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PG & RESEARCH DEPARTMENT OF ECONOMICS

INDIAN ECONOMIC DEVELOPMENT (16ACCEC4)
I B.A ECONOMICS

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Objective: To make the students understand some important components of Indian economy and the socioeconomic problems.

Module I : Economic Development and National Income:

Economic growth and development – determinants of economic growth – Features of Indian Economy – Economic and non-economic factors – Barriers to economic development – National Income – Methods of measuring National Product – trends – difficulties in measuring National Income – Social Accounting.

Module II : Population, Poverty and Unemployment

Population – growth – Age composition – occupational distribution – Demographic theory – causes, effects and remedial measures – Population policy – Poverty – rural and urban poverty – causes – poverty alleviation – programmes – Unemployment – types – causes and effects – Employment generation programmes.

Module III : Agriculture

Agriculture and its role – productivity – causes for Low productivity in Agriculture – land reforms – Government measures – Agricultural development under Five Year Plans.

Module IV : Industries

Role of Cottage MSMEs and large scale industries – Industrial policies of 1948, 1956, 1991 and recent changes – problems of rural industries – Government remedial measures to solve the problems – Industrial development under Five Year Plans – Liberalisation, Privatisation and Globalisation.

Module V : Transport and Labour in Economic Development

Role of Transport in Economic Development – Transport coordination – Labour – causes for low productivity – labour unrest – Trade unionism – Labour problems – Government measures – wage policy – social security measures – Recent trends.

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MODULE I : ECONOMIC DEVELOPMENT AND NATIONAL INCOME

Economic growth and development

Economic Development refers to a country's concerted use of its natural and human resources so as to attain a high level of National and Per Capita Income and reduce, if not remove, hunger, malnutrition, inequality, poverty, unemployment and other such economic maladies. It comes from the French word developer (to unfold) and means the general unfolding or blossoming of a country's prospects towards tangible material welfare

Thus Economic development is not a matter of the level of achievement but rather the progress or movement towards it.

It is an ongoing process rather than a final state. No country, however rich or advanced can ever be said to have reached a perfect or ultimate level. It can always aspire higher.

Even when a substantial material welfare has been achieved in the country, it can achieve more in terms of non-material bur economically important values such as self-esteem and sovereignty

The world consists of countries or `economies' with varying degrees of economic development

Whenever we think of a country, one of the main questions that we ask is: Is it an economically developed country (D C) or an under-developed country (UDC) or a less developed country(LDC) ?

Sweden, USA, Canada, Britain, Germany, Japan and Singapore are some instances of Developed or Advanced economies. India, China, Pakistan, Bangladesh, Tanzania, Uganda or Zambia used to be called under-developed or less developed countries, though now the term used to describe them is 'developing economies'.

Countries with economic development are also referred to as advanced or, simply, rich. Countries yet to achieve economic development are called backward or poor

Developed or advanced countries are characterized by a high level of National Income and Per Capita Income along with a high standard of living, access to education, employment and other meaningful pursuits of life A country with a highly advanced industrial and infrastructural position relative to other countries with lesser industrial and infrastructural achievements is called developed country, industrialized country, or a "more economically developed country" (MEDC).

Distinction between Growth and Development

Economic Development has to be contrasted with Economic Growth. The two are related but not quite the same. Economic Development is a wider or more comprehensive concept than Economic Growth.

Economic Growth (from old Norse grooi or groa, to be healthy) refers to the process of a country's achieving long-term and sustained increase in the national income. Economic Growth is a more concrete and quantifiable concept than Economic Development. It is possible to define it in terms of national income, and measure it in terms of a `rate of growth'.

If Y symbolizes National Income, t time, and g growth rate, then $g = (Y_t - Y_{t-1})/Y_{t-1}$. In the case of India, the government has forecast a growth rate of 6.1%–6.7% for 2013–14, But there is no corresponding concept of Rate of Development. This is because Development has other dimensions than Growth. It cannot be captured in terms of National Income alone.

Initially the distinction was not clearly recognized. But over time economists have given explicit recognition to it. The following definitions will make this clear

Economists Charles Kindleberger and Bruce Henrick write: " Economic development includes improvements in material welfare, especially of persons with lower incomes, the eradication of mass poverty, illiteracy disease and early death; change in the composition of inputs and outputs that generally include shifts in

underlying structure of production away from agriculture towards industrial activities; the organization of the economy in such a way that productive employment is general among the working age population rather than the situation of a privileged minority; and the correspondingly great participation of broadly based groups in making decisions about the directions, economic or otherwise, in which they should move to improve their welfare". (Economic Development, New York 1958)

M.P. Todaro writes: "Development must be conceived of as a multidimensional process involving major changes in social structures, popular attitudes, and national institutions, as well as the acceleration of economic growth, the reduction of inequality and the eradication of absolute poverty".(Todaro, M.P., Economic Development in the Third World, p 83). There are three core values of development: - sustenance: the ability to meet basic needs such as food, shelter, health and protection - self-esteem: to be a person - a sense of worth and self respect, of not being used as a tool by others for their own needs - freedom to servitude: to be able to choose.

Development Economics and Economic Development, Growth Theory and Economic Growth

Economic Planning (Paper no.8 that we are studying) as an area of Economics is distinct yet related to Development Economics which is an area of Economics that studies how various countries come to be developed, or less so, and how the less developed ones can raise their status.

As A.P Thirlwall puts it, it " seeks to understand and explain why some countries are poor and others rich, and how to reduce poverty in poor countries to give everyone on the planet a minimum standard of life and freedom from hunger and fear of the future" (p 4, Economics of Development,2011 Reprint, A.P, Thirlwall).

The focus of Development Economics is not only upon methods of promoting economic development but also upon the improvement of health, education, working conditions of people through various policies. It involves social ,political and ethnic factors as well as well as economic theory and planning models.

Again, Economic Growth, as studied in this paper, is related but distinct from Theories of Economic Growth.

Growth Theory is basically theoretical, even mathematical. But this paper looks at real variables of growth, measured and analyzed in statistical terms rather than mathematical. The model of the First Five Year Plan in India was based on the Harrod-Domar model which puts the rate of economic growth (g) to be the ratio of the propensity to save (s) to the capital-output ratio (k). But the derivation and analysis of this model belongs to Macro-economics or, rather, Growth Theory. The Planning Commission used it merely for calculation of the plan targets. The Second Five Year Plan in India was based on the Mahalanobis model. But the derivation of the Mahalonobis model (on the lines of the Feldman model of Soviet planning) was not important for Indian planners. What was important was the calculation of the various values of the plan targets.

Historical Evolution

Although Economic Development has been an age-old concern of mankind, the term has come into use, only from mid-20th century. The very title of Adam Smith's book -An Inquiry into Causes of The Wealth of Nations (1776) indicates that Adam Smith was concerned about economic development and how was to be achieved.

In the Mercantilist era (16th to late 18th century), it was thought in Europe that a nation's wealth depended largely on its stock of gold, silver and other precious metals. It was the era of Bullionism.

The Physiocrats (18th century) believed that a nation's wealth came from its agriculture. The yield of Land was the basic constituent of its prosperity. Feudalism was the prevailing economic system and this idea was perfectly in tune with it.

But as urbanization and industrialization proceeded in the 18th and 19th centuries, and Capitalism became the prevailing economic system, new ideas were born. Adam Smith , writing in 1776, found the wealth of nations to be based on Production on the principles of Specialization through Division of Labour. David Ricardo became

worried about the Diminishing Returns from Land. Thomas Robert Malthus made gloomy predictions about population outstripping food supply, i.e., the returns from Land. These Classical economists were really becoming concerned about economic development, though they did not actually use that term.

The World Wars and the Great Depression of the 1930s brought into focus the role of the government in rehabilitating, stabilizing and rejuvenating countries of the Western world. The newly-formed USSR started Central Planning experiments. The dissolution of the British Empire and the emancipation of its colonies in Asian and African countries created awareness of the crying needs of such countries. It is from those times, that is, mid-20th century, that the term Economic Development came into vogue.

Determinants of economic growth

In this section, we review the main determinants of economic growth. We also examine the reasons for the widening disparities in economic growth rates among countries in recent years.

The Sources of Economic Growth

As we have learned, there are two ways to model economic growth: (1) as an outward shift in an economy's production possibilities curve, and (2) as a shift to the right in its long-run aggregate supply curve. In drawing either one at a point in time, we assume that the economy's factors of production and its technology are unchanged. Changing these will shift both curves. Therefore, anything that increases the quantity or quality of factors of production or that improves the technology available to the economy contributes to economic growth.

The sources of growth for the U.S. economy in the 20th century were presented in the chapter on choices in production. There we learned that the main sources of growth for the United States from 1960 to 2007 were divided between increases in the quantities of labor and of physical capital (about 65%) and in improvements in the qualities of the factors of production and technology (about 35%). Since 2000, however, the contributions from improvements in factor quality and technology have accounted for about half the economic growth in the United States.

In order to devote resources to increasing physical and human capital and to improving technology—activities that will enhance future production—society must forgo using them now to produce consumer goods. Even though the people in the economy would enjoy a higher standard of living today without this sacrifice, they are willing to reduce present consumption in order to have more goods and services available for the future.

As a college student, you personally made such a choice. You decided to devote time to study that you could have spent earning income. With the higher income, you could enjoy greater consumption today. You made this choice because you expect to earn higher income in the future and thus to enjoy greater consumption in the future. Because many other people in the society also choose to acquire more education, society allocates resources to produce education. The education produced today will enhance the society's human capital and thus its economic growth.

All other things equal, higher saving allows more resources to be devoted to increases in physical and human capital and technological improvement. In other words, saving, which is income not spent on consumption, promotes economic growth by making available resources that can be channeled into growth-enhancing uses.

Explaining Recent Disparities in Growth Rates

Toward the end of the 20th century, it appeared that some of the world's more affluent countries were growing robustly while others were growing more slowly or even stagnating. This observation was confirmed in a major study by the Organisation for Economic Co-operation and Development (OECD),[1] whose members are listed in Table "Growing Disparities in Rates of Economic Growth". The table shows that for the OECD countries

as a whole, economic growth per capita fell from an average of 2.2% per year in the 1980s to an average of 1.9% per year in the 1990s. The higher standard deviation in the latter period confirms an increased disparity of growth rates in the more recent period. Moreover, the data on individual countries show that per capita growth in some countries (specifically, the United States, Canada, Ireland, Netherlands, Norway, and Spain) picked up, especially in the latter half of the 1990s, while it decelerated in most of the countries of continental Europe and Japan.

Table 8.1 Growing Disparities in Rates of Economic Growth

Trend Growth of GDP per Capita			
Country	**1980–1990**	**1990–2000**	**1996–2000**
United States	2.1	2.3	2.8
Japan	3.3	1.4	0.9
Germany	1.9	1.2	1.7
France	1.6	1.5	1.9
Italy	2.3	1.5	1.7
United Kingdom	2.2	2.1	2.3
Canada	1.4	1.7	2.6
Austria	2.1	1.9	2.3
Belgium	2.0	1.9	2.3
Denmark	1.9	1.9	2.3
Finland	2.2	2.1	3.9
Greece	0.5	1.8	2.7
Iceland	1.7	1.5	2.6
Ireland	3.0	6.4	7.9
Luxembourg	4.0	4.5	4.6
Netherlands	1.6	2.4	2.7
Portugal	3.1	2.8	2.7
Spain	2.3	2.7	3.2
Sweden	1.7	1.5	2.6
Switzerland	1.4	0.4	1.1
Turkey	2.1	2.1	1.9
Australia	1.6	2.4	2.8
New Zealand	1.4	1.2	1.8
Mexico	0.0	1.6	2.7
Korea	7.2	5.1	4.2
Hungary	—	2.3	3.5
Poland	—	4.2	4.8
Czech Republic	—	1.7	1.4
OECD24*	2.2	1.9	2.2
Standard Deviation of OECD24	0.74	1.17	1.37
***Excludes Czech Republic, Hungary, Korea, Mexico, Poland, and Slovak Republic**			

Variation in the growth in real GDP per capita has widened among the world's leading industrialized economies.

The study goes on to try to explain the reasons for the divergent growth trends. The main findings were:

- In general, countries with accelerating per capita growth rates also experienced significant increases in employment, while those with stagnant or declining employment generally experienced reductions in per capita growth rates.
- Enhancements in human capital contributed to labor productivity and economic growth, but in slower growing countries such improvements were not enough to offset the impact of reduced or stagnant labor utilization.

- Information and communication technology has contributed to economic growth both through rapid technological progress within the information and communication technology industry itself as well as, more recently, through the use of information and communication technology equipment in other industries. This has made an important contribution to growth in several of the faster growing countries.
- Other factors associated with more growth include: investments in physical and human capital, sound macroeconomic policies (especially low inflation), private sector research and development, trade exposure, and better developed financial markets. Results concerning the impact of the size of the government and of public sector research and development on growth were more difficult to interpret.
- With qualifications, the study found that strict regulation of product markets (for example, regulations that reduce competition) and strict employment protection legislation (for example, laws that make hiring and firing of workers more difficult) had negative effects on growth.
- All countries show a large number of firms entering and exiting markets. But, a key difference between the United States and Europe is that new firms in the United States start out smaller and less productive than those of Europe but grow faster when they are successful. The report hypothesizes that lower start-up costs and less strict labor market regulations may encourage U.S. entrepreneurs to enter a market and then to expand, if warranted. European entrepreneurs may be less willing to experiment in a market in the first place.

The general concern in the second half of the 1970s and the 1980s was that economic growth was slowing down and that it might not be possible to reverse this pattern. The 1990s and early 2000s, in which growth picked up in some countries but not in others, suggested that the problem was not universal and led to a search for the reasons for the disparities in growth rates that emerged. The OECD study described above gives some possible explanations. The findings of that study practically beg countries to examine closely their economic policies at a variety of levels and to consider changes that may add flexibility to their economies.

To spur this process, in 2005, the OECD started a new annual publication called *Going for Growth*. The inaugural edition identified five priority structural policy areas specific to each OECD country. The policies were categorized as either improving labor utilization or improving productivity. Suggestions for improved labor utilization ranged from changing tax policies to improving incentives for females to enter, and for older people to remain in, the workforce. Suggestions for improved productivity ranged from education reform to privatization of state-owned industries. As an example, the priorities proposed for the United States in 2005 included (1) limiting increases in labor costs by reforming Medicare to restrain health care costs, (2) encouraging private saving by shifting the burden of taxation toward consumption, (3) improving primary and secondary education, (4) reducing trade-distorting agricultural price supports, and (5) promoting transparency and accountability of corporate governance.

In closing, it is worth reiterating that economic freedom and higher incomes tend to go together. Countries could not have attained high levels of income if they had not maintained the economic freedom that contributed to high incomes in the first place. Thus, it is also likely that rates of economic growth in the future will be related to the amount of economic freedom countries choose. We shall see in later chapters that monetary and fiscal policies that are used to stabilize the economy in the short run can also have an impact on long-run economic growth.

Features of Indian Economy

Indian economy is termed as the developing economy of the world. Some features like low per capita income, higher population below poverty line, poor infrastructure, agriculture based economy and lower rate of capital formation, tagged it as a developing economy in the world.

Some features of Indian economy are given below:

1. Low per Capita Income: India's per capita income is very less as compare to developed countries. As per the estimates of the Central Statistics Office (CSO), the per capita net national income of the country at current prices for the year 2015-16 is estimated to attain the level of Rs. 93231/-. The per capita net national income at constant prices (2011-12) for the year 2015-16 is estimated to attain the level of Rs. 77, 431/-. As per the CSO's estimates, the per capital net national income at current prices is 2012-13

……Rs. 71050/-, 2013-14 …… Rs. 79412/, 2014-15 …….Rs. 86,879/- The per capita net national income at constant prices (base year 2011-12), 2012-13……. Rs. 65,664/-, 2013-14……. Rs. 68867/-, 2014-15. ……Rs. 72889/-

2. Agriculture Based Economy: Agriculture and allied sectors provide around 14.2% of Indian GDP while 53% of total Indian population is based on the agriculture sector.
3. Over population: in every decade Indian population get increased by about 20% . During the 2001-11 population increased by 17.6%. Currently India is adding the total population of Australia every year. India is the possessor of around 17.5% population of the whole world.
4. Income Disparities: a report released by Credit Suisse revealed that the richest 1% Indians owned 53% of the country's wealth, while the share of the top 10% was 76.30%. To put it differently, in a manner that conveys the political economy of this stunning statistic, 90% of India owns less than a quarter of the country's wealth.
5. Lack of Capital Formation: Rate of capital formation is low because of lower level of income. Gross domestic capital formation was 23.3% in 1993-94 increased upto the level os 38.1% in 2007-08 but declined upto 34.8% in 2012-13.
6. Backwardness of Infrastructural Development: As per an recent study, 25% of Indian families don't have reach of electricity and 97 million peoples don't have reach of safe drinking water and 840 million people in India don't have sanitation services. India needs 100 million dollar for infrastructural development upto 2025.
7. Market Imperfections: Indian economy doesn't have good mobility from one place to other which hinders the optimum utilization of resources. These market imperfections create the fluctuations in the price of commodities every year.
8. Economy is Trapped in the Vicious Circle of Poverty: Prof. Ragner Nurkes says that 'a country is poor because it is poor'. It means poor countries are trapped in the vicious circle of poverty.
9. Use of Outdated Technology: It is very clear that Indian production technique is more labour oriented in nature. So it increases the cost of production of the products made in these countries.
10. Traditional Set Up of Society: Indian societies are trapped in the menace like casteism, communalist, male dominated society, superstitions, lack of entrepreneurship, and '*chalta hai attitude' of the peoples*. These all factors hindered the growth of the country as a whole.

Economic and non-economic factors

1. Economic Factors

1. Natural Resource: The principal factor affecting the development of an economy is the availability of natural resources. The existence of natural resources in abundance is essential for development. A country deficient in natural resources may not be in a position to develop rapidly. But a country like Japan lacking natural resources imports them and achieve faster rate of economic development with the help of technology. India with larger resources is poor.

2. Capital Formation: Capital formation is the main key to economic growth. Capital formation refers to the net addition to the existing stock of capital goods which are either tangible like plants and machinery or intangible like health, education and research. Capital formation helps to increase productivity of labour and thereby

production and income. It facilitates adoption of advanced techniques of production. It leads to better utilization of natural resources, industrialization and expansion of markets which are essential for economic progress.

3. Size of the Market: Large size of the market would stimulate production, increase employment and raise the National per capita income. That is why developed countries expand their market to other countries through WTO.

4. Structural Change: Structural change refers to change in the occupational structure of the economy. Any economy of the country is generally divided into three basic sectors: Primary sector such as agricultural, animal husbandry, forestry, etc; Secondary sector such as industrial production, constructions and Tertiary sector such as trade, banking and commerce. Any economy which is predominantly agricultural tends to remain backward.

5. Financial System: Financial system implies the existence of an efficient and organized banking system in the country. There should be an organized money market to facilitate easy availability of capital.

6. Marketable Surplus: Marketable surplus refers to the total amount of farm output cultivated by farmers over and above their family consumption needs. This is a surplus that can be sold in the market for earning income. It raises the purchasing power, employment and output in other sectors of the economy. The country as a result will develop because of increase in national income.

7. Foreign Trade: The country which enjoys favorable balance of trade and terms of trade is always developed. It has huge forex reserves and stable exchange rate.

8. Economic System: The countries which adopt free market mechanism (laissez faire) enjoy better growth rate compared to controlled economies. It may be true for some countries, but not for every country.

2. Non- Economic Factors

'Economic Development has much to do with human endowments, social attitudes, political conditions and historical accidents. Capital is a necessary but not a sufficient condition of progress. – Ragnar Nurkse.

1. Human Resources: Human resource is named as human capital because of its power to increase productivity and thereby national income. There is a circular relationship between human development and economic growth. A healthy, educated and skilled labour force is the most important productive asset. Human capital formation is the process of increasing knowledge, skills and the productive capacity of people. It includes expenditure on health, education and social services. If labour is efficient and skilled, its capacity to contribute to growth will be high. For example Japan and China.

2. Technical Know-how: As the scientific and technological knowledge advances, more and more sophisticated techniques steadily raise the productivity levels in all sectors. Schumpeter attributed the cause for economic development to innovation.

3. Political Freedom: The process of development is linked with the political freedom. Dadabhai Naoroji explained in his classic work 'Poverty and Un-British Rule in India' that the drain of wealth from India under the British rule was the major cause of the increase in poverty in India.

4. Social Organization: People show interest in the development activity only when they feel that the fruits of development will be fairly distributed. Mass participation in development programs is a pre-condition for accelerating the development process. Whenever the defective social organization allows some groups to appropriate the benefits of growth. majority of the poor people do not participate in the process of development. This is called crony capitalism.

5. Corruption free administration: Corruption is a negative factor in the growth process. Unless the countries root-out corruption in their administrative system, the crony capitalists and traders will continue to exploit national resources. The tax evasion tends to breed corruption and hamper economic progress.

6. Desire for development: The pace of economic growth in any country depends to a great extent on people's desire for development. If in some country, the level of consciousness is low and the general mass of people has accepted poverty as its fate, then there will be little scope for development.

7. Moral, ethical and social values: These determine the efficiency of the market, according to Douglas C. North. If people are not honest, market cannot function.

8. Casino Capitalism : If People spend larger propotion of their income and time on entertainment liquor and other illegal activities, productive activities may suffer, according to Thomas Piketty.

9. Patrimonial Capitalism : If the assets are simply passed on to children from their parents, the children would not work hard, because the children do not know the value of the assets. Hence productivity will be low as per Thomas Piketty.

Barriers to economic development

Cochrane wrote a paper on economic growth last year as part of a project to design presidential debate questions where he took a matter-of-fact approach to the growth problem.

Government Interference

The government interferes in just about every segment of the economy. Sometimes it brings benefits like traffic safety and clean air. More often, regulation simply slows growth in order to transfer wealth from one group to another.

It interferes with growth by impeding competition and distorting economic incentives. It distorts the signal that individuals send markets about their preferences and adds a great deal of noise and cost, which distorts economic activity from being its most efficient.

The Dodd-Frank Financial Regulations

The Dodd-Frank financial regulations had the laudable goal of preventing future bank crises, but in reality, they simply work against other government policies. Washington encourages and subsidizes debt and then tries to prevent the inevitable consequences.

Obamacare

We're all frustrated by Obamacare and health insurance generally. What we need is simple, portable, catastrophic health insurance. Instead of promoting it, the government makes it illegal.

Energy Subsidies

Here again the government works at cross-purposes with itself. It subsidizes energy so that it costs less, then tries to prevent us from using too much of it. Cochrane says the ethanol mandate helps no one but the large corn-producing companies. Ditto for solar subsidies.

Taxes

Taxes should raise revenue, but instead we use them to redistribute income and encourage/discourage behavior. A simpler tax code would remove massive economic distortions, and it would be far better to tax consumption instead of income.

Income-Based Social Programs

Cochrane sees no need to be stingy with helping people in genuine need. Welfare programs are far less costly than the many subsidies we give the middle class and large corporations.

The problem is that perverse incentives trap people and make them permanently dependent. He suggests consolidating all the aid programs and making them time-based, like unemployment benefits, rather than income-based.

Immigration Terms

We can end illegal immigration overnight, says Cochrane, by making it legal. The question is the terms we apply to legal immigration. We should welcome skilled workers who want to stay in the US and contribute to our economy. He also points out, wisely, that whether someone should be here is a separate question from whether they should be allowed to work here.

Public Schools

Public schools do not need more money; they need correct incentives. The way to deliver them and ensure better opportunities for all is to adopt vouchers and charter schools. The government doesn't have to directly provide the service in order to help people afford it.

Implementing these reforms is a political challenge, not an economic one. One man's waste is another man's subsidy. People naturally resist when they perceive they are on the losing end of the bargain. Serious change is very hard if everyone insists on keeping whatever benefits they presently have.

National Income

The basic economic processes in any society are carried out through numerous transactions every day. Buying and selling of food, cloth, cars and houses, sale and resale of shares and other financial assets, as well as services like schools, doctors, domestic help, restaurants and social security benefits given by the government like old age pension are all part of these transactions. Not all these transactions constitute national income, as we will see in the coming lecture.

Macroeconomics is concerned with the questions of production, distribution and growth of material output. Hence, the need to measure the material output of any society, which is essentially, the rationale for understanding of national income.

What is national product?

National product/ domestic product is the money value of the goods and services produced within the domestic territory (domestic product) or by the residents of a country (national product) in a given period of time, typically a year.

In other words, abstracting from the difference between domestic and national product for the moment, national income is simply put, the money value of transactions representing current production of goods and services.

Current production of goods and services

In any economy there are many goods which get sold and resold between several buyers. For example, mobile handsets, cars and computers. According to the definition of national income, these goods would have been included in the national income estimate of the year in which these were produced. If we were to include every re-sale transaction of these goods in our national accounts, our national product estimate would be a serious overestimation. Hence, any sale of goods that have previously been included in the national income accounts is not included at the time of its resale. For instance, let us consider a car worth Rs. 4 lakhs, manufactured in the year 2010. This car is resold to another buyer for Rs 3.5 lakhs, three years later, in 2013. Since the car was produced and sold first in the year 2010, the national income of that year would have included this transaction. However, the latter transaction, that is the resale of the car three years later will not be included in the national income of the year 2013. Hence, the transactions of resale of second hand good remains excluded from the national income.

This is even truer for goods such as shares and other financial assets which are continuously sold and resold in the financial markets. As each sale does not actually represent any new production undertaken in the economy, it does not get included in national income. However, the first time the company issues equities in the market to raise money to set up industry, the value of sales enter national income as it reflects current production. Additionally, the Gross Domestic Product or GDP (one of the alternative measures of national income to be explained later in the lecture) as per the definition, excludes any capital gains or losses on the assets when they are re-sold.

Transfer payments

There are some transactions in an economy that even though valuable from a welfare point of view signify no corresponding production of any new good or service. For instance, the old age pensions or merit scholarships given by the government are simply transfers of purchasing power or re-distribution of the already existent goods and services produced in a society. These payments are not given in lieu of any productive activity undertaken by the recipient. In other words, these transactions are different from the wages that are given supposing to a construction worker in return for his labour services. Hence, any transfer payment in the form of social security will not be included in the national product of the economy.

Immeasurable activities

Many activities are often excluded from the national income on account of simply problems of measurement. These are activities usually which are not sold in the market, such as time spent in household work, even though part of the productive set of activities carried out in an economy. In addition there are several other activities which are included in the national income but have associated costs which remain excluded from the national income. For instance, the production of bricks in the kiln might be included as part of the production in the national income, but what about the pollution it causes? The cost of environmental degradation is a depletion of sorts, and yet remains excluded from getting captured in any of the variants of national income. Although there are several reasons to incorporate the productive activities of unpaid domestic work and costs of environmental degradation, they remain excluded because of practical difficulties of measurement. Ofcourse, efforts are being made by different countries to incorporate some of these activities in their estimates.

Alternative aggregates of national product

By making certain adjustments to the national accounts, it is possible to attain alternative concepts of national product which might help in understanding the various aspects of the economy better. The relationship between the variants of national income- GDPMP, GDPFC, GNPMP, GNPFC, NDPMP, NDPFC, NNPMP, NNPFC will be explained in detail in the next section. For now, we elaborate on the points of distinction between these aggregates.

Goods produced in the country Vs residents of the country

An estimate that includes goods and services produced 'in a country' poses a question as to which boundary should be considered. We can include the goods and services produced within the territorial bounds of the country. Or alternatively, we can also consider the goods and services produced by all the residents of the country. It is not very difficult to imagine, in the world we live in, to see the difference between these two concepts. There are several nationals who are temporarily placed in a foreign country. Similarly, we know there are several foreign nationals, temporarily situated in our own country and contribute to the production carried out here. Would their contribution be included in the national product of our country or the country of which they are the residents'?

In national income accounts, these two different boundaries lead to two variants of the national product. The goods and services produced within the territorial bounds of a country, in a given period are part of the domestic product. On the other hand, goods and services produced by the residents of a country, wherever their temporary base might be (within the country or in a foreign location) are considered a part of the national product.

Who is a resident? According to the report published by CSO- NAS, Sources and Methods, 2007, "the data for factor incomes from abroad are provided by the Balance of payments (BoP) statistics compiled by the RBI. For BoP purposes, the term 'resident' is defined as a person or entity who may be expected to consume goods and services, participate in production or engage in other economic activities in the territory, on other than 'temporary basis' and whose 'centre of interest' lies in the country's economy. The rule of thumb adopted for determining the resident status of an individual is the stay of one year or more. Thus, residents cover Indian nationals and non-nationals residing in the country for one year or more, government agencies (comprising all departments, establishments and bodies of its Central and State Governments and Embassies and Consulates and other entities of the Government located abroad), business enterprises and non-profit organizations."

Formally,

(Factor incomes earned by - (Factor incomes paid to = Net factor income from abroad Indian residents abroad) foreign nationals in India) or NFIA

While calculating the national income for India we need to include the net of these factor incomes from abroad. Hence, in order to obtain the national income we add the net factor income from abroad to the domestic income.

Formally,

GDP + NFIA = GNP

Or GNP - NFIA = GDP

where, GDP refers to Gross Domestic Product and GNP refers to Gross National Product.

Now, how is existence of various aggregates of national income helpful to us? This distinction between a domestic and national income might allow us to make certain inferences about the nature of our economy. For instance, if there is significant difference between the national and domestic product of a country such that domestic is greater than national, it would signify an increased presence of foreign nationals in the country contributing to our production.

Depreciation

In the course of production the fixed capital (plants and machinery) undergoes routine wear and tear which signifies the extent of consumption of fixed capital. Additionally, over time the machinery tends to becomes outdated or obsolete, even if perfect in the working condition. To avoid over estimating the national product, we create a provision for this wear and tear or depreciation as well as the routine obsolescence. Hence, if we have a gross estimate of the national product, subtracting the depreciation would give us the net national product.

Formally,

GDP/GNP - Depreciation = NDP/NNP

or, NDP/NNP + Depreciation = GDP/GNP

where, NDP refers to Net Domestic Product and NNP refers to Net National Product.

Market value – national product at market prices or factor cost

In any economy, the government is responsible for raising the revenue and expending it on certain items of importance in the society. The taxes levied and the subsidies (for certain goods and services) provided are instances of these revenue sources and expenditures. More specifically, the taxes levied by the government on the goods and services sold in the market (either excise duties or sales tax) are called indirect tax. The excess of the taxes levied on the goods and services over the subsidies is called the net indirect tax.

ie, **Indirect tax - Subsidies = Net indirect tax**

Eight alternative concepts of national product at a glance

Now let us look at the alternative measures of national product, namely GDPMP, GDPFC, GNPMP, GNPFC, NDPMP, NDPFC, NNPMP, NNPFC. Some of these measures are used extensively by the government in its own reports and documents, while others are not, however they are all important a conceptual point of view.

1. GDPMP - Indirect taxes = GDPFC
2. GDPFC - Depreciation = NDPFC
3. NDPFC + NFIA = NNPFC
4. NNPFC , which is national income.

Factors affecting National Income

I. Resource Allocation: This is based on the physical capacity of factors of production and the given technology. The more efficient and effective factors of production leads to better National Income as the total productivity of the nation increases. Hence every nation strives to get better factors of production.

   1) Land Resources: The geographical location of the natural resources also affects the level of National income. That is the areas rich in coal, iron and other such essential items affect the level of GNP of the nation.

   2) Labor: The quality of human resource today affects the standard of a nation today. The productivity of labor is more important than quantity

   3) Capital: Capital is generally determined by investment which in turn depends on other factors like profitability, political stability etc.

   4) Technology: In addition to natural resources and labour the level of invention and innovation in production affect the productivity of the factors of production. Thus, the per capita output grows with the help of technology.

II. Government Government is the key resource to provide a favorable business environment and hence it affects the productivity of the nation and in turn affects the National Income of an economy. Although, Classical's believe that the government is an impediment to growth in output.

III. Political Stability The political system of a nation affects the stability of an economy. A stable economy in turn increases the productivity and the national income of a nation. Unfavorable business environment encourages problems like wars, strikes and other social unrests which discourage economic development.

National Income Accounting

a) Gross Domestic Product(GDP)

GDP is the total value of goods and services produced within the country during a year. This is calculated at market price and is known as GDP at market prices. There are 3 methods to calculate GDP at market price:

1. The income method, under this method all incomes received by the factors of production generated in the economy during a year are added together. It includes payment for wages on both employment and self-employment, profits, interest to lenders on capital or rents to owners of land.

2. The output method/product method, under this method the combined amount of the new and final output produced in different sectors of the economy, including manufacturing, financial services, transport, leisure and agriculture is taken into account.

3. The expenditure method, under this method all spending of the economy by households and firms on new and final goods and services by households and firms are added together to calculate the national income of an economy.

National Income Aggregates:

Value of Gross output = Price * Quantity of all goods and services produced in the country (not adjusted for bought out inputs)

Since prices differ:

Gross output =$\sum_{i-1}^{n} PiQi$

Net output = Gross output – Value of bought out input (like value of raw materials purchased)

Net output = Gross output. Therefore, Net National Output = Gross national product.

If GNP is adjusted for income earned from abroad:

GNP – Net income earned from abroad = Gross domestic Product (measured at market prices = GDP_{mp}

b) Gross Domestic Product at Factor Cost (GDPfc)

GDP at factor cost is the net value added by all producers within the country. GDP at Factor Cost = $GDPm$p - Indirect taxes + subsidies = $GDPf_{mp}$

c) Net Domestic Product (NDP)

NDP is the net output of the nation during the year. Capital assets wears out or becomes obsolete each year during the production process. Thus

Net Domestic Product = GDP at Factor cost – Depreciation = NDP_{fc}

d) Nominal and Real GDP

When GDP calculated on current price, is called GDP at current prices or nominal GDP. While, when GDP is calculated on the basis of fixed prices in some previous year, it is called GDP at constant prices or real GDP. It measures the value of goods and services by ignoring the changes in the price level.

e) GDP Deflator

GDP deflator is a barometer of price changes of goods and services included in GDP. It is a price index which is calculated as follows

$$\text{GDP Deflator} = \frac{\text{Nominal(or Current Prices)GDP}}{\text{Real(or Constant Prices)GDP}} * 100$$

f) Gross National Product (GNP)

GNP is the total difference in the flow of goods and services at market value resulting from current year's production of a country. It also includes the net income from abroad.

National Income Estimation

There is a difference between National Income Accounting and National Income Estimation. Accounting tells us how to derive one NI aggregate from the other. National Income Estimation tells us how to calculate NI. But we do not use the term calculation because very often the enumerators who calculate national income have to use methods of estimation (or even guess estimates) for assessing the production or income generated during one year.

Precautions in National Income Estimation

The factors to be taken into consideration while estimating National Income:

1) Money value considered: GNP is the sum of money, in which all kinds of goods and services manufactured in a country during one year are measured in terms of money at current prices and then added together. But in this manner, due to the fluctuations in the prices, the GNP is increased or declined, which may not be real. To guard against erring on this account, a particular year (base year) when prices are normal is taken and the GNP is adjusted in accordance with the index number for that year.

2) Avoid double counting: In estimating GNP, the market price of only the final products should be considered. Many of the products pass through different number of stages before they are ultimately purchased by consumers. If these products are counted and calculated at every stage, they would be included many a time in the nationa-=l product. Consequently, the GNP would increase too much. To avoid double counting, therefore, only the final products and not the intermediary goods should be taken into account.

3) Avoid non-market value: Goods and services given free of cost are not included in the GNP, because it is not difficult to have a correct estimation of their market value or price. For example, the bringing up of a child by the mother, giving instructions to his son by a teacher, recitals to his friends by a musician, etc.

4) The transactions which do not arise in the current year or which do not contribute in any way to production are not included in the GNP. The sale and purchase of second hand goods, and shares, bonds and assets of existing companies are not included in GNP because these do not make any addition to the national product, and the goods are simply transferred

5) The payments received under social security, e.g., unemployment insurance allowance, old age pension, and interest on public loans are also not included in GNP, because the recipients do not provide any service in lieu of them. But the depreciation on machinery, other capital goods is not deducted from GNP.

6) The profits earned or losses incurred due to fluctuations in market prices in the value of capital assets are not included in the GNP if they are not responsible for current production or economic activity. For example, if the price of a building or of a bare land increases due to inflation, the profit earned by selling it

will not be a part of GNP. But if, during the current year, a portion of a house is constructed anew, the increase in the value of the house (after subtracting the cost of the newly constructed portion) will be adjusted in the GNP. Similarly, variations in the value of assets, that can be ascertained beforehand and are insured against flood or fire, are not included in the GNP.

7) The income earned in restricted activities are not to be included in the GNP. Though the goods sold in the black market are priced and fulfill the needs of the people, but as they are not useful from the social point of view, the income received from their sale and purchase is always excluded from the GNP.

Social Accounting

Meaning:

The term 'social accounting' was first introduced into economics by J.R. Hicks in 1942. In his words, it means 'nothing else but the accounting of the whole community or nation, just as private accounting is the accounting of the individual firm'.

Social accounting, also known as national income accounting, is a method to present statistically the inter-relationships between the different sectors of the economy for a thorough understanding of the economic conditions of the economy.

It is a method of studying the structure of the body economic. It is a method of studying the structure of the body economic. It is a technique of presenting information about the nature of the economy with a view not merely to get an idea of its prosperity, past or present, but also to get guidelines for state policy to influence or regulate the economy.

In the words of Edey, Peacock and Cooper: "Social accounting is concerned with the statistical classification of the activities of human beings and human institutions in ways which help us to understand the operation of the economy as a whole.

Components of Social Accounting:

The principal forms of economic activity are production, consumption, capital accumulation, government transactions and transactions with the rest of the world. These are the components of social accounting. If the incomings and outgoings of a country relating to these five activities are shown in the form of accounts, they show a closed network of flows representing the basic structure of the economy. These flows are always expressed in money terms.

We classify these flows as follows:

(1) Production Account:

The production account relates to the business sector of the economy. It includes all forms of productive activity, i.e., manufacturing, trading, etc. It covers public and private companies, proprietary firms and partnerships, and state-owned business undertakings. Since all productive activity takes place within this sector, all payments flow from it to the other sectors. The production account of the business sector is shown in Table 1.

Table 1 : Production Account

(Rs Crores)

	Payments			Receipts	
1.	Payments to personal sector, i.e., wages, etc. (2-5)	279	5.	Consumption expenditures (2-1)	219
2.	Payments to government (3-5)	12	6.	Government Purchases (3-1)	30
3.	Business saving (4-3)	9	7.	Gross private domestic investment (4-1)	36
4.	Imports of goods and services (5-2)	9	8.	Exports of goods and services (5-1)	24
	Gross national income	309		Gross national expenditure	309

Note : Figures in brackets relate to corresponding Table and item number.

Payments to personal sector include rent, interest, dividend, wages, salaries, employees' compensation and proprietors' income. The item 'payments to government' includes producers' net payment to government in the form of taxes and social security payments.

Business saving refers to producers' retained income or corporate saving. The last item relates to payments made to the foreign sector for imports of goods and services. These figures make up gross national income.

The receipt side of the production account shows the incomings to the business sector from sales of goods and services to the household or personal sector. Government purchases refer to goods and services sold by the business sector to the government.

Gross private domestic investment comprises the gross flow of capital goods (fixed capital formation) and the net change in inventories. Net exports refer to the income earned by the business sector by selling goods and services to the rest of the world. The total of all these items gives GNP by expenditure.

(2) Consumption Account:

The consumption account refers to the income and expenditure account of the household or personal sector. The household sector includes all consumers and non-profit making institutions such as clubs and associations. The consumption account is shown in Table 2.

Table 2 : Consumption Account

(Rs Crores)

	Payments			Receipts	
1.	Consumption expenditure (1-5)	219	5.	Receipts from business, wages and salaries, etc. (1-1)	279
2.	Payments to government (3-6)	45	6.	Receipts from government (3-2)	6
3.	Personal saving (4-4)	15			
4.	Transfers to foreigners (5-3)	6			
	Personal outlay and saving	285		Personal income	285

Note : Figures in brackets relate to corresponding Table and item number.

The major item in the left side of the consumption account is the expenditure of household consumers in buying goods and services from the business sector to satisfy their wants. Payments to government include taxes and special insurance contributions. The next item refers to personal saving used for investment by the household sector. The item 'transfers to foreigners' might be taken to relate to investment in foreign securities or expenses by the residents on education or travel abroad.

(3) Government Account:

The government account relates to the outflows and inflows of the government sector. In the government sector are included all public authorities—centre, states and local authorities in a country. The government account is shown in Table 3.

Table 3 : Government Account

(Rs Crores)

	Payments			*Receipts*	
1.	Payments to business (1-6)	30	5.	Receipts from business (1-2)	12
2.	Payments to persons (2-6)	6	6.	Receipts from persons (2-2)	45
3.	Government surplus (4-5)	15			
4.	Payments to foreigners (5-4)	6			
	Government outlay and surplus	57		Government receipts	57

Note : Figures in brackets relate to corresponding Table and item number.

All items in the preceding Table have already been explained in the two accounts constrained in Tables 2 and 3, except item 3. This refers to investment made by the government out of its surplus or saving.

(4) Capital Account:

The capital account shows that saving equals domestic and foreign investment. Saving is invested in fixed capital and inventories within the country and/or in international assets. The capital account is shows in Table 4. The gross private investment includes the gross flow of capital goods and net change in inventories. Net foreign investment is the foreign surplus on current account. On the right side, gross saving includes business and personal savings and government surplus.

Table 4 : Capital Account

(Rs Crores)

	Payments			*Receipts*	
1.	Gross private domestic investment (1-7)	36	3.	Business saving (1-3)	9
			4.	Personal saving (2-3)	15
2.	Net foreign investment (5-5)	3	5.	Government surplus (3-3)	15
	Gross investment	39		Gross saving	39

Note : Figures in brackets relate to corresponding Table and item number.

(5) Foreign Account:

Foreign account shows the transactions of the country with the rest of the world. This account covers international movements of goods and services and transfer payments and corresponds to the current account of the international balance of payments.

The foreign account or the rest-of-the world account is shown in Table 5. For simplicity, such services as freight and insurance have not been shown separately. All items have been already explained in the preceding accounts.

Table 5 : Foreign Account

(Rs. Crores)

	Payments			*Receipts*	
1.	Exports of goods and services (1-8)	24	2.	Imports of goods and services (1-4)	9
			3.	Transfer payments to foreigners by persons (2-4)	6
			4.	Transfer payments to foreigners by government (3-4)	6
			5.	Net foreign investment (4-2)	3
	Net receipts from foreigners	24		Net payment to foreigners	24

Note : Figures in brackets relate to corresponding Table and item number.

It should be noted that in the foreign account 'exports' have been shown under payments (on the left side) and 'imports' under receipts (on the right side). This is because the amount received by the nationals of the country for exports is paid to foreign countries in exchange for imports and transfer payments. Here payments and receipts relate to the rest of the world and not to the country itself.

The five-account system detailed above relates to flows of the economy in terms of production, consumption, government transactions, capital accumulation, and transactions with the rest of the world.

Importance of Social Accounting:

Social accounting helps in understanding the structure of an economy and relative importance of the different sectors and flows. It is a key to the evaluation and formulation of government policies both in the present and future.

The uses of social accounting are as follows:

(1) In Classifying Transactions:

Economic activity in a country involves innumerable transactions relating to buying and selling, paying and receiving income, exporting and importing, paying taxes, etc. The great merit of social accounting lies in classifying and summarising these different kinds of transactions properly, and deriving from these such aggregates as national income, national expenditure, saving, investment, consumption expenditure, production expenditure, government spending, foreign payments and receipts, etc.

(2) In Understanding Economic Structure:

Social accounting helps us to understand the structure of the body economic. It tells us not only about the national income but also about the size of production and consumption, the level of taxation and saving and the dependence of the economy upon foreign trade.

(3) In Understanding Different Sectors and Flows:

Social accounts throw light on the relative importance of the different sectors and flows in the economy. They tell us whether the contribution of the production sector, the consumption sector, the investment sector or the rest of the world sector is greater than the other sectors in the national accounts.

(4) In Clarifying Relations between Concepts:

Social accounts help in clarifying the relationships between such related concepts as net national product at factor cost and gross national product at market prices.

(5) In Guiding the Investigator:

Social accounts are a guide for the economic investigator by indicating the type of data which might be collected for analysing the behaviour of the economy. Such data might relate to gross national product, government expenditure on goods and services, private consumption expenditure, gross private investment, etc.

(6) In Explaining Trends in Income Distribution:

Variations in the components of social accounts are a guide to the trends in income distribution within the economy.

(7) In Explaining Movements in GNP:

Movements in gross national product valued at constant prices and expressed per head of population indicate changes in the standard of living. Similarly, changes in the level of productivity can be measured by relating gross national product valued at constant prices to working population per head.

(8) Provide a Picture of the Working of Economy:

Social accounts provide an ex post picture of the working of the economy. “They can also be used as a framework for drawing up an ex ante forecast of the likely outcome of the economy in the future. Thus, social accounts ensure consistency of forecasts, both internally and in relation to other known facts.”

(9) In Explaining Interdependence of Different Sectors of the Economy:

Social accounts also provide an insight into the interdependence of the different sectors of the economy. This can be known from a study of the matrix of social accounts.

(10) In Estimating Effects of Government Policies:

The importance of social accounts lies in estimating the effects of government policies on different' sectors of the economy and in formulating new policies in keeping with changes in economic conditions, as revealed by national income accounts.

Their main function is to help the government judge, guide or control economic conditions and to formulate economic policies which aim at maximisation of national income, keeping employment at a high level, reducing inequalities of income and wealth, preventing undue rise in prices, conserving foreign exchange, etc.

(11) Helpful in Big Business Organisations:

Social accounts are also used by big business houses for assessing their performance and to improve their prospects on the basis of the statistical information about the various sectors of the economy.

(12) Useful for International Purposes:

Social accounting is also useful for international purposes. A comparative study of the social accounts of different countries of the world helps in the categorization of countries into underdeveloped, less developed and developed. It is on the basis of social accounts that the various agencies of the United Nations make provisions for aid to poor countries of the world.

(13) Basis of Economic Models:

Social accounts form the basis for economic models for the purpose of analysing the behaviour of the economy as a whole, of economic forecasting and of illuminating problems of economic policy.

Difficulties of Social Accounting:

The preparation of social accounts presents the following difficulties:

1. Imputations:

In preparing social accounts, all incomes and payments are measured in money. But there are many goods and services which are difficult to impute in terms of money. They are services of the housewife in her home, painting as hobby by an individual, a teacher teaching his children at home, etc. Similarly there are a number of non-traded or non-marketed products and services.

They are vegetables produced in the kitchen garden and consumed by the family itself, rental value of house occupied by the owner himself, a portion of farm produce retained by the farmer for personal consumption, etc. All such non-market transactions which cannot be assessed in money terms present problems in preparing social accounts accurately.

2. Double Counting:

The greatest difficulty in preparing social accounts is of double counting. It arises from the failure to distinguish between final and intermediate products. For instance, flour used by a bakery is an intermediate product and that by a household the final product.

Similarly, 'the purchase of a newly constructed building by the government is taken under consumption output of the economy. On the other hand, the purchase of the same building by a private firm becomes gross investment for the year'. Thus the same product is shown as consumption and investment in social accounts. Such problems lead to difficulties in preparing social accounts.

3. Public Services:

Another problem is of estimating a number of public services in social accounts. They are police, military, health, education, etc. Similarly, the contributions made by multipurpose river valley projects cannot be fitted into the social accounts because of the difficulty of assessing their numerous benefits in monetary terms.

4. Inventory Adjustments:

All inventory changes whether negative or positive are adjusted in the production accounts by inventory valuation adjustment. But the difficulty is that firms record inventories at their original costs and not at their replacement costs.

When prices rise, there are gains in the book value of inventories. But when prices fall, there are losses in the value of inventories. So for correct calculation of inventories in business accounts under social accounting, inventory valuation adjustment is required which is a very difficult thing.

5. Depreciation:

Another problem in business accounts under social accounting is of estimating depreciation. For instance, it is very difficult to estimate the current depreciation rate of a capital asset whose expected life is very long, say fifty years. The difficulty increases further when prices of assets change every year. Unlike inventories, it is very difficult to have depreciation valuation adjustment in social accounts.

MODULE II : POPULATION, POVERTY AND UNEMPLOYMENT

Population

Significance of population studies has been realized even since the ancient times. History is a witness that both in India and United States, in one or another form, some account detailing the population and its expansion was kept, so that state remained aware of growing population. No doubt, during those days population explosion did not become a matter of concern, because needs of growing population were very limited and available resources adequate enough to meet the ever increasing needs of the continually growing population.

Demography today neither be ignored by the planners, nor policymakers, nor administrators, nor by academicians and politicians. It provides them with foundational support for their work and is springboard from when to jump. Population studies are being increasingly developed and used from different perspectives and these have today become an integral part of the socio-economic and political systems on one hand and planned economic development on the other.

Aspects of Population

Under population studies three main aspects are covered namely size, composition and distribution of population:

(1) Size: While studying size, that aspect of the study is taken which deals with such problems as to how many people live in a given population group, what changes are taking place in the size of the group and how these changes are affected. It also aims at finding out how many people live in a given place at a given point of time. But this can be accurately found out by clearly defining the terms 'place,' 'person' and 'time'.

(2) Composition: After size comes composition in population study. All the measurable characteristics of the people who form a given population. The composition of two groups can differ when one of the groups has larger or smaller proportion of persons with a given characteristics. The composition of two groups differ in a number of ways. There are, however, usually two major considerations while selecting characteristics. The characteristics must be effectively related to demographic processes and that these must the relevant to the attempt to understand certain specific aspects of national or community life. Age and sex are the most widely used characteristics of population study. In the words of Thompson and Lewis, the relationship between the composition of a population and its mortality, fertility and net migration is a reciprocal one; i.e., composition affects the demographic process and these processes in turn affect the composition by determining the age and sex structure of a population.

(3) Distribution: Population distribution study is concerned with such matters as to how are the people distributed and what is the nature of changes in population distribution. In a population study one would be engaged in finding out the nature of the world population living in advanced urban industrial areas, newly developing and growing urban industrial areas and pre-urban industrial areas and the way in which changes are taking place in each category. The distribution can also be studied by dividing population and finding out ratio of people living in small, urban, farm non-farm areas etc. Basically, changes in population distribution are caused by the cumulative effect of difference in mortality birth and net migration rates.

How the world's people are distributed among within continents, world regions and countries how their number and population change and he wants to know the political, economic and social causes and the result of these changes to answer these questions, he must learn what the demographic means by the sizes, composition and distribution he must understand nationality and migration, and finally, he must search for social significance of satisfies he has studied under these heading

DEMOGRAPHIC FACTORS FOR POPULATION CHANGE

Population studies are increasingly becoming popular on account of their practical utility in every walk of life. These studies are being studied today for solving housing, water, electricity, law and order and administration problems. Demography is also assuming popularity and importance because it is closely related to other subjects of social sciences. It is because of utility of the study of their subject that many new universities are setting up department where population research is being seriously undertaken.

The major causes responsible for the rapid growth of population for the last decades can be classified into:

(A) High birth rate

(B) Decline death rate

(C) Migration

(D) Marriage

High Birth Rate

A characteristic feature of under-developed countries in transition is the prevalence of high birth rate. Birth rate refers to the number of live births per thousand of population per year. A high birth rate is a function both of social and economic factors. While with the process of growth underway, conditions are created for the material well-being of the people they are slow to react to these conditions. It may take a full generation, or even more to pass before any notable change in the attitudes may be in evidence.

In India climate, social and economic factors all combine to cause the birth rates to remain high. Their reproductive period begins normally from fourteen years resulting in a later reproductive span. These climatic conditions gets supported by existing social and economic institutions.

Declining Death Rate

As far as death rate is concerned, India is fast closing the gap with the rest of the world. A declining death rate is a characteristic feature of a developing economy. As civilization advances and conditions are created for the maternal well-being of the people, mortality falls. Fortunately, the technology of disease control and death control has so much advancement during the last few decades that many dreadful and chronic diseases no longer hold a threat. Among these plague, small pox, typhoid which used to take a toll on entire villages together are no larger dreaded. Anti-biotics and other life-saving medicines are how freely available that causalities resulting from these diseases have been drastically reduced.

To this, one must also add the growing awareness and facilities for sanitation and cleanliness, which help to reduce the incidence of mortality. The provision of better maternity and post-natal care has helped to being down the infant mortality rate.

Migration

Migration is the third dynamic constituent of population growth. A population may gain in size by experience of influx of migration and it may diminish in size by an exodus of some of its members to join another population. Both international and internal migration has played a very important role in the history of population growth of any country.

Differences in the natural increase among the states of a country are often rather very small, while in reality there are wide variations in their growth rates. The only principal mechanism for such wide variations is internal migration. The rural to urban migration is usually associated with industrialization and urbanization. Migrants from the rural areas tend to adopt the urban way of life, which in turn has a direct impact on reducing the fertility a striking feature of the migration is that while changes caused by the fertility and morality in the size and structure of the population are never drastic migration may change the size, structure and sex ratio of the population quite drastically at any point of times. Regional growth rates result from both differential natural increase and migration increase leading to growth of population. It is assumed that economic hard times would cause people to migrate in search of jobs and thus increase migration.

Marriages

Marriage is the stage to which demography pay their considerable attention. Marriage may be defined as legal union of persons of opposite sex. The legality of such a union may be established by civil, religious or other means as recognized by law of each country and irrespective of the type of marriage, each should be reported for vital statistics purpose.

In India, marriage is considered compulsory because of social, personal, religious and many other so as reasons. Not only marriage, but widow remarriages polygamy among Muslims are providing a suitable environment for population growth.

Population Policy

Population policy may be defined as deliberately constructed or modified institutional arrangements and/or specific programs through which governments seek to influence, directly or indirectly, demographic change.

The generality of the definition lends itself to varying interpretations. For any given country, the aim of population policy may be narrowly construed as bringing about quantitative changes in the membership of the territorially circumscribed population under the government's jurisdiction. Additions to membership are effected only through births and immigration, losses are caused by emigration and by deaths. Concern with this last component is usually seen as a matter for health policy, leaving fertility and migration as the key objects of governmental interest in population policy.

Population Control in Traditional Societies

Rulers of any political unit have a stake in the size and composition of the population over which they have authority, hence an incentive to try to influence demographic change in a desired direction. Thus "population policy" may be said to have a long history, starting at least with the empires of the ancient world. Greater numbers tended to connote greater wealth and power, at least for those at the apex of the social pyramid. Measures encouraging marriage and sometimes immigration testify to the prevailing populationist sentiment among rulers throughout history

Rationale for Population Policy

Modernity—the rise of effective state formations reflecting the public interest and the emergence of rapid economic development—brought about the realistic promise of realizing age-old human aspirations for a better life. The state increasingly came to be seen as an institution created by the voluntary association of the individual members of a given society to further their interests. The central function of the state was to produce public goods—goods that individuals cannot secure for themselves. The US Constitution, promulgated in 1789, articulated key items in the collective interest concisely and with the ambition of conveying universal validity. The aim of the Union formed by the People was, in the words of the Constitution's Preamble, to "establish Justice, insure domestic Tranquility, provide for the common defence, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity." In pursuing such goals, regulation of immigration into a state's territory is clearly defined as a public good, thus delineating a particular role for population policy. And aggregate fertility may also be construed as a public good, if its level as determined by spontaneous social interaction is too high or too low in terms of the collective interest.

Population Policy in the Liberal State

Technological progress and consequent improvements in the standard of living in modernizing societies result in a far more effective control of mortality than was possible in the traditional society. But the fall of the death rate accelerates the rate of population growth, which, in turn, could strain the capacity of the economic system to accommodate the increased population numbers. Falling living standards then would once again increase death rates, reestablishing an approximate balance between births and deaths at a low standard of living. This was the pessimistic central vision of T. R. Malthus's 1798 Essay. But this outcome, although held to be highly probable, was, according to Malthus, avoidable. Given sound public policies, there was an alternative to subsistence-level equilibrium, an alternative both agreeable and achievable.

A salient element in the 1798 Essay, and in subsequent writings influenced by it, was disapproval of the schemes for poor relief prevailing in Britain and elsewhere in Europe—on the grounds that they were likely to encourage irresponsible reproduction. Efforts of the paternalistic state to reduce poverty were held to be misguided; by stimulating fertility, hence population growth, such efforts would generate only more misery. Malthusians argued that the state's correct stance in demographic matters, as in the economy at large, was laissez faire. This would foster the prudential habits among the general population similar to those that already existed among the propertied classes. It would do so by assuring that the costs of childbearing were not shared by society at large but were primarily borne by the individual couples having children.

Population Policy between the World Wars

The massive losses of life resulting from World War I and from the influenza pandemic in its immediate aftermath, and the sharp drop in the number of births during the war years, were temporary disruptions in the steadily declining trends of fertility and mortality characterizing the prewar decades in the West. Those trends soon made it evident that there is no built-in guarantee that the sum total of individual fertility decisions will eventually settle at a point at which, in the aggregate, the rate of population growth will be exactly zero or fluctuate tightly around a zero rate. Although, owing to relatively youthful age distributions, the rate of natural increase remained positive, by the late 1920s demographers realized that fertility rates in several Western countries had fallen to such a low level that, in the longer term, natural increase would become negative. This

trend became more accentuated and more general under the impact of the Great Depression. Some observers foresaw a twilight of parenthood.

Poverty

Introduction

Poverty is a multi-dimensional concept. It is basically a socio-economic phenomenon in which a portion of the society is deprived of the basic amenities of life. The definition of poverty has differed from country to country and also time to time for a nation. The third world countries exhibit higher levels of poverty than the developed world.

Though attempts have been made in all countries to define poverty, but the difference arises as to 'what minimum standard of living' should be. The similarity happens because everyone is unanimous on deprivation concept. The concept of Poverty in developed countries is significantly different from India because the average person is able to afford a much higher standard of living there. Invariably, there is an effort in all definitions of poverty to approach 'the average level of living' and the acceptance of the existence of inequalities. To quote Swami Vivekananda "In human society too much wealth or too much poverty is a great impediment to the higher development of the soul. It is from the middle classes that the great ones of the world come. Here the forces are very equally adjusted and balanced".

HUMAN POVERTY INDEX (HPI)

The Human Poverty Index was introduced by the United Nation's Human Development Report in 1997 with a view to measuring the extent of deprivation and the degree of poverty in a country. The HPI Index uses the same parameters as are used in the Human Development Index (HDI) such as, Longevity, Knowledge and Living standards. The HPI Index also includes other parameters as:

1. Vulnerability to death at a relatively early age as measured by percentage of people with probability of death before the age of forty years.

2. Adult illiteracy rate as measured by percentage of illiterate adults in total adult population.

3. Living standards as measured by three variables, viz/; the percentage of people with access to

   (i) health services

   (ii) safe drinking water

   (iii) malnourished and underweight children below the age of five years.

The HPI is the average of the above three components and measures deprivation on a scale of one to one hundred. The Countries with high HDI rankings have lower HPI rankings. In India, the HPI value is around thirty, showing a medium level of deprivation.

RELATIVE AND ABSOLUTE POVERTY

Two types of standards have been commonly used in economic parlance: The Absolute and The Relative.

RELATIVE POVERTY

Relative poverty refers to the income or asset position of one class or group of people in comparison with the other classes or groups, or one individual vis-a –vis the other. The essential point of significance is that poverty of one is relative to the richness of the other. For example, an average middle class person is relatively poor when compared to an upper middle class person. The upper middle class person is relatively poor in

comparison to the richer persons. This kind of comparison does not take into account the level of economic conditions, whether he is sufficiently endowed or not. The condition of the person is understood in relation to what others have. The concept of relative poverty is essentially a problem of inequality: inequality of income and ownership of assets.

ABSOLUTE POVERTY:

The concept of Absolute poverty is associated with a minimum level of living or minimum consumption requirements of food, clothing, house, health and so on. Therefore, absolute poverty can be defined as the 'inability to achieve the minimum requirements of life, health and efficiency due to very low income or inadequate assets'. Poverty is viewed as a 'state of absolute deprivation' Absolute poverty is defined in terms of a certain normative minimum level of living operationally measured by' consumption expenditure' that is necessary to ensure that ' minimum desirable level of living'. Therefore, all those people who are deprived of these minimum consumption requirements are categorized as poor.

The minimum consumption requirements includes]

i. A reasonable satisfactory nutritional diet

ii. Reasonable clothing, housing etc

iii. Access to minimum level of education, health, water facilities etc.

Absolute poverty is a more comprehensive concept than relative poverty, as it manifests itself in denial of basic/minimum 'human requirements' of food, clothing, shelter , education ,health and so on. The eradication of absolute poverty is challenging but nonetheless one of the most important priority of every country. Thus, a state of absolute poverty is characterized by low life conditions in the form of disease, illiteracy, malnutrition, and squalor which denies a minimal state of human existence. Poverty is also taken as 'denial of human rights' and is a major challenge for the planners,

POVERTY LINE

Absolute poverty is measured by 'Poverty Line' which refers to some cut-off level in terms of consumption or income level. The extent of poverty in a country is measured by the number of people who live below the poverty line and their ratio to the total population.(poverty ratio).

Poverty line is drawn on the basis of expenditure that is necessary to secure the minimum acceptable living standard, according to the work and efficiency. Poverty line is drawn on the basis of a minimum necessary nutritional requirement, which is expressed in calorie intake of a person (2,400 calories for rural and 2100 calories for urban areas). The minimum calorie intake for rural areas is higher than the urban areas because rural people put in more physical efforts in comparison to the population in urban areas.

Poverty ratio is the ratio of the number of people below poverty line to the total population. The poverty ratio is high in the rural areas in comparison to the urban areas.

The Planning Commission estimates poverty using data from sample surveys on household expenditure carried out by National Sample Survey Organization (NSSO) every five year. It defines poverty line on the basis of monthly per capita consumption expenditure (MPCE). The methodology used by the Planning Commission is based on the recommendations of experts.

The Expert group headed by late Prof. Suresh Tendulkar in its report in December 2009 has measured the poverty lines at all India level as monthly per capita consumption expenditure (MPCE) of Rs. 447 for rural areas and Rs. 579 for urban areas in 2004-05

Poverty lines and poverty ratio have been updated by the Planning Commission. It has been estimated as Rs 673 for rural areas and Rs 860 for urban areas in 2009-10.And based on these cut-off, the percentage of people living below the poverty line in the country was 29.8 percent in 2009-10

TABLE 1: POVERTY RATIO AND NUMBER OF PEOPLE BELOW POVERTY LINE

YEARS	POVERTY RATIO	NUMBER (crores)
1973-74	54.9	32.1
1977-78	51.3	32.9
1983-84	44.5	32.3
1987-88	38.9	30.7
1993-94	36.0	32.0
2004-05	27.5	30.2

Source: Planning Commission Reports and Economic Survey of India (various issues)

TABLE 2: NUMBER AND PERCENTAGE OF POOR –RURAL –URBAN

Year	Number of poor (million)			Poverty Ratio (percent)		
	Rural	Urban	Total	Rural	Urban	Total
1973-74	261	60	321	56.4	49.0	54.9
1977-78	264	65	329	53.1	45.2	51.3
1983-84	252	71	323	45.7	40.6	44.5
1887-88	232	75	307	39.1	38.2	38.9
1993-94	244	76	320	37.3	32.4	36.0
2004-05	221	80.8	302	28.3	25.7	27.5
2009-10	278.2	76.5	354.7	33.8	20.9	29.8

Source: Planning Commission Reports and Economic Survey of India (various issues)

From the Table 2, we can see that the incidence of poverty is higher in the rural areas than the urban areas. It is also clear that the overall poverty ratio is declining at the all India average. The decline in the number of rural poor in spite of rapid increase in population has been caused

(i) Due to the large number of anti-poverty programmes launched by the government from time to time.

(ii) Due to the effects of migration wherein rural population moves to towns and cities in search of better economic avenues/employment and consequent urbanization .

CAUSES OF POVERTY:

DIFFERENT CAUSES OF POVERTY IN INDIA

The World Bank in its Report, World Development Report (2005), pointed out that on the basis of the International poverty line rate of $1 per day, 34.7 percent of the population in India in 1999-00 would be placed below poverty line. This shows that the problem of poverty is chronic in India and needs to be tackled through developmental measures. Poverty still exists in spite of six decades of planning and specific poverty removal schemes. Poverty is deep rooted on account of various reasons, out of which the most important ones are:

1. **Rapid growth of population:**

Rapid increase in population has been a major factor responsible for high incidence of poverty. Between 1951 and 2001, about 66 crores of people were added to the existing population. From 36 crores in 1951, the population in 2014 is 120 billion. Unfortunately; the pace of development has been slow. During the period 1951-81, there was a massive increase in population on account of a high birth rate and a rapidly declining death rate. The growth rate of population per annum was 1 percent at the time of independence increased to 2.22 percent in 1981, tended to moderate to 2.14 percent in 1991 and came down to 1.93 percent in 2001 and is 1.72 percent in 2011. Heavy population means higher burden of dependents and consequently low savings and investments and a low level of economic growth. Thus, high population growth and a slow rate of economic growth depress the growth rate of per capita income.

2. Underdeveloped structure of the economy:

Indian economy still exhibits pockets of backwardness, particularly evident in the agricultural sector. Since, a majority of the population depend on agriculture for livelihood, the low productivity of the sector leads to low levels of income and poverty. Not only agriculture, our industrial sector too is slow and the lack of infrastructure leads to a slow growing output. Higher productivity of sectors has led to overall GDP growth rate and low levels/negligible poverty in developed countries.

3. Inequalities in income and Asset ownership:

An important reason for wide scale poverty is the growing inequalities in income distribution and ownership of assets. Because of lack of education, skill and so on, a large section of population are unable to reap opportunities to develop. The rich becomes richer and the poor becomes poorer. Most of the development opportunities are pocketed by few. The World Development Report, 2001-02 of the World Bank points out that the top 20 percent of people in India have a 46 percent share of national income while the bottom 20 percent have less than 8 percent share. Inequality perpetuates further inequality.

4. Chronic unemployment and Underemployment:

India is a vast country with chronic unemployment –seasonal, structural, frictional, and open and underemployment. There are problems of educated unemployment and disguised unemployment .Though large number of employment schemes have been launched by the governments but the number of job seekers is too large in comparison to the jobs created. There is huge backlog of unemployed youths resulting in unemployment, poverty.

5. Inflation:

Rising prices/inflation is a common feature of developing economies. Rising prices leads to falling purchasing power and real incomes. The fixed income group suffers immensely as compared to the business class. Particularly, the unorganized sector comprising of casual workers, labourers, rickshawallahetc are driven to poverty on account of rising prices.

MEASURES TO REDUCE POVERTY:

Apart from the following indirect measures for countering poverty, there are direct measures/anti-poverty schemes running both at urban and rural areas.

1. Accelerate the growth rate of GDP- develop agriculture, promote village and small industries to create employment opportunities.

2. Growth should be employment oriented.

3. Inclusive growth process – emphasis on rural areas, marginal sections of society,

4. Reducing inequalities in income and asset ownership

5. Reduce the growth rate of population
6. Impart vocational training along with education
7. Design proper monetary policy to control price rise
8. Poverty alleviation programmes should be accompanied by asset creation, selfemployment initiatives.
9. Programmes to ensure accessibility to minimum standards of education, health, roads, drinking water

The Anti-poverty programmes were designed to make a direct attack on poverty. These programmes included self-employment and income generating schemes for the poor like,

IRDP (Integrated Rural Development Programme, Training of Rural Youth for Self Employment (TRYSEM), Rural Landless Employment Guarantee Programme (RLEGP), National Rural Employment Programme. These were redesigned and restructured and merged to form a single programme named Swarnajayanti Gram Yojana (SGSY) from April 1, 1999.

The National Rural Employment Guarantee Act (NREGA) was passed in 2005 to enhance the livelihood security of people in rural areas by generating wage employment through works that develop infrastructure base of the area. The NREGA provides that every State government shall make a scheme for providing not less than 100 days of guaranteed work in a financial year to every household in the rural areas,

MODULE III : AGRICULTURE

Agriculture and its Role

Agriculture plays a vital role in economic development of developing countries. The role of agriculture in economic development is crucial because a majority of the population of developing countries make their living from agriculture. We explain below the role of agriculture in detail and point out in what ways agriculture can contribute to economic growth of a country.

Agriculture's contribution to economic development has been classified into six categories: 1. Product contribution 2. Factor contribution 3. Market contribution 4. Foreign exchange contribution 5. Agriculture and Poverty Alleviation 6. Contribution of Agriculture to Employment Generation.

1. Product Contribution:

Most of the developing countries depend on their own agriculture to provide food to be consumed by their population. However, there are few exceptions. Some countries such as Malaysia, South Saudi Arabia have large exports based on natural resources which enable them to earn enough foreign exchange to import their food requirements for their people. But most developing countries do not have necessary foreign exchange earnings to import food-grains to feed their people and therefore have to rely on their own agriculture to produce enough food to meet the consumption needs of their people.

Farmers in these developing countries have to produce food over and above their subsistence needs so as to provide necessary food to their urban population. If the industrial and services sectors have to grow, the food requirements of the workforce employed in them have to be met by the marketable surplus of the farmers. As the industrial and services sectors develop further, the agricultural productivity and production must also rise to sustain the industrial development by feeding the increasing industrial workforce.

2. Factor Contribution:

Another contribution of agriculture to economic development is that it provides two important factors — labour and capital — for industrial growth. The size of agricultural sector in developing countries is quite large as around 60 per cent of their population is engaged in it and therefore it can release a significant amount of labour to be

employed in the industrial and other non-farm sectors. However, agriculture can release labour for industrial development if its productivity rises.

In Lewis "Model of Development with Unlimited, Supplies of Labour," mobilisation of surplus labour (i.e., disguisedly unemployed) in agriculture for expansion of modern industrial sector and capital accumulation has to be made for employment in expanding industries. The smaller the wages of labour, the lower will be the cost of industrial sector which will bring large profits to the industrialists which can be ploughed back for further industrial development and capital accumulation.

Source of Capital:
Agriculture can also be a major source of saving or capital for industrial growth of developing countries. Even, in poor developing countries, as income from agriculture is unequally distributed, rural people with high incomes can invest their savings for industrial development. In Britain at the time of industrial revolution rich landlords voluntarily invested some of their savings in growing industries. Besides, small farmers can deposit their small savings in banks operating in the rural areas and then these banks can provide loans to the industrialists for investment purposes.

3. Market Contribution:
The market contribution of agriculture means the demand for industrial products. In the earlier stages of development when urban sector is very small and markets for exports have not yet been found, agricultural sector of developing countries is a major source of demand or market for industrial products. The farmers often produce cash crops such as sugar, jute, cotton and from their sales they obtain money incomes which they can spend on industrial goods. Besides, the farmers who have marketable surplus of food-grains (cereals and pulses) sell them in the market from which they get money incomes which also become a source of demand for industrial goods.

4. Foreign Exchange Contribution:
The exports of agricultural products can also be a source of foreign exchange earnings. In the initial stages of development when industrial sector has not yet developed much, agriculture is a source of foreign exchange earnings from its exports of primary goods.

The developing countries in the early stages of economic development often experience shortage of foreign exchange or what has been called 'foreign exchange gap' to meet the requirements of imports for industrial development. By contributing to foreign exchange earnings, it enables the developing countries to have access to imported goods needed for industrial growth which cannot be produced at home or can be produced at a higher opportunity cost.

5. Agriculture and Poverty Alleviation:
A majority of poor people live in rural areas. Even after 60 years of independence around 40% of population in the rural areas of India lives below the poverty line and a majority of them consists of small and marginal farmers, landless agricultural labourers, Scheduled Casts and Tribes. It has been shown, among others, by Montek Singh Ahluwalia, the former Deputy Chairman of Indian Planning Commission that poverty declines with agricultural growth.

6. Contribution of Agriculture to Employment Generation:
In major growth models for labour-surplus developing countries, prominent among them are 'Lewis' model of growth with unlimited supply of labour,' Mahalanobis' growth model of assigning higher priority to basic and heavy industries visualised withdrawal of surplus labour from agriculture to be employed in the expanding industrial sector. However, the empirical evidence shows that far from withdrawing surplus labour from agriculture, the modern industrial sector being highly capital-intensive generates very little employment opportunities which are not enough even to employ all the openly unemployed persons in the urban areas.

The main reasons for the favourable result of ADLI strategy are that:

(1) The strong domestic linkages of agriculture with manufacturing, through both the demand and the input sides, lead to high domestic demand multipliers for agricultural output;

(2) Investment in agriculture is less import- intensive and more labour-intensive than investment in industry and so is agricultural production;

(3) The rate of return to investment in agriculture is high, equal or be exceeding that of investment in industry.

Agricultural productivity

Agricultural productivity is measured as the ratio of agricultural outputs to agricultural inputs. While individual products are usually measured by weight, their varying densities make measuring overall agricultural output difficult. Therefore, output is usually measured as the market value of final output, which excludes intermediate products such as corn feed used in the meat industry. This output value may be compared to many different types of inputs such as labour and land (crop yield). These are called partial measures of productivity.

Agricultural productivity may also be measured by what is termed total factor productivity (TFP). This method of calculating agricultural productivity compares an index of agricultural inputs to an index of outputs. This measure of agricultural productivity was established to remedy the shortcomings of the partial measures of productivity; notably that it is often hard to identify the factors cause them to change. Changes in TFP are usually attributed to technological improvements.

Agricultural productivity is an important component of food security.

Sources of agricultural productivity

Some sources of agricultural productivity are:

- Mechanization
- High yield varieties, which were the basis of the Green revolution
- Fertilizers: Primary plant nutrients: nitrogen, phosphorus and potassium[7][8] and secondary nutrients such as sulfur, zinc, copper, manganese, calcium, magnesium and molybdenum on deficient soil
- Education in management and entrepreneurial techniques to decrease fixed and variable costs and optimise manpower
- Liming of acid soils to raise pH and to provide calcium and magnesium
- Irrigation
- Herbicides
- Genetic engineering
- Pesticides
- Increased plant density
- Animal feed made more digestible by processing
- Keeping animals indoors in cold weather

Importance of agricultural productivity

The productivity of a region's farms is important for many reasons. Aside from providing more food, increasing the productivity of farms affects the region's prospects for growth and competitiveness on the agricultural market, income distribution and savings, and labour migration. An increase in a region's agricultural

productivity implies a more efficient distribution of scarce resources. As farmers adopt new techniques and differences, the more productive farmers benefit from an increase in their welfare while farmers who are not productive enough will exit the market to seek success elsewhere

As a region's farms become more productive, its comparative advantage in agricultural products increases, which means that it can produce these products at a lower opportunity cost than can other regions. Therefore, the region becomes more competitive on the world market, which means that it can attract more consumers since they are able to buy more of the products offered for the same amount of money.

Increases in agricultural productivity lead also to agricultural growth and can help to alleviate poverty in poor and developing countries, where agriculture often employs the greatest portion of the population. As farms become more productive, the wages earned by those who work in agriculture increase. At the same time, food prices decrease and food supplies become more stable. Labourers therefore have more money to spend on food as well as other products. This also leads to agricultural growth. People see that there is a greater opportunity to earn their living by farming and are attracted to agriculture either as owners of farms themselves or as labourers.

Causes for Low productivity in Agriculture

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

Some reasons for this situation are as follows:

1. Population Pressure:

Land is limited, and has almost reached the level where more expansion in cultivated area is not possible. The growth in population creates immense pressure on land.

Even though land-human ratio in India is better compared to some of the developed countries like Japan, the Netherlands, Belgium and even China, other factors like very low yields and low levels of industrialisation in India compound the problem of population pressure on agricultural land.

2. Uneconomic Holdings:

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

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

3. Uncertain Monsoons and Inadequate Irrigation Facilities:

With more than half of the gross cropped area being rainfed, failure or inadequacy of rains causes fluctuation in yields. Even if the maximum irrigation potential is realised, around 86.5 mHa of gross cropped area will remain under rainfed conditions. This underlines the need to develop rainfed agriculture on scientific lines.

4. Subsistence Nature of Farming:

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

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

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

7. Poor Organisation of Resourdces and Lack of Entrepreneurship:
India has an underdeveloped agricultural infrastructure and institutions. Conditions of poverty and deprivation and unequal distribution of land resources hamper the evolution of an agricultural entrepreneur class.

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

Land Reforms in India

Land reform is a broad term. It refers to an institutional measure directed towards altering the existing pattern of ownership, tenancy and management of land.

It entails **"a redistribution of the rights of ownership and/or use of land away from large landowners and in favour of cultivators with very limited or no landholdings."**
Thus, in a broad sense, land reform refers to an improvement in agro-economic institutions. It includes measures and policies relating to redistribution of land, regulation of rent, improving the conditions of tenancy, cooperative organisation, agricultural education, and so on.

Objectives of Land Reforms:
Land reform is a part of heritage of the country's freedom movement since the agrarian structure that we inherited from the British at the time of independence was of the feudalistic exploitative character. Zamindars-intermediaries-moneylenders played a big role in exploiting the masses.

It is in this background that we have to examine the objectives of land reform policy in India. Land reform measures aim not only at raising agricultural productivity. It is also viewed as a tool for social uplift.

Measures of Land Reforms:
The comprehensive land reform policy that evolved so far after independence consisted of:
i. Abolition of intermediaries between the State and tenants;

ii. Tenancy reforms that provide (a) security to tenants, (b) rationalisation and regulation of rent, and (c) conferment of ownership rights on tenants;

iii. Fixation of ceiling on landholdings;

iv. Consolidation of holdings; and

Agriculture under First Plan:
The chief objective of First 5-Year Plan was to restore the disequilibrium created by the Second World War and the Partition. The Partition of the country resulted in a transfer of the fertile wheat areas of the Punjab and rice

areas of Bengal to Pakistan. Pakistan also benefited by getting the long-stapled cotton and jute-growing areas. And a relatively much large acreage of the irrigated area.

Overcome these shortfalls, the First 5-Year Plan gave a predominant importance to the development of agriculture and irrigation out of a total actual investment of Rs. 1960 crores made in the first plan. Rs. 601 crores i.e. 31% was allocated for agriculture.

There were two components of agricultural investment In the public sector, (i) Rs, 291 crores (15%, of the total) was allocated to agriculture & C.D.P. and the balance of Rs. 310 crores (or 16% of total) was the share of irrigation? It was expected that the index of farm output would increase from about 100 in 1949-50 to 114 in 1955-56.

The details of the targets of the various agricultural products are given in the following table.
This table also gives the extent of achievement of the targets at the end of the Plan. The targets were realized in most of the cases, excepting for commercial crops like sugarcane, cotton and jute. The over fulfilment of the target of food production brought about a fall in the prices in the country.

Crop.	Unit	Target	Actual Production	Over-Achieve-ment (+) or UnderAchieve-ment (-)
Foodgrains	Million tons	61.6	65.8	+4.2
Oilseeds	Lakh tons	55	56	+1
Sugarcane	Lakh tons	63	60	-3
Cotton	Lakh tons	42	40	-2
Jute	Lakh tons	54	46	-12

The above referred targets were expected to be achieved through various measures like institutional reforms. Organisational changes, structural changes and technical progress. The realization of targets was due not only to these changes but also the weather gods. As a result of planning.

Agriculture under Second Plan:
The over-fulfillment of First 5-Year Plan target of food output made the planners think that the food problem was solved and that the agricultural base was strengthened. Hence, they devoted a relatively less outlay for agriculture 20% of the public outlay (or Rs. 4800 crores) as compared to 33% in the First Plan.

In money terms, however, the outlay in the Second Plan was higher. It was Rs. 1050 crores as compared to only. Rs.758 crores in the First Plan. The targets originally fixed for the Second Plan which were much lower were revised upward and they were given as in the following table. These targets were to be achieved by the same measures as those in the First Plan. The following table gives the actual production at the end of Second Plan.

Crop.	Unit	Target	Actual Production in 1960-61	Over-Achieve-ment (+) or Under-Achieve ment (–)
Foodgrains	Million tons	80.5	78.7	–1.8
Oilseeds	Million tons	7.6	6.5	–1.1
Sugarcane	Million tons	7.8	10.4	+2.6
Cotton	Million bales	6.5	6.5	–1.0
Jute	Million bales	5.5	4.0	–1.5
Tea	Million lbs.	700	725	+25

The actual progress in agricultural front was quite substantial but fell far short of targets fixed earlier, e.g. against 21 mn. acres of additional land to be brought under irrigation, the actual achievement was about 16 mn. acres only.

The consumption of fertilizer increased very slowly. In brief the methods of increased agricultural production did not make as much headway as was originally visualised by the Planning Commission. However the actual output by the end of Second Plan was much more than the actual output of the beginning of the Second Plan. But these was a shortfall in the Production of all commodities except sugar cane and tea.

Agriculture under Third Plan:
Third 5 year Plan gave a Predominant emphasis to agriculture. One of the major objectives of the Plan was to achieve self-sufficiency in food grains and to increase agricultural production for exports.

It says, in the scheme of development during the Third Plan the first priority necessarily belongs to agriculture. Experience under the first two plans and especially in the second plan has shown that the rate of growth in the agricultural production is one of the main limiting factors in the process of Indian economy.

Agricultural production has therefore, to be increased to the largest extent feasible, and adequate resource have to be provided under the Third Plan for raising the agricultural production. The rural economy has to be diversified and the proportion of the population dependent on agriculture gradually diminished.

The targets and actual production of the major agricultural corps were as follows:

Crop	Unit	Target for 1965-66	Actual Production For 1956-66	Over-Achievement (+) or Under-Achievement (-)
Foodgrains	Million tons	100.0	72.3	-27.3
Oilseeds	Million tons	9.8	6.1	-3.7
Sugarcane	Million tons	10.0	11.8	+1.8
Cotton	Million bales	7.0	4.7	-2.3
Jute	Million bales	6.2	4.5	-1.7

In short, the Third Plan failed on the agricultural front. In contrast to the targeted increase of 30% or 6% per year in food grains a bare 10% or 2% per year was realized: at the same time, the index of food grains prices had short up from 118.4 in 1961-62 to 168.8 in 1965-66. As a consequence of the shortfall in food production food-grains worth Rs. 1.10 crores were imported between 1961-62 and 1965-66. This strained our foreign exchange position still further.

Agriculture under the Annual Plan:
The Third 5 Year Plan, consequently the Fourth Plan could not be introduced in April 1966. Instead the Govt. introduced the annual plans for three years-1966 to 1969. During these annual plans actual expenditure on agriculture worked out to be Rs. 1624 crores which was 24% of the total plan investment of 6757 crore rupees.

Agriculture under Fourth Plan:
The bitter experience of the Third Plan made the Planning Commission realize the fact that planning would be a failure unless agricultural production was increased rapidly. Accordingly Planning Commission assigned a high priority to agriculture.

Even in the case of industries, the Planning Commission emphasised those industries which supply fertilizers, agricultural machinery etc. The approach to Fourth Plan emphasised the need of creating favourable economic conditions for the formation of agriculture, a systematic effort to extend the application of science and technology to agriculture and in general intensify agricultural programmes to the maximum possible extent in selected areas.

The Fourth Plan had the following two main objectives in the agricultural sector:
(i) To provide the conditions necessary for a sustained increase of about 5 per cent per annum over the next decade.

(ii) To enable as large a sector of the rural population as possible, including the small farmer, the farmer in dry areas and agricultural labourers to participate in development and share its benefits.

The strategy of agricultural development was based largely on the further extension of the high yielding varieties (HYV) and multiple cropping programmes.

The Fourth Plan envisaged an expenditure of Rs. 3814 crores on Agriculture which was 24% of the total expenditure of Rs 15902 crores. But the actual outlay was less.

Agriculture under the Fifth Plan:
During the Fifth Plan, Rs. 7,411. crores will be spent on the development of agriculture and irrigation which accounts for 20% of the total Plan outlay. Beside this, investments by the private sector shall be of the order of Rs. 2,950 crores.

Taking public and private, sectors, together, total outlay on agriculture, will be of the order of Rs. 10,361 crores. With this level of outlay, the Fifth Plan has targeted a growth rate of 4.2% for food-grains as a whole. This is distinctly, less ambitions as than the target set out in the Fourth Plan.

In determining targets the Fifth Plan has clearly stated its objectives:
"It is envisaged that the fulfillment, of these targets will make country not only self-sufficient in respect of food grains but also leave a cushion for building a buffer stock. The dimension of growth in commercial crops envisaged in the Plan are such as to take care of export requirement in addition to meet the indigenous needs by way of industrial raw material." In other words, the objective is food self-sufficiency and self-reliance."
Agricultural Development under Sixth Five Year Plan:
The Sixth Five Year Plan (1980-85) was started in an extremely different circumstances as the year of 1979-80 witnessed a worse drought. It affected agricultural production adversely. However, the achievements of the plan were satisfactory.

Agricultural Production:
Among the different crops, only wheat has been keeping pace with the plan targets. The production of rice came close to the target of 55 million tons in 1980-81 but failed to show any improvement in the following years. Kharif crop also suffered a setback due to drought weather in many parts of the country during 1982-83. The total production of all food grains in the terminal year of sixth plan was recorded 138.1 million tons. Out of it, the production of rice and wheat was about 54.5 and 41.2 million Ions, respectively.

Similarly, oilseeds production was 11.4 million tons against as target of 12.5 million tons. Millet production has moved nearer to the target in 1984-85. Table 29.8 shows the trends of agricultural production ending 1984-85. Similarly ,indeed number for the same period exhibits the agricultural production has been highlighted in table.

Table Agricultural Production

S. No.	Crop Base level	Unit Plan	Assumed in 1984-85, 1979-80	Sixih target 1980-85	Progress
1.	Foodgrains	Million Tons	127.86	153.60	150.5
2.	Oilseeds	Million Tons	10.20	13.00	11.4
3.	Sugarcane (cane)	Million Tons	175.80	215.00	175.1
4.	Cotton	Million bales	7.34	9.20	7.5
5.	Jute	Million bales	7.54	9.08	6.2

Table Index Number of Agricultural Production ending 1984-85

(Base Year 1969-70=100)

Category	1979-80	1984-85
All Commodities	117.0	155.0
Pood Crops	114.8	155.1
Non-food crops	121.9	154.7

Inputs and Other Supporting Programmes:

Weather conditions were favourable during 1978-79 and 1981-82 which enabled the farmers to make better use of inputs and infrastructure resulting in bumper harvest. This period can specifically be considered as a turning point in Indian agriculture as it could stand a challenge to natural calamities with comparatively less damage.

The plan has set a target of additional irrigation of 5.6 million hectares from major and medium and 8 million hectares from minor schemes. The utilisation potential for major/medium and minor schemes of irrigation was 60.58 million hectares in 1984-85 against 54.1 million hectors in 1980-81. Under the 20-Point Programme, the target was raised to 14.00 million hectares against 13.6 million hectares.

The achievement in the first three years is 6.22 million hectares. By 1981-82, an area of 46.5 million hectares was brought under high yielding varieties, which increased to 54.1 million hectares in 1984-85. Chemical fertilizer obtained anticipated achievement in 1982-83 of 60.64 lac tons against the target of 46.50 lac tons. The consumption of fertilizer during 1981-82 was 60.6 lac tons which increased to 82.2 lac tons in 1984-85.

For the development of dry farming during 1982-83.3824 micro watersheds covering 3.8 million hectares were to be identified by various states. It had covered 4111 micro-watersheds against the total target of 3824 watersheds by the end of March 1983. Upto July 1983, 43.31 lac acres of land had been declared surplus under the revised land ceiling laws. 29.45 lac acres have been taken over by the states and out of this 20.05 lac acres have been distributed among 14.82 lac eligible families of landless agricultural workers. The consumption of plant protection materials was below expectations i.e. actual consumption in 1984-85 was only 56000 tons.

Minikits and Other Programmnes:

The central sector scheme of community nurseries of rice and minikit distributions of rice, wheat, jowar, bajra, maize and rabi were intensified in order to create a visible impact on production of cereal crops. The physical target of coverage of area under the community nurseries of rice was raised from 15000 hectare to 25000 hectares during 1982-83.1.42 lac minikits were distributed during 1982-83 against 14000 minikits during 1981-82.

Agricultural marketing and Rural Godowns:

In 1982-83, 40 selected regulated markets, 2 terminal markets. 350 primary rural markets in rural area and 20 wholesale markets in backward area have been provided the central assistance for the development of infrastructural facilities. 2371 godowns having a storage capacity of 10.65 lac tons were sanctioned upto 1981-82. In 1982-83, 4 lac tons capacity of additional target was expected to have been achieved.

Agricultural Credit:

The National Bank for Agriculture and Rural Development (NABARD) was set up in July 1982. As on 30th June 1981, there were 27 State Cooperative Banks, 327 Central Cooperative Banks, 94019. Primary Agricultural Credit Societies and 19 State Land Development Banks with 1731 Primary Land Development Banks. The Commercial Banks had 17658 rural and 8370 semi urban branches in the country. The total credit under multi-agency was recorded to be Rs.5556 crores in 1984-85.

Agricultural Development in Seventh Plan:

The outlay for agriculture and allied sector including forestry and wild life was Rs. 10524 crore in Seventh Plan against Rs.6440 crores in Sixth Five Year Plan Period. The average level of annual production of food grains during the plan period was around 155 millions tonnes. In 1990-91 food grain production reached to the level of 176-92 million tonnes against the production of 140.35 million tonnes in 1987-88.

Wheat production has increased to 2244 Kg/ha in 1989-90 while the production of cereals reached to the level of 34.76 million tonnes in the same year. The production of pulses and oilseed peaked to the level of 14.06 and 18.46 million tonnes in 1990-91. The production of sugarcane reached a record level of over 240 million tonnes in 1990-91.

The certified seeds distributed were 57.04 lakh quintals ending 1989-90 against the target of 70 lakh quintals. The total consumption of N, P and K was 11.5 million tonnes while pesticides was of 72.47 thousand tonnes ending the plan period. The area under high yielding varieties was 63.1 million hectares against the target of 70.00 million hectares. The production of tea and rubber was increased from 652 million Kgs. and 201000 tonnes in 1984-85 to 703 million Kgs and 297000 tonnes in 1989-90 respectively.

During the plan period, disbursement of agriculture credit through cooperatives commercial and regional rural banks increased from Rs.5810 crores in 1984-85 to Rs. 12570 crores by 1989-90. The debt relief scheme was announced in 1990-91, affected the recovery climate resulting in a lower volume of credit flow.

There were 76,000 fertilizer retailer outlets and 40 lakh tonnes of fertilizer nutrients were distributed during 1989-90. The number of co-operative godown/warehousing capacity increased from 80 lakh tonnes in 1984-85 to 100 lakh tonnes in 1987-88. Soil and water conservation activity in 27 catchments taken up in 17 states covering 2.4 million hectares by the close of plan period.

The contribution of the livestock sector has increased to Rs. 27,700 crores in 1987-88 as compared to Rs. 10,000 crores in 1980-81 which constitutes 25.5 percent of the total agricultural output. By the end of Seventh Plan, 22.75 lakh tonnes of marine and 14.02 lakh tonnes of inland fish were produced, indicating an average annual growth rate 6.25 per cent. However, during 1990-91 export of marine products was 138400 tonnes valued at Rs.8.90 crores while fish production stood at 38.36 lakh tonnes over the same year.

The number of national dairy co-operative societies increased from 34523 in 1984-85 to 64000 in 1991-92. The progress in case of milk, eggs and wool was 41.5 million tonnes; 14252 millions and 3S.0 in. Kgs. in 1984-85 respectively which rose to the level of 51.1 million tonnes 920204 and 41.7 m. Kgs. for milk, eggs and wool ending 1989-90.

Agricultural Development in the Eighth Plan:

Eighth Plan envisages to spend Rs. 22,467 crore on agricultural development. For rural development a total sum of Rs. 34,425 crore has been fixed whereas Rs. 6,750 crore on special area programme and Rs. 35,525 crore on irrigation and flood control have been proposed in the draft of the plan.

In this way agricultural sector alone will attract 22.2 percent of the total plan expenditure. Self-sufficiency in food grains and development and diversification of agriculture to generate export surplus are the main objects of the plan. Apart from this, plan emphasises to increase food grains production to 2100 lakh tonnes, of sugarcane to 2,750 lakh tonnes, of cotton 140 lakh bales and of jute to 95 lakh bales.

Eighth Five Year Plan envisages to continue work on 312 medium and 182 major projects initiated during the seventh plan. The draft of the plan emphasizes to make Command Area Development Programme more effective. In the draft of the plan, medium irrigation projects were accorded high priority. Flood control programmes will be made more meaningful. Thus, in Eighth Plan, a sum of Rs. 35,525 crore have been proposed on irrigation development and flood control measures.

In the agricultural sector, the country has achieved 5 per cent rate in 1992-93 and 2.3 per cent growth rate in 1993-94. Total production of food grains has increased to 179.5 million tonnes in 1992-93 showing a growth rate of 6.6 per cent and then it slightly increased to 184.0 million tonnes in 1993-94 showing a growth rate of 1.4 per cent and further 199.0 million tonnes in 1996-97. Thus the agricultural sector both in respect of food grains and fibre crops has registered almost a stagnation during the first two years of the Eighth Plan.

In 1994-95, production of food grains has increased to 191 million tonnes which shows a growth of only 3.7 per cent. Thus the new economic policy could not create any favourable impact on the performance of the agricultural sector of the country. The potential of irrigation increased from 728 lakh hectares to 894 lakh. The achievements of agricultural sector during the first four years of eighth plan were presented in the following table.

Table Agricultural Production

S. No.	Crop Base level	Unit Plan	Assumed in 1984-85, 1979-80	Sixih target 1980-85	Progress
1.	Foodgrains	Million Tons	127.86	153.60	150.5
2.	Oilseeds	Million Tons	10.20	13.00	11.4
3.	Sugarcane (cane)	Million Tons	175.80	215.00	175.1
4.	Cotton	Million bales	7.34	9.20	7.5
5.	Jute	Million bales	7.54	9.08	6.2

Agricultural Development in Ninth Plan:

The agricultural development strategy during Ninth Five Year Plan is based on the Policy of food security announced by the Government to double the production and make India hunger free in ten years.

Accordingly the Ninth Plan target is to achieve a growth rate of about 4.5 per cent per annum in agricultural output and production of 234 million tonnes of food grains by 2001-02. In order to achieve the goal of doubling the food output and alleviation of hunger, a regionally differentiated strategy based on agro-climatic regional planning will be adopted.

Agro-climatic based planning is to be promoted for high productivity zone, low productivity-high potential zone, low productivity zone and ecologically fragile regions. The table below presents the targets of production for agricultural commodities for 2001-02. Plan emphasised on raising the capabilities of small and marginal fanners and conserving and maximising the value from scarce natural resources. Emphasis was laid on infrastructure development and minor irrigation.

Regional programmes was formulated particularly for hilly backward and tribal areas. Agricultural credit got special attention and efforts were made to increase public investment during the plan period. In every district rural infrastructure development fund was used to promote productive projects.

A high emphasis was placed given for the development of the allied sectors such as horticulture, fisheries, live-stock and dairy. Agricultural exports will receive special attention and the co-operative will be strengthened.

It has also been emphasised that agro-processing and agro-industries will be encouraged. The consumption of fertilizers (NPK) during 1996-97 was 14.31 million tonnes, during the Ninth Five Year Plan greater use of Bio-fertilizers and bio- technological research will be encouraged. However, targets of production is given in table

Table : Targets of Production for Agriculture for 2001-02

Crops	Production (Million Tonnes)	Annual compound growth rate (%)
1. Rice	99.0	4.02
2. Wheat	83.0	3.68
3. Coarse Cereal	35.5	0.70
4. Pulses	16.5	2.67
5. Total foodgrains	234.0	3.26
6. Oilseeds	30.0	3.75
7. Sugarcane	336.0	3.91
8. Cotton	157.0	4.00

Agriculture and allied sector has attained 2.7 per cent growth rate against its target of 3.9 per cent. The same sector attained the growth rate of (-) 2.4 per cent in 1997-98,7.1 per cent in 1998-99 and a mere 0.7 per cent in 1999-2000 and 0.9 per cent in 2000-2001.

The index of agricultural production (1981- 82=100) increased from 165.3 in 1997-98 to 178.1 in 1998-99 and then declined to 176.8 in 1999-2000 and 170.6 in 2000-2001. Total production of food grains has also increased substantially from 192.3 million tonnes in 1997-98 to 203.5 million tonnes in 1998-99 and then to 208.9 million tonnes in 1999-2000. It, further declined to 199.0 million tonnes in 2000-01. Thus, the agriculture and allied sector has shown a mixed performance during the Plan period of Ninth Five Year Plan.

Agricultural Development in the Tenth Plan:

Although the draft Tenth Plan had set a target to attain annual average growth rate of 3.97 per cent in Agriculture and allied sector, but during the Tenth Plan it has attained (-) 7.2 per cent in 2002-03 and then to 10 per cent in 2003-04 and 6.0 per cent in 2005-06 and is expected to attain only 2.7 per cent in 2006-07.

Total production of food grains increased from 179.4 million tonnes in 2002-03 to 212.4 million tonnes in 2003-04 and then to 208.3 (P) million tonnes in 2006-07. The index of agricultural production in 1981-82 = 100) increased from 150.4 in 2002-03 to 181.0 in 2003-04 and then to 197.1 in 2006- 07. Thus the agriculture and allied sector has been showing a mixed performance.

Agricultural Development in 11th Plan:

Although the agricultural sector of the country is having a great potential but the growth rate of the sector is very low. The greatest challenge before the Eleventh Plan is to double the growth rate of agriculture so achieved in the Tenth Plan. This will require steps both on the demand side as well as the supply side.

On the demand side there is evidence that farmers face adverse demand conditions. Not only the agricultural growth has been low in the last decade but the prices received for the agricultural products have also failed to keep pace with the costs or the general price level and as a result profitability of the sector has declined.

The Approach Paper of the Eleventh Plan is of the view that some of the steps already taken such as introduction of National Rural Employment Guarantee Programme (NREGP) along with expansion of public sector schools and health facilities would directly and indirectly generate demand support for agriculture.

Moreover, improved rural connectivity envisaged through Bharat Nirman can also trigger growth of an integrated national market where rural areas are more able to meet each other’s demand.

Such expanded rural—rural trade is likely to be important in the initial years along with other efforts of demand support such as promoting agricultural exports, for strengthening support to agricultural diversification for domestic processing which are likely to attract private corporate investment into rural areas.

The supply side challenge of doubling agricultural growth is also formidable. This is mainly because no dramatic technological breakthrough comparable to the green revolution is presently visible. We are also not initiating or exploiting the potential of existing technology. In fact, most of the growth required in cereals, pulses and oilseeds is possible merely through plausible yield increase in currently low yield regions untouched by green revolution.

The National Commission on Farmers has also drawn attention to the knowledge deficit which constrains agricultural productivity. In order to overcome this problem farmer will need effective links to universities and best practices through a good extension system. The problem of lack of credit facilities needs to be addressed.

Accelerated agricultural growth will require diversification into horticulture and floriculture, effective marketing linkages supported by modern marketing practices adopted through grading post- harvest management, cold-chains, etc. to be established for expanding domestic market and also the export market.

There is also the need for risk management through expansion of crop insurance. The government must devise the viable policy packages to cover all agro-climatic zones. There is also the need for stimulating agricultural research to address the newer and more formidable challenges. The contract farming is a potentially effective way of attracting corporate investors to help establish linkages with markets and also provide farmers with necessary inputs, extension and other support and advice.

Moreover, there is also need for better water management and effective irrigation facilities. Watershed management, rainwater harvesting and ground water recharge can also help in augmenting water availability in rainfed areas. Side by side there is also the need for developing animal husbandry and fishery activities to revive agricultural dynamism.

However, there is urgent need for taking agriculture into a higher growth trajectory of 4 per cent annual growth and such target can only be met with improvement in the scale as well as of quality of agricultural reforms undertaken by the various states and agencies at the various levels.

These reforms must aim at efficient use of resources and conservation of soil, water and ecology on a sustainable basis and in holistic framework which must incorporate financing of rural infrastructure such as water, roads and power.

The approach paper to the Eleventh Plan has aptly highlighted such holistic framework and suggested the following strategy to raise agricultural output:

(a) Doubling the rate of growth of irrigated area;

(b) Improving water management, rain water harvesting and watershed development;

(c) Reclaiming degraded land and focusing on soil quality;

(d) Bridging the knowledge gap through effective extension;

(e) Diversifying into high value outputs, fruits, vegetables, flowers,, herbs and spices, medicinal plants, bamboo, bio-diesel. but with adequate measures to ensure food security;

(f) Promoting animal husbandry and fishery;

(g) Providing easy access to credit at affordable rales;

(h) Improving the incentive structure and functioning of market, if necessary, through state intervention for improving the prices of agricultural produce and

(i) Refocusing on land reforms issues. National Commission on Farmers has already laid the foundation for such a framework.

Moreover, R&D expenditure on agriculture in India is low by international standards, despite its high social return. Increased R&D expenditure backed by modern technologies and compatible institutions must be focused in the coming years.

With proper implementation, the National Agricultural Innovation Project initiated in July, 2006 for enhancing livelihood security in partnership mode with farmer's groups panchayati raj institutions and private sector would go a long way in strengthening basic and strategic research in frontier agricultural lances.

Criticism of Agricultural Planning in India:

The following are a few points of criticism of agricultural planning in India:

1. Self-Complacency:

The First 5-Year Plan wisely gave a top priority agriculture But the Second 5-Year Plan failed to give agriculture a proper place. It appears, the success of the First 5-year Plan, which was primarily due to a series of favourable Monsoons created a sense of self-complacency.

2. Quick-Yielding Projects Not given Sufficient Importance:

Projects having a long gestation period were given undue importance and those with a short fruition lag were not given sufficient importance. Minor irrigation works did not receive the attention they deserved. More attention was given to expansion of irrigation potential and less to maintenance of existing works so that increase in irrigation potential was neutralized by loss of irrigation potential.

3. Unproductive Expenditure:

Unnecessarily large sums were provided for unproductive expenditure.

4. Inadequate Provision for Rural Credit:

The annual credit requirements of the Indian farmers have been estimated at Rs. 10, 000-12,000 mn. whereas the provision is not even for Rs. 3500 mn. Without adequate credit facilities agriculture cannot progress.

5. No Provision for Agricultural Inputs:

There has had been co-ordinated provision for the simultaneous production of agricultural inputs like fertilizers, pesticides, cement, etc.

6. New Farming Techniques Not Enforced:

In agricultural planning in India, no concrete steps were taken for the adoption of new agricultural technique and for standardizing farming practices.

7. Lack of Suitable Price Policy:

Unless farm output programmes are backed by a suitable agricultural price policy providing price support and incentives to the growers, things might go wrong and they have actually gone wrong in India.

8. Morale Neglected:

India is passing through a crisis of confidence. The planners did not provide for any concrete measure to keep up the morale of the people.

9. Unrealistic Planning:

The failure to achieve targets indicates the unrealistic element in agricultural planning in India. The physical targets have proved ,to be "paper targets" treating irrigated area from all sources alike and to put all types of food grains superior and inferior together and above all to split up minutely the total allotment: under, different headings assigned to different authorities, are a few, instances of unrealistic planning

10. Delay in Land Reforms:
Land reforms have not been implemented and whichever implemented have been delayed much.

MODULE IV : INDUSTRIES

Role of Cottage MSMEs and large scale industries

Small Scale Industries are industries in which the investment limit is up to a certain limit which was 1 crore initially 1 crore and now has been increased to 5 crores. Cottage Industries are usually very small and are established in cottages or dwelling places.

In Small scale industry outside labour is used whereas in cottage industries family labour is used. SSI uses both modern and traditional techniques. Cottage industries depend on traditional techniques of production.

In accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 the Micro, Small and Medium Enterprises (MSME) are classified in two Classes:

- Manufacturing Enterprises: The enterprises engaged in the manufacture or production of goods pertaining to any industry specified in the first schedule to the Industries Development and Regulation Act, 1951. The Manufacturing Enterprise is defined in terms of investment in Plant & Machinery.
- Service Enterprises: The enterprises engaged in providing or rendering of services and are defined in terms of investment in equipment:

This is an important topic for the IAS Exam. In this article, relevant information regarding small scale and cottage industries have been provided.

Manufacturing Sector & Service Sector – Comparison

Comparison based on	Manufacturing sector	Service Sector
Enterprises	Investment in plant & machinery	Investment in equipment
Micro Enterprises	Does not exceed twenty-five lakh rupees	Does not exceed ten lakh rupees
Small Enterprises	More than twenty-five lakh rupees but does not exceed five crore rupees	More than ten lakh rupees but does not exceed two crore rupees
Medium Enterprises	More than five crore rupees but does not exceed ten crore rupees	More than two crore rupees but does not exceed five crore rupees

Contribution of Small Scale Industries

The major contributions of the small scale industries towards economic development can are stated below:

- Small enterprise sector provided employment to about 225 lack people during 2008-09. The small scale sector accounts for over 80% of the manufacturing sector's employment.

- It contributed significantly towards the economic growth of the nation, with over 39% of the industrial production.
- The small-scale accounts for over 34% of the total exports and about 45% of the manufacturing exports. Further, over 90% of exports of the SSIs consists of non-traditional items like sports goods, readymade garments, processed foods, chemicals etc.
- SSIs are conducive for the economic development of underdeveloped countries like India. Such industries are relatively labour intensive so they make economical use of scarce capital.
- Small scale industries are instrumental in reducing the inequalities in wealth.
- In these industries, capital is widely distributed in small quantities and the surplus of these industries is distributed among a large number of people.
- Small scale industries bring about regional dispersal of industries and alleviate regional imbalances.
- Small-scale industries make use of local resources including the capital and entrepreneurial skills which would have remained unused for want of such industries.
- The small industry sector has performed exceedingly well and enabled the country to achieve a wide measure of industrial growth and diversification.
- In these industries relations between employers and employees are direct and cordial. There is hardly any scope of exploitation of labour and industrial disputes.

Government measures to promote small – scale industries

Organisational measures

- Establishment of Boards
- National Small Industries Corporation (NSIC)
- Industrial Estates
- District Industries Centre (DIC)

Financial measures

- Small Industries Development Fund (SIDF) – set up in 1986 to provide refinance (i.e. finance to the financial institutions in lieu of their
- lending to SSIs) assistance for development, expansion, modernization, rehabilitation of SSIs.
- National Equity Fund (NEF)
- Single Window Scheme (SWS)
- Small Industries Development Bank of India (SIDBI):—lt was established in October 1989 by an amalgamation of small Industries Development Fund (SIDF) and Natural Equity Fund (NEF)

Fiscal Measures

- Small-scale enterprises having turnover, up to 1 crore are fully exempted from the excise duty.
- Concessional rate of customs duties is levied on import of certain kind of raw materials and components used by SSIs.
- Price and purchase preference is granted to products manufactured in the small-scale sector in government purchase programme.

Technical assistance

- Small-scale Industries Development Organisation (SIDO):—It was established in 1954. SIDO provides technical, managerial, economic and marketing assistance to SSIs through its network of extension centres and service institutes.

- Council for Advancement of Rural Technology (CART):—It was established in 1982 to provide technical assistance to rural industries.
- Technology Development and Modernisation Fund (TDMF):—It was set up for the technological upgradation and modernization of the export-oriented units.

Reservation of items for SSIs

- The policy to reserve certain items for the small-scale sector was introduced in 1967.
- It aims to promote the SSIs by protecting them from the competition with the large-scale units. In April 1967 there were only items in the reserved category which were increased in several phases to 873 in 1984.
- The policy of reservation was widely criticized by a number of economists because it adversely affected the production and productivity of the reserved items. So, the government appointed the Abid Hussain Committee to review the policy of reservation of items for the SSIs.
- The committee gave its report in 1997 with the observation that the policy of reservation has actually reduced the competitiveness of the SSIs engaged in the production of such items.
- Only a few SSIs were involved in the production of the reserved items and their output was almost negligible in comparison of the total output of the SSIs. Thus, the committee recommended that the policy of reservation of items for SSIs should be abandoned.
- The government did not abandon the policy of reservation altogether; however, the government has deserved a few items in the recent past. Government deserved 79 items in February 2008. The total number of reserved items now stands at 35.

Problems of Cottage and Small-Scale Industries

The major problems faced by the cottage and small-scale industries are stated below:

1. Non-availability of timely and adequate credit.
2. Inefficient management
3. Lack of infrastructure
4. Technological obsolescence
5. Limited availability of raw materials
6. Marketing problems
7. Competition with large-scale industries and imports.
8. Excessive burden of local taxes
9. Widespread sickness

Industrial Policy

1. Pandit Jawaharlal Nehru laid the foundations of modern India. His vision and determination have left a lasting impression on every facet of national endeavour since Independence. It is due to his initiative that India now has a strong and diversified industrial base and is a major industrial nation of the world. The goals and objectives set out for the nation by Pandit Nehru on the eve of Independence, namely, the rapid agricultural and industrial development of our country, rapid expansion of opportunities for gainful employment, progressive reduction of social and economic disparities, removal of poverty and attainment of self-reliance remain as valid today as at the time Pandit Nehru first set them out before the nation. Any industrial policy must contribute to the realisation of these goals and objectives at an accelerated pace. The present statement of industrial policy is inspired by these very concerns, and represents a renewed initiative towards consolidating the gains of national reconstruction at this crucial stage.
2. In 1948, Immediately after Independence, Government introduced the Industrial Policy Resolution. This outlined the approach to industrial growth and development. It emphasised the importance to the economy of securing a continuous increase in production and ensuring its equitable distribution. After the adoption

of the Constitution and the socio-economic goals, the Industrial Policy was comprehensively revised and adopted in 1956. To meet new challenges, from time to time, it was modified through statements in 1973, 1977 and 1980.

3. The Industrial Policy Resolution of 1948 was followed by the Industrial Policy Resolution of 1956 which had as its objective the acceleration of the rate of economic growth and the speeding up of industrialisation as a means of achieving a socialist pattern of society. In 1956, capital was scarce and the base of entrepreneurship not strong enough. Hence, the 1956 Industrial Policy Resolution gave primacy to the role of the State to assume a predominant and direct responsibility for industrial development.
4. The Industrial Policy statement of 1973, inter alia, identified high-priority industries where investment from large industrial houses and foreign companies would be permitted.
5. The Industrial Policy Statement of 1977 laid emphasis on decentralisation and on the role of small-scale, tiny and cottage industries.
6. The Industrial Policy Statement of 1980 focused attention on the need for promoting competition in the domestic market, technological up gradation and modernisation. The policy laid the foundation for an increasingly competitive export based and for encouraging foreign investment in high-technology areas. This found expression in the Sixth Five Year Plan which bore the distinct stamp of Smt. Indira Gandhi. It was Smt. Indira Gandhi who emphasised the need for productivity to be the central concern in all economic and production activities.
7. These policies created a climate for rapid industrial growth in the country. Thus on the eve of the Seventh Five Year Plan, a broad-based infrastructure had been built up. Basic industries had been established. A high degree of self-reliance in a large number of items - raw materials, intermediates, finished goods - had been achieved. New growth centres of industrial activity had emerged, as had a new generation of entrepreneurs. A large number of engineers, technicians and skilled workers had also been trained.
8. The Seventh Plan recognised the need to consolidate on these strengths and to take initiatives to prepare Indian industry to respond effectively to the emerging challenges. A number of policy and procedural changes were introduced in 1985 and 1986 under the leadership of Shri Rajiv Gandhi aimed at increasing productivity, reducing costs and improving quality. The accent was on opening the domestic market to increased competition and readying our industry to stand on its own in the face of international competition. The public sector was freed from a number of constraints and given a larger measure of autonomy. The technological and managerial modernisation of industry was pursued as the key instrument for increasing productivity and improving our competitiveness in the world. The net result of all these changes was that Indian industry grew by an impressive average annual growth rate of 8.5% in the Seventh Plan period.
9. Government is pledged to launching a reinvigorated struggle for social and economic justice, to end poverty and unemployment and to build a modern, democratic, socialist, prosperous and forward-looking India. Such a society can be built if India grows as part of the world economy and not in isolation.
10. While Government will continue to follow the policy of self-reliance, there would be greater emphasis placed on building up our ability to pay for imports through our own foreign exchange earnings. Government is also committed.
11. The Industrial Policies pursued till 1990 enabled India to develop a vast and diversified industrial structure. India attained self-sufficiency in a wide range of consumer goods. But the industrial growth was not rapid enough to generate sufficient employment, to reduce regional disparities and to alleviate poverty. It was felt that government controls and regulations had put shackles on the growth of different segments of Indian industry. Lack of adequate competition resulted in inadequate emphasis on reduction of costs, upgradation of technology and improvement of quality standards. It is to reorient and accelerate industrial development with emphasis on productivity, growth and quality improvement to achieve international competitiveness that the Industrial Policy of 1991 was announced

Industrial Development During the Five year Plans In india

The Real Growth and Industrial Development in India started during the period of five-year plans.

First Five Year Plan(1951-56): The main objective of the first year plan was on agricultural development.Therefore the Importance was given on existing Industries rather than the establishment of new industries like cotton, woolen and jute textiles, cement, paper, medicines, paints, sugar etc.

Second Five Year Plan(1956-61): This plan was given Importance to an establishment of heavy industries only, The main thrust of industrial development was on iron and steel,Heavy engineering and fertilizer industries. Three new iron and steel plants were located in Bhilai, Durgapur, and Rourkela.

Third Five Year Plan(1961-66): There was an emphasis on the expansion of basic industries like iron and steel,fossil-fuel and machine building.The Ranchi Machine Tool and three moreHMT units were established.Machine building, Locomotive and Railway coach making.

Annual Plans(1966-1969): The period between 1966 and1969 was the period of annual plans.The Industrial period could not make much progress during the annual plans period.

Fourth Five Year Plan(1969-74): Industries like sugar,cotton, jute,vanaspathi,metal based and chemical industries were given much importance and It was during this plan, Much progress was made in alloys, tools aluminum, automobiles tyres, electronic goods, Machine Tools, Tractors and special steel.

Fifth Five Year Plan(1974-79): The Main Importance was given to the rapid growth of steel plants and exports.The Steel Plants at Salem, Vijayanagar and Visakhapatnam were proposed to create additional capacity and Steel Authority of India Ltd.(SAIL) was constituted, moreover, Drug manufacturing, oil refining, Chemical fertilizers and heavy engineering industries made steady progress.

Sixth Five Year Plan(1980-85): The Main objective was on producing goods to exploit the domestic and international marketers and priority was given to industries like aluminium,automobiles, electric equipment and thermostats. Production Targets were achieved in industries like commercial vehicles, drugs,T.V ,automobiles, cement, Coal, Jute industry, railway wagons, Sugar industry etc.

Seventh Five Year Plan(1985-90): Target mainly on electronic industries.Industrial dispersal, Self-employment, exploitation of local resources and proper training were the preference areas of the plan.

Eighth Five Year Plan: The Period between 1990 and 1992 was the period of annual plans.There was a major change in the industrial policy of the government of India which was initiated in 1991.The policy of liberalization was adopted for the investment of foreign multinationals.Emphasis was given on the removal of regional imbalances and encouraging the growth of employment in small and tiny sectors.

Ninth Five Year Plan(1997-2002): The main emphasis during this plan was on cement ,coal,crude oil,consumer goods,electricity,Infrastruture,refinery and quality steel products.

Tenth Five Year Plan(2007-12): During this plan, the main emphasis was on modernization,technology,upgradation,reducing transaction costs and increasing exports and also to enhance exports and to increase global competitiveness and to achieve balanced regional development.

Eleventh Five Year Plan (2007-12): This Plan gave priority to industry,infrastructure, and employment.The plan recognized that there should be a rapid industrial development that brings a faster reduction in poverty, generates employment and ensures essential services such as health and education to all sections of the society.

Twelfth Five Year Plan (2012-2017): The planning commission focus on instilling"inclusive growth" is making headway. The Plan is expected to create employment through developing India's manufacturing sector and move the nation higher up the value chain is a boon for Industry ,The planning commission indicated that it aims to have industry & manufacturing related activities grow by 11% during this plan period, contrasted to 8% over the previous 11th five year plan.

Liberalisation, Privatisation and Globalisation.

LIBERALISATION

As pointed out in the beginning, rules and laws which were aimed at regulating the economic activities became major hindrances in growth and development. Liberalisation was introduced to put an end to these restrictions and open various sectors of the economy. Though a few liberalisation measures were introduced in 1980s in areas of industrial licensing, export-import policy, technology upgradation, fiscal policy and foreign investment, reform policies initiated in 1991 were more comprehensive. Let us study some important areas, such as the industrial sector, financial sector, tax reforms, foreign exchange markets and trade and investment sectors which received greater attention in and after 1991.

Deregulation of Industrial Sector: In India, regulatory mechanisms were enforced in various ways (i) industrial licensingunder which every entrepreneur had to get permission from government officials to start a firm, close a firm or decide the amount of goods that could be produced (ii) private sector was not allowed in many industries (iii) some goods could be produced only in small-scale industries, and (iv) controls on price fixation and distribution of selected industrial products.

The reform policies introduced in and after 1991 removed many of these restrictions. Industrial licensing was abolished for almost all but product categories — alcohol, cigarettes, hazardous chemicals, industrial explosives, electronics, aerospace and drugs and pharmaceuticals. The only industries which are now reserved for the public sector are a part of defence equipment, atomic energy generation and railway transport. Many goods produced by small-scale industries have now been dereserved. In many industries, the market has been allowed to determine the prices.

Financial Sector Reforms: Financial sector includes financial institutions, such as commercial banks, investment banks, stock exchange operations and foreign exchange market. The financial sector in India is regulated by the Reserve Bank of India (RBI). You may be aware that all banks and other financial institutions in India are regulated through various norms and regulations of the RBI. The RBI decides the amount of money that the banks can keep with themselves, fixes interest rates, nature of lending to various sectors, etc. One of the major aims of financial sector reforms is to reduce the role of RBI from regulator to facilitator of financial sector. This means that the financial sector may be allowed to take decisions on many matters without consulting the RBI.

PRIVATISATION

It implies shedding of the ownership or management of a government owned enterprise. Government companies are converted into private companies in two ways (i) by withdrawal of the government from ownership and management of public sector companies and or (ii) by outright sale of public sector companies.

Privatisation of the public sector enterprises by selling off part of the equity of PSEs to the public is known as disinvestment. The purpose of the sale, according to the government, was mainly to improve financial discipline and facilitate modernisation. It was also envisaged that private capital and managerial capabilities could be effectively utilised to improve the performance of the PSUs.

The government envisaged that privatisation could provide strong impetus to the inflow of FDI. The government has also made attempts to improve the efficiency of PSUs by giving them autonomy in taking

managerial decisions. For instance, some PSUs have been granted special status as maharatnas, navratnas and miniratnas

GLOBALISATION

Although globalisation is generally understood to mean integration of the economy of the country with the world economy, it is a complex phenomenon. It is an outcome of the set of various policies that are aimed at transforming the world towards greater interdependence and integration. It involves creation of networks and activities transcending economic, social and geographical boundaries. Globalisation attempts to establish links in such a way that the happenings in India can be influenced by events happening miles away. It is turning the world into one whole or creating a borderless world.

Outsourcing: This is one of the important outcomes of the globalisation process. In outsourcing, a company hires regular service from external sources, mostly from other countries, which was previously provided internally or from within the country (like legal advice, computer service, advertisement, security — each provided by respective departments of the company). As a form of economic activity, outsourcing has intensified, in recent times, because of the growth of fast modes of communication, particularly the growth of Information Technology (IT). Many of the services such as voice-based business processes (popularly known as BPO or call centres), record keeping, accountancy, banking services, music recording, film editing, book transcription, clinical advice or even teaching are being outsourced by companies in developed countries to India. With the help of modern telecommunication links including the Internet, the text, voice and visual data in respect of these services is digitised and transmitted in real time over continents and national boundaries. Most multinational corporations, and even small companies, are outsourcing their services to India where they can be availed at a cheaper cost with reasonable degree of skill and accuracy. The low wage rates and availability of skilled manpower in India have made it a destination for global outsourcing in the post-reform period

MODULE V : TRANSPORT AND LABOUR IN ECONOMIC DEVELOPMENT

Role of Transport in Economic Development

INTRODUCTION

In this chapter, we explore the role of transport in the economic development of a region. We examine different theories for development of transport infrastructure. Then, we look at the development of the transport sector in India.

TRANSPORT

Transport plays an important role in the development of industry and agriculture. The aim of all economic activities involving movement of goods and men is to transform things in their present forms/ places and time to more highly desired forms, places and time preferences. Value is thus added to the commodities by way ofform, place and time utilities

Whereas form utility is created by the production process of converting raw materials to finished goods, space and time utilities are the products of physical distributions in which transportation is the most important ingredient. The primary function oftransportation is to provide space and time utility. Therefore, transportation has an important place, in the overall production process creating value through addition of utility in the case of manufacturing industries or agricultural activities. It is the function of transport to bridge the gap between producers and consumers so that goods and services may be exchanged in time for their mutual benefit. As a supplier ofspace and time utility, it broadens the market and is an important element of satisfactory functioning of the economic market. i The proper functioning of an economic market is helped by price stability and leveling of supplies. Transport charges form a substantial part of the price of any commodity, particularly of low value primary commodities like minerals, bricks, wood, sand etc

A developed transport system helps large-scale production and mass distribution with accompanying regional specialization and division of labour. Consequently a trend in the direction of a preferred regional distribution of population, industry; and income would develop. Its "locational" contribution in I formation of growth poles would be vital to the regional development. It would open up underdeveloped remote areas by releasing utilities trapped in these and enable new products and factors to be brought into exchange. It would help in increasing rural income by extending the money economy to the agricultural and rural sectors by raising its productivity on the one hand and. retarding unhealthy urbanisation on the other.

TRANSPORT DEVELOPMENT IN INDIA DURING THE PERIODS PLAN

In formulation of a national transport policy, due weightage has been given to the development of our transport system. Before independence, the transport system, comprising mostly of railways and roads, was developed primarily to provide communications with major ports and larger cities, keeping in view the administrative needs and trade imperatives of the time. The focus of transport development changed after independence. Efforts were made to rehabilitate railways and roads neglected during World War-11 and in rebuilding the transport network and linking it with developmental needs of the economy. The magnitude of the effort devoted to development of the transport sector is broadly expressed in Plan outlays for transport

Importance of the transport sector in development of the national economy was recognised at the beginning of the plan period. But financial constraints did not permit required allocation to the transport sector. The approach was generally to create capacity mainly for specific categories of traffic in the industrial and agricultural sectors and for providing relief to the existing congested routes. These limited steps were taken keeping the financial constraints in view. What was lacking more was a comprehensive long-term transportation plan for the country keeping in view its potential economic and industrial growth. A transport plan for the whole country is a difficult and complex problem as it requires detailed data and analysis: of regional trade flows and comparative resource cost of movement by various modes of transport. The Planning Commission has taken,steps,, though only on a limited scale, by introducing a study through Rail India Technical and Economic Services Limited (RITES.) and by constituting a Transport Policy Planning Project with an objective to improve forecast methodology oftransport demand in this country

CONCLUSION

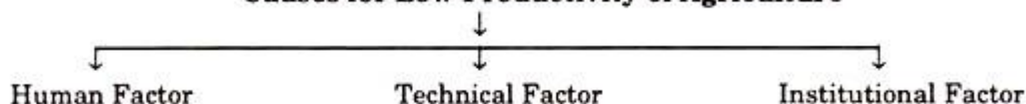
Transport plays a vital role in the economic development of a country or a region. Transport as an infrastructure should be created in advance for other industrial and economic activities to follow and flourish. From experience it is clear that the transport sector has helped in the progress of the advanced countries, in .the early stages > of their economic growth.

Causes of the Low Productivity of Agriculture in India

The main causes for low productivity of agriculture are broadly of three types;

1. Human Factors:
Human favors are those which are related to training and efficiency of the farmers.

(i) Social atmosphere:



Social climate includes customs and traditions. Indian farmer is illiterate and has no knowledge for latest techniques of production. He believes in God and fatalist in thought. He wastes money on customs and traditions. So social climate is not suitable for agriculture.

(ii) Pressure of population on land:

Heavy pressure of population is the main cause of low productivity of Indian agriculture. In 1901, 16.30 crore people were dependent on agriculture. The number has gone up to 58.80 crore. So per capita cultivable land had reduced from 0.43 hectare to 0.23 hectare. Heavy pressure has led to subdivision and fragmentation of land holdings.

2. Technical Factors:
Technical Factors include techniques and methods of production:
(i) Traditional methods of Cultivation:
Traditional methods of cultivation like manual ploughing, two crop pattern and old system of irrigation are mainly responsible for low productivity of agriculture.

(ii) Old implements:
Traditional equipment's like wooden ploughs, sickles and spades are commonly used. Tractors & Combines are not so common in use. Due to the use of these old implements agriculture is backward.

(iii) Insufficient irrigation facilities:
Indian agriculture is mainly dependent on rain. Even after 60 years of Independence only 40% of the agricultural land has permanent irrigation facility. Due to improper irrigation facility, farmer can produce one crop only in a year.

(iv) Problems of soil:
Indian soil has many problems like soil erosion, water logging, nitrogen deficiency and swamps. These are the reasons for low productivity of agriculture.

(v) Problems of pests and diseases of crops:
Plant diseases like rust and smut and rats, insects and pests destroy large portion of crops.

(vi) Feeble cattle:
Due to limited mechanisation of Indian agriculture, cattle has significant place in agriculture. Cattle are generally weak. Farmer has to spent a lot on these Cattle farming is more time consuming and expensive than tractor. So these also increase the cost of agriculture.

(vii) Lack of credit facility:
Credit facilities are inadequate in rural areas. Farmers can not be able to raise credit from rural banks easily. They have to depend on 'Mahajans' and 'Shahukars'. These money lenders charge heavy rate of interest. Farmers have to sell their produce at low price to these money lenders. So farmers have low Income and thus low productivity.

(viii) Lack of High Yielding Variety (HYV) seeds:
HYV seeds are not commonly used. Farmers do not understand their significance. They cannot afford to buy them and also these seeds are not easily available.

Trade Unionism

How must the working class fight capitalism in order to win? This is the all important question facing the workers every day. What efficient means of action, what tactics can they use to conquer power and defeat the enemy? No science, no theory, could tell them exactly what to do. But spontaneously and instinctively, by feeling out, by sensing the possibilities, they found their ways of action. And as capitalism grew and conquered the earth and increased its power, the power of the workers also increased. New modes of action, wider and more efficient, came up beside the old ones. It is evident that with changing conditions, the forms of action, the tactics of the class struggle have to change also. Trade unionism is the primary form of labour movement in fixed capitalism. The isolated worker is powerless against the capitalistic employer. To overcome this handicap, the workers organise into unions. The union binds the workers together into common action, with the

strike as their weapon. Then the balance of power is relatively equal, or is sometimes even heaviest on the side of the workers, so that the isolated small employer is weak against the mighty union. Hence in developed capitalism trade unions and employers' unions (Associations, Trusts, Corporations, etc.), stand as fighting powers against each other.

Trade unionism first arose in England, where industrial capitalism first developed. Afterward it spread to other countries, as a natural companion of capitalist industry. In the United States there were very special conditions. In the beginning, the abundance of free unoccupied land, open to settlers, made for a shortage of workers in the towns and relatively high wages and good conditions. The American Federation of Labour became a power in the country, and generally was able to uphold a relatively high standard of living for the workers who were organised in its unions.

It is clear that under such conditions the idea of overthrowing capitalism could not for a moment arise in the minds of the workers. Capitalism offered them a sufficient and fairly secure living. They did not feel themselves a separate class whose interests were hostile to the existing order; they were part of it; they were conscious of partaking in all the possibilities of an ascending capitalism in a new continent. There was room for millions of people, coming mostly from Europe. For these increasing millions of farmers, a rapidly increasing industry was necessary, where, with energy and good luck, workmen could rise to become free artisans, small business men, even rich capitalists. It is natural that here a true capitalist spirit prevailed in the working class.

The same was the case in England. Here it was due to England's monopoly of world commerce and big industry, to the lack of competitors on the foreign markets, and to the possession of rich colonies, which brought enormous wealth to England. The capitalist class had no need to fight for its profits and could allow the workers a reasonable living. Of course, at first, fighting was necessary to urge this truth upon them; but then they could allow unions and grant wages in exchange for industrial peace. So here also the working class was imbued with the capitalist spirit.

Now this is entirely in harmony with the innermost character of trade unionism. Trade unionism is an action of the workers, which does not go beyond the limit of capitalism. Its aim is not to replace capitalism by another form of production, but to secure good living conditions within capitalism. Its character is not revolutionary, but conservative.

Labour

Labour in India refers to employment in the economy of India. In 2012, there were around 487 million workers in India, the second largest after China. Of these over 94 percent work in unincorporated, unorganised enterprises ranging from pushcart vendors to home-based diamond and gem polishing operations. The organised sector includes workers employed by the government, state-owned enterprises and private sector enterprises. In 2008, the organised sector employed 27.5 million workers, of which 17.3 million worked for government or government owned entities.

Labour structure in India

Over 94 percent of India's working population is part of the unorganised sector.[2] In local terms, *organised sector* or *formal sector* in India refers to licensed organisations, that is, those who are registered and pay GST. These include the publicly traded companies, incorporated or formally registered entities, corporations, factories, shopping malls, hotels, and large businesses. *Unorganised sector*, also known as *own account enterprises*, refers to all unlicensed, self-employed or unregistered economic activity such as owner manned general stores, handicrafts and handloom workers, rural traders, farmers, etc.

India's Ministry of Labour, in its 2008 report, classified the unorganised labour in India into four groups.[7] This classification categorized India's unorganised labour force by occupation, nature of employment,

specially distressed categories and service categories. The unorganised occupational groups include small and marginal farmers, landless agricultural labourers, sharecroppers, fishermen, those engaged in animal husbandry, beedi rolling, labeling and packing, building and construction workers, leather workers, weavers, artisans, salt workers, workers in brick kilns and stone quarries, workers in saw mills, and workers in oil mills. A separate category based on nature of employment includes attached agricultural labourers, bonded labourers, migrant workers, contract and casual labourers. Another separate category dedicated to distressed unorganised sector includes toddy tappers, scavengers, carriers of head loads, drivers of animal driven vehicles, loaders and unloaders. The last unorganised labour category includes service workers such as midwives, domestic workers, barbers, vegetable and fruit vendors, newspaper vendors, pavement vendors, hand cart operators, and the unorganised retail.

SOCIAL SECURITY MEASURES IN INDIA

Social Security is defined by the International Labour Organization (ILO) as "The protection which so-ciety provides for its members through a series of public measures against the economic and social distress that otherwise would be caused by the stoppage or substantial reduction of earn-ings resulting from sickness, ma-ternity, employment injury, inva-lidity and death; the provision of medical care; and the provision of subsidies for families with chil-dren" (1984). The security which society furnishes through appro-priate organizations against cer-tain risks to which its members are perennially exposed.

NEEDS OF SOCIAL SECURITY

In India 90% of families earn their livelihood from the unor-ganized sector. Most of the rural and informal sector workers in the world do not have any social secu-rity measures. In most of the devel-oping countries the rural and in-formal sectors constitute the bulk of the population. They do not have any form of insurance or se-curity (e.g. Maternity benefits, re-tirement benefits, health insurance etc) nor do they have representa-tive organizations that might help them by fighting for these benefits. Poor are particularly vulnerable to the lack of health security measures. They spend a greater percentage of their budget on health related expenditures. Dur-ing sickness they need to spend large amounts of money for treat-ment and are unable to earn money while under treatment. Ma-jority of poor households reside in remote rural areas where no government or private medical facili-ties are available and obtaining treatment at town or district level hospital involves travel costs, which are not insignificant. As a Worker/Employee, you are a source of social security protection for yourself and your family. As an Employer you are responsible for providing adequate social security coverage to all your workers.

NEEDS THAT NECESSITATES SOCIAL SECURITY

1. Physical risks: Sickness, in-validity, old age, maternity, acci-dents, death.
2. Economic risks : Unemploy-ment
3. Economic burden of large family

SOCIAL IMPACT OF SOCIAL SECURITY MEASURES

Short term effects:

Provides adequate medical care and prevents accidents and illness which will ultimately benefit the workers and the society.

Long term effects:

More efficient workers. Higher productivity and a greater feeling of security. Reduced absenteeism, labour turnover and stabilized working class. Improve the living standards of the people and strengthen livelihoods.

Significance of Social Security Methods:

Important step towards the goal of welfare state and helps in the formation of stable and effi-cient labour force. Tends to reduce the wastage arising out of indus-trial disputes, sickness, and disa-bility. Social cost of industrializa-tion in the shape of unemploy-ment, disability, frustration and mass dissatisfaction is considera-bly minimized.

AIM OF SOCIAL SECURITY

Measures to be taken to im-prove the condition of work

 Reduction in the hours of work.
 Better lighting and ventila-tion.
 Proper disposal of trade waste and adequate provision for bathrooms etc.
 Improve the safety measures to reduce accidents and disability.

Restoration: Early restoration of the workers to their normal oc-cupation as early as possible.

APPROACHES TO SOCIAL SECURITY (Table 1)

There are mainly two types:

1. Social assistance
2. Social insurance

Social assistance:

A method to provide benefits as of right to persons usually of small means in amounts sufficient to meet a minimum standards of liv-ing from general revenues of the state. Characteristics feature of this is the beneficiaries do not make any contribution towards various benefits which are made available to them. It is a "Non-contributory benefits" towards the maintenance of vulnerable groups such as chil-dren, mothers, aged peoples, disa-bled etc. Very much essential for the effective working of the eco-nomic system.

Recent Trends

If you've been following the news on exciting tech trends like artificial intelligence, then you're probably aware that emerging technologies are changing the way we work and interact with others. In fact, with things like machine learning and touch commerce becoming increasingly popular across every industry from banking to healthcare, technology is revolutionizing the way we do business and making high-tech approaches an integral part of our lives.

Here are the top five technology trends you need to know to work in any industry.

1. Internet of Things (IOT)

One of the biggest tech trends to emerge in recent years is the Internet of Things. Simply put, the Internet of Things (abbreviated IOT) is the idea that all technological devices can be connected to the internet and to each other in an attempt to create the perfect marriage between the physical and digital worlds. How will this impact you? It depends on your industry. For example, for those who work in marketing, advertising, media or business management, IOT could provide a wealth of information on how consumers engage with products by tracking their interactions with digital devices. In turn, this data could be used to optimize marketing campaigns and user experiences.

How it's affecting industries: The really cool thing about IOT is that it's not only changing the way we do business but also the business models we use to do it. For example, pay-per-use models are becoming increasingly popular across all industries as new customer data becomes available.

2. Machine learning

Another exciting emerging technology is machine learning, which is essentially a computer's ability to learn on its own by analyzing data and tracking repeating patterns. For example, social media platforms use machine learning to get a better understanding of how you're connected with those in your social network. They do this by analyzing your likes, shares and comments and then prioritizing content from your closest connections, serving you that content first.

How it's affecting industries: In addition to shaping your day-to-day interactions with friends on social media, machine learning is also changing the way companies do business with customers. Companies like Google are using machine learning on mobile devices which can continue learning even when offline. The result? Machine learning is reshaping the way businesses interact with their customers in a big way by helping them anticipate and meet customer needs more easily.

3. Virtual reality (VR)

Remember watching movies about virtual reality and thinking how cool it would be if it was actually like that in real life? Well, it's about to be. Although VR has been around since the 1950s, until recently the technology wasn't able to deliver the fully immersive digital experience users have been craving. That's about to change with recent improvements to both hardware and programming, and the effects are going to be felt across almost every industry from retail to education.

How it's affecting industries: Virtual reality has been a popular component of video games for several years and this trend is continuing to expand. In addition to video games, VR is likely to affect companies across the board as they adopt the technology to help them engage customers more effectively and optimize their sales and marketing efforts. It's also a potentially useful tool for learning and is increasingly being adopted by educational organizations.

4. Touch commerce

Being able to buy anything you want with the touch of a finger may have seemed like a fantasy a few years ago, but it's now a reality. Merging touchscreen technology with one-click shopping, touch commerce allows consumers to buy products easily from their phones. After linking their payment information to a general account and enabling the feature, customers are able to buy everything from clothes to furniture with just a fingerprint.

How it's affecting industries: This is one of the biggest things to hit eCommerce in recent years with purchases of this type expected to increase by 150% this year alone and retailers in almost every industry anticipating an increase in sales directly related to this new technology.

5. Cognitive Technology

Cognitive technology is in the same vein as machine learning and virtual reality except that it's a broader concept. For example, the cognitive technology umbrella includes things like natural language processing (NLP) and speech recognition. Combined, these different technologies are able to automate and optimize a lot of tasks that were previously done by people, including certain aspects of accounting and analytics.

How it's affecting industries: Although cognitive technologies have a broad range of applications, one of the industry sectors most affected by this trend initially will be the software sector. Automated analysis of user data and experiences will be particularly useful for software companies hoping to scale.

With emerging technologies changing professional industries including banking, eCommerce, healthcare and education, staying up to date on the latest trends will give you a better understanding of your chosen industry and make you a more competitive candidate. Best of all, this knowledge might open up new doors within your field and others.