpose of making some improvement on land, buying cattle, agricultural implements, etc. These loans are larger than short-terms loans and can be repaid over longer periods of time.

(c) The farmers need finances for the purpose of buying additional land, to make permanent improvements on land, to pay off old debt and to purchase costly agricultural machinery. These loans are for long periods of more than 5 years.

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Productive and Unproductive Loans

We can further classify the credit requirements of farmers into two types—productive and unproductive loans. The former include loans (a) to buy seeds, fertilisers, implements, etc. (b) to pay taxes to the Government and (c) to make permanent improvements on land, such as digging and deepening of wells, fencing of land, etc. All these forms of credit help the farmers in their agricultural operations or in improving their land.

The Indian farmers often borrow for unproductive purposes too, such as for celebration of marriages, births and deaths, for litigation etc. Unproductive loans raised at exorbitant rates of interest are highly improper and unjustified.

Sources of Rural Credit

Broadly, there are two sources of credit available to the 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). Non-institutional or private sources include money-lenders, traders and commission agents, relatives and landlords.

Non-institutional sources — money- lenders land-lords, traders etc. accounted for 93 per cent of the total credit requirements in 1951-52 and institutional sources including the Government accounted for only 7 per cent of the total credit needs in that year. The All India Debt and Investment Survey (1981), estimated that the share of non-institutional sources had slumped to about 37 per cent in 1981, moneylenders accounting for barely 16 per cent; the share of institutional credit, however, had jumped to 63 per cent—co-operatives contributing 30 per cent and commercial banks about 29 per cent.

Non-Institutional Sources :

A. Money-Lenders

There are two types of money-lenders in rural areas. There are rich farmers or landlords who combine farming with money-lending. There are also professional money-lenders whose only occupation or profession is money-lending.

The cultivators depend upon the money-lenders for their requirements of cash. The Government and the Reserve Bank of India have been propagating that the importance of the money-lenders as suppliers of loans to the farmers has been declining rapidly. How ever, there are many reasons for the preponderance of the village money-lenders in rural areas even now.

(a) The money-lender freely supplies credit for productive and non-productive purposes, and also for short-term and long-term requirements of the farmers.

(b) He is easily accessible and maintains a close and personal contact with the borrower, often having relations with family extending over generations.

(c) His methods of business are simple and elastic.

(d) He has local knowledge and experience and, therefore, can lend against land as well as against promissory notes. He knows how to protect himself against default, through legal and illegal methods.

B. Landlords and Others

Traders and commission agents supply funds to farmers for productive purposes much before the crops mature. They force the farmers to sell their produce at low prices and they charge a heavy commission for their dealings. This source of finance is particularly important in the case of cash crops like cotton, groundnut, tobacco, etc., and in the case of fruit orchards like mangoes. Traders and commission agents may be bracketed with money-lenders, as their lending to farmers is also at exorbitant rates and has other undesirable effects too.

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14.2 Credit Delivery Mechanism in Rural Finance: Multi Agency Approach

Need for Institutional Finance

The need for institutional credit arises because of the weakness or inadequacy of private agencies to supply credit to farmers. Private credit is defective because :

(i) it is based on profit motive and, therefore, it is always exploitative;

(ii) it is very expensive and is not related to the productivity of land;

(iii) it does not flow into most desirable channels and to most needy persons;

(iv) it is not available for making agricultural improvements—and much of the necessary improvements are not undertaken as funds are not available for long periods at low rates of interest; and

(v) it is not properly integrated with the agriculturist's other needs.

Institutional credit is not exploitative and the basic motive is always to help the farmer to raise his productivity and maximise his income. The rate of interest is not only relatively low but can be different for different groups of farmers and for different purposes. Institutions also make a clear distinction between short-term credit and long-term credit requirements and give loans accordingly. Finally, institutional credit is fully integrated with other needs of agriculturists. The farmers require not only credit but also guidance in the planning of their agricultural operations like the use of seeds, fertilisers, pesticides etc., assistance in raising crops and in general, help for maximising their income. Agricultural credit and agricultural improvement should go hand in hand and the farmers should be taught improved farming methods and also be provided adequate and cheap credit. In all developed countries, provision of credit facilities and extension services go hand in hand. This work can be done best by institutions like co-operative societies and commercial banks and not by rapacious money-lenders and commission agents.

National Policy and Objectives

Since independence, *a multi-agency approach* consisting of co-operatives, commercial banks and regional rural banks—known as institutional credit— has been adopted to provide cheaper and adequate credit to farmers. The major policy in the sphere of agricultural credit has been its progressive institutionalisation for supplying agriculture and rural development programmes with adequate and timely flow of credit to assist weaker sections and less developed regions.

The basic objectives of this policy are :

(a) to ensure timely and adequate flow of credit to the farming sector;

(b) to reduce and gradually eliminate the money-lenders from the rural scene;

(c) to make available credit facilities to all the regions of the country, i.e., reduce regional imbalances; and

(d) to provide larger credit support to areas covered by special programmes like Pulses Development Programme, Special Rice Production Programme and the National Oilseeds Development Project.

Institutional credit, as mentioned earlier, refers to the funds made available by co-operative societies, commercial banks, and Regional Rural Banks (RRBs).

Evolution of Multi-agency Approach

Faced with the serious problem of deteriorating agricultural production and the rapacious money lenders, the Government set up co-operative credit societies and land mortage banks. Much was expected from the co-operative credit movement as it was led by the farmers themselves. A survey of rural credit in 1950-51 showed that the co-operatives could meet barely 33 per cent of the total credit requirements of farmers, while the money-lenders accounted for 93 per cent of the credit needs of the farmers. The All-India Rural Credit Survey Committee (1954) stated : "Co-operation has failed, but

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co-operation must succeed." It was the All India Rural Credit Survey Committee (1969) which recommended the adoption of "multi-agency approach" to finance the rural sector. For the first time, the Government openly accepted that rural credit could not be met by co-operative societies alone and that commercial banks should play an important role in the rural sector.

On the recommendations of this committee, RBI took a series of measures to strengthen the co-operative movement. The State Bank of India was set up in 1955 after nationalising the Imperial Bank of India to show a special concern for agricultural credit.

In 1969 14 leading banks were nationalised. This was followed by the setting up of Regional Rural Banks (RRBs). Thus, the multi-agency approach of institutional credit to agriculture was evolved over a number of years.

While RBI was helping the co-operative sector directly, it was felt that the multi-agency approach to rural finance required a special banking institution to coordinate and help all the institutions specialising rural finance. It was for this reason that NABARD was set up as the apex bank for rural finance in 1982.

Growth of Institutional Credit for Farmers

The extent of institutional credit for farmers in recent years is given in table 1.

Table 1 shows that total agricultural credit from institutional sources had steadily increased from ₹ 6,230 crores in 1984-85 to ₹ 2,03,300 crores in 2006-07. The contribution of co-operatives was 55 per cent of total institutional credit in 1984-85 but was only 21 per cent in 2005-2006. Correspondingly commercial banks including RRBs have raised their share from 45 per cent to 69 per cent during this period.

The Tenth Plan (2002-07) projected a substantial jump in institutional credit flow to the agricultural sector to the tune of ₹ 7,36,600 crores - almost three times, as compared to the Ninth Plan) — and the annual average credit flow would be ₹ 1,49,120 crores — as against ₹ 46,000 crores during the Ninth Plan.

Table 1 : Institutional Credit to Agriculture

Year	Cooperative Banks Amount	%	RRBs Amount	%	Commercial Banks Amount	%	Total	%
1984-85	3,440	55	–	_	2,790	45	6,230	100
1997-98	14,090	44	2,040	6	15,830	50	31,960	100
2002-03	23,720	34	6070	9	39,770	57	69,560	100
2006-07	42,480	21	20,440	10	1,40,380	69	2,03,300	100
2007-08	48,258	19	25,312	10	1,81,088	71	2,54,658	100
2008-09	36,762	13	26,724	9	2,28,951	78	2,59,337	100
2009-10	63,492	17	35,218	9	2,85,799	74	3,84,514	100
2010-11	29,450*	15	19,141	10	1,45,801	75	1,94,392	100

Source : Economic Survey, 2010-11

* Upto Sept. 2010

Table 1, however, shows that during Tenth Plan (2002-03 and 2007-08), there was substantial increase in institutional credit flow and by the year 2009-10, it reached ₹ 3,84,514 crores.

Table 1 shows that even though total institutional credit to agriculture, has been steadily rising, there has been

(a) Steady decrease in percentage terms, in the contribution of cooperative banks in rural credit - from 55% in 1984 to 17% in 2009-10.

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(b) The share of RRBs continue to reamain low (around 10 percent).

(c) The share of commercial banks has been steadily rising and reached 74 percent in 2009-10. It would be a good idea if cooperative banks and RRBs are made subsidiaries of commercial banks.

Shortcomings of Institutional Credit

Way back in 1950 the private money-lender reigned supreme in rural India and institutional sources met no more than three per cent of the credit requirements of farmers. Thanks to progressive institutionalisation of agricultural credit under the Five Year Plans, over 60 per cent of the required short-term (including medium-term) production credit is now provided by co-operatives, commercial banks, and RRBs in many States.

It should, however, be remembered that all the changes and improvements in the last 30 years in the field of rural credit appear to have failed to make a dent on poverty and provide adequate credit to improve the economic condition for the bottom 70 per cent of our rural population. In this connection, it can be safely asserted :

(i) The many new institutions created by the Government and the vastly extended facilities of rural finance provided by these institutions have generally been appropriated by the top 30 per cent of middle and affluent farmers in the country.

(ii) Even those credit facilities exclusively created for marginal and small farmers and for economically backward classes do not reach the target groups but are misappropriated by more affluent farmers through collusion with government officials and politicians.

(iii) Precious little is being done for the weakest of the rural population consisting of bonded labourers, landless agricultural labourers, tribals, scheduled castes' and scheduled tribes, etc. These people, constituting about 25 to 30 per cent of the total rural population, continue to be cruelly exploited by the high caste money-lenders and landlords.

This has led to extensive suicides by farmers all over the country, specially in Andhra and Karnataka.

Problems of Multi-agency Approach

The government was of the view that multi agency approach to rural credit was the real solution to the emancipation of small farmers from the clutches of money lenders. But the Working Group under the chair-manship of C. E. Kamath brought out the following problems of multi-agency approach :

(i) There has been a steady declining trend in the share of cooperative banks in the flow of institutional credit over the years - from 55% in 1984-85 to 40% in 1999-00 and further to 28% in 2004-05. This indicates the need of restructuring and reforming these banks.

(ii) There was no coordination between different agencies operating in the same area and, as a result, there was multiple financing, over-financing in some areas and under-financing in others.

(iii) Despite the adoption of lead bank scheme and district credit plans, the different agencies often failed to formulate and develop meaningful agricultural credit programmes in given blocks and districts.

(iv) Despite guidelines issued by RBI, different agencies adopted different procedures and policies in the matter of providing loans and in their recovery. The result was unnecessary competition among the different agencies.

(v) There were practical problems in the recovery of loans when different agencies had lent to the same persons against the same securities. Ultimately, there were heavy overdues.

The recently introduced "service area approach" (SAA) is definitely an improvement in the credit delivery system but it does not do away with the weakness of the multiple agency approach.

The major problem faced by the lending institutions, particularly the cooperatives, is the most unsatisfactory level of overdues. The ratio of overdues to demand is around 40 to 42 per cent in the case of co-operatives and 47 per cent in the case of regional rural banks. Accordingly, the health of

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agricultural credit institutions, both co-operatives and RRBs, is in a very sad state in several parts of the country. The Planning Commission regretfully admits : "Wilful default and overdues are mounting in a number of states including some co-operatively progressive states like Maharashtra and Gujarat. By writing off agricultural loans and providing subsidies out of the state exchequer, some of the states have set a bad example to the entire country. If this trend is not reversed and if banks are reduced to institutions providing grants rather than recycling scarce resources to get the maximum benefits for the country as a whole, the banking system will be unable to provide more credit to meet the growing needs of the farmers."

Pitiable Financial Condition of Small and Marginal Farmers

The farming community, all over the country has been seething with anger and dissatisfaction about the falling interest rates of banks not reaching them and being forced to borrow at exorbitant rates from the moneylenders. There were a series of suicides among farmers in Andhra Pradesh. Maharashtra and Punjab. This was one of the major reasons for the fall of NDA Government in 2004.

The UPA Government realized the need to enhance credit flow to agriculture. In consultation with RBI, NABARD and commercial banks, the UPA Government announced a package for agriculture : The initiatives announced in June 2004 include :

(i) Stepping up agricultural credit from all lending institutions (co-operative banks, RRBs and commercial banks) from about Rs 85,000 crores to ₹ 1,05,000 crores (30 percent increase - this would continue year after year).

The farm credit package of the UPA Government has increased year after year—₹ 125,000 crores in 2004-05, ₹ 1,80,480 crores in 2005-06 and ₹ 2,04,000 in 2006-07. If these figures are true, as farm credit, why do farmers commit suicide. This can only mean that much of the farm credit goes to well-to-farmers.

(ii) The branches of commercial banks and RRBs would be energized to enhance the flow of agricultural credit.

(iii) Under special agricultural credit plan, at least 100 new farmers would be financed at each rural and semi-urban branch during each year.

(iv) Financing of at least 2 to 3 new investment projects by each branch in plantations and horticulture, fisheries, organic farming, etc.

(v) Providing credit to tenant farmers and oral lessees.

(vi) Debt restructuring as opposed to debt write-off in the following forms :

(a) Relief to farmers in distress by rescheduling their loans and making them eligible for fresh loans; and

(b) One-time settlement for small and marginal farmers and consider them eligible for fresh loans.

None of these proposals worked satisfactorily. The money lenders still continue their strangehold on poor and marginal farmers. The banks have increased their lending considerably but to the well to do farmers only. Farmers suicides continue.

Rural Co-Operative Credit Societies

Indian planners considered co-operation as an instrument of economic development of the disadvantaged, particularly in the rural areas. They saw in a village panchayat, a village co-operative and a village school, as the trinity of institutions on which a self-reliant and just economic and social order was to be built. The non-exploitative character of co-operatives, voluntary nature of membership, the principle of one man one vote, decentralised decision-making and self-imposed curbs on profits eminently qualified them as an instrument of development combining the advantage of private ownership with public good.

The rural co-operative movement was started in over 100 years back largely with a view to providing agriculturists funds for agricultural operations at low rates of interest and protect them from the clutches of money lenders.

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The organisation of the co-operative credit for short period is briefly outlined here :

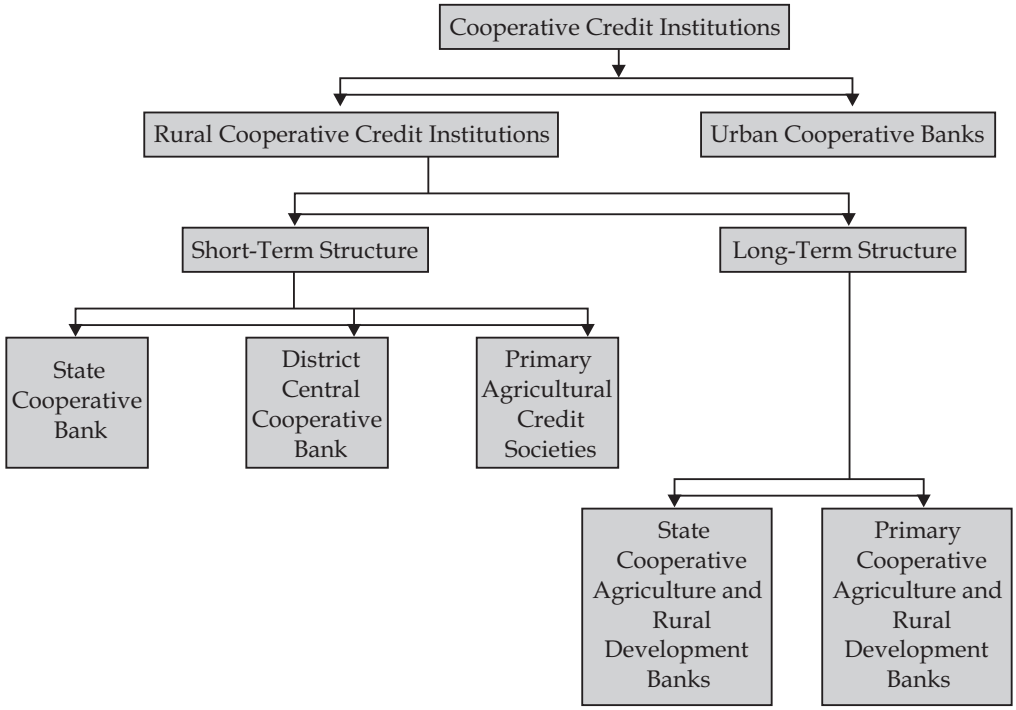
Primary Agricultural Credit Society : (PACS) A co-operative credit society, commonly known as the primary agricultural credit society (PACS) may be started with ten or more persons, normally belonging to a village. The value of each share is generally nominal so as to enable even the poorest farmer to become a member. Primary Agricultural Credit Societies (PAC S) are the grassroot level arms of the short-term cooperative credit strucure. PACS deal directly with farmer-borrowers, grant short term and medium term loans and also undertake distribution and marketing functions.

The management of the society is under an elected body consisting of President, Secretary and Treasurer. The management is honorary, the only paid member being normally the accountant (in case the society is large and requires a paid whole-time accountant). Loans are given for short periods, normally for one year, for carrying out agricultural operations, and the rate of interest is low. Profits are not distributed as dividend to shareholders but are used for the welfare of the village, in the construction of a well, or maintenance of the village school, and so on.

The usefulness of PACs has been rising steadily. In 1950-51, they advanced loans worth ₹ 23 crores; this rose to ₹ 200 crores in 1960-61, and to ₹ 34,520 crores in 2000-01. The PACS have stepped up their advances to the weaker sections particularly the small and marginal farmers. This progress has been quite spectacular but not adequate considering the demand for finance from farmers. However, "the primary credit society has continued to remain the weakest link in the entire co-operative structure."

Restructuring of PACS : Considerable attention was given during the past few decades to build the PACS into strong institutions. Such a structure, close to the farmers, is very essential for disbursing rural credit, particularly to small farmers. A programme was introduced by the Government and RBI to reorganise and revitalise the primary agricultural credit societies. It was completed in Rajasthan, Orissa, Madhya Pradesh, Kerala, Tamil Nadu and Gujarat. In other States, it has not made much headway.

The number of PACS had come down from 2,12,000 in 1960-61 to 1,61,000 in 1970-71 and 1,06,380 at the end March 2006 with estimated membership of over 10 crore farmers.



Source : RBI, *Report on Trend and Progress of Banking*, 2001-02.

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Most of the PACS are dependent on the finance provided by central cooperative banks (CCBs). In case the CCBs are weak, the PACS are starved of finance which affects the credit functions of PACS. As at the end of March 2006, the loans and advances outstanding for PACS were about ₹ 51,780 crores.

Financial Strength of PACS : To make all primary agricultural societies viable and ensure adequate and timely flow of co-operative credit to the rural areas the Reserve Bank of India, in collaboration with State Governments, had been taking a series of steps to strengthen PACS and to correct regional imbalances in co-operative development. Steps were taken to reorganize viable PACS and for amalgamation of non-viable societies with farmers' service societies or large sized multipurpose societies. These efforts are being intensified by providing larger funds to weak societies to write off their losses, bad debts and overdues. The programme of re-organisation of PACS has been under implementation for the last two decades and is almost completed in all states except Gujarat, Maharashtra and Jammu & Kashmir.

PACS and Weaker Sections : The major objective of the co-operative development programmes is to ensure that the benefits of co-operative activities flow increasingly to weaker sections including scheduled castes and scheduled tribes. The Government seeks to achieve this through expanding the membership of the weaker sections in the existing PACS and ensuring larger flow of funds and services to them. In the tribal areas, large sized multipurpose societies are being organised mainly for the benefit of the tribals.

PACS and Commercial Banks : The commercial banks in India introduced in 1970 a scheme of financing PACS, through which the funds of the commercial banks are being made available to PACS. This scheme came in handy to commercial banks which could use PACS for disbursing agricultural loans and thus find a way out of the serious problem of not having close contacts with farmers through their own branches and field staff. The scheme, however, has not been as successful as was anticipated.

Firstly, the two systems with two unrelated cultures—one commercial and the other co-operative—could not be linked effectively. Difficulties have arisen from this basic incompatibility.

Secondly, state co-operative banks as well as central co-operative banks have not liked successful PACS being taken away from their fold by the commercial banks.

However, a good deal of scope for co-ordination exists between PACS and the branches of commercial banks in rural areas :

(a) The rural branches of commercial banks can assist such of those members of the PACS who are eligible for loans but who are unable to get finance from PACS for lack of funds.

(b) They can also help the PACS with advice on management e.g., proper maintenance of books of accounts, accounting procedures, etc.

(c) The PACS, in their turn, can help commercial bank branches to identify eligible borrowers and to recover loans.

Shortcomings of PACS : The co-operative credit system makes credit available to the farmers at convenient distances and has intimate knowledge of the local conditions and problems. But it is organisationally and financially weak and hence, in practice, its ability to support credit to the agricultural sector is considerably limited. The All-India Rural Credit Review Committee brought out the following weaknesses of the primary credit societies :

(a) Co-operative credit still forms a small portion of the total borrowings of the farmers;

(b) Tenants and small farmers find it difficult to satisfy their need for funds fully from PACS alone.

(c) Most primary credit societies are financially weak and are unable to meet fully even the production-oriented credit needs of farmers.

(d) Overdues at all levels are financially increasing alarmingly indicating the failure of co-operative credit institutions; and

(e) PACS have not been able to ensure adequate and timely credit for the borrowing farmers.

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District Central Co-operative Banks (DCCBs) : These are now at the end of March 2006 369 District Central Cooperative Banks. The loans outstanding came to ₹ 79,200 crores. These are federations of primary credit societies in specified areas normally extending to a whole district (hence they are some-times known as district co-operative banks). These banks have a few private individuals as shareholders who provide both finance and management. Their main task is to lend to village primary societies, but they are expected to attract deposits from the general public also (volume of deposits). But the expectation has not been fulfilled and many of the co-operative central banks act as intermediaries between the State Co-operative Bank on the one hand and the village primary credit societies on the other. The Reserve Bank — now NABARD has formulated a scheme for the rehabilitation of weak central co-operative banks. NABARD is providing liberal assistance to the State Governments for contributing to the share capital of the weak central co-operative banks selected for the purpose.

State Co-operative Banks (StCBs) : There are now 31 State Co-operative Banks (StCBs) in the country. They form the apex of the co-operative credit structure in each State. The StCB finances and controls the working of the District central co-operative banks in the State. It serves as a link between NABARD (formerly RBI) from which it borrows and the co-operative central banks and village primary societies. The State Co-operative Bank obtains its working funds from its own share capital and reserves, deposits from the general public and loans and advances from NABARD (formerly from RBI). The last mentioned source is quite important, as it constitutes between 50 and 90 per cent of the working capital of State Co-operative Banks in the country. The State Co-operative Bank are not only interested in helping the rural co-operative credit movement but also in promoting other co-operative ventures and in extending the principles of co-operation. During 2005-06 the 31 state cooperative banks had lent about ₹ 48,260 crores to District central co-operative banks.

The Problem of Overdues

A highly distressing fact of rural co-operative credit is the heavy overdues estimated around ₹ 15,500 crores at the end of March 2006. According to RBI "Study Team on Overdues of Co-operative Credit Institutions". "Lack of will and discipline among the cultivators to repay loans was the principal factor responsible for the prevalence of overdues of co-operatives. Defective lending policy pursued by co-operatives, the apathy of management in taking quick action against recalcitrant members and absence of favourable climate were other contributory factors."

Apart from these common factors normally responsible for a high level of overdues, intervention of external forces such as loan waivers, concessions in various forms towards repayment of principal and payment of interest had also affected the recovery performances of credit institutions to a significant extent. The problem is further accentuated on account of the State Governments' inability to meet the financial commitments to cooperative banks emanating from waiver of loans, interest subsidy, etc.

Loans overdue, it is disquieting to note, represent 45 per cent of loans outstanding in all-India; the percentage ranges from 23 in the case of Tamil Nadu to 77 in the case of Bihar.

In recent years, the farmers are getting organised and one of the chief demands of the farmers' union is the cancellation of their debts to co-operative societies and banks. States have meekly surrendered to such demands to write off these debts. This tendency of States to write off the debts is a matter of extreme concern, as it hampers recovery of dues from the farmers. The National Front Government wrote off farmers' debts upto the value of ₹ 10,000.

The problem of loan overdues is a matter of serious concern, as it affects the recycling of funds and credit expansion on the one hand, and economic viability of the lending institutions, specially the cooperatives and the RRBs, on the other.

Other Weaknesses of Co-operative Credit Movement

Another weakness of rural credit co-operation is that in the case of tenants, share-croppers, landless agricultural labourers and rural artisans who are the poorest and, therefore, the most needy, the flow of co-operative credit in terms of percentage share continues to range around 3 to 5 per cent over the

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years. The small and marginal farmers are apparently getting credit in larger proportion, viz., 35 per cent of the total. But since these farmers depend mainly on credit for the purchase of their inputs, the available credit to them is still inadequate. In other words, even though the share of the weaker sections of the rural community has been steadily increasing over the years and is, at present, placed around 40 per cent of the total, this share falls short of their essential production needs.

There is also the problem of uneven distribution of co-operative benefits as between different States. For instance, the loans advanced per member varied widely; the farmers of Gujarat, Punjab, Haryana and Tamil Nadu are getting much more than those in Orissa, Bihar, U.P. and West Bengal. Viewed in another way, that is, in terms of average credit per hectare of cropped area, it is only in five States, namely, Gujarat., Haryana, Kerala, Punjab and Tamil Nadu, that such credit is much higher than (double or more than double) the All-India average.

Apart from considerable regional disparities in credit availability, the co-operatives have not been able to ensure an increasing flow of production loans and investment credit in most of the tribal and hill areas.

Moreover, though the co-operatives have now come to cover almost the entire countryside, the membership is only around 45 per cent of the rural families; agricultural labourers and rural artisans constituted only 10 per cent of the total membership. The weaker sections of the rural community are still not adequately represented in the membership roll.

In the ultimate analysis, the most outstanding of the weaknesses, which indeed is at the root of many of the shortfalls in the co-operative performance, is in the area of management. There has been considerable discussion over the years at all levels in regard to the need for proper man-power development in the co-operative sector. Not much progress has taken place. The co-operatives themselves have shown a singular lack of appreciation of this problem.

Long-Term Rural Credit: Cooperative Agriculture and Rural Development Banks (CARDBs)

Land Mortgage Banks

The long-term requirements of the farmers were traditionally met by the money-lenders but later by other agencies also, such as the State Governments and the co-operative credit banks. But these agencies were found defective for one reason or another. There was, thus, a great need in India for an institution specially designed to cater to the long-term credit needs of the agriculturists, which would offer long-term funds at moderate rates and recover loans in annual or semi-annual instalments spread over a number of years. Initially, land mortgage banks were organised for the purpose of providing long-term credit to farmers. These banks were later called land development banks. In recent years, they have been renamed as cooperative agricultural and rural development banks. (CARDBs). These are classified into Primary Co-operative agricultural and rural development banks (PCARDBs) and State Co-operative Agricultural and Rural Development Banks (SCARDBs).

The real beginning in land development banking was made by Madras with the organisation of central land development bank in 1929 for centralising the issue of debentures and for co-ordinating the working of primary banks in the State. The progress of land development banking has been very slow and also uneven. During the great depression, (1929-33) land-development banks received some stimulus as agricultural prices fell considerably and the farmers needed financial assistance. But with the Second World War, the farmers experienced a good measure of prosperity and were in a position to repay their debts with the land development banks. But after Independence, land development banks have been enjoying a great degree of prosperity. However, it is important to note that whatever progress was achieved was concentrated in only a few States, viz., Andhra, Tamil Nadu, Karnataka, Maharashtra and Gujarat. The number of PCARDBs and their branches increased from 286 in 1950-51 to 696 in 2005-06, while that of State cooperative agricultural and rural development banks (SCARDBs) increased from 5 to 20 during the same period.

Total loans advanced by PCARDBs during 2005-06 were ₹ 2,250 crores and the loans outstanding at the end-March 2006 stood at ₹ 12,740 crores. On the other hand, SCARDBs had sanctioned loans

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worth ₹ 2,900 crores in 2005-06 and the amount of loans outstanding at the end-March 2006 was ₹ 17,710 crores.

The Structure of CARDBs

The long-term credit structure consists of the central land development banks generally one for each State and are now called State Cooperative Agricultural Rural Development Banks (SCARDBs) and Primary Cooperative Agricultural Rural Development banks (PCARDBs). In some States, there are no primary land development banks but in their place, there are branches of central land development banks. In Madhya Pradesh, the State Co-operative Bank itself functions as a central land development bank through a separate land development banking department. In Andhra, Kerala and Maharashtra, there are more than one central land development banks and efforts are being made to integrate them into a unified bank for the whole State. Similarly, there are considerable differences in the organisation of PCARDBs in different States.

Finances of CARDBs

CARDBs obtain their funds from share capital reserves, deposits and issue of bonds or debentures. However, the last is the most important. Debentures are long-term loans which are issued by SCARDBs, carrying fixed interest and for fixed periods, generally up to 20 years. These debentures are guaranteed by State Governments in respect of payment of interest and repayment of principal. They are sub-scribed by the LIC, the commercial banks, the State Bank of India and its subsidiaries and by the Reserve Bank of India. Besides ordinary debentures, SCARDBs float rural debentures for periods up to 7 years which are subscribed by farmers and panchayats and by the Reserve Bank of India (up to 66 per cent of the value of the rural debentures). In recent years, the substantial refinance facilities provided by NABARD to SCARDBs have helped enlarge the lending operations of these banks.

Loan Operations of CARDBs

The main function of CARDBs is to grant loans on the security of agricultural properties :

(a) Since they grant loans which run for several years, strict rules are laid down with regard to the security against which they can advance loans.

(b) Generally, these banks restrict their loans to first mortgage of agricultural property, though in a few cases they may advance loans against the security of second mortgage as well.

(c) They generally lend up to 50 per cent of the value of the security. In order to assess the value of land against which they lend they employ experts who assess the value of land and are conversant with local conditions. In assessing the value of land such factors as the amount of land tax paid, the rental value of land, gross and net income from the land, sale value of the land etc., are taken into account.

(d) While granting loans the banks consider not only the value of the security offered but also examine the repaying capacity of the applicants.

(e) Finally, they are able to lend at fairly low rates of interest and enable the needy farmer to secure funds for long periods.

CARDBs provide credit for a variety of purposes such as redemption of old debts, improvement of land, purchase of costly agricultural equipment, construction of wells and erection of pumps and so on. At one time, the redemption of old debts was the most important and, in a sense, the only purpose for which the farmers approached the land development banks. In recent years, however, farmers have been borrowing from CARDBs mainly for the purpose of land improvement and development including sinking of wells (56 per cent) and purchase of agricultural machinery (30 per cent).

Problems of CARDBs

Land development banking is yet to take strong roots in India barring a few States. However, CARDBs have contributed in large measure to agricultural development by lending specially for minor irrigation. All their loans are for productive purposes benefiting mostly the small farm holders. Though land development banking has made considerable progress in recent years, it has not really contributed

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much to the improvement of the financial position of the farmers. A large number of factors are responsible for the relative ineffectiveness of CARDBs.

Problem of overdues : Mounting overdues in most of the CARDBs have crippled the structure badly, in recent years. Overdues at the level of PCARDBs have been put between 42 to 44 per cent. Overdues have caused innumerable financial problems besides limiting the capacity of these banks to lend and operate as viable units. The financial discipline imposed on the banks in the matter of eligibility to undertake fresh lending based on recovery performance has been the main limiting factor for quantitative growth of credit operations. To some extent, the banks them-selves are to be blamed for this predicament due to faulty loaning policies, inadequate supervision, over-utilisation of loans, ineffective measures for recovery etc. Which have contributed to the deterioration in recovering the loans. Even when the wilful defaulter's lands are attached and auctioned under the provision of law, the banks find few coming forward to purchase such lands. Various suggestions for making the coercive measures effective have largely remained unimplemented at the levels of State governments. With large overdues, restricted lending eligibility and financial problems, the operations of the banks in a few states have come to a standstill. Unfortunately, there are neither permanent arrangements to rehabilitate borrowers and banks, nor any credit stabilisation arrangements take care of overdues affected by national calamities and other factors beyond the control of CARDBs and the borrowers. Overdues, however, are not peculiar to CARDBs alone. The position is equally bad in other sectors of rural credit. Some serious thinking is called for to remedy the situation at the higher levels before the institutional rural credit arrangements are put out of gear.

Future of CARDBs

Since the Seventh Plan, the CARDBs were the main institutional agency to implement the minor irrigation programmes. Apart from minor irrigation, the CARDBs are also stepping up their credit assistance to several other agricultural development activities and for various subsidiary occupations. The integrated rural development programme now covers the entire country to improve the rural economy and institutional agencies including the CARDBs are involving themselves effectively to support various productive activities which, besides supplementing the income of the people, result in creating employment potential in rural areas.

Commercial Banks and Rural Credit

An important argument in support of bank nationalisation was that commercial banks had kept themselves aloof from the problems of agriculture and had remained largely indifferent to the credit needs of farmers for agricultural operations and land improvement. When social control of banks was introduced in 1967, a rapid expansion in bank branches in rural areas was started. By July 1969, all commercial banks had over 1,860 branches in rural and semi-urban areas; this number had increased to over 30,585 by June 2006. There were 3,07,17,195 million agricultural borrowing accounts with commercial banks amounting to ₹ 3,08,087 crores (2007-08), as compared to only 0.2 million accounts with total outstanding advances to the extent of about ₹ 160 crores in June 1969. A large number of village co-operatives are among the borrowers, some of them borrowing from other financial agencies as well.

Direct Finance by Commercial Banks

At the time of bank nationalisation, it was clearly conceded that the commercial banks did not have the necessary experience or the personnel to deal with the farmers directly, while the co-operatives had been specialising in rural credit since the beginning of the century. Even then, the nationalised banks were expected to go vigorously in support of the farmers in general and the small cultivators in particular. In the initial stages, for obvious reasons, the nationalised banks concentrated their attention on large cultivators and other special category farmers such as those engaged in raising high-yielding varieties of foodgrains. At present short term crop loans account for nearly 42 to 45 per cent of the total loans disbursed by the commercial banks to farmers. Term loans for varying periods for purchasing pump sets, tractors and other agricultural machinery, for construction of wells and tube-wells, for development of fruit and garden crops, or levelling and development of land for the

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purchase of plough animal, etc. are provided. These term loans account for about 35 to 37 per cent of the total loans disbursed by commercial banks.

Finally, commercial banks extend loans for such activities as dairying, poultry farming, piggery, bee keeping, fisheries and others—these loans account for 15 to 16 per cent. Regionwise, Southern region accounts for the bulk of the credit disbursed by commercial banks viz., 52 per cent of the total credit extended.

Commercial Banks and IRDP

Since October 1980, the Government has extended the integrated rural development programme (IRDP) to all development blocks in the country and has asked the commercial banks to finance IRDP. The leading banks have to prepare banking plans, and allocate the responsibility of financing the identified beneficiaries among the participating banks. It has been found that commercial banks have not implemented IRDP enthusiastically. But commercial banks have valid reasons for their lukewarm attitude.

In the first place, commercial banks have been asked to finance all economically and backward people identified by government agencies. Commercial banks have found that most of the affluent farmers have managed to get their names inserted in the beneficiaries list through paying the Government officials or through using political pressure. In other words, all the prospective borrowers are not really economically backward and banks have the responsibility to find out the eligible beneficiaries.

Secondly, commercial banks have found that all the beneficiaries do not utilise the loans for which they are granted. In many cases, the farmers may use the bank loans for unproductive purposes but may produce receipts of purchase of buffaloes through bogus sellers (who may oblige for a commission). Commercial banks have to ascertain the credibility of sale-purchase transactions before disbursing loans.

Finally, small and marginal farmers are fleeced by petty government officials, veterinarians, local politicians and panchayat samiti members before they could become beneficiaries of bank loans. Ultimately it is the banks which suffer due to heavy overdues. Accordingly, banks are reluctant to finance IRDP.

Indirect Finance by Commercial Banks

Even though the scope for direct financing by commercial banks would be limited for some years to come, there is considerable scope for indirect financing by commercial banks. For instance, commercial banks are financing co-operative societies to enable them to expand their production credit to the farmers. More especially, they increasingly finance co-operatives engaged in the marketing and processing of agricultural produce or in activities ancillary to agriculture such as dairy farming, poultry farming etc. In this connection., the State Bank of India and its subsidiaries are already playing an active role in financing co-operative marketing and processing.

Commercial banks are providing indirect finance for the distribution of fertilisers and other inputs.

Commercial banks extend credit to manufacturing or distribution firms and agencies and co-operatives engaged in the supply of pumpsets and other agricultural machinery on a hire-purchase basis. They finance the operations of the Food Corporation of India, the State Government and others in the procurement, storage and distribution of foodgrains.

Finally, commercial banks increasingly subscribe to the debentures of the central land development banks and also extend advances to the latter. This enables land development banks to expand their medium and long-term advances to farmers for purposes of land improvement and land development.

Commercial Banks and Small Farmers

It has been estimated that nearly 70 per cent of farmers owning less than 2 hectares of land are not getting bank credit; only large landowners have been found creditworthy and suitable for bank advances. But such a situation cannot continue for long. Under the direction of the Planning Commission, Small Farmers Development Agencies (SFDAs) have been set up to identify small farmers and work out economically viable schemes of agricultural development. Commercial banks have to group them into various categories for credit support so as to enable them to become viable cultivators.

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For instance, in areas where the subsoil water table is high, the small cultivator has to be helped by banks to convert his dry holding into wet holding. With a pumpset loan, the cultivator can change the cropping pattern into double or even multiple cropping activity. As regards small cultivators near urban areas and with irrigation facilities, commercial banks can help them to go in for poultry farming and maintaining one or two vegetable cultivation or combine it with small milch cattle.

Problems of Commercial Banks in Agricultural Credit

The annual credit needs of the agricultural sector in the next few years are estimated to rise to ₹ 2,00,000 to ₹ 3,00,000 crores. To meet these needs is an enormous task, and responsibility will have to be borne by cooperatives and commercial banks. As resources available to commercial banks in the agricultural sector will naturally be limited, it is important that every commercial bank attempts to make optimum use of its limited resources in this sector.

In the field of financing of agriculture, the problem is not merely quantitative but also of coverage vis-a-vis the organisation and the personnel available to the nationalised banks. The majority of the rural population consists of small farmers. Further, there are 5,50,000 villages spread throughout the country. To reach all of them with only about 47,000 banking offices is, no doubt, a stupendous task. Even with the completion of the branch expansion programmes of the commercial banks now in hand or those which may be undertaken during the next 5 to 10 years, commercial banks may not be in a position to cover many of the villages. Moreover in recent years, the rural branches of commercial banks in general and branches of regional rural banks (RRBs) in particular have been under severe financial strain on account of higher transactions costs involved in handling of large number of small-size loan accounts and somewhat lower interest income as a result of concessional rate of interest on small-size loans. The lower proportion of current deposits in total deposits of rural branches has also placed them at a disadvantage with regard to cost of resources. Finally, the presence of overdues, particularly after the implementation of Agricultural and Rural Credit Debt Relief Schemes, 1990 has further adversely affected the viability of rural branches of commercial banks.

Under these conditions, if the development of agriculture is not to suffer for want of credit and if there has to be some improvement in the lot of innumerable small farmers, new dimensions will have to be given to schemes of financing agriculture.

Nabard and Its Role in Rural Credit

Since its inception, RBI had shown keen interest in agricultural credit and maintained a separate department for this purpose. RBI extended short-term seasonal credit as well as medium-term and long-term credit to agriculture through State level co-operative banks and land development banks.

At the same time, RBI had also set up the Agricultural Refinance Development Corporation (ARDC) to provide refinance support to the banks to promote programmes of agricultural development, particularly those requiring term credit. With the widening of the role of bank credit from "agricultural development" to "rural development" the Government proposed to have a more broad-based organisation at the apex level to extend support and give guidance to credit institutions in matters relating to the formulation and implementation of rural development programmes. A National Bank for Agriculture and Rural Development (NABARD) or the National Bank, for short, was, therefore, set up in July 1982 by an Act of Parliament to take over the functions of ARDC and the refinancing functions of RBI in relation to co-operative banks and RRBs. NABARD is linked organically with the RBI by the latter contributing half of its share capital—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.

Resources of NABARD

The authorised share capital of NABARD was ₹ 500 crores and its paid-up capital was ₹ 100 crores, contributed equally by the Central Government and the Reserve Bank. The paid-up capital of NABARD was raised from ₹ 100 crores to ₹ 500 crores and then to ₹ 2,000 crores by the year 1999-00. The resources of the National Agricultural (long-term operations and stabilisation) funds were transferred to NABARD. World Bank and IDA have also been providing funds to NABARD for implementation

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of the projects financed by them. The most important source of NABARD's funds are now RIDF deposits, closely followed by market borrowings.

In recent years, there has been considerable improvement in the resource position of NABARD mainly due to :

(a) Significant rise in the deposits under the Rural Infrastructure Development Fund (RIDF) by commercial banks;

(b) use of tax-free bonds through the issue of capital gains bonds and priority sector bonds.

(c) acceptance of priority sector deposits from private banks.

NABARD cannot accept short-term public deposits and, therefore, it has depended on the general line of credit (GLC) from RBI from its inception in 1982. NABARD's dependence on GLC from RBI is quite large and NABARD uses this source to meet short-term credit and working capital requirements.

Functions 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 credits 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; and

   (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.

Working of NABARD

NABARD is the apex organisation with respect to all matters relating to policy, planning and operational aspects in the flow of credit for the promotion of agriculture, small-scale industries, cottage and village industries, handicrafts and other rural crafts and other allied economic activities in rural areas.

NABARD is performing the various functions assumed by it smoothly and efficiently. For instance, it sanctioned short-term credit limits worth ₹ 8,820 crores during 2003-04 and ₹ 16,100 crores during 2006-07 for financing seasonal agricultural operations at the concessional rate of 3 per cent below the Bank Rate. NABARD has attempted to ensure the flow of credit to weaker sections of society under the new 20-point programme by making it obligatory for banks to disburse a specified percentage of short-term loans to small and marginal farmers and other economically weaker sections.

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NABARD has continued to follow the policy earlier laid down by the Reserve Bank in regard to sanction of medium credit limits for approved agricultural purposes. It also grants longterm credit to State Governments for contribution to the share capital of co-operative credit institutions.

NABARD provides two types of refinance. The first is extended to RRBs, Apex Rural Credit Institutions, *viz.*, State Cooperative Banks and State Governments. The second type of refinance is extended to provide resources for ground level deployment of rural credit.

14.3 Rural or Agricultural Marketing

There are many ways by which the farmer may dispose of his surplus produce. This first and the most common method is to sell away his surplus produce to the village money-lender-cum-trader, who may buy it either on his own or as an agent of a bigger merchant of the neighbouring 'mandi' town. It is estimated that in the Punjab, 60 per cent of wheat, 70 per cent of oils and 35 per cent of cotton are sold in the village itself.

The second method adopted by the Indian farmer is to dispose of his produce in the weekly village markets, known in Hindustani as the 'hat'. Besides, fairs are held once a year in important villages or towns in connection with religious festivals. In 'hats' and fairs, the farmers bring their produce as well as livestock and sell them.

The third method of agricultural marketing is through the mandis in small and large towns. The mandi may be located at a distance of several miles and, therefore, the farmer has to make special effort to carry his produce to the mandi. In the mandis, there are brokers or 'dalals' who help the farmers to dispose of their produce to till wholesalers known as 'arhatiyas'. The wholesalers may dispose of the agricultural produce which they have purchased from the farmers to retailers or flour mills and processing units. For instance, in the case of cotton, the wholesaler sells to the cotton ginning factories, and in the case of foodgrains like wheat he sells to the flour mills or to retailer.

Basic Facilities Needed for Agricultural Marketing

In order to have best advantage in marketing of his agricultural produce the farmer should enjoy certain basic facilities :

(i) He should have proper facilities for storing his goods.

(ii) He should have holding capacity, in the sense, that he should be able to wait for times when he could get better prices for his produce and not dispose of his stocks immediately after the harvest when the prices are very low.

(iii) He should have adequate and cheap transport facilities which would enable him to take his surplus produce to the mandi rather than dispose it of in the village itself to the village money-lender-cum-merchant at low prices.

(iv) He should have clear information regarding the market conditions as well as about the ruling prices; otherwise, he may be cheated. There should be organised and regulated markets where the farmer will not be cheated by the dalals and arhatiyas.

(v) The number of intermediaries should be as small as possible so that the middlemen's profits are reduced. This increase the returns to the farmer.

Defects of Agricultural Marketing in India

Judging from these considerations, the position of agricultural marketing in India is still deplorable. The Indian farmer does not have facilities for storing his produce. The storage facilities which are available in the village at present are so poor that 10 to 20 per cent of the produce is eaten away by rats.

Secondly, the average farmer is so poor and indebted that he was no capacity to wait for better prices. He is forced to sell his output to the money-lender or to the trader so as to clear his debts. Such distress sales weaken the already miserable position of the average Indian farmer further.

Thirdly, the transport conditions in rural areas continue to be bad that even richer farmers, who have large amounts of surplus, may not be interested ingoing to the mandis. Most roads are kachcha (unmetalled) and in rainy season they are unusable.

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Fourthly, the conditions in the mandis are such, that the farmer may have to wait for some time before he may be able to dispose of his produce. He may not have proper warehousing facilities to keep his stock while he waits. The method of transaction is generally against the interest of the farmer. In the mandis the farmer makes use of the services of a dalal (broker) to sell his output to the arhatiya. The dalal is often in collusion with arhatiya and, therefore, the price which is settled is generally to the advantage of the arhatiya and not to the farmer. Moreover, through unnecessary deduction on the plea that his produce is of inferior quality, the farmer often loses in going to the mandis.

Fifthly, the number of intermediaries and middlemen between the farmer and the final consumer of his produce is too many and the margin going to them too large.

Finally, the farmers do not ordinarily get information about the ruling prices in the big markets. As a result the farmers have to accept whatever price is quoted to them and have to believe whatever the traders tell them.

Regulated Markets

The purpose of a regulated market is to eliminate unhealthy market practices, to reduce marketing charges and to ensure fair prices and in general, to protect the interests of farmers. All the States had passed legislation known as State Agricultural Produce Marketing (Development and Regulation) Act for the establishment of regulated markets. In 1951, there were more than 200 regulated markets in India and by the end of the Second Five-Year Plan, i.e., in 1961, there were nearly 1,000 regulated markets. By the end of March 1998 over 7,060 agricultural markets in the country had been regulated.

Features of a Regulated Market

A regulated market is started under the law either for any specific commodity or for a group of commodities. Such a market is administered by a market committee, which consists of representatives of the State Government, the legal bodies (as for instance, the district board), the traders, the commission agents or the dalals and the farmers themselves. The committee is appointed by the government for a specific period and is entrusted with management of the market.

The market committee fixes the market charges, such as the commission to be charged. It ensures that no dalal represents either the buyer or the seller. It prevents unauthorised deductions from the price paid to the farmer and ensures that correct weights and measures are always used. The committee hears all the complaints and settles them. In cases of dispute, it arranges for arbitration. The committee is responsible for the licensing of brokers and weighmen. It is vested with powers to punish any one who is found guilty of dishonest and fraudulent practices.

The system of regulated markets has been found to be very useful in removing fraudulent practices followed by brokers and commission agents and in standardising market practices. They have helped farmers to secure fair prices for their produce and to come to the market without fear of being cheated. They have helped in using standard measures and weights throughout the country. Hence it is the policy of the government to convert all markets in the country into the regulated type.

Regulated markets aim at the development of the marketing structure to :

(a) ensure remunerative price to the producer of agricultural commodities,

(b) narrow down the price spread between the producer and the consumer,

(c) reduce non-functional margins of the traders and commission agents.

To achieve these objectives, the Government went for comprehensive and rapid expansion of regulated marketing system. Considerable success has been achieved in States like Punjab and Haryana, where regulated markets have been established in major producing areas, with linked up satellite markets in the rural growth. The regulated marketing system has also proved a good source of generating income for the marketing boards and for use in rural infrastructure. The regulated market complex also includes facilities for grading and for monitoring of prices.

The regulated markets are set up especially in areas where commercial crops like cotton, jute, tobacco

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and important non-traditional crops are produced and sold in weekly markets and 'hats'. Co-operative marketing and distribution and banking are also linked with the regulated markets.

Co-Operative Marketing

Before l954, separate co-operative marketing societies were established as distinct from the co-operative credit societies. Since 1954. however, multipurpose societies have been started with the purpose of giving credit to the farmers and marketing their surplus produce.

The co-operative marketing society functions in the following manner : The members of the society agree to sell their surplus produce to the society. As soon as they supply the produce to the society, they get an advance to carry on with their agricultural operations. The society collects the produce of all the members as also of the non-members of the village who are willing to sell their produce, often process the produce and then disposes it of in the mandi. It does away with many of the middlemen. If the current prices are not favourable and if it is anticipated that prices may rise in the future, the society may decide to stock the commodity. As soon as the produce is sold, the society pays the farmers the balance of the amount due to them. An important feature of the marketing society is that it is managed by paid staff. Usually a society covers a number of villages so that it may be effective and successful.

Advantages of Co-operative Marketing Societies

In some of the Western countries, co-operative marketing has been extremely successful. Denmark has been well-known throughout the world for co-operative marketing of dairy products. Many advantages are claimed for agricultural marketing on co-operatives basis. They are :

(a) The marketing society substitutes collective bargaining in place of individual bargaining. The farmer by himself is weak but the marketing society is said to be strong.

(b) It advances loans to the farmers and enables them to wait for better prices. Besides, it lends to them for their other needs. Thus, co-operative marketing societies can link credit, farming, marketing and processing to the best advantage of the farmers.

(c) It can have its own storage and warehousing facilities, it can thus remove the damage to agricultural produce through rats, ants, dampness etc.

(d) It can arrange to have quick and cheap transport and sometimes it can even have its own transport.

(e) It can encourage the farmers to produce graded and standardised products and discourage them from adulterating their produce.

(f) It can control the flow of supplies and thus influence the prices.

(g) It can eliminate many of the middlemen and thus remove their large-profit margins.

(h) Apart from selling the produce of the farmers it can supply them such essential goods as seeds, fertilisers, implements etc. Thus the co-operative marketing society is probably the best method to reorganise rural marketing and promote planned growth of our rural areas.

Development of Co-operative Marketing

There is great scope for the development of co-operative marketing societies. In the first place, there is the necessity to co-ordinate better farming, finance and marketing. At present efforts are being made to have one society which will perform all the three services for the farmers.

Secondly, the marketing societies increasingly undertake processing of agricultural goods. Several agricultural goods can be more favourably marketed if they are processed before sale. Cotton can be ginned and pressed; oilseeds can be crushed and oil may be sold; jute can be processed and baled; and so on.

Thirdly, the co-operative marketing societies can attempt to sell agricultural goods to consumers directly (wherever this is possible) and thus eliminate the middlemen and their commission.

Fourthly, the co-operative marketing societies should be made to grade their goods. The grading facilities may be made available to them by the Government through the Agricultural Marketing

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Department. Grading will not only help the societies to secure better prices for their produce but also induce them to bring pressure upon their members to improve the quality of their products through the use of improved seeds, etc.

Fifthly, the co-operative marketing societies are going for their own storage and warehousing facilities in the rural areas and "mandis." This may be promoted trough the provision of grants and subsidies by the Government or through cheap finance provided by the State Bank and the Reserve Bank of India.

Sixthly, the area of operation of the co-operative marketing society should be expanded to cover many villages (if necessary, even a tehsil) so that it may render effective marketing service to the farmers. This will also enable it to engage qualified men to manage its affairs.

Seventhly, there is very great scope for co-operative marketing societies to supply inputs to their members, such as fertilisers, certified quality seeds, agricultural machinery and implements, pesticides etc. Nearly 47 per cent of the total fertilisers distributed in the country are sold through co-operative marketing societies.

Finally, the government should use the co-operative marketing societies whenever it is possible and necessary. The Food Corporation of India should buy foodgrains from the co-operative marketing societies and thus eliminate the usual channels of trade. This will encourage the formation of cooperative marketing societies.

Government and Agricultural Marketing

Let us consider the various measures which the Government has taken so far in the field of agricultural marketing.

(i) **Marketing Surveys :** In the first place the government has undertaken marketing surveys of various goods and has published these surveys. These surveys have brought out the various problems connected with the marketing of goods and have made suggestions for their removal. The Government gives vide publicity to prices of agricultural goods in all major markets.

(ii) **Grading and Standardisation :** The government has done much to grade and standardise many agricultural goods, Under the Agricultural Produce (Grading and Marketing) Act, 1937 the government has set up grading stations for commodities like ghee, flour, eggs, etc. To facilitate grading, standards have been laid down for 162 agricultural and allied commodities. The graded goods are stamped with the seal of the Agricultural Marketing Department--AGMARK. The 'Agmark' goods have a wider market and command better prices.

A Central Quality Control Laboratory has been set up at Nagpur and eight other regional laboratories in different parts of the country with the purpose of testing the quality and purity of agricultural products applying for the Government's 'Agmark' have been created. The Government is further streamlining quality control enforcement and inspection and improvement in grading. The number of testing laboratories is being increased and the programme of grading at producers' level is receiving greater attention especially for commercial crops.

(iii) **Setting up of regulated markets :** A very important measure which the Government has taken to improve agricultural marketing has been the setting up of regulated markets in the country. There are now 7,062 regulated markets. With the establishment of these regulated markets, the malpractices in mandis have disappeared and the market charges have been rationalised. As much as 80 per cent of agricultural produce is now sold in regulated markets.

(iv) **Provision of Warehousing Facilities :** To prevent distress sale by the farmers, particularly, the small and marginal farmers, due to prevailing low prices, rural godowns have been set up. The government has done much to provide warehousing in towns and villages. The Central Warehousing Corporation was set up in 1957 with the purpose of constructing and running godowns and warehouses for the storage of agricultural produce. The States have set up the State Warehousing Corporations with the same purpose. At present the Food Corporation is constructing its own network of godowns in different parts of the country.

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The total storage capacity in the country is now 35 million tonnes.

(v) **Organisation of Co-operative marketing Societies :** The Government has given active encouragement to the organisation of multi-purpose co-operative societies with emphasis on credit and marketing. The primary marketing societies have been encouraged to form central marketing societies and apex marketing societies (at the state level) and the National Agricultural Co-operative Marketing Federation (NAFED). The Government has also provided larger financial resources to the co-operative marketing societies and federations through the State Bank of India and other nationalised banks.

In this connection, we should refer to the setting up of the National Co-operative Development Corporation (NCDC) by the Government of India in 1965 to plan and promote programmes for the production, processing, storage and marketing of agricultural produce through co-operative societies.

(vi) **Setting up of Special Boards :** The Central Government has set up a number of development councils for special commodities like rice, pulses, jute, millets, cotton, tobacco, oilseeds, sugarcane, arecanut, etc. The Government of India has also set up export promotion councils such as Cashewnuts Export Promotion Council and the Agricultural and Processed Food Export Development Authority.

(vii) **Boost to Export of Agricultural Products :** Under Government support, export of agricultural products has shown an increasing trend in recent years — as for example, ₹ 7,880 crores in 1992-93 and ₹ 34,000 crores in 2003-04. India's agricultural exports include pulses, rice, wheat, tobacco, sugar and molasses, poultry and dairy products, spices, cashew nuts, sesame and niger seed, groundnut, oilmeals, castor oil, shellac, fruits and vegetables, meat and meat preparations, marine products, etc. The share of agricultural exports in India's exports ranges around 12 to 15 per cent.

Foreign Trade Policy (2004-09) of the Government of India has emphasized the importance of agricultural exports and has initiated a new scheme - Special Agricultural Produce Scheme - for promoting the export of fruits, vegetables, flowers, minor forest produce. The Government is earmarking funds to assist states for development of Agro Export Zones (AEZ)

(viii) **Agricultural Marketing Reforms :** The Government appointed an Inter-Ministerial Task Force on Agricultural Marketing Reforms to suggest measures for making agricultural marketing system more vibrant and competitive. The Task Force has in its report submitted in June 2002 recommended:

(i) Promotion of direct marketing and contract farming;

(ii) Development of agricultural markets in private and cooperative sectors;

(iii) Expansion of future trading to cover all agricultural markets;

(iv) Introduction of negotiable warehouse receipt system; and

(v) Use of information technology to provide market-led extension services to the farmers.

The Government of India has drafted and circulated a Model Act on agricultural marketing which, among other items, will provide for the establishment of direct purchase centers, farmers' markets for direct sale to consumers (thus eliminate middlemen, such as wholesale and retail traders), complete transparency in the pricing system, payment to farmers on the same day, public private partnership for professional management of existing markets, etc. In 2004, state Governments agreed to adopt the Model Law.

(ix) **Futures Trading :** As part of economic reforms, the Government permitted the resumption of futures trading in gur, potato, castor seed, pepper, turmeric and hessian. During 1997-98 the Government extended futures trading in coffee, cotton, castor oil jute goods. In the 1998-99 budget, the Government announced futures trading in oilseeds, oilcakes and edible oils. The Government has allowed international futures trading in pepper and caston oil.

In 2003-04, the Government of India initiated major steps towards introduction of future trading in all commodities by setting up the National Level Commodity Exchanges. The major agricultural commodities traded at these exchanges are wheat, kapas (cotton), soya oil, guar

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gum, jute, rubber, pepper turmeric, etc. These commodity exchanges have introduced various innovations which would increase efficiency of agricultural marketing in the country. Basically, physical delivery is blocked by warehouse receipt – the rigidity inherent in the trading of physical goods is thus eliminated. There is also a judicious mix of protection against both price and quality risks. The National Commodity and Derivative Exchange, Mumbai has launched pilot projects in the states of Gujarat, Madhya Pradesh and Andhra Pradesh to help farmers understand the concepts and benefits of hedging the price risk on trading platform of an Exchange prior to harvesting.

Reforms in Agricultural Marketing with Special Reference to Model APMC Act

After independence there was a general feeling that agricultural markets do not function in an efficient manner. There exist inefficiencies in distribution, including wastage of agricultural produce. Farmers suffer due to exploitation by traders on different accounts such as weight, illegitimate deductions, delayed payments etc. To overcome such problems different state governments enacted their respective APMC Acts. Stringent provisions were made under these Acts, to safeguard the interests of the farmers and save them from exploitation ensuring efficiencies. Norms were made for spending market fees on different heads including infrastructural developments.

Structure of APMC committee, the apex decision making body in respective Mandis was made such that farmers were in an overwhelming majority and Chairman of the committee would also be a farmer. There is not doubt that with time we have to bring amendments in the laws, howsoever good they may be in their original form. Emerging changes in the field of agriculture, on call for changes in laws pertaining to agriculture marketing.

With the stated objective of making the agricultural marketing system more vibrant and competitive, Government of India first constituted Expert Committee on Agricultural Marketing and later on 'Inter Ministerial Task Force on Agricultural Marketing Reforms' was constituted. Main recommendations of the Expert Committee are listed as follows :

(a) An alternative marketing systems to promote direct marketing,

(b) Increasing Credit flow to agricultural sector

(c) Introducing a system of negotiable warehouse receipt

(d) System of 'Forward' and 'Futures' contracts be evolved and modalities be worked out

(e) Promoting Information Technology in the field of agricultural marketing.

(f) Extension and training services

'Inter Ministerial Task Force on Agricultural Marketing Reforms' set 9 priority areas for itself which are as follows :

(a) Legal reforms;

(b) Direct marketing;

(c) Market infrastructure;

(d) Pledge financing;

(e) Warehousing receipt system;

(f) Forward and futures markets;

(g) Price support policy;

(h) Information Technology in agricultural marketing and

(i) Marketing extension, Training and Research.

The Task Force made various recommendations, The most important recommendations included amendments to the State APMC Act and Contact Farming.

Notes

Salient features of amendments in States' APMC Acts

In order to guide the states in the implementation of suggested reforms, central government drafted a 'Model Act on Agricultural Marketing' which inter-alia provided for the establishment of direct purchase centers and farmers' markets for direct sale to consumers. 'The Model Act' and the suggested reforms were discussed at the National Conference of State Agriculture Ministers held on 7th January 2004 at New Delhi and on 19th November, 2004 at Bangalore. The states were requested to complete the process of amendment to the APMC Act within 2-3 months time. So far a number of states have either amended their respective APMC Acts in tune with APMC Model Act or have started the process for foe same. Some states have even notified the new legislation. In some other states process of amendment have initiated or is about to be initiated.

In most states the APMC Act prohibits transactions outside the mandis. Even in states that allow transactions outside the mandi, the Act states that while procurement may be direct, companies need to Pay a mandi tax.

The Model APMC Act, sought to amend the APMC Act to permit private and corporate bodies to establish a marketing network for agriculture produce.

States such as Madhya Pradesh, Rajasthan and Uttar Pradesh had amended their respective APMC Acts at the first instance. Many other states have either amended their APMC Acts in tune with Model APMC Act or are making efforts to amend their respective state APMC Acts. The intentions of Model APMC Act prepared by the government of India and being imposed are clear from the following points :

1. The monopoly of Government regulated wholesale markets has prevented development of a competitive marketing system in the country, providing no help to farmers in direct marketing, organized retailing, a smooth raw 'material supply to agro-processing industries and adoption of innovative marketing system and technologies.
2. Inter-Ministerial Task Force On Agricultural Marketing Reform, set up by the Ministry has suggested promotion of new and competitive agricultural markets in private and cooperative sectors to encourage direct marketing and contract farming programmes, facilitate industries and large trading companies to undertake procurement of agricultural commodities directly from the farmer's fields and to establish effective linkages between the farm production and retail chains.
3. If agricultural markets are to be developed in private and cooperative sectors and to be provided a level competitive environment vis-a-vis regulated markets, the existing framework of state APMC Act will have to undergo a change. The state has to facilitate varying models of ownership of markets. Working of existing government regulated markets also needs to be professionalized by promoting public private partnership in their management. Appropriate legal framework is also required to promote direct marketing and contract farming arrangements as alternative marketing mechanism. Therefore, there is a need to formulate a new model law for agricultural market.
4. Provision made for the appointment of Chief Executive Officer of the market committee from among the professionals drawn from open market (Section- 36).
5. Provision made for the purchase of agricultural produce through private yards, directly from agriculturists in one or more than one market area. (Section-45) Adoption of the Model APMC Act in place of the earlier APMC Acts of different states is expected to bring some unfavourable impact on the farmers, traders and agriculture at large.

Self-Assessment

1. Choose the correct option:

(*i*) The choice between high markups and high volume is part of which of the following retailer marketing decisions?

(*a*) Target market decisions
(*b*) Product assortment and services decisions
(*c*) Pricing decisions
(*d*) Promotion decisions

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(*ii*) All of the following factors can affect the attractiveness of a market segment except?

(*a*) the presence of many strong and aggressive competitors

(*b*) the likelihood of government monitoring

(*c*) actual or potential substitute products

(*d*) the power of buyers in the segment

(*iii*) The type of sales force structure in which the sales force sells along product lines is called a ..... ?

(*a*) territorial sales force (*b*) product sales force

(*c*) customer sales force (*d*) retail sales force

(*iv*) Technological advances, shifts in consumer tastes, and increased competition, all of which reduce demand for a product are typical of which stage in the PLC?

(*a*) decline stage (*b*) introduction stage

(*c*) growth stage (*d*) maturity stage

14.4 Summary

- The financial requirements of the Indian farmers can be classified into three types depending upon the period and the purpose for which they are required :
- Farmers need funds for short periods of less than 15 months for the purpose of cultivation or for meeting domestic expenses.
- We can further classify the credit requirements of farmers into two types—productive and unproductive loans. The former include loans (a) to buy seeds, fertilisers, implements, etc. (b) to pay taxes to the Government and (c) to make permanent improvements on land, such as digging and deepening of wells, fencing of land, etc.
- Broadly, there are two sources of credit available to the 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). Non-institutional or private sources include money-lenders, traders and commission agents, relatives and landlords.
- The need for institutional credit arises because of the weakness or inadequacy of private agencies to supply credit to farmers.
- Institutional credit is not exploitative and the basic motive is always to help the farmer to raise his productivity and maximise his income. The rate of interest is not only relatively low but can be different for different groups of farmers and for different purposes.
- The major policy in the sphere of agricultural credit has been its progressive institutionalisation for supplying agriculture and rural development programmes with adequate and timely flow of credit to assist weaker sections and less developed regions.
- Way back in 1950 the private money-lender reigned supreme in rural India and institutional sources met no more than three per cent of the credit requirements of farmers.
- The government was of the view that multi-agency approach to rural credit was the real solution to the emancipation of small farmers from the clutches of money lenders.
- There are many ways by which the farmer may dispose of his surplus produce. This first and the most common method is to sell away his surplus produce to the village money-lender-cum-trader, who may buy it either on his own or as an agent of a bigger merchant of the neighbouring 'mandi' town.
- In order to have best advantage in marketing of his agricultural produce the farmer should enjoy certain basic facilities :
  - (i) He should have proper facilities for storing his goods.
  - (ii) He should have holding capacity, in the sense, that he should be able to wait for times when he could get better prices for his produce and not dispose of his stocks immediately after the harvest when the prices are very low.

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- Judging from these considerations, the position of agricultural marketing in India is still deplorable. The Indian farmer does not have facilities for storing his produce.
- The purpose of a regulated market is to eliminate unhealthy market practices, to reduce marketing charges and to ensure fair prices and in general, to protect the interests of farmers.
- Before l954, separate co-operative marketing societies were established as distinct from the co-operative credit societies. Since 1954. however-multipurpo se societies have been started with the purpose of giving credit to the farmers and marketing their surplus produce.
- In some of the Western countries, co-operative marketing has been extremely successful. Denmark has been well-known throughout the world for co-operative marketing of dairy products.
- The National Agricultural Co-operative Marketing Federation of India Ltd. (NAFED) is the apex, co-operative organisation at the national level; it deals in procurement, distribution, export and import of selected agricultural commodities.
- NCDC has actively promoted distribution of essential consumer articles such as foodgrains, sugar, edible oils, controlled cloth, kerosene, salt, soft coke, etc, in rural areas through service cooperatives.
- After independence there was a general feeling that agricultural markets do not function in an efficient manner. There exist inefficiencies in distribution, including wastage of agricultural produce.
- Earlier agricultural market (mandi) could be established under the Act, where market committee is constituted by elections, where majority of the members are farmers a few members from the trading community Would be there.
- In the earlier Acts, though different types of agricultural markets are allowed to be established, but there was no provision of establishment of private markets.
- The reasons for failure of contract farming have been mainly in the design and the management of the projects by the companies and their partner institutions.

14.5 Key-Words

1. Rural Credit : Rural credit is a small amount of money which give to the poor peopls including small scale farmers and unemployed person as loan to start there own work by development banks or any other finencial institutions.
2. Marketing : The action or business of promoting and selling products or services.

14.6 Review Questions

1. What do you mean by rural credit? Discuss the various sources of Rural Credit?
2. Write a short note on the rural co-operative movement.
3. Discuss the working and functions of Nabard.
4. Explain the rural and agricultural marketing. What are the basic facilities needed for agricultural marketing?

Answers: Self-Assessment

1. (*i*) (*c*) (*ii*) (*b*) (*iii*) (*b*) (*iv*) (*a*)

14.7 Further Readings

Books

1. The Indian Economy; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001.
2. Indian Economy; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055.

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Unit 15: WTO and Agriculture

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Objective

After reading this Unit students will be able to:

- Explain the WTO and Agriculture

Introduction

Agriculture is one of the few economic sectors which has its own agreement within the WTO. Other than the broad WTO distinction between goods and services, all other WTO provisions are neutral as to the economic sector involved. Agriculture is therefore unique. However understanding agriculture is central to understanding the WTO.

Agriculture has given rise to a high number of disputes. Ironically the two most famous agricultural disputes, EC - Bananas III and EC - Hormones, were not brought on the basis of the Agreement on Agriculture but on the GATT 1994 and GATS for bananas and on the Agreement on the Application of Sanitary and Phytosanitary Measures or SPS Agreement for hormones. The first big dispute to examine the Agreement on Agriculture was, in fact, the FSC case which was about a general tax scheme in the United States which favoured exporters.

Recently there have been two cases on the Agreement on Agriculture which are of utmost importance and which are dealt with in this module: the Canada - Dairy case and the Chile - Price Band System case. Like many dispute cases both these cases only look at specific parts of the Agreement on Agriculture. This module, on the other hand, looks at the broad provisions of the Agreement on Agriculture as well as the specific issues which were decided in all the cases which have examined the interpretation of the provisions of the Agreement on Agriculture.

Overall this module examines both the agricultural sector specific provisions in the Agreement on Agriculture and the general WTO rules in a number of other WTO Agreements which can impact agricultural trade. The reader of this module should, on completion, be able to understand the main legal provisions affecting trade in agricultural products. Where technical terms have been used simple explanations of them have been provided.

15.1 WTO and Agriculture

WTO Agreement on Agriculture stipulated that developed countries would reduce their subsidies by 20 per cent in six years and developing countries by 13 per cent in 10 years. But as facts stand today, developed countries tried to circumvent this agreement by providing Green Box and Blue Box subsidies to support agriculture.

Green Box Subsidies include amounts spent on Government services such as research, disease control, infrastructure and food security. They also include payments made directly to farmers that do not

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stimulate production, such as certain forms of direct income support assistance to help farmers restructure agriculture, and direct payments under environmental and regular assistance programmes. This definition is very wide and includes all types of Government subsidies.

Blue Box Subsidies are certain direct payments made to farmers where the farmers are to limit production, certain government assistance programmes to encourage agriculture and rural development in developing countries, and other support on a small scale when compared with the total value of the products supported 15 per cent or less in the case of developed countries and 10 per cent or less for developing countries.

Similar to domestic support subsidies, developing countries are not allowed to increase their negligible level of export subsidies while developed countries are allowed to maintain 64 per cent of their subsidy outlays on the base level. Consequently, agriculture imports from developed countries are available at much below the market price in the domestic economy. **Human Development Report** (1997) reviewing this problem mentions : "According to the OECD, the per capita transfer to US farmers amounted to $ 29,000 in 1995. In the main maize producing areas of Mindanao and Cagayen Valley, the average per capita income amount to less than $ 300. So each US farmer receives in subsidies roughly 100 times the income of a maize farmer in Philippines."

"In the real world, as distinct from the imaginary or inhabited by free traders, survival in agricultural markets depends less on comparative cost advantage than on comparative access to subsidies. Liberalising local food markets in the face of unequal competition is not a prescription for improving efficiency, but a recipe for the destruction of livelihood."

"Implementation of the Uruguay Round agriculture agreement over the next five years will not materially change the picture... Agriculture remains the only area in which export dumping is accepted as a legitimate trade practice."

Earlier, Indian agricultural prices were lower than international prices mostly. But as a result of the heavy subsidization of agricultural exports by developed countries, the situation undertook a dramatic about-turn. The Indian farmers have been put to serious disadvantage. The phenomenon of farmers suicides and the growing unrest in several states because of the distress of farmers specialising in agricultural commodities and their exports is a very serious human problem.

Has the Situation Changed after Doha ?

Doha Ministerial (2001) forced the developed countries to consider issues of implementation before undertaking consideration of new issues. Developed countries agreed to discuss the issues related with implementation. It was also felt that developed countries should reduce tariffs and also remove non-tariff barriers. But did the situation change thereafter ? It would be relevant to quote the findings of the Human **Development Report (2003)** in this regard.

"The most important expectation of poor countries in the Uruguay Round of international trade negotiations (1986-94) was that rich countries would open their markets in these two sectors (Agriculture and Textiles). But the results have been largely disappointing. Protection in most rich countries remains extremely high, through a variety of instruments."

Creating Fairer Markets in Agriculture Sector

Although earlier rules of GATT did apply to agriculture trade, they contained loopholes. Some developed countries protected their costly and inefficient production of temperate zone agricultural products (e.g., wheat and other grains, meat, and dairy products) by imposing quantitative restrictions and variable levies on imports in addition to the high import tariffs. This level of protection often resulted in increased domestic production which, because of high prices, could be disposed off in the international markets only under subsidy. Such subsidized sales depressed international market prices of such agro-products. Providing subsidies by developed countries also led to taking away of legitimated market share of competitive producers, mainly low income countries in the agro sector.

As a result, international trade in agriculture became highly 'distorted', especially with the use of export subsidies which would not normally have been allowed for industrial products. Trade is termed as 'distorted' if prices are higher or lower than normal, and if quantities produced, bought, and sold are also higher or lower than normal of the levels that usually exist in a competitive market.

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The Uruguay Round produced the first multilateral agreement dedicated to the agriculture sector. The objective of the Agreement on Agriculture (AoA) was to reform trade in agriculture and to make policies more market oriented. This is likely to improve predictability and security for both importing and exporting countries.

Elimination of non-tariff measures through the 'tariffication' process

Subsequent to the Uruguay Round, quotas and other types of trade restrictive measures were to be replaced by tariffs that provide more or less equivalent levels of protection. This process of converting quotas and other types of non-tariff measures to tariffs that represent about the same level of protection, is termed as 'tariffication'. Under the Uruguay Round, member countries agreed that developed countries would cut the tariffs by an average of 36 per cent in equal steps over six years while developing countries would make 24 per cent cuts over 10 years. Several developing countries also used the option of offering ceiling tariff rates in cases where duties were not 'bound' before the Uruguay Round. Least developed countries do not have to cut their tariffs.

For products whose non-tariff restrictions have been converted to tariffs, governments are allowed to take special emergency actions or 'special safeguards' in order to prevent swiftly falling prices or surges in imports from hurting their farmers.

Binding against further increase of tariffs : In addition to elimination of all non-tariff measures by *tariffication*, all countries have bound all their tariffs applicable to agricultural products. In most cases, developing countries have given binding at rates that are higher than their current applied or reduced rates.

Tariffs on all agricultural products are now bound. Almost all import restrictions that did not take the form of tariffs, such as quotas, have been converted to tariffs. This has resulted into substantial market predictability in agriculture. The tariffs have also been reduced substantially. Besides, market-access commitments on agriculture also eliminate previous import bans on certain products.

Domestic support : National policies that support domestic prices or subsidized production often encourage over-production. This squeezes out imports or leads to export subsidies and low-price dumping in international markets. Under the agreement on agriculture, domestic policies that have a direct effect on production and trade have to be cut back. The domestic support in the agriculture sector is categorized under Green, Amber, and Blue boxes as shown in Exhibit.

Member countries quantified the support provided per year for the agriculture sector which is termed as 'total aggregate measurement of support' (total AMS) in the base years of 1986-88. Developed countries agreed to reduce total AMS by 20 per cent over six years starting in 1995 while the developed countries agreed to make a 30 per cent cut over 10 years. Least developed countries were not required to make any cut in AMS. The AMS is calculated on a product-by-product basis by using the difference between the average external reference price for a product and its applied administered price multiplied by the quantity of production. To arrive at AMS, non–product-specific domestic subsidies are added to the total subsidies calculated on a product-by-product basis.

Export subsidies : The agreement on agriculture prohibits export subsidies on agricultural products unless the subsidies are specified in a member's lists of commitments. Where they are listed, the

Exhibit : 15.1 Categories of domestic support in agriculture sector

Green Box : All subsidies that have little or at most minimal trade distorting effects and that do not have the 'effect of providing price support to producers', are exempt from commitments towards reduction. The subsidies under the Green Box include.

- Government expenditure on agricultural research, pest control, inspection and grading of particular products, marketing, and promotion services
- Financial participation by government in income insurance and income safety-net programmes
- Payments for natural disaster

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- Structural adjustment assistance provided through
  - Producer retirement programmes designed to facilitate the retirement of persons engaged in marketable agricultural production
  - Resource retirement programmes designed to remove land and other resources, including livestock, from agricultural production
  - Investment aids designed to assist the financial or physical restructuring of a producer's operations.
- Payments under environmental programmes
- Payments under regional assistance programme

Amber Box : This category of domestic support refers to the amber colour of traffic lights, which means 'slow down'. The agreement establishes a ceiling on the total domestic support that a government may provide to domestic producers.

Blue Box : Certain categories of direct payment to farmers are also permitted where farmers are required to limit production. This also includes government assistance programmes to encourage agricultural and rural development in developing countries, and other support on a small scale when compared with the total value of the product or products supported (5 per cent or less in the case of developed countries and 10 per cent or less for developing countries).

agreement requires WTO members to cut both the amount of money they spend on export subsidies and the quantities of exports that receive subsidies. Taking averages for 1986-90 as the base level, developed countries agreed to cut the value of export subsidies by 36 per cent over six years starting in 1995 whereas developing countries by 24 per cent over 10 years. Developed countries also agreed to reduce the quantities of subsidised exports by 21 per cent over six years whereas developing countries by 4 per cent over 10 years. Least developed countries did not need to make any cuts. During the six-year implementation period, developing countries were allowed under certain conditions to use subsidies to reduce the costs of export marketing and transporting.

Developing countries' perspective of the Agreement on Agriculture

Contribution of agriculture to economies of developing countries is highly important in terms of sustaining livelihood of a significant proportion of the population, which includes a large number of low-income and resource-poor producers and landless agriculture labourers. This section of the population in developing countries, including India, lacks skills and is not covered under any safety net, which is essential for ensuring a minimal cross-sector labour mobility. Thus, the situation in developing countries is in sharp contrast to the reality of agriculture sector in developed countries. India and other developing countries have, therefore, been insisting that special and differential treatment for developing countries must be integral to all aspects, including the negotiated outcome on agriculture under the Doha Round in the WTO.

Mitigating the risks associated with price declines, price volatility, predatory competition, and other market imperfections that low-income, resource-poor, and subsistence farmers have to face, remains paramount. Key reasons for market imperfections include huge amounts of production and trade-distorting subsidies provided by some developed countries to their agricultural sector. Therefore, along with other developing countries, particularly its alliance partners in the G-20 and G-33, India has been emphasizing that the Doha agricultural outcome must include at its core

- Removal of distorting subsidies and protection by developed countries to the level playing field
- Appropriate provisions designed to safeguard food and livelihood security to meet the rural development needs in developing countries

Apart from insisting on appropriate policy and flexibilities to enable developing country governments to help low-income and vulnerable producers absorb or insure themselves against risks, India has also taken the stand that governments must be able to foster stable and remunerative prices for domestic producers to increase productivity and gradually move away from dependence on low-

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productivity agriculture. To these ends, meaningful and effective instruments such as Special Products and the Special Safeguard Mechanism are important for developing countries, such as India. At the Hong Kong Ministerial Conference, it has been agreed that Special Products and the Special Safeguard Mechanism shall be an integral part of the modalities and the outcome of negotiations in agriculture. Moreover, developing countries shall have the right to self designate an appropriate number of special products, guided by indicators based on the three fundamental criteria of food security, livelihood security, and rural development needs. These designated products will attract more flexible treatment. Developing country members will also have the right to recourse to a special safeguard mechanism based on import quantity and price triggers, with precise arrangements to be further defined.

Self-Assessment

1. Choose the correct option:

(*i*) Which of the following is NOT an argument to support free trade?

(*a*) Free trade leads to efficient allocation of resources.

(*b*) Free trade limits the influence of special-interest groups.

(*c*) Free trade is always welfare-improving because those who gain can compensate those who lose.

(*d*) Free trade allows firms to exploit economies of scale.

(*ii*) What is the essence of the "terms-of-trade" argument against free trade?

(*a*) Terms-of-trade is an important policy tool that is not available if the government commits to free trade.

(*b*) A large country can improve its terms-of-trade by imposing tariffs, and the optimal tariff is positive.

(*c*) A large country can improve its terms-of-trade by subsidizing exports, and the optimal export subsidy is positive.

(*d*) A small country cannot affects its terms-of-trade, so it might as well impose tariffs to raise government revenues.

(*iii*) What particular market failure does the "market failure argument" against free trade refer to?

(*a*) Knowledge and technology spill-overs.

(*b*) Unemployment.

(*c*) Environmental externalities.

(*d*) Any market failure that occurs in the tradable sector.

(*iv*) The "theory of the second best" states that:

(*a*) Free trade is only the "second best" policy, after the optimal tariff.

(*b*) Free trade is only desirable if everything else works properly.

(*c*) There is always an alternative solution if the first best is not feasible.

(*d*) Trade intervention is the best policy for dealing with domestic market imperfections.

(*v*) What is the main reason explaining why agriculture enjoys protective tariffs in the U.S.?

(*a*) Producers (who gain) are well organized, while consumers (who lose) are not.

(*b*) The "infant industry" argument.

(*c*) Environmental and health concerns force the government to restrict non-compliant imports.

(*d*) Unfair competition from European agriculture.

(*e*) Low wages in the agriculture sector would fall even further in the absence of protection.

15.2 Summary

- WTO Agreement on Agriculture stipulated that developed countries would reduce their subsidies by 20 per cent in six years and developing countries by 13 per cent in 10 years. But as

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facts stand today, developed countries tried to circumvent this agreement by providing Green Box and Blue Box subsidies to support agriculture.

- Earlier, Indian agricultural prices were lower than international prices mostly. But as a result of the heavy subsidization of agricultural exports by developed countries, the situation undertook a dramatic about-turn.
- Doha Ministerial (2001) forced the developed countries to consider issues of implementation before undertaking consideration of new issues.
- The upshot of the entire analysis is that whereas the developed countries want to penetrate the markets of developing countries in agriculture, they continue to use tariffs, quotas and subsidies to help their farmers.
- Although earlier rules of GATT did apply to agriculture trade, they contained loopholes. Some developed countries protected their costly and inefficient production of temperate zone agricultural products (e.g., wheat and other grains, meat, and dairy products) by imposing quantitative restrictions and variable levies on imports in addition to the high import tariffs.
- Contribution of agriculture to economies of developing countries is highly important in terms of sustaining livelihood of a significant proportion of the population, which includes a large number of low-income and resource-poor producers and landless agriculture labourers.
- Mitigating the risks associated with price declines, price volatility, predatory competition, and other market imperfections that low-income, resource-poor, and subsistence farmers have to face, remains paramount.
- Apart from insisting on appropriate policy and flexibilities to enable developing country governments to help low-income and vulnerable producers absorb or insure themselves against risks, India has also taken the stand that governments must be able to foster stable and remunerative prices for domestic producers to increase productivity and gradually move away from dependence on low-productivity agriculture.
- Developing country members will also have the right to recourse to a special safeguard mechanism based on import quantity and price triggers, with precise arrangements to be further defined.

15.3 Key–Words

1. Tariff : A tax or duty to be paid on a particular class of imports or exports.
2. Export subsidies : Export subsidy is a government policy to encourage export of goods and discourage sales of goods on the domestic market through low-cost.

15.4 Review Questions

1. Discuss the role of WTO.
2. What is the WTO agreement on agriculture? Discuss.

Answers: Self–Assessment

1. (*i*) (*c*) (*ii*) (*b*) (*iii*) (*d*) (*iv*) (*b*) (*v*) (*a*)

15.5 Further Readings

Books

1. The Indian Economy; S.K. Ray; Prentic, Hall of India Private Limited New Delhi - 110001.
2. Indian Economy; Gaurav Datt and Aswani Mahajan; S. Chand and Company LTD. Ram Nagar, New Delhi-110055.