Directorate of Distance Education

UNIVERSITY OF JAMMU

JAMMU

SELF LEARNING MATERIAL

B.A. SEMESTER - VI

SUBJECT : ECONOMICS **UNIT I - IV**

COURSE NO. : EC - 601 **LESSON NO. 1 - 18**

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DEVELOPMENT ECONOMICS

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CONTENTS

SYLLABUS

Semester-VI

Course No. : EC-601 **Title : DEVELOPMENT ECONOMICS**

Duration of Examination : 3 Hours **Total Marks : 100**

External Examination : 80

Internal Assessment : 20

Syllabus for the examinations to be held from 2017, 2018 and 2019.

PREAMBLE : Units incorporated in this paper would enable the students to know about theories of growth and development. Sectoral aspects of development, investment criteria, allocation of resources and interrelations of international aspects of development have been incorporated. The techniques of planning and its recent adaptations in the light of market dominated strategy and issues resulting to sustainable development also find their due place in the contents of this paper.

UNIT-I : **Development and Economic Growth**

Distinction between economic growth and economic development; Factors affecting economic growth; Sustainable development; development and underdevelopment - characteristics of underdevelopment, perpetuation of underdevelopment; Measurement of development; Human development indices - PQLI and HDI.

UNIT-II : **Theories of Economic Development**

Schumpeter’s theory of economic development; Nurkse’s theory of disguised unemployment; Myrdal’s theory of circular causation; Lewis’ theory of unlimited supply of labour; Rostow’s stages of economic growth.

UNIT-III : **Domestics and International Aspects of economic Development :**

Role of agriculture in economic development; Industrialization and economic development; Capital formation and economic development; Population growth and economic development; Role of international trade in economic development; Foreign Aid and economic development.

UNIT-IV : Choice of techniques and development planning :

Labour intensive techniques vs. Capital intensive techniques; Meaning of economic planning; Need for planning in under developed countries; Prerequisites of successful planning; Centralized and Decentralized planning; Capital-Output ratio - meaning and importance in planning.

Note for Paper Setters :

The question paper will contain two sections. In the first section, two questions from each unit i.e. 8 questions in total will be asked. The candidate will be required to answer any four questions of 6 marks each (choosing one question from each unit), word limit is not more than 250 words each. Second section will contain two questions from each unit i.e. 8 questions in total. The candidate will be required to answer one question from each unit i.e. a total of 4 questions. There will be internal choice with each unit. Each question will carry 14 marks and word limit is not more than 600 words.

The distribution of the Internal Assessment of 20 marks will be as follows : There shall be two written assignments of 10 marks each.

Suggested Readings :

1. Aggarwal R.C. : Economics of Development and Planning, Lakshmi Narain Aggrawal. Agra.
2. Bhagwati, J and Desai, P. : India-Planning for Industrialisation, OUP, London.
3. Hayami, Y : Development Economics, Oxford University Press, New York.
4. Haggins, B : Economic Development, Norton, New York.
5. Jhigan, M.L. : The Economics of Development and Planning, Vrinda Publication, Delhi.

6. Joshi, M.V. : Environmental Economics, Atlantic Publisher and Distributors, New Delhi.
7. Kindleberger, C.P. : Economic Development, Norton, New York.
8. Kumar, Pushpam (ed.) : Economics of Environment and Development, Ane Books, New Delhi.
9. Lekhi, R.K. : The Economics of Development and Planning, Kalyani Publishers, New Delhi.
10. Lekhi, R.K. and Sujata Slathia : Development and Environmental Economics, Kalyani Publishers, Ludhiana.
11. Meier, G.M. : Leading Issues in Economic Development, OUP, New Delhi.
12. Shankar, U. (ed.) : Environmental Economics, OUP, New Delhi.
13. Thirwal, A.P. : Growth and Development, Macmillan, London.
14. Todaro, M.P. : Development Planning - Models and Methods, OUP, New Delhi.

DISTINCTION BETWEEN ECONOMIC GROWTH AND ECONOMIC DEVELOPMENT; FACTORS AFFECTING ECONOMIC GROWTH

B.A. Sem-VI | **Unit - I**

EC-601 | **Lesson No. 1**

STRUCTURE

1.1 Introduction

The great depression of thirties and the Second World War were the two major historic events, which have made radical turn to the study of principles, problems and policies pertaining to economic development. This was perhaps due to the fact that most of the Asian and African countries got independence from the colonial slavery. Since then economists have studied the problem of accelerating development in underdeveloped countries and of maintaining development in developed countries of the world. Therefore, economic development is of utmost importance for all types of economies.

1.2 Objectives

After going through this lesson, you will be able to:-

- Explain the meaning of economic growth and economic development;
- Describe the similarities between economic growth and economic development;
- Differentiate between economic growth and economic development;
- Discuss the economic factors affecting economic growth and
- Non-Economic factors affecting economic growth.

1.3 Economic growth and Economic Development

1.3.1 Definitions of Economic Development:

The definitions of economic development can be broadly classified into two parts:

(A) Classical based on (i) increase in national income and (ii) real per capita income.

(B) Modern based on economic welfare.

(A) Classical Definitions

I. Definition based on increase in National Income

According to Paul Albert, "Economic Development is the exploitation of all productive resources by a country in order to expand real income." In short, economic development is a process by which real national income of the country increases over a long period of time."

II. Definition regarding Real Per Capita Income

I. According to Prof. Meier and Baldwin, "Economic development is a process whereby an economy's real national income increases over a long period of time." This definition is simple and precise. This definition emphasizes on three ingredients of economic development Process, Real National Income and Long Period. These three ingredients serve as the basis of understanding the main concept of economic development:

(a) Process: In this definition, the term process means long-term changes in the economy. The effect of these changes is on the supply of the resources and the factors affecting the demand for goods.

(b) Real National Income: The objective of economic development is increase in per capita income. It is estimated by dividing national income by population.

Per Capital Income = National Income/Population

(B) Modern definitions based on economic welfare

During 1970's, economists tried to redefine the concept of economic development especially in terms of reduction of poverty, inequality and unemployment in a growing economy. "Redistribution with Growth" became the popular slogan. Some of the welfare definitions of economic development are as follows:

According to **Colin Clark**, "Economic development is simply an increase in economic welfare."

According to Okun and W. Richardson "Economic development may be defined as a sustained secular improvement in material well being which may be considered to be reflected in an increasing flow of goods and services."

After studying both the above approaches, we conclude that all the above definitions explain one or the other aspect of economic development. If the main points of the above definitions are linked together, then a more suitable and comprehensive definition of economic development may be given by Prof Todaro. It follows: "Economic development is a multi-dimensional 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."

1.3.2 Features or Characteristics of Economic Development

Let us now discuss in brief the main features of economic development which may be summarized as under:

1. Economic development is a dynamic process. It suggests that all the economic development variables should continue to change to suit the requirements of economic development.
2. Economic development is a long-term phenomenon. It signifies that after all economic development is not a miracle which can be performed in a short span of time. It must be continuous and spread over a long period of time for achieving the desired goals.
3. Economic development is measured by the real per capita income. Higher the per capita real income, higher will be the level of economic development. This suggests that higher per capita income is possible when there is continuous increase in national income and growth of population is under control.
4. Economic development refers to the quantitative as well as qualitative improvement in the development variables. In other words, economic development implies Growth plus Change. Growth is thus a symbol of increase in the development variables, such as, real national income, net national output, capital investment, value of savings etc. Change refers to the alterations in the social, political, technical and institutional frame-work.
5. Distributive justice is another important feature of economic development. Fair and equitable distribution of wealth is a necessary condition for economic development. In the face of glaring inequalities, people will not be prepared to

give their whole-hearted and continuous co-operation for the implementation of economic programs for development.

6. Human approach is also an important feature of the modern economic development. According to Dr. Omen, economic development refers to the raising of people from inhuman elements like poverty, unemployment, ill-health etc. and making them more human.

1.3.3 Meaning of Economic Growth

In recent literature, the term economic growth refers to sustained increase in a country's output of goods and services or more precisely, product per capita. Economic growth may be defined as a steady and continuous rise in the aggregate real national product of an economy over a long period of time. Today, every country, whether advanced or backward, would like to maintain an adequate level of its annual growth rate.

Economic growth indicates sustained increase in per capita real income of a country. Real income is nominal income minus inflation rate. Moreover, economic growth is said to have taken place when the growth rate of real national income is higher than the growth rate of the population in the country. For instance if the real national income increases by 6 percent and population increases by 2 percent then real increase in per capita income would be 4 percent which can be called the growth rate of the economy in per capita terms or 6 percent in terms of national income of the country.

1.3.4 Distinction between Economic Growth and Economic Development

In a general way, the term economic growth and economic development are considered to be synonymous and are inter- changeable. It is difficult for a layman to make any distinction between these terms, but economists like Schumpeter, Maddison, Kindleberger and Dr. Bright Singh came forward and attempted to draw a line of demarcation. Thus economists distinguish between these two concepts.

1. According to Prof. J.A. Schumpeter, "Development is a continuous and spontaneous change in the stationary state which forever alters and displaces the equilibrium state existing previously, while growth is a gradual and steady change in

the long run, which comes about by a general increase in the rate of savings and population."

2. According to Prof. A. Maddison, "The rising of income levels is generally called economic growth in rich countries and in poor countries, it is called economic development".

3. According to C.P. Kindleberger, "Economic growth means more output and economic development implies both more output and changes in the technical and institutional arrangements by which it is produced."

4. According to Dr. Bright Singh, "Economic development is a multi-dimentional phenomenon; it involves not only increase in money incomes, but also improvement in real habits, education, public health, more leisure and in fact all the social and economic circumstances that make for a fuller and happier life. On the contrary, in case of economic growth, there is increase in national income alone. There is no structural change in the economy".

The above mentioned views of different economists show that these two terms are nothing but synonymous. The differences in both are imaginary and unreal.

In this context, it is better to quote Prof. Lewis. According to him, "Most often we shall refer only to 'growth' but occasionally, for the sake of variety, to 'Progress' and 'Development'."

The main points of difference between the two are stated below:

1. Single Dimensional and Multi-Dimensional: Economic growth is single dimensional, which is concerned with increase in national and per-capita income. On the contrary, economic development is multi-dimensional. It is concerned both with income and structural changes. In fact economic development is a broader term.

In case of economic development, along with increase in national income, there is change in the economic, social and political structure of the country. For example, relative contribution of agricultural sector in national income declines and that of industrial and service sector increases. On the other hand, in case of economic growth, there is increase in national income alone. There is no structural change in the economy.

2. Quantitative and Qualitative Change: Growth is quantitative and development is qualitative. There are many important qualitative changes in development process which take it beyond growth. These qualitative changes manifest themselves in the form of efficient functioning of the factors of production and improved techniques of production. Economic development is related not only with increase in production but also its equitable distribution. If increased national income is not properly distributed then there will be no change in the standard of living of the weaker section in the economy.

3. Steady vs. Spontaneous and Continuous vs. Discontinuous Changes: The term 'Development' is used for steady and continuous changes while the term 'Growth' is used for spontaneous and discontinuous changes.

4. Economic Development implies Economic Growth: Some economists used the term economic development to describe the determinants of economic growth, such as changes in techniques of production, in social attitudes and in institutions. Due to these changes, the national income increases and is called economic growth. In this regard, development is the determinant of growth.

5. Growth without development. Growth is possible without development. For example the main cause of rise in national income of Liberian economy is the export of primary goods. But this production is done in those gardens whose ownership is in the hands of foreign companies.

6. Special Problems of Underdeveloped Countries: The term economic development is used for the full utilization of unutilized natural and human resources of the underdeveloped countries, while on the other hand, the term economic growth is referred to for maintaining the situation of full employment in developed countries.

1.3.5 Differences between Economic Growth and Economic Development

Economic Growth	Economic Development
1. Single dimensional phenomenon.	1. Multi-dimensional phenomenon.
2. The rising of income levels are generally called growth in rich countries.	2. The rising of income levels are generally called development in poor countries.
3. Discontinuous change.	3. Gradual and steady change in the long run.
4. Growth means more output.	4. Development implies more output by making changes in the technical and institutional arrangements.
5. Economic growth is a narrower concept than economic development.	5. Economic development is wider concept than economic growth.
6. Solution of problems of developed countries.	6. Solution of the problems of under developed countries.
7. Growth related to developed countries.	7. Development related to under-developed countries.
8. Economic growth is spontaneous in character.	8. Economic development is regulated and controlled in character.
9. Economic growth is possible without economic development.	9. Economic development is not possible without economic growth.
10. Economic growth is an expansion of the system in one or more dimensions without a change in its structure.	10. Economic development is an innovative process leading to the structural transformation of social system.
11. Quantitative changes in national and per-capital income.	11. Both quantity and quality of output will improve. It will change composition and distribution of national and per-capita income.

Check your progress I.

Note: Write your answer in the space given below:-

Q. 1: Give one definition of Economic Development based on the concept of National Income.

Ans.____

____

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____

____

Q. 2: Describe the concept of Economic Growth.

Ans.____

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1.4 Factors affecting Economic Growth:

The process of economic growth of an economy is really a complex phenomenon and is greatly influenced by a number of factors which may be classified into two parts-economic and non-economic factors.

A. Economic Factors

1. Capital
2. Labour
3. Technology
4. Natural Resources
5. Structural Changes
6. Size of the Market

7. Removing Market Imperfections
8. Financial Stability
9. Organization and Able Entrepreneurship.

B. Non-Economic Factors

1. Desire for Development.
2. Wide spread Education.
3. Social and Institutional Changes.
4. Maintenance of law and order.
5. Political and Administrative efficiency
6. Psychological factors
7. Social Justice
8. Religious outlook

Let us explain the main economic and non-economic factors in detail:

1.4.1 Economic Factors

Economic factors are those which directly influence the development of the country. The growth rate of economy rises or falls as a result of changes in them.

1. Capital

Undoubtedly, capital is the core of economic development. In simple words, capital refers to that part of the wealth of an economy which is utilized for further production of wealth. It includes all forms of reproducible wealth utilized directly or indirectly in the production of a large volume of output. A huge amount of capital is invested on the construction of irrigation schemes, production of agricultural tools, building of big dams and bridges, land reclamation machines, roads, railways, airports etc.

Role of Capital

- **Helpful in Raising Per Capita Productivity:** Capital is helpful in raising per capita productivity as the stock of capital in an economy is closely related to the possibilities of effecting changes in the scale of technology of production. In fact, the economy remains in a better position to enjoy the advantages of large scale production and increased production.

- **Methods of Production:** Rapid capital accumulation may further lead to an increased supply of tools and machinery per worker. They enable them to use mechanical devices for producing goods.

- **Necessary for expanding production:** With rapid growing population, increased capital accumulation is a pre-requisite for expanding production and providing employment to the growing labour force.

- **Technical Progress is Possible:** Additional capital is required to adopt new technology. It may either finance the discovery of new techniques or helps to change the existing knowledge of commercial exploitation through new innovative designs.

- **Capital and Agricultural Development:** In most of the underdeveloped countries, more than 70 per cent people are directly or indirectly dependent on this sector, while in developed countries, hardly 5 per cent to 10 per cent people are dependent on agriculture. Therefore, in poor countries, capital is needed for the development of irrigation, to control floods, and for crop rotation.

- **Capital and Industry:** Capital is the basic need for the development of industrial sector. It is required to adopt moderate and latest technology especially in underdeveloped countries. In fact, the mode of production is primitive and out-dated. As a result, it adversely affects the productivity. In order to accelerate the pace of economic development in industrial sector, capital is the key factor.

- **Capital and Natural Resources:** Generally, in underdeveloped countries, natural resources are under-utilized or misused on account of the fact that these countries do not possess sufficient capital. In this way, it is capital which leads to the proper utilization of natural resources.

- **Capital and Population Growth:** According to some economists, higher growth of population is an obstacle in the path of economic development. Capital is required to adopt family planning techniques and other methods of controlling population especially in poor and less developed countries. Another argument is that capital is the foremost requirement to meet the requirement of food, shelter and housing etc. in these countries.

- **Capital and Public Utility Services:** Prof. Lewis has noted that less developed countries need very heavy expenditure on public utility services and infrastructures like roads, railways, electricity, communication system etc. In fact, these basic utilities speed up the pace of development of a country.

2. Labour

Labour is the primary factor of production which is considered important not only in terms of its use but by way of social and political considerations also. A society which does not employ labour rationally creates very serious problems for itself. Over employment of labour results in its exploitation and unemployment causes poverty, economic inequality, social unrest and political disturbance.

Definitions of Labour

In ordinary language, labour is very often used to represent the mass of labour. But in Economics, it is used in a wider sense.

Dr. Marshall defines labour "as any exertion of the body or mind undertaken wholly or partly with some object other than the pleasure derived from the labour itself."

According to **A.H. Smith,** "Labour includes all the efforts made by man to earn a living."

According to **Thomas,** "Labour refers to all human efforts of body or mind, undertaken in the expectation of reward."

This means, any work whether mental or manual, undertaken for monetary reward is labour.

Role of Labour in Economic Development

- **Basis of Consumption:** Labour is a human factor and the main source of consumption. Utility is created (Production) for the satisfaction of his needs. **Lord Keynes** was of the view that a stimulus to investment comes via increase in consumption. When investment increases, income increases which leads to increase in consumption. The basis of this consumption is labour.

- **Basis of Production:** Producers produce the commodities when they are assured by consumers that their products would be consumed. Labour is the basis or the compulsory factor of production. It is a mobile factor and brings in use the other factors of production like land and capital.

- **Basis of Exchange:** Labour is a basis of not only consumption and production, but it also serves as a basis of exchange. A man needs so many commodities to fulfill his daily needs. He cannot produce all of them. He has to satisfy his needs by exchanging his surplus production with others. So labour serves as a basis of exchange.

- **Basis of Distribution:** National income is the result of the contribution of all the factors of production. So labour becomes the basis of this distribution of national income among all factors. The contribution of each factor depends on its marginal productivity. If labour is efficient, its share in national income would go up.

- **Basis of Economic Growth:** Technically sound and intelligent labour serves as a spinal cord of the nation. Efficient labour force makes proper use of the scarce natural resources of the country. Sincere, dedicated, devoted, hardworking and intelligent labour force helps the country to march on the path of development.

3. Technology

It has been observed that the main cause of poverty in underdeveloped countries is that they suffer from technological backwardness. A specific level of technological advancement is the necessary pre-condition for rapid growth. The U.N. experts observed: “Unless special effort is made, the process of technological development in the UDC's will be relatively slow and the gap in technology will continue to grow wider as the cumulative scientific progress of developed countries accelerates."

Meaning of Technological Change

Technological change means the technical knowledge used in the production of capital and machinery. The various changes in technology lead to an increase in the productivity of labour, capital and other production factors. Technological progress comprises of creation of skill, new means of production, new uses of raw materials and the widespread use of machinery.

Role of Technology in Economic Development

Technological advancement and economic growth are truly related to each other. The level of technology is also an important determinant of economic growth. The rapid rate of growth can be achieved through high level of technology. Schumpeter observed that innovation or technological progress is the only determinant of economic progress. But if the level of technology becomes constant, the process of growth stops. Thus, it is the technological progress which keeps the economy moving. Inventions and innovations have been responsible for rapid economic growth in developed countries.

The impact of technological change on production functions can be illustrated with the help of following diagrams.

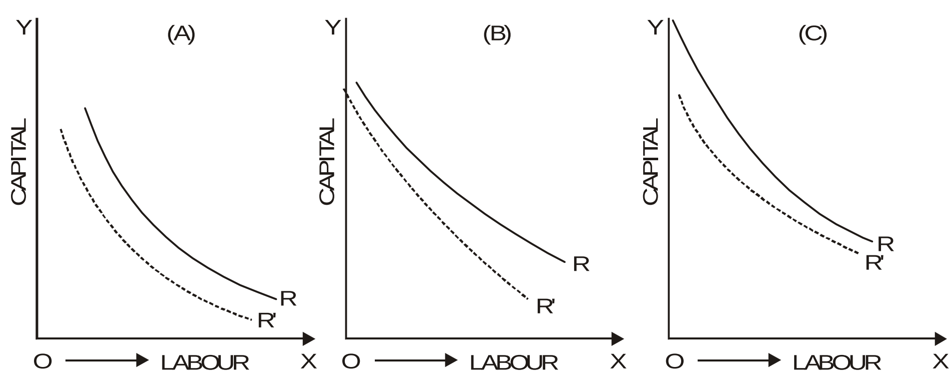

Fig 1 Fig . 2 Fig. 3

In the above figures 1.1 to 1.3, R is an isoquant of production function before technological change and R’represents the same quantities output after the innovation in the first figure. The innovation is neutral with respect to labour and capital. The new production function R’shows that the same output can be produced with less labour and less capital after technological advancement. The second figure shows that innovation is labour saving and R ’shows that same output can be produced with lesser inputs but the saving of labour is greater than that of capital. The third figure shows that the innovation is capital saving and R ’shows that the same output can be produced by less inputs after technological change but saving of capital is greater than that of labour.

It is generally assumed that the technological advancement is more important than even capital formation. But the capital formation alone can bring out economic development to a limited extent and the progress stops if there is no technological change. A country cannot remain dependent on the import of technology. A nation that spends more on science and technical research will tend to grow faster than another country accumulating more capital but spending less on technological development. This can be explained with the help of following diagrams:

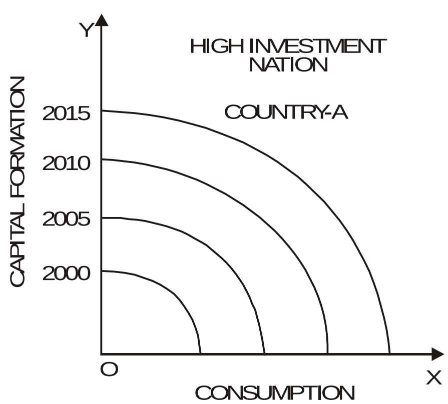

Fig 4

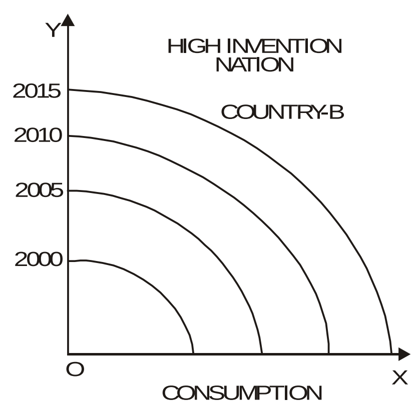

Fig . 5

In the first figure (1.4) the country A concentrates on accumulation of more capital resources while in second figure (1.5), country B focuses attention on technological aspects but does not regulate the accumulation of capital. It is clear that the progress of country B is faster than that of country A due to the high rates of technological development.

Check your Progress II.

Note: Write your answer in the space given below:-

Q. 1: What is Capital?

Ans.____

Q. 2: What is the meaning of labour in Economics?

Ans.____

Q. 3: What is technological change?

Ans.____

4. Natural Resources

In narrow sense, natural resources mean the gift of nature which can be appropriated in accordance with its requirements but in a broader sense, they include those gifts of nature such as air, water, sunshine, animals, vegetables, plants, forests etc. satisfying human wants. According to McGraw Hill dictionary of Modern Economics, "Natural resources include raw materials and wild life available in nature for man's use including minerals, forests, water and food". In this way every invention which increases man's control over nature also increases the sum total of available resources. Amongst these resources land was regarded as occupying the dominant position. For economic growth, the existence of natural resources in abundance is pre-requisite. Countries which are rich in natural resources can make a good start with the aid of modern technology as compared to others.

Prof. W.A Lewis has rightly pointed out, “Other things being equal, men can make better use of rich resources than they can of poor.”

5. Structural Changes

Structural changes and organizations are also crucial factors which determine economic development of the economy. The growth process has not to make optimum allocation or efficient use of existing resources but has to increase the supply of resources and further put to different uses.

In poor agrarian countries, the structural change means a reduction in properties of rural population engaged in primary sector in comparison to other sectors. In other words, population in agriculture sector has to be reduced and simultaneously other non-agricultural sectors will have to be expanded. Prof. Meier and Baldwin have rightly observed, that, “New wants, new motivations, new ways of production, new institutions need to be created if national income is to raise more rapidly. Where there are religious obstacles to modern economic progress, the religion may have to be taken less seriously or its character altered.” Entrepreneur as an organizer also plays a dominant role in the economic activities. He performs the task of an organizer and undertakes many risks. In short, his main function is to innovate. For industrial revolution and the economic growth of U.S.A. in 19th century all credit goes to him. In brief, structural changes and organization go a long way in promoting economic growth in a poor and backward economy.

6. Size of the market

Large size of the market would stimulate production and increase employment opportunities. It will increase national income and per-capita income in the economy. In order to increase size of the market, it is essential that weaknesses of the markets are removed, credit facilities are extended and monopoly tendencies are controlled.

There should be free flow of goods and services and quality control measures are properly taken care of.

7. Removing Market Imperfections

It means that markets must be all free from imperfections which check the development by allowing only partial utilization of resources. Market imperfections prevent the flow of resources from less productive to more productive occupations and are to a greater extent, responsible for under-utilization of resources. According to **Schultz,** “Alternative flows of social and economic organizations are required to remove the market imperfections.” However in order to accelerate development, it is a pre-requisite that the resources should be utilized to the maximum and the market is free from all sorts of impediments to growth.

8. Financial Stability

It implies the existence of an efficient and organized capital market in the country. It will facilitate easy availability of money in a requisite quantity. Monetary policy of the country should be conducive for economic growth. Supply of money should be in consonance with needs of the country with proper level of rate of interest that can ensure price stability as well.

9. Organization and Able Entrepreneurship

Organization relates to the optimum use of factors of production in economic activities. Organization is complementary to capital and labour and helps production to reach the maximum level. In the modern economic system, the entrepreneur performs the duty of an organizer and bears all risks and uncertainties. He is an economic leader who possesses the ability to recognize opportunities for successful introduction of new commodities, new techniques and new sources of supply. He is the kingpin of any business enterprise and without him the wheels of industry cannot move.

Most of the LDCs in the world are poor because of acute deficiency of able entrepreneurship. The Japanese possess such attitude in abundance. This is the reason for Japan’s rapid economic growth.

1.4.2 Non-Economic Factors

Non-economic factors comprise cultural, institutional, moral values, social and political organizations which greatly influence the process of economic development in a country. They are indirect factors.

United Nations experts have pointed out: “Economic Progress will not occur unless the atmosphere is favourable to it. The people of a country must desire progress and their social, economic, legal and political situations must be favourable to it.”

Despite the fact that economic factors are significant, non-economic factors are more dynamic and powerful which determine economic development to a greater extent.

Let us now examine these non-economic factors in detail.

1. **Desire for Development:** It is universally true that desire determines development. The desire for development must come from the heart of the people. Therefore, it is the foremost factor responsible for initiating and accelerating the process of economic development. There cannot be rapid progress unless people want it e.g. politicians, engineers, teachers, businessmen, trade unionists, journalists and all others desire progress for the country and should be willing to pay the price for it. The greatest progress will occur in those regions where education is wide spread and it encourages experimental outlook.

In the words of Prof. Cairncross, “Development is impossible if it does not take place in the minds of men.”

2. **Widespread Education:** It has been rightly observed by Prof. Krause who claimed that, **“Education brings revolutions in ideas for economic progress.”** Therefore, it has been maintained that educational gap is mainly responsible for the backwardness of low-income countries. General advancement in technology is hindered in underdeveloped countries due to lack of education. In fact, education is the main spring of economic growth which teaches honesty and inspires patriotism. Progress, thus, will occur more rapidly in those countries where education is widespread.

According to **Prof. H.W. Singer,** "Investment in education is not only highly productive but also yields increasing returns. So education plays pioneer role for the creation of human capital and social progress which in turn determines the progress of the country".

3. Social and Institutional Changes: It has been maintained that social and institutional changes are both means and end of economic development. Conservative and rigid social set up such as joint family system, caste system, traditional values for life etc. retard the pace of economic development. Philosophy and theory of salvation have greatly obstructed economic growth and aggravated the situation in the morass of poverty and backwardness. They have prevented horizontal and vertical mobility of labour. In short, in order to accelerate the pace of economic development, present social and institutional framework has to be changed and modified in accordance with new environments.

4. Maintenance of Law and Order: In welfare states, maintenance of law and order is the primary responsibility of government which further helps to promote economic development at a higher rate. Defense of the country against external aggression and protection of public property are most important functions of efficient government. Peace, stability and legal protection, generally boost up entrepreneurship. An efficient and able government can stimulate capital formation by adopting the right monetary and fiscal policies.

It is a sorry state of affairs that in most of underdeveloped countries there is no law and order. There is anarchy, confusion and disorder which has hampered the social and economic activities and progress. The larger scale of disorder leads to the greater drain of national resources from the development activities to non development channels. A huge amount is spent for financing the military and police for the restoration of law and order in the region.

5. Administrative Efficiency: The existence of strong, competent and honest administrative machinery is another crucial determinant of economic development in a country. If the government and administrative set up is weak, inefficient, corrupt, it leads the country into chaos and creates disorders.

Prof. Lewis remarked: “The behaviour of the government plays an important role in stimulating or discouraging economic activity.”

Unfortunately, most of the Underdeveloped countries possess loose administration and leaders generally lack dynamism. Under these conditions, rapid progress is impossible. On the other hand, strong and efficient administration not only enables to maintain law and order but frames effective economic policies. They enhance the faith of public in administration.

6. Psychological Factors: The economy of UDCs has been badly guided by traditional customs, outdated ideology, old values and obsolete attitudes which have not been conducive to their economic development. Thus, there is need to change or modify these social and psychological factors for the rapid economic growth in such economies. But it is not so easy and moreover, any rapid change may bring discontentment and resistance in the society. Only the selective social and psychological changes can lead to economic growth in UDCs.

7. Social Justice: Social justice means that economic and political power should be equally distributed in the country and there should be no concentration of economic power in the hands of few people. With social justice, people will have more incentive for economic growth in the country. In UDCs, the absence of social justice presents a serious problem in their path of economic growth. The government should help obtain social justice through land reforms, reduction in inequalities of income through progressive taxation system, decentralization of economic power, workers participation in management etc.

8. Religious Outlook: If the people of the country give importance to material development and do not consider economic progress as anti-religion and have full faith in their labour and hard work, the country is bound to have rapid economic growth.

1.4.3 Let us sum up:

To conclude, we can say that the process of economic development of an economy is a very complex phenomenon. Both economic as well as non- economic factors are important. Economic growth is not possible as long as non-economic factors do not encourage development.

1.5 Lesson End Exercise

A. Long answer type questions:

1. Define Economic Development. Is economic development desirable?

2. Distinguish between Economic Development and Economic Growth.

3. What is Capital? State its role in economic development.

4. Capital occupies the central position in economic development in U.D.Cs. Explain.

5. What role is played by labour in economic development of a developing economy?

6. What is Technological change? Give its significance.

7. Technology is the heart of economic development, comment.

8. Explain economic factors affecting economic growth.

9. To what extent do non-economic factors affect economic growth? Give your views.

B. Short answer type questions:

1. What do you know about economic development?

2. State the main features of Economic Development.

3. Explain the term Economic Growth.

4. Define the concept of economic development in terms of (*a)* classical and (b) modern definitions.

5. In what way, does Economic Development differ from Economic Growth?

6. Give the meaning of capital in your own words.

7. State any four points showing the role of capital.

8. Define the concept of labour.

9. Examine the role of labour in economic development of an economy.
10. What is Technology?
11. Evaluate the role of technology in economic development.
12. State the process of Technological Change.
13. Briefly explain the difference between economic and non-economic factors affecting economic growth.
14. Explain any two economic factors affecting economic growth.

1.6 Suggested Readings:

1. Aggarwal R.C. Economics of Development and Planning, Lakshmi Narain Aggarwal, Agra.
2. Jhingan, M.L: The Economics of Development and Planning, Vrinda Publications, Delhi
3. Lekhi, R.K: The Economics of Development and Planning, Kalyani Publishers, New Delhi.
4. Lekhi, R.K and Sujata Slathia: Economics of Development and Planning, Kalyani Publishers, Ludhiana.

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SUSTAINABLE DEVELOPMENT

B.A. Sem-VI **Unit - I**

EC-601 **Lesson No. 2**

STRUCTURE

2.1 Introduction:

Dear learners, in the first lesson you have learned about Economic Development and Economic Growth. Now in this lesson, we will try to understand what is sustainable development? On one hand, population of the earth is growing rapidly while on the other hand, with the technological and scientific revolution, developmental activities have been accelerated to such an extent that in certain areas they have become a threat to the environment. The utilization of natural resources is there are worrying signals regarding the conservation of environment. The degradation of the environment due to industrial and other wastes discharged into the atmosphere and hydrosphere has also caused many problems. All these environmental problems associated with development have raised several questions regarding the type and nature of development and this has given rise to the concept of 'sustainable development.'

2.2 Objectives:

After going through this lesson, you will be able to:-

- Explain the meaning of Sustainable Development;
- State the objectives of Sustainable Development;
- Describe the indicators of Sustainable Development and
- Discuss the policies of Sustainable Development.

2.3 Meaning:

The term 'sustainable development' was first used by the 'World Conservation Strategy' presented by the International union for the conservation of Nature and Natural Resources in 1980.

According to **Brundtland Report,** 1987 "Sustainable Development means meeting the needs of the present generation without compromising with the needs of the future generations to meet their own needs".

Thus sustainable development refers to development which should keep going. It is the creation of sustainable improvements in the quality of life of all people through increase in real income per capita, improvement in education, health and general quality of life and improvements in quality of natural environmental resources. It can be modified as a path of development in which options of future generations are not compromised by the path taken by the present generation. Sustainable development is development that is everlasting. It contributes to the quality of life through improvements in natural environments.

The World Development Report of 2000 emphasizes the creation of sustainable improvements in the quality of life for all people as the principal goal of development policy.

According to one of the **UN publications,** Sustainable Development means, “improving the quality of human life while living within the carrying capacity of supporting ecosystems”.

2.4 Objectives of Sustainable Development:

The main objectives of Sustainable Development are stated as under:

(i) It aims at the creation of sustainable improvements in the quality of life for all people.

(ii) Increasing economic growth through meeting basic needs i.e. raising the standard of living.

(iii) Providing chance to participate in public life and helping to clean environment.

(iv) Promoting intergenerational equity.

(v) Aiming at maximizing the net benefits of economic development subject to maintaining the stock of all environmental and natural resources.

(vi) Aiming at accelerating economic development in order to conserve and enhance the stock of environmental, human and physical capital without making future generations worse off.

(vii) It aims strongly that the natural capital stock should not decline. Moreover, weak sustainability needs that total value of physical, human and natural capital stock should not decrease.

Check your progress:

Note: Write your answer in the space given below:-

Q.1 Explain briefly the meaning of sustainable Development.

Ans.____

Q. 2: Describe any three objectives of Sustainable Development.

Ans.

2.5 Indicators of Sustainable Development:

It links present development with future development. But here, a question arises, that how can we say whether sustainability is achieved or not? How can we sanction the plan, policies, programs, and projects with the context of sustainability? What should be the indicators of sustainability? Some learned economists and experts like Daly and Cobb, El Serafy, Clarke, Mathews and Tunstall, Goodland, Homeberg, Dalal Claton etc. have given few indicators as explained below:-

1. **Total Production growth rate**: This represents success or failure story of working machinery of the economy as a whole. GDP is the basic and very important criterion of development. The growth rate of GDP depends upon total production of goods and services which depends upon capital formation, M.E.C., infrastructural facilities, planning etc. Higher growth rate is essential for economic and social welfare of present and future generations. It reduces unemployment and poverty, which is directly connected with the reduction in the environment damage caused by poverty.

2. **Population:** Population should be sustained in the context of environment. Over population leads to over exploitation of the natural resources which is very harmful in achieving sustainability. Labour is very important factor of production but it is also true that human beings are ultimately responsible for present pollution problems. Thus,

population control is required. Optimum population is essential for optimum use of resources for the welfare of present and future generations. It is one of the major causes of environmental degradation.

3. Water Supply and its uses: Water is the key factor in production and consumption process. Water is required for domestic, agricultural, industrial and many other uses. The use of water is more than its renewable capacity. Overuse of water in inefficient manner has created water crisis for present generation, then what would be the scenario for future generations? So we should try to save water as it is very essential for existence of life.

4. The availability of clean and pure air: The availability of pure air for present and for future generations is one of the significant indicators for the sustainability, as it is life supporting necessity for human beings and other creatures. In Economics, we are teaching that air is God gifted free good. But in present circumstances this is not perfectly true. Pure air is God gifted but man has polluted it. There is scarcity of fresh and pure air.

5. Industrial and Urban Development: Automobiles and industries are letting-out pollutants in the air. Many gases mix in the air. These include Carbon dioxide, Carbon monoxide, Sulphur oxide etc. All this has resulted in the greenhouse effects and acid rains. This would create many health problems. This would also eliminate the sustainability of the development process.

6. Human Resource Development: It is very useful for achieving sustainable economic development because human quality is required in the development process. Education, training, nutritional standards, research and development, health, standard of living etc. are the main indicators of HRD index. More than 0.8 HRD index is considered as high and less than 0.5 is to be considered poor. At present, India is passing through the phase of demographic dividend which is both an opportunity as well as a challenge, as more resources need to be created for making these people productive.

7. Energy Intensity: There are specific impacts in the changes in the trends of demand and supply of energy on sustainable development. Energy intensity is very important in total output. It can be measured by Energy/GNP ratio. Lower Energy/GNP ratio reflects higher sustainability. There are two types of source of energy, exhaustible and renewable sources. Renewable sources are very important to continue energy generation. If the ratio of renewable energy proportions is greater, then longer will be the sustainability.

8. Resource Material intensity: Means of Production are scarce and having alternative uses. This is a basic economic problem. In this context, resource planning, resource allocation, resource combination, resource use technique etc. are very important.

From the above indicators of sustainable development, we understand that we should think about present as well as future development simultaneously. Over utilization of natural and other resources presently would damage the chances of future generations of utilising these resources.

2.6 Policies for Sustainable Development:

Let us explain these policies in detail:

1. Reducing Poverty: The foremost policy is to reduce poverty. Therefore such projects should be started which provide greater employment opportunities to the poor class. Government should expand health, family planning and education services, that will help reduce population growth. Investments in civic amenities like the supply of drinking water, sanitation facilities, alternate habitats in place of slums, etc. will go a long way in improving environment of the country.

2. Removing Subsidies: To reduce environmental degradation at no net financial cost to the Government, subsidies for resource use by the private and public sectors should be removed. In fact, these subsidies on the use of electricity, fertilizers, pesticides, diesel, petrol, gas, irrigation water, etc. lead to their wasteful use. In turn, they generate environmental problems. Removing or reducing subsidies will bring benefit to the country from all sides.

3. Market Based Approaches: There is urgent need for adopting market based approaches for the protection of environment. They aim at pointing to consumers and industries about the cost of using natural resources on environment. The Market Based Instrument (MBIs) approach is the best policy. It is of two types. (i) quantity based and price based. They are in the form of environmental taxes that include: “pollution charges (emission tax/pollution taxes), marketable permits, depositor fund system, input taxes/product charges, differential tax rates and user administrative charges (ii) Subsidies for pollution abatement equipment for air and water resources.

4. Classifying and Expanding Property Rights: Lack of property rights over excessive use of resources leads to degradation of environment. This leads to overgrazing of common or public lands, deforestation and over exploitation of minerals, fish, etc. Clarifying and assigning ownership titles and tenure right to private owners will solve environmental problems. Thus, the ownership rights should be properly clear in the records of the Govt.

5. Economic Incentives: Economic incentives regarding price, quantity and technology can also help to a greater extent. Incentives are usually given in the form of variable fees to resource users for the quantity of pollutants in air, water and land use. They are given rebates if less waste or pollution is generated than the emission standards laid down by the Govt.

6. Regulatory Policies: Regulatory policy is another weapon to be used in reducing environmental degradation. Regulators have to make decisions regarding price, quantity or the price of pollution or resource use or technologies. The regulating authority decides whether policies should target the environmental problem directly or indirectly. It lays down technical standards and regulations and charges on air, water and land pollutants. Regulatory authority should be impartial in applying environmental standards to both public and private sector polluters or resource users.

7. Trade Policy: Trade policy in relation to environment has two implications (i) Concerning domestic policy reforms; and (ii) relating to international trade policy.

Domestic trade policy stresses on the establishment of less polluting industries away from the cities and the use of environmental friendly processes for polluting industries by adopting cleaner technologies.

8. Public Awareness: Public awareness and participation are highly effective in improving environmental conditions. Conducting of formal and informal education programs relating to environment management and environment awareness programs can go a long way in controlling environmental degradation and keeping the environmental clean. Therefore public participation can also render costless and useful assistance in afforestation, conservation of wildlife, management of parks; improvements of sanitation and drainage system and flood control.

9. Participation in Global Environmental Efforts: In modern times, it is felt that participation in global environmental efforts can help to minimize damages made by degradation of environment. Therefore, efforts should be made to make agreements on environmental protection. One such case is the Montreal protocol on phasing out of Ozone-depleting chemicals.

2.7 Let us sum up

All of us now understand that all round development in agriculture, industrial sector, urbanization as well as infrastructure along with population growth have led to environmental degradation. Environmental degradation harms human health, reduces economic productivity and leads to the loss of amenities. The need of the hour is that it requires a judicious choice of economic and environmental policies and environmental investments to check environmental degradation to attain sustainable development.

2.8 Lesson End Exercise

A. Long answer type questions:

1. State your views on Sustainable Development. Is environmental problem harmful for society?

2. Define the concept of Sustainable Development. Point out its main objectives.

3. State the various indicators of Sustainable Development.

4. Describe in detail various policies for Sustainable Development.

B. Short answer type questions:

1. Define Sustainable Development.

2. Give any four objectives of sustainable Development.

3. Write down any two indicators of Sustainable Development.

4. Give any two policies of Sustainable Development.

2.9 Suggested Readings:

1. Jhingan, M.L: The Economics of Development and Planning, Vrinda Publications, Delhi.

2. Kumar, Pushpam(ed.): Economics of Environment and Development, Ane Books, New Delhi.

3. Lekhi, R.K and Sujata Slathia: Economics of Development and Planning, Kalyani Publishers, Ludhiana.

4. Meier, G.M: Leading Issues in Economic Development, OUP, New Delhi.

5. Thirwal, A.P: Growth and Development, Macmillan, London.

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DEVELOPMENT AND UNDERDEVELOPMENT-PERPETUATION OF UNDERDEVELOPMENT

B.A. Sem-VI **Unit - I**

EC-601 **Lesson No. 3**

STRUCTURE

3.1 Introduction:

Dear learners, in the previous lesson, we have studied the indicators and policies of sustainable development. In this lesson, we will study the concept of development and characteristics of developed countries. You will also come to know about perpetuations of underdevelopment which means all those characteristics which will keep a country backward for a longer period of time.

All countries in the world may be classified into two major groups; developed and underdeveloped (or developing) countries.

3 .2 Objectives:

After going through this lesson, you will be able to:-

- Explain the meaning of development;
- Describe the main characteristics of development;
- Discuss few definitions clearing the meaning of underdevelopment and
- Explain few perpetuations/characteristics of underdevelopment.

3.3 Meaning and Characteristics of Developed Countries

A developed country is one which has established herself comparatively at a very high level of prosperity by achieving the goal of maximizing total national output and per capita income of the people. These countries are the USA, the UK, France, Germany, Japan etc. which are very rich and prosperous in the world.

The main characteristics of developed countries are as follows:

1. **Significance of Industrial Sector:** Most of the developed countries have given much importance to the development of industrial sector. As we are quite aware of the fact, that these countries receive the major portion of their national income from industry, trade, transport and communication. For example, England generally receives nearly 50% of national income from industrial sector, 21% from transport and commerce, 4% from agriculture and 25% from the other sectors. The same pattern may be observed in the USA, Japan and other Western European countries.

2. **High Rate of Capital Formation.** Developed countries are generally very rich, as they maintain a high level of savings and investment, with the result that they have huge amount of capital stocks. The rate of capital formation in these countries is very high. The rate of investment constitutes 20% to 25% of the total national income. Well developed capital market, broader business prospects and capable entrepreneurship have led to a high growth of capital formation in such economies.

3. **Use of High production Techniques and Skills:** These countries have been giving priority to the scientific research so as to improve and evolve the new

technique of production. Consequently these countries find themselves to produce goods and services of a better quality comparatively at a lesser cost. It is because of the use of high production techniques and skills, that the countries like Japan, Germany and Israel could have developed their economies very rapidly, though they have very limited natural resources.

4. Low Growth of Population: The developed countries like the USA, the UK and other Western European countries have low growth of population because of their birth and death rates being low. Good health conditions, high degree of education and high level of consumption of the people improves life expectancy as well. The high rate of capital formation and low growth of population have resulted in high level of per-capita income and prosperity in these countries. The economic motive and strong desire to lead a better social life always inspire people to contribute towards development.

3.4 Definitions of Underdevelopment

The term 'underdeveloped country' is not easy to define because there is no universally acceptable criterion on the basis of which developed as well as underdeveloped countries can be distinguished from each other. However, the word 'underdevelopment' represents 'Poverty of Nations'. In fact, countries were classified as 'poor' or 'rich', using per capita real income as the basis. After Second World War, all poor countries were initially known as 'backward'. Later on, these countries were called 'underdeveloped'. Subsequently, the term 'less developed' has come into use. This implies that some countries are 'more developed and others are less developed'. But more recently, the usage 'developing countries' has been more popular as it signifies progress. Now, finally, low income countries are called 'Third World Countries'.

According to **UNO Group of Experts**, "The term underdeveloped country is that in which per capita real income is low when compared with the per capita income of the United States of America, Canada, Australia and Western Europe".

According to Indian Planning Commission, "An underdeveloped economy is characterized by the co-existence in greater or less degree of unutilized or underutilized man power on the one hand and unexploited natural resources on the other".

Ragnar Nurkse defined, "Underdeveloped countries are those which compared to advanced countries are underdeveloped with capital in relation to their population and natural resources".

According to **M.P. Todaro**, "Underdeveloped economy is that economy in which there are low level of living, absolute poverty, low per capita income, low consumption levels, poor health services, high death rates, high birth rates and dependence on foreign countries".

Check your progress:

Note: Write your answer in the space given below:-

Q. 1: Write any two characteristics of Developed Countries.

Ans.____

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Q. 2: Write down any one definition of an Underdeveloped Economy.

Ans.____

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3.5 Characteristics/ Perpetuations of Underdevelopment

Now let us examine some of the main characteristics of underdeveloped countries. These characteristics are responsible for prolonged existence of under development in these economies:

(i) General Poverty and Low Income: The majority of the people in underdeveloped countries generally possess low level of income because of their extremely low level of production. Two-third of world's people who live in such countries, receive hardly one-third of the world's income generated. They can be called poverty ridden. According to **Prof. A.N. Cairn Cross**, "Underdeveloped countries are the slums of the world economy". In World Development Report 2010, countries were classified into three categories; low income, middle income and high income countries. Low income economies are those economies whose GNP per capita was either $ 975 or lower to it in 2008; middle income economies possess GNP per capita between $ 976 to $ 11905; lastly high income economies are those with GNP per capita $ 11906 and above. A further division of GNI per capita $ 3855 is made between lower middle income and upper middle income economies.

World Bank Report 2015, (2011 –14) based on actual data, published the following figures regarding Per Capita GNP of different countries:

Qatar $ 1,40,649, Kuwait $73,246, UAE $67,674, Switzerland $ 59,540, U.S. $ 54,630 etc. These were some of the richest countries whereas on the other hand Central African Republic has just $ 594 GNP per capita, Nepal has $ 2,374, Bangladesh $ 3,123 and India has $ 5701. Thus, the low level of income is sufficient evidence to show the plight of common people in these countries. However average calorie intake in underdeveloped countries hardly exceeds 2000 as compared to more than 3000 calories in the case of diet of the common man of the advanced countries.

(ii) Underdeveloped Natural Resources: The natural resources in an underdeveloped country are either unutilized or underutilized. In fact, these countries are not deficient in natural resources like land, water, mineral, forest or power resources but they are not properly tapped. In other words, they constitute potential resources and are not fully utilized due to various constraints and problems. Here, it must be remembered that at times, country can be poor in resources but it may become rich in future because of discovery of unknown resources or new uses.

(iii) Capital Deficiency: It is both a cause and an effect of underdevelopment. Generally, underdeveloped countries suffer from chronic shortage of capital which is largely responsible for low per capita income in an economy. This, in turn, accounts for low rate of saving and consequently, low rate of capital formation. In this way, not only the existing stock of capital is inadequate to meet the basic requirements of economic development but the current rate of capital formation is also very low.

The scarcity of capital in underdeveloped countries is due to the following reasons:

(i) Low family income and low rate of savings;

(ii) Poorly organized capital markets and saving institutions;

(iii) Tendency to fritter away the major saving on conspicuous consumption.

(iv) **Excessive Dependence on Agriculture:** Most of the underdeveloped countries are predominantly agricultural and are typically raw material producers or primary good producers. In these countries, output and employment tend to be heavily concentrated in agriculture or mineral fields while manufacturing accounts for very little of output and employment. In other words, about 70 per cent to 80 per cent of their population is engaged directly or indirectly in agricultural occupations. This is due to the fact that secondary and tertiary sectors are not properly developed.

(v) Demographic Features: The underdeveloped countries are generally suffering from the problem of over population. In fact, Malthusian law of population is applicable to a large number of underdeveloped countries.

However, the main demographic characteristics of these countries are:

(a) Over-Population: Most of the underdeveloped countries are in the high population growth potential stage with high birth rate and sharp declining death rate. The birth rate in backward countries is nearly about 35 per thousand per year but still some have higher birth rates as 47 in Ethiopia and Pakistan, 41 in Bangladesh and Nepal, 44 in Libya and 46 in Guinea. In India birth rate (2009) was 22.5 per thousand and death rate (2009) was 7.3 per thousand.

(b) Expectation of Life: The average expectation of life in underdeveloped countries is much lower than that of advanced countries. It is largely due to low per capita income, low-standards of living, insufficient nourishment and non- availability of adequate medical aid to the poor sections of society. The average expectation of age in Asia, Latin America and Middle East is between 40 to58. On the other hand, it is 75 in Germany, 75 in United States, and Denmark, 77 in Canada, Switzerland and Norway and in Japan, it is 78. In India according to 2011 census, it was 63.5 years.

(c) Development Ratio: Another striking feature of demography in underdeveloped countries is that a much larger proportion of total population is in the younger age group. The percentage of population below 15 year of age is around 40 per cent in Asia, Latin America and Africa while in developed countries, its range is between 20 to 25 per cent of the total population. This means that the percentage of economically active population is very small in poor countries in comparison to that of advanced countries.

(vi) Foreign Trade Orientation: Most of underdeveloped economies export primary products and import consumer goods and capital goods. The recent World Bank data reveal that on an average about 80 percent export of the majority of underdeveloped countries are based on minerals, metals raw materials and other primary products. These countries largely depend on imports, consisting of fuel, manufactured goods, machinery, foreign capital, technological assistance, and even food. The regular decline in their income from foreign trade has reduced their capacity to import. Most of these developing nations have been facing the problem of unfavourable balance of trade and their liabilities in the form of foreign loans have increased substantially during the recent decades.

(vii) Existence of Underemployment and Disguised Unemployment: An underdeveloped economy is generally characterized by the existence of underemployment and disguised unemployment. The phenomenon of disguised unemployment is confined to the agricultural sector. It is the result of excessive pressure of population on land and most of the people lack alternative employment opportunities. In fact, disguised unemployment creates a situation in which it becomes hard to identify any person as unemployed or under-employed in the family.

(viii) Dualistic Economy: Another striking feature of underdeveloped countries is that these economies are mostly dualistic. It is dualistic in the sense that they are composed of (i) Market and (ii) Subsistence sector. The market sector is found in urban areas, while the subsistence sector exists in rural areas. The market sector possesses almost all modern amenities of life. For instance, transportation, communication, banking and other ultra modern facilities. But, on the other hand, subsistence sector is totally primitive and in a backward shape. Their main occupation is agriculture. Modern amenities of life are yet a dream for them and even beyond their reach.

(ix) Absence of Enterprise and Initiative: The absence of dynamic entrepreneurship and initiative is another common characteristic of underdeveloped countries. Land, labour and capital are the vital factors of production and as such they fail to contribute to their optimum capacity without the fourth factor—the entrepreneur. But limited size of the domestic market, poor knowledge of new horizons of development and defective laws restrict the growth of genuine entrepreneurship.

(x) Technological Backwardness: Technological dualism is another prominent feature of developing countries. Such countries are not using the best techniques of production available in countries which are economically better off. As a result of this backward and outdated technology, labour productivity per capita is low and production cost is high. The technological backwardness is mostly due to technical dualism. It implies the use of different production functions in traditional sector as well as in advanced sectors of the economy.

(xi) Factor Disequilibrium: An underdeveloped economy is characterized by the existence of factor disequilibrium. It implies that the factors of production in poor countries fail to achieve the equilibrium level. In a stagnant economy, various market imperfections prevent its movement towards the production frontier. In other words, underdeveloped economies are called for a high degree of factor immobility. Certain social institutions, difference in language, religion and custom are the main impediments to the path of mobility of labour. Other factors which restrict the optimum allocation of resources are monopolistic practices, ignorance of existing domestic and international market possibilities, lack of specialization, rigidity of price and unprogressive social set up.

(xii) Lack of Infra-Structure: Underdeveloped countries are recognized by the fact that they lack infrastructure, as compared to well advanced countries. The means of communication and transportation are not fully developed. Power generation is insufficient to meet the growing needs of the economy. Technical and professional facilities are poor.

(xiii) Poor Economic Organization: Economic organization plays a vital role in the economic development of an underdeveloped country. In these countries, Indirect taxes and custom duties account for high ratio of revenue and most of the taxes are regressive in nature. Banks and other credit institutions are non- existent especially in rural areas. The bill market and money market are totally unorganized.

(xiv) Economic Backwardness: According to **Prof. Meier and Baldwin,** "these countries have low labour efficiency, factor immobility, limited civilization in occupation and in trade, economic ignorance, values and social structure that minimizes the incentives for economic change". Therefore, low labour efficiency results from general poverty which is further reflected in low nutritional standards, ill health, illiteracy and lack of training and occupational mobility. The labour supply is not governed by wage rates but cultural and psychological factors. The occupational immobility of labour is also due to joint family system and caste system. They believe in fate rather than in hard work.

(xv) Unfavourable Institutional set up: Generally, underdeveloped countries possess unfavourable institutional set up which greatly affect the smooth functioning. They have defective land tenure system, imperfections of market forces, underdeveloped institutions for employment, trade and credit, low effectiveness in national politics, inefficiency and low integrity in public administration, lack of facilities etc.

3.6 Let us sum up:

All the above characteristics are responsible for prolonged existence of underdevelopment in these economies. These economies should make efforts to remove or reduce these characteristics to achieve higher rate of growth.

3.7 Lesson End Exercise

A. Long answer type questions:

1. Give the meaning of development. Explain the characteristics of a developed economy.
2. Explain the various features of an Underdeveloped Economy.
3. Discuss underdevelopment with the help of few definitions and write the main perpetuations of an underdeveloped economy.

B. Short answer type questions:

1. Give any one definition of underdevelopment.
2. Explain the following :
   (a) Capital Deficiency.
   (b) Demographic Features
   (c) Excessive Dependence on Agriculture

3.8 Suggested Readings:

1. Hayami, Y: Development Economics, Oxford University Press, New York.
2. Haggins, B: Economic Development, Norton, New York.
3. Jhingan, M.L: The Economics of Development and Planning, Vrinda Publications, Delhi.
4. Kindleberger, C.P: Economic Development, McGraw Hill, New York
5. Lekhi, R.K: The Economics of Development and Planning, Kalyani Publishers, New Delhi.
6. Lekhi, R.K and Sujata Slathia: Economics of Development and Planning, Kalyani Publishers, Ludhiana.

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MEASURE OF DEVELOPMENT :

HUMAN DEVELOPMENT - PQLI and HDI

B.A. Sem-VI	**Unit - I**
EC-601	**Lesson No. 4**

STRUCTURE

4.1 Introduction:

Economic development is a long process in which several forces or factors of production work together to bring about an economic change for the betterment.

The main objective of economic development is to maximize the production of consumer goods and services in the society which would positively increase the economic welfare of the masses.

4.2 Objectives:

After going through this lesson, you will able to:-

- Explain Development Gap;
- Discuss different criteria of development;
- Select best criterion of development;
- Understand Human Development Indices;
- Explain Physical Quality of Life Index;
- Discuss Human Development Index and
- State difficulties in measurement.

4.3 Development Gap

On November 4, 2010, UNDP released its 20th Human Development Report, in which India had marginally improved its position to 119th place out of 169 countries surveyed. The top five countries in 2010 HDI readings were Norway, Australia, New Zealand, the United States and Ireland while the bottom five were Mozambique, Burundi, Niger, Congo and Zimbabwe. The index stated that some of the world's poorest countries are doing worse on most key human development indicators than earlier years and the gap between the richest and the poorest countries is growing.

During the last two decades, the world has witnessed an increasing restlessness in UDCs to develop. This is due to two reasons. On the one hand, UDCs suffer from mass poverty which makes them difficult to develop and on the other, the existing gap between UDCs and developed countries is quite large and this gap is widening. UDCs have lagged far behind in development race. So there is need for these countries to grow fast. There is already a wide gap between them and the developed west. That gap needs to be bridged.

Extreme Poverty: Poverty has resulted in sub human living conditions in the third world countries. People have been denied food, drinking water, clothes, house, education and even medical facilities in these countries of Asia, Africa and Latin America. The major problem which is closely related to poverty is unemployment. Unemployment in these countries is mostly disguised and may be considered both a cause and effect of widespread poverty, because unemployment in disguised form steadily grows and in turn breeds further poverty.

International Inequality: The GNP per capita measured at PPP is very low in low income countries as compared to the high income countries. This fact reflects the glaring inequalities between the countries of third world and developed countries of the west. All countries including the most advanced countries of the West, were once at subsistence level. In fact, until the advent of industrial revolution, there were little international inequalities. Industrial Revolution, assisted by rapid technological development created wide international disparities. If the developed countries agree to provide financial assistance to developing countries, they can repeat the development performance of the western countries.

The third world countries are now conscious of international inequalities and they all wish to realize their development potential to check further widening of gap between them and Western countries.

4.4 Different Criteria of Development

Though there are several criteria or principles to measure the economic development, yet none provides a satisfactory and universally acceptable index of economic development. Hence, it is very difficult to give an exact measure of economic development. R.G. Lipsey maintains that there are many possible measures of a country's degree of development : income per head, the percentage of resources unexploited, capital per head, saving per head and amount of social capital. But more commonly used criteria of economic development are increase in national income, per capita real income, comparative concept, standard of living and economic welfare of the community, equality of income and wealth etc. Let us make a detailed study of these measurements for better understanding.

1. National Income as an Index of Development

There is a group of certain economists which maintains that the growth of national income should be considered most suitable index of economic development. They are Meier and Baldwin, Hicks D. Samuelson, and Kuznets who favoured this method as a basis for measuring economic development. For this purpose, Net National Product (NNP) is preferred to Gross National Product (GNP) as it gives a better idea about the progress of a nation.

According to Prof. Meier and Baldwin, "If an increase in per capita income is taken as the measure of economic development, we would be in the awkward position of having to say that a country had not developed if its real national income, had risen but population had also risen at the same rate."

Similarly, Prof. Meade maintains that, "Total income is a more appropriate concept to measure welfare than income per capita."

Therefore, in measuring economic development, the most appropriate measure will be to include final goods and services produced but we must allow for the wastage of machinery and other capital goods during the process of production.

Arguments in Favour of National Income

Following are certain arguments for stressing real national income as a measurement of economic development :

(i) A larger real national income is normally a pre-requisite for an increase in real per capita income and hence, a rising national income can be taken as a token of economic development.

(ii) If an increase in per capita income is taken as the measure of economic development, we are likely to be put in an awkward situation of saying that a country has not developed if its real national income has increased but its population has also increased at the same rate.

Arguments Against National Income

Despite the favourable arguments, national income as a measure of economic development suffers from certain shortcomings:

(i) Unless the distribution of income is equitable, any increase in national or per capita income shall not ensure economic welfare.

(ii) Expansion of national and per capita income cannot be identified with enrichment because the composition of the total output is also important. For example, an expansion of total output could be accompanied by a depletion of natural resources or could consist of merely a greater output of capital goods.

(iii) It must not only consider what is produced but also how it is produced. It is possible that when real national output grows, the real costs i.e., 'pain and sacrifice' of the society may also grow.

(iv) It is difficult to determine proper deflators to eliminate the effects of price changes in an underdeveloped country.

(v) It is also complicated when average income is rising but unemployment exists due to the rapid growth of population, thus, such a situation is not consistent with the development.

2. Per Capita Real Income

Some economists believe that economic growth is meaningless if it does not improve the standard of living of the common masses. Thus, they say that the meaning of economic development is to increase aggregate output. Such a view holds that economic development be defined as a process by which the real per capita income increases over a long period of time. Harvey Leibenstein, Rostow, Baran, Buchanan and many others favour the use of per capita output as an index of economic development. The UNO experts in their report on 'Measures of Economic Development of Under-developed Countries' have also accepted this measurement of development. Charles P. Kindleberger also suggested the same method with proper precautions in computing the national income data.

Arguments in favour of per Capita Real Income:

(a) The aim of economic development is to raise the living standard of the people and through this to raise consumption level. This can be estimated through per capita income rather than national income. If national income of a country goes up but the per capita income is not increasing, that will not raise the living standard of the people. That way, per capita income is a better measure of economic development than the national income.

(b) In underdeveloped countries, there is very less capacity to produce per head. So, as the capacity to produce goes up, these economies proceed towards economic development.

(c) Increase in per capita income can be better index of an increase in the welfare of the people. In advanced countries, national income has increased much faster than the growth rate of population. It means the per capita real income has been constantly increasing and this has led to the increase in welfare of the people. That way, per capita income can be considered a better index of the welfare of the people.

Arguments against Per Capita Real Income:

The real per capita income, a measure of economic development has been severely criticized by Jacob Viner, Kuznet etc.

(a) According to Meier and Baldwin, "If an increase in per capita income were taken as the measure of development, we would be in the awkward position of having to say that a country had not developed if its real national income had risen, but population has also risen at the same time." If in a country, an increase in national income is offset by the increase in population, then we would be bound to say that no economic development has taken place. Similarly, if national income in a country has not gone up but population has reduced due to epidemic or war, in that case we would be bound to conclude that economic development is taking place.

(b) When we divide national income by population, the problem of population in that case is ignored. It confines the scope of the study.

(c) In this measure, distributive aspect has been ignored. If national income goes up but there is unequal distribution of income among different sections of the society, in that case rise in national income will be meaningless.

(d) In the underdeveloped countries, where per capita income is regarded as a measure of economic development, with the increase in per capita income of these countries, there is also increase in unemployment, poverty and income inequalities. This cannot be regarded as development.

(e) Economic growth is a multi-dimensional concept which involves not only increase in money income but also improvement in social activities like education, public health, greater leisure etc. Such improvements cannot be measured by changes in per capita real income.

(f) The data of per capita national income are often inaccurate, misleading and unreliable because of imperfections in national income data and its computation. So per capita real income is not free from drawbacks.

Despite these drawbacks in the measure of real per capita income, many countries have adopted this measure as an indicator of economic development.

3. Economic Welfare as an Index of Economic Development

Keeping in view the drawbacks of real national income and real per capita measures of economic development, some economists like ColinClark, Kindleberger, D. Bright Singh, Hersick etc. suggested economic welfare as the measure of economic development.

The term economic welfare can be understood in two ways:

(a) When there is equal distribution of national income among all the sections of the society, it raises economic welfare.

(b) When the purchasing power of money goes up, even then there is an increase in the level of economic welfare. The purchasing power of money can go up when with the increase in national income there is increase in the prices of goods. That means economic welfare can increase if price stability is ensured.

Thus economic welfare can boost with equal distribution of income and price stability. Higher the level of economic welfare, higher will be the extent of economic development and vice-versa.

Arguments against Welfare Index

In order to assess economic welfare, it is essential to know about the nature of national income and the social cost of production. We face a lot of practical difficulties while estimating these economic factors. It is on account of this reason that many economists do not consider economic welfare as a good measure of economic development. Also the concept of welfare is subjective in nature which cannot be measured. Also welfare is a relative term which differs from person to person.

4. Comparative Concept

Economic development is a comparative concept and it can be easily understood and measured. In a simple way, from comparative concept, we can ascertain how much economic development has been attained by a country.

The comparison can be made by two methods over time period:

(a) Comparison within the country.

(b) Comparison with other countries.

(a) **Comparison within the Country:** To compare the economic development of a country over time, we will have to consider the long period and divide it into different phases. For instance, national income in 2000 is 1,000 crores which rose to 1,200 crores in 2005 and 1,800 crores in 2010 and 2250 crores in 2015. Therefore, within the period of five years i.e., from 2000 to 2005 national income increases to the extent of 20 percent (200 x 100/1000 = 20%). Form 2005-2010, it rose to 50 percent (600 x 100/1200) and from 2010-2015, it rose 25 percent (450 x 100/1800 = 25%). This has been shown with the help of diagram 4.1.

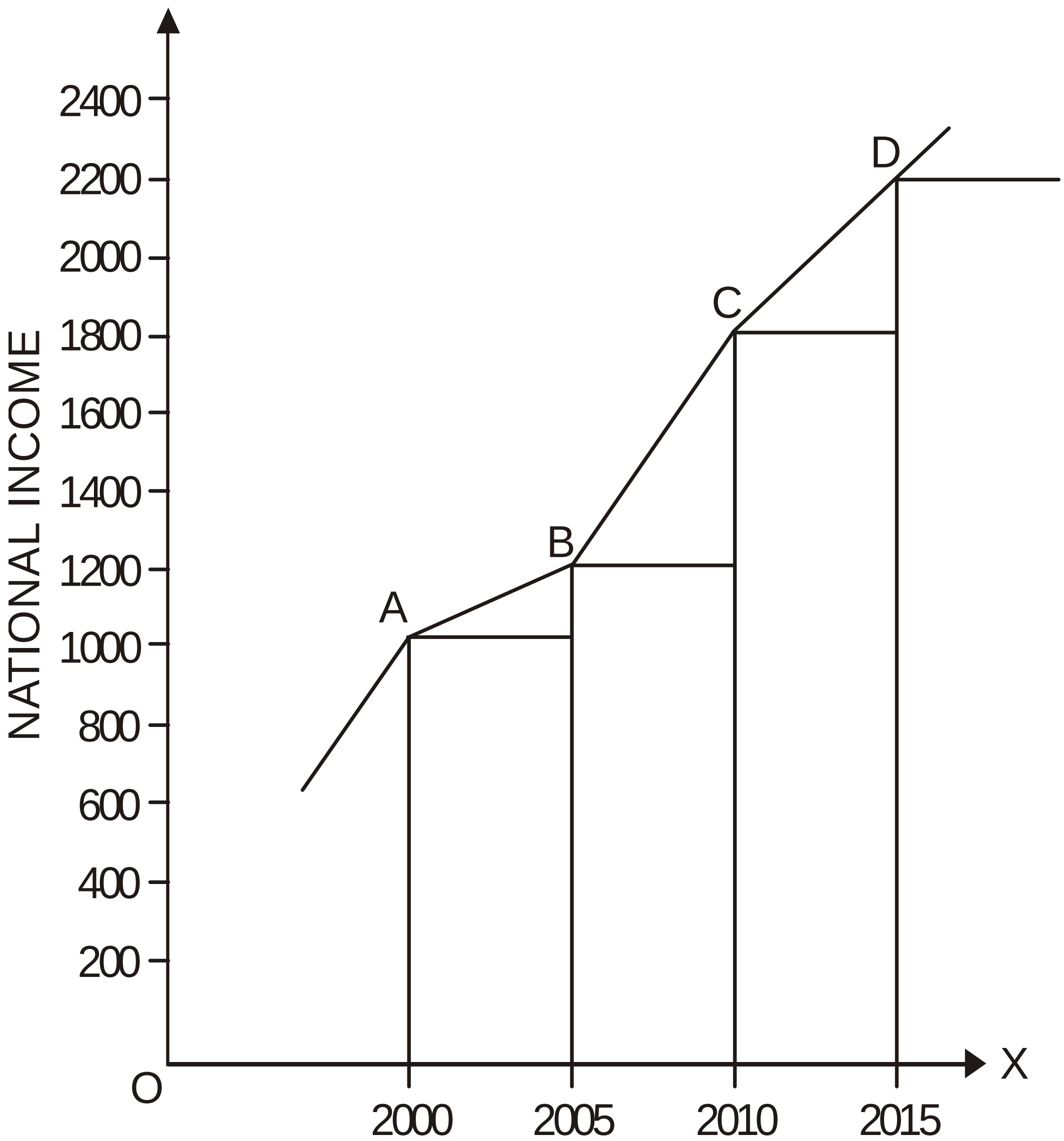
NATIONAL INCOME
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
O
X
A
B
C
D
2000
2005
2010
2015
Year

Fig. 4.1

(b) Comparison with Other Countries: In Figures 4.2, time is shown on the horizontal axis and national income on vertical axis OY.

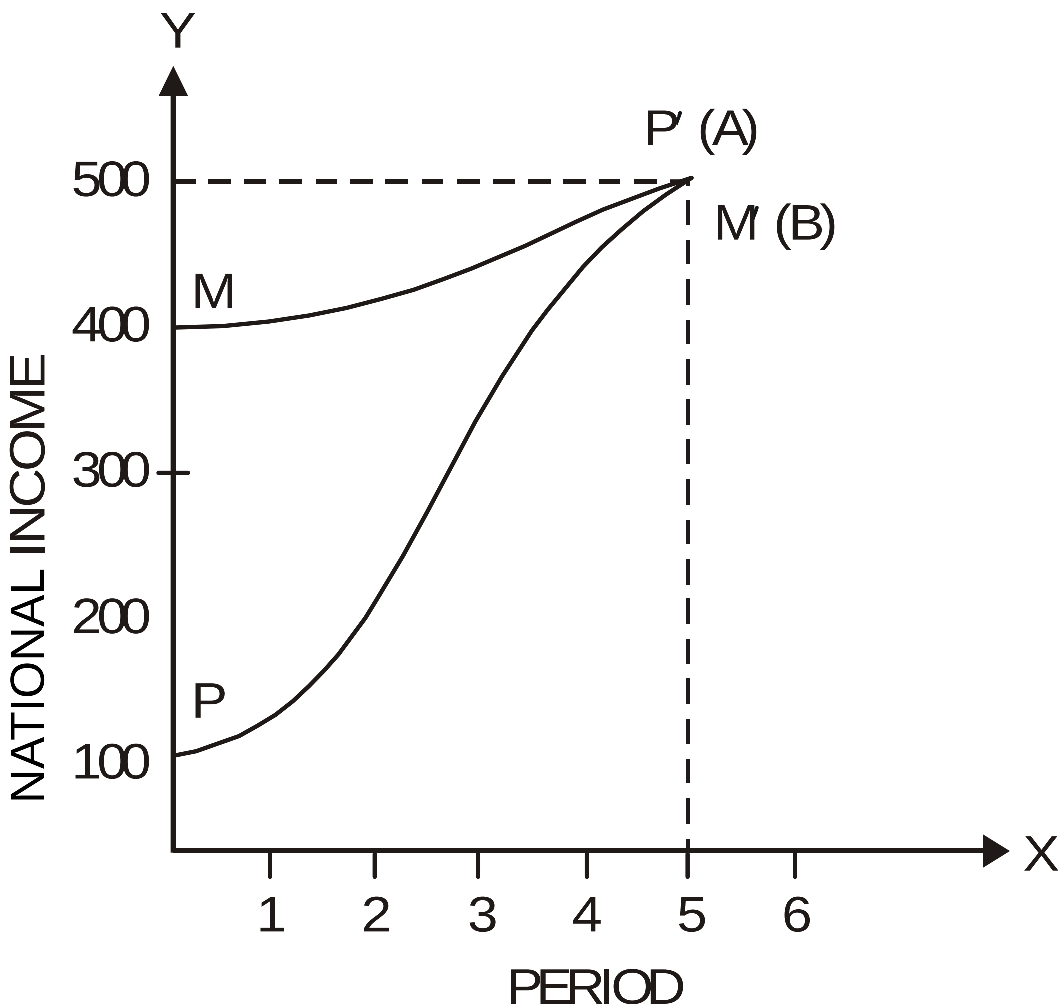

Fig. 4.2

The curve PP depicts the path of development (showing slow rise in income) of country. A. MM curve shows the path of development of country B. In the beginning of the time periods, country B is at a much higher level of national income than country A. But in the meanwhile, the rate of development of country A becomes higher than rate of development of country B. At point E i.e., time period 5, national incomes of both the countries are equal. In the long run or after time interval, national income of country A becomes higher than of country B. In this way, we can say that country A is more developing economy as compared to country B.

5. Measurement through Occupational Pattern

The distribution of working population in different occupations is also regarded as a criterion for the measurement of economic development. Some economists regard the changes in the occupational structure as a source for measuring the nature of economic development.

According to Colin Clark, there is deep relation between the occupational structure and economic development. He has divided the occupational structure into three sectors:

(1) **Primary Sector:** It includes agriculture, fisheries, forestry, mining etc.

(2) **Secondary Sector:** It consists of manufacturing, trade, construction etc.

(3) **Tertiary Sector:** It includes services, banking, transport, etc.

In under-developed countries, majority of the working population is engaged in primary sector. On the contrary, in developed countries the majority of the working population works in tertiary sector. A shift in occupational distribution of population from primary sector to secondary and territory sectors shows the movement towards economic development. When a country makes economic progress, its working population begins to shift from primary sector to secondary and tertiary sectors. Thus, with economic development, the percentage of population engaged in primary sector declines, while the percentage of population working in secondary and tertiary sector increases.

Here we should note that the measurement of economic development through occupational pattern is not considered as satisfactory on following grounds: (i) It is not possible to clearly classify the occupations in an underdeveloped economy in three distinct categories (ii) Secondly, in the early stages of development, the activities of tertiary sector like transport, communications, trade etc. are inadequate and insufficient. Consequently the chances of employment in these activities are very restricted.

6. Standard of Living Criterion

Another method to measure economic development is the standard of living. According to this view, standard of living and not rise in per capita income or national income should be considered as an indicator of economic development. The very objective of development is to provide a better life to its people through improvement or upliftment of the standard of living. In other words, it refers to increase in average consumption level of the individual. But, even this criterion is not flawless. Let us suppose that both national income and per capita income increase but the government takes away this income through heavy dose of taxation or compulsory deposit scheme or any other method. In such a situation, there is no possibility to raise the average consumption level i.e., standard of living. Moreover, in poor countries, propensity to consume is already high and stern efforts are made to reduce superfluous consumption in order to encourage savings and capital formation. Again 'standard of living' is also subjective which cannot be determined with objective criterion.

7. Equality of Income and Wealth

Until the advent of industrial revolution in Western countries, there were little international inequalities. Industrial revolution assisted by rapid technological development created wide international disparities. It was during this period that there was massive drain of wealth from colonies to metropolitan countries. There was brain-drain also. The contribution of these drains from colonies to western countries was significant in the light of development.

Irrespective of their level of development, the third world countries are now conscious of international inequalities. They all wish to realize their development potential so as to check further widening of gap between their living standards and those of the people in the developed west.

Income inequalities result from the concentration of wealth and capital. In

India, this problem has persisted because of the private ownership of the means of production.

Rapid industrialization in India has led to economic development but the development gap of the people has widened. All the sections of society have not been able to reap the benefit of development equally. This is due to the fact that economic growth of a pro-rich economy has a tendency to accentuate disparities in income distribution.

4.5 Best Measure of Economic Development:

After studying all the above methods of measurement of economic development, we are likely to be confused and the question might arise as to which of the above measures of economic development is the best. Answer depends on the objective of measuring economic development. However, after considering different points of view, it may be concluded, that GNP or per capita income is the best method of measuring economic development. In the words of Prof. R.G. Lipsey, "Whatsoever changes there may be in future in the measurement of economic development, they cannot fully replace Gross National Product (GNP)." Economists and U.N. Organizations use GNP per capita as the measurement of economic development.

Check your progress.

Note: Write your answer in the space given below:-

Q. 1. Describe Development Gap.

Ans.____

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Q. 2: Explain briefly National Income as an Index of development.

Ans.____

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4.6 Introduction to HDIs:

Economists have tried to measure social indicators of basic needs by taking one, two or more indicators for constructing composite indices of human development. We study below the Physical Quality of Life Index (PQLI) of Morris and the Human Development Index (HDI) as developed by the United Nations Development Program (UNDP).

4.7 Physical Quality of Life Index (PQLI)

In 1979, D. Morris constructed a composite Physical Quality of Life Index (PQLI). He found that most of the indicators were inputs to development process rather than result of the development process. These indicators reflected that economically less developed countries are simply underdeveloped versions of industrialized countries. He therefore, combined three component indicators of Infant Mortality, Life Expectancy and Basic Literacy to measure performance in meeting the basic needs of the people.

The choice of indicators are:

1. Life Expectancy Indicator (LEI)
2. Infant Mortality Indicator (IMI)
3. Basic Literacy Indicator (BLI)

These three indicators can be improved upon in a variety of ways. However, Prof. Morris used Life Expectancy (LE) at birth as the indicator. Infant mortality implies death before age one instead of life expectancy at birth. In case, the figure for life expectancy at age one was not available, it could be worked out by using a formula which relates life expectancy at birth, infant mortality and the proportion of children.

How to Normalize Indicators

We are familiar that life expectancy is measured in terms of years, infant mortality rate in terms of per thousand and basic literacy rate in terms of percentage. They cannot be simply added. Moreover, basic literacy can have a natural zero for minimum and 100 for maximum, thus there exists no natural minimum or maximum values for other indicators. For comparison, each of the levels should be normalized. Prof. Morris chose the best and worst levels in each of the three cases. In the case of positive indicators of life expectancy and basic literacy the best is shown by the maximum and worst by the minimum. While in case of negative indicator of infant mortality, the best is denoted by the minimum and the worst by the maximum. For converting the actual levels of a positive variable into normalized indicators, first the minimum values are subtracted from the actual values and then the gap is divided by the range. For positive indicators, the formula is:

$$\textbf{Achievement Level} = \frac{\text{Actual Value} - \text{Minimum Value}}{\text{Maximum Value} - \text{Minimum Value}}$$

For negative indicator of infant mortality, actual value has to be subtracted from the maximum value and the gap if any has to be divided by the range.

The formula is

$$\textbf{Achievement Level} = \frac{\text{Maximum Value} - \text{Actual Value}}{\text{Maximum Value} - \text{Minimum Value}}$$

In a nut shell, three indicators are averaged to give what is called the Physical quality of Life Index (PQLI).

$$\text{PQLI} = (1/3)\ (\text{LEI} + \text{IMI} + \text{BLI})$$

Choice of Minimum and Maximum Values

In case of life expectancy and infant mortality, there exists no natural minimum and maximum values. The conversions from values to indices are linear. Put the actual value of these indicators of the country in the expression and get the reasonable indices as Physical Quality of Life Index.

4.8 Human Development Index (HDI):

Considering quality of Life Index, the United Nations was the first to prepare and publish Human Development Index in the year 1990. Human Development Index studies the following three basic human aspects:

(i) Living a long life or Longevity (LEI)

(ii) Being knowledgeable or **Educational Attainment Index (EAI).**

(iii) Standard of Living or Real per capita GDP (SLI).

These three indices can be expressed as

HDI = (1/3) (LEI + EAI + SLI)

Let us discuss these three aspects.

(i) Longevity (LEI): Longevity means life expectancy at birth. It refers to the number of years a newly born baby is expected to live. Life expectancy in India at present is 63 years.

(ii) Educational Attainment Index (EAI): It means education attained by the people of the country on an average basis.

The constituents of educational attainment are expressed through the following two variables:

(a) Adult Literacy Rate (ALR)

(b) Gross Enrolment Ratio (GER)

(a) Adult Literacy Rate (ALR): The rate or the percentage of people aged 15 and above who can understand, read and write a short and simple statement in their everyday life are known as literate. It implies that every literate must be capable of reading and writing certain sentences. If someone is able to sign but is not capable of reading and writing simple statement, he is not literate. Thus, capability of reading only or writing only does not make a person literate. Literacy is the symbol of the quality of the people.

(b) Gross Enrolment Ratio (GER): Gross Enrolment Ratio refers to the number of students enrolled at different levels of education. It is the percentage of population of different age groups engaged in educational pursuit. The education level consists of primary, secondary and tertiary level. Basic elements of education are provided at primary level. Secondary level education is studied from middle to secondary level. University level education is studied under tertiary level. **General enrolment ratio shows the percentage of population enrolled at primary, middle, secondary and university level.** The higher GER indicates higher quality of life. It will be the sincere effort of every economy to increase general enrolment ratio as far as possible.

(iii) Real GDP Per Capita or Standard of Living (SLI): It is considered as a measure of the standard of living of the people of a country. In order to calculate human development index we are required to study and analyze longevity, educational attainment and real GDP per capita.

CONSTRUCTION OF HUMAN DEVELOPMENT INDEX

The construction of Human Development Index requires two steps to be adopted. They are:

1. Construction of relevant indices.
2. Taking the simple average of the indices.

1. Construction of Relevant Indices.

(a) Fixing minimum and maximum value for each indicator of Human Development: While constructing indices the first step is to fix minimum and maximum values of each indicator. The minimum and maximum values fixed by the United Nations Organization (UNO) for the year 1997 were as follows:

Minimum and Maximum Values for the year 1997

Indicator	Minimum Value	Maximumm Value
(1)	**(2)**	**(3)**
(i) Life expectancy at birth	25	85
(ii) Adult-Literacy rate	0%	100%
(iii) Combined Gross Enrolment ratio	0%	100%
(iv) Real GDP per capita (PPP*S)	$100	$40,000

*PPP here means purchasing power parity. PPP GDP is calculated after eliminating price differences among countries.

These minimum and maximum values have been computed and published by UNO. These are standardized values and commonly applied to all countries.

(b) Computing Individual Indices: The construction of Human Development Index requires the computation of individual indices of all the indicators.

The formula for the construction of individual indices of the indicators is stated as under:

$$\textbf{Achievement Level} = \frac{\text{Actual Value} - \text{Minimum Value}}{\text{Maximum Value} - \text{Minimum Value}}$$

Let us explain this formula by assuming India's life expectancy at birth in 1997 as 62.6 years. We shall compute life expectancy index by applying the formula as under. (Assume maximum and minimum value for life expectancy as 85.0 and 25.0).

$$\textbf{Life expectancy Index of India} = \frac{\text{Actual Value} - \text{Minimum Value}}{\text{Maximum Value} - \text{Minimum Value}}$$

$$= \frac{62.6 - 25.0}{85.0 - 25.0} = \frac{37.6}{60.0} = 0.62$$

We shall be computing individual indices of educational attainment and adjusted real GDP per capita. We shall first calculate the actual, maximum and minimum values and then apply the formula discussed above.

In order to calculate Human Development Index we are required to construct the following three indices:

(i) Life expectancy index

(ii) Educational attainment index

(iii) Real GDP per capita index

(i) Life expectancy Index of India: This index measures the degree of the achievement of the country regarding life expectancy of the people in a country. The value of index varies between 0-1. For example, the life expectancy index of India for the year 1997 was 0.62. It means that India's life expectancy rate in 1997 was 62% (0.62 x 100).

(ii) Educational attainment index: This index measures the level of educational attainment of the people. The value of this index also varies between 0-1. Higher index shows higher level of educational attainment. India's educational attainment rate at present is about 0.57 or 57%. Educational attainment of the people is one of the measures of the quality of life of the people.

(iii) Real GDP per capita index: Real GDP per capita is also another significant measure of the quality of life of the people. Real GDP is calculated at constant prices. It shows the changes in physical production in real terms. Per capita real GDP is the GDP at constant prices divided by population. Real per capita GDP is also known as real per capita income. It is better measure of the quality of life of the people as compared to per capita income. Higher per capita GDP shows better quality of life of the people. At present out real GDP per capita index is about 0.49.

2. Taking the Simple Average of the three Indices

After computing the life expectancy index, educational attainment index and real GDP per capita index, we are required to compute the simple average of the three indices. We adopt the following formula for the calculation of simple average of the three indices.

Human Development Index (HDI)

$$\frac{\text{Life expectancy index} + \text{Educational attainment index} + \text{Real GDP per capita index}}{3}$$

Example: Let life expectancy index be 0.52, educational attainment index is 0.68 and real GDP per capita index was 0.42 for the year 1997.

Calculate Human Development Index with the above figures.

Solution: HDI (for 1997)

$$= \frac{0.52 + 0.68 + 0.42}{3} = \frac{1.62}{3} = .54$$

It appears that India's Human Development Index was 0.54 in 1997. In other words, achievement of India's human development in 1997 was 54 (54´ 100) percent. According to this index, India's rank in human development was 132 out of a total of 174 countries. Canada had the first rank. Its Human Development Index was 0.932. The average Human Development Index of the world was 0.706. Here, in this case, we have seen that welfare of the people is directly related to Human Development Index. It means that higher human development is associated with higher welfare and vice-versa.

In the latest report of UNDP (HDI ranking 2017), India ranks 130 out of 189 countries surveyed. India's HDI value is 0.640, which puts the country in the Medium Human Development category. Between 1990 and 2017, value of India's HDI increased from 0.427 to 0.640, an increase of about 50%. During this period, India's Life Expectancy at Birth increased to 68.8 (in years), Expected Years of Schooling increased to 12.3 and Gross National Income (GNI) per capita (PPP$) increased to 6,353. As compared to 1990, India's Life Expectancy at Birth increased by nearly 11 years, children can expect to stay in schools 4.7 years more (than in 1990) and the increase in India's GNI is 266.6%. The average value of HDI for South Asia is 0.638. (Source : UNDP)

4.9 Difficulties in the Measurement of Economic Development in Under-Developed Countries:

The measurement of economic development is really a difficult work as every method faces the problems of its own kind.

However some of these problems are discussed as below:

1. Lack of Statistical Data: In order to measure economic development accurately, we should have correct assessment of national income, per capita income, per capita consumption etc. But in under-developed economies, the data on national income, per capita income and per capita consumption are not available. Due to lack of statistical data, it is difficult to assess economic development accurately in such countries.

2. Controversy over national Income and per capita Income: The economists also differ over the issue of whether to use national income or per capita income as the measure of economic development. In reality, we require both of these. If in two countries, the national income is increasing at same rate but in country A population is doubled whereas population remains the same in country B, in that case the per capita income in country A will reduce to half as compared to country B. The national income measure will put both the countries at same economic level. But country B will have double per capita income than country A. Therefore, we are required to know both these measures to assess economic development accurately.

3. Lack of Accurate measure of Economic Development: Another controversy arises over the accurate measure of economic development. Some regard national income and other regard per capita income as the suitable measure of economic development. Some economists give importance to per capita consumption of electricity, food etc. There is no unanimity over the measure of economic development.

4. Difficulties in the Measurement of Living Standard: Some economists favour living standard as a measure of economic development. But it is very difficult to determine which living standard is high and which is low. The living standard depends on the price level, but not on income level. But this is not a good measure of economic development, as it poses similar type of problems in its measurement.

5. Non-Economic Factors Ignored: It is not only economic factors which affect economic development but it is greatly affected by non-economic factors like social, political, religious, cultural etc. Non-economic factors are indispensable. But the measurement of economic development does not take into account the non-economic factors.

6. Difficulties in International Comparisons: There is no universal measure of economic development, with the help of which International comparisons can be made.

4.10 Let Us Sum Up:

We can thus conclude that human Development Index is the measure of the quality of life of the people. Further, Human Development Index (HDI) is a better measure and indicator of the welfare of the people than national income. Human Development index is not restricted to the real per capita GDP, but it considers longevity (life expectancy) and educational attainment as well.

4.11 Lesson End Questions

A. Long answer type questions:

1. Describe the different methods of measurement of Economic Development. Which method is the best?
2. "Economic Development is a process whereby an economy's real National Income increases over a long period of time". Comment.
3. How far are 'National Income' and 'Per Capita Real Income' reliable yardsticks for economic development? Give their limitations also.
4. To what extent is 'National Income' a satisfactory index to measure economic development? Comment.
5. 'Development is impossible if it does not take place in the minds of the man', Caircross. Discuss.
6. Explain the followings:-
   (a) Physical Quality of Life Index (PQLI)
   (b) Human Development Index (HDI)
7. Mention the difficulties faced in the measurement of Economic Development with special reference to U.D.Cs.

B. Short answer type questions:

1. Explain National Income as an index of development.

2. Give any two arguments in favour of National Income as an index of development.

3. State any two arguments against National Income as an index of development.

4. Discuss in short 'Per Capita Real Income' as an index of development.

5. Point out any two arguments in favour of Per Capita Real income.

6. Give any two defects of Per Capita Real Income as an index of development.

7. State your views on Economic Welfare as an index of development.

8. What do you know about Comparative Method as a index of development? Explain with the help of diagram.

9. Explain the following methods of measuring economic development.

   (a) Measurement through Occupational Pattern.

   (b) Standard of Living Criterion.

10. Which measure of Economic Development is the most suitable for a developing country?

11. Explain Physical Quality of Life Index.

12. Define Human Development Index.

13. State any two difficulties in the measurement of Economic Development of a developing country like India.

4.10 Suggested Readings:

1. Aggarwal R.C. Economics of Development and Planning, Lakshmi Narain Aggarwal, Agra.

2. Lekhi, R.K: The Economics of Development and Planning, Kalyani Publishers,New Delhi.

3. Lekhi, R.K and Sujata Slathia: Economics of Development and Planning, Kalyani Publishers, Ludhiana.
4. Meier, G.M: Leading Issues in Economic Development, OUP, New Delhi.
5. Thirwal, A.P: Growth and Development, Macmilion Londen.
6. Todaro, M.P: Development Planning-Models and methods, OUP, New Delhi.

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SCHUMPETER'S THEORY OF ECONOMIC DEVELOPMENT

B.A. Sem-VI **Unit - II**

EC-601 **Lesson No. 5**

STRUCTURE

5.1 Introduction

Dear learners, in the first unit we have learnt about Development and Economic growth. In the second unit, we will study about five partial models of Economic Development.

All these models have suggested how a backward capitalistic economy can be converted into a developing economy. All these models started from the same point and reached at the same conclusions but by choosing different paths.

5.2 Objectives

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

- Explain the meaning of Capitalistic Society;
- Discuss the Circular flow;
- Describe the meaning of Innovations and Innovators;
- Differentiate between Innovator and Entrepreneur;
- Know how to break the circular flow and
- State different phases of Business Cycle.

5.3 Main Features of Schumpeter's Theory

J.A. Schumpeter, a great admirer of the capitalist system, has propounded growth model in his pioneer attempt, **"The Theory of Economic Development".** This theory offers a clear analysis of business cycles and economic development. Schumpeter was optimistic about the future of capitalism but stressed that downfall of capitalism is not due to the failure of the system but over growth of the system beyond limits.

MAIN FEATURES OF SCHUMPETER'S THEORY

5.3.1 Circular Flow

5.3.2 Innovations

5.3.3 Role of Entrepreneur

5.3.4 Breaking the Circular flow

5.5.5 Cyclical Process or Business Cycle and

5.3.6 The Decay of Capitalism.

5.3.1 Circular Flow

Schumpeter starts his analysis of development process with the concept of circular flow. It implies a condition where economic activity produces itself continuously at constant rate through time. It is the characteristic of an economy in stationary state. The circular flow is similar to circulation of the blood in an animal organism.

The main features of circular flow are as under:-

(a) All economic activities are essentially repetitive and follow a familiar routine course.

(b) All the producers know the aggregate demand for goods and adjust the supply of output accordingly. This means demand and supply are in equilibrium at each point of time.

(c) The economic system has the optimum level of output and its maximum use and there is no possibility of wastage of resources.

(d) The firms working in a system are in a state of competitive equilibrium.

(e) Under the stationary equilibrium, the prices are equal to the average cost.

5.3.2 Innovations:

Innovation may be defined as a change in existing production system to be introduced by the entrepreneur with a view to make profits and reduce costs.

An innovation may consist of:

- the introduction of a new product,
- the introduction of a new method of production,
- the opening up of a new market,
- a new source of supply of raw material or semi manufactured good and
- changes in organizational set up.

5.3.3 Role of the Entrepreneur

Entrepreneur or innovator is the key figure in Schumpeter's analysis of the process of development. He occupies the central place in the development process because he initiates development in a society and carries it forward. A manager simply directs production under existing techniques but entrepreneur requires the introduction of something new. An Innovator is also different from a capitalist. The capitalist simply furnishes the funds while the Innovator directs the use of these funds.

Three things are necessary for the performance of the entrepreneurial function.

(a) Technical know - how,

(b) Capital: For this, he needs purchasing power in the form of credit and which he can borrow from banks and other financial institutions and

(a) Role of profits **:** An innovator innovates to earn profits.

Check your Progress.

Note: Write your answer in the space given below:-

Q. 1. Write the main features of Schumpeter's theory of Economic Development.

Ans.____

Q. 2: Mention any two Innovations given by Schumpeter in this theory.

Ans.____

5.3.4 Breaking the Circular Flow

In order to break the circular flow, the innovating entrepreneurs are financed by bank credit expansion. Since investment in innovation is risky, they must be paid interest on it. Once the innovations become successful and profitable, other entrepreneurs follow it in **“swarmlike clusters”.** Innovations in one field may induce other innovations in related fields. For example, the emergence of a motor car industry, may in turn, stimulate a wave of new investments in the construction of highways, rubber tyres and petroleum products etc. But the spread is never cent percent.

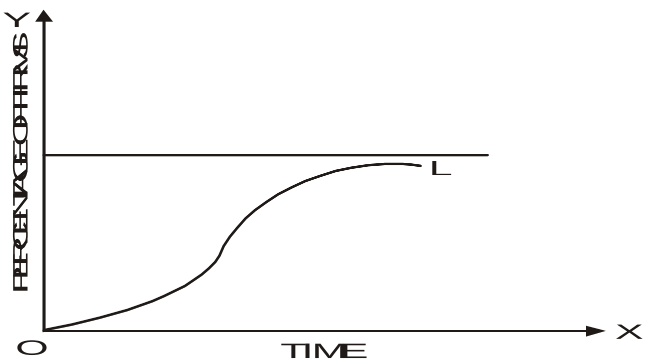

FIg. 5.1

The spread of innovation can be explained with the help of a figure. 5.1 where percentage of firms are taken along Y-axis and time is along X-axis. The curve OL represents that firms adopt an innovation slowly to start but soon the adoption of innovation gains momentum but it never reaches 100 percent adoption by firms.

5.3.5 Business Cycle or Cyclical Process

The next component of development according to Schumpeter is the business cycle. Bank credit is an essential element of Schumpeter’s model. The rising prices and the high rates of profits stimulate producers to raise investments by borrowing from the banks. The credit inflation starts with the entrance of new entrepreneurs in the field of production, which superimposes on the primary wave of innovations.

This may be called **boom or prosperity period.** In this stage, the economic activities reach their maximum heights and the unemployed resources are minimized.

During the boom period, the new products start appearing in the market with the entrance of new entrepreneurs. These products displace the old ones and thus decrease their demand in the market. Consequently, the prices of old products fall. With a view to liquidating their stocks, the old firms start selling their goods at a low price and hence most of the firms incur losses and some are even forced to run into loss. Investment declines and unemployment starts, leading to a fall in the aggregate demand. As the entrepreneurs start repaying bank loans, the quantity of money in circulation is reduced and prices start falling. Profits too decline and come to zero point. Uncertainty and risk increase. A wave of pessimism sweeps the entire economy and the boom period ends with the appearance of the phase of depression.

Schumpeter believes in the existence of the long wave of upswings (or boom) and downswings (or depression). Once the upswing ends, the long wave of downswing begins and the painful process of readjustment to the **"point of previous neighbourhood of equilibrium"** starts. The economic forces of recovery come into operation and ultimately bring about a revival. Once again the economy comes across the equilibrium and the new boom period starts with a new set of innovations.

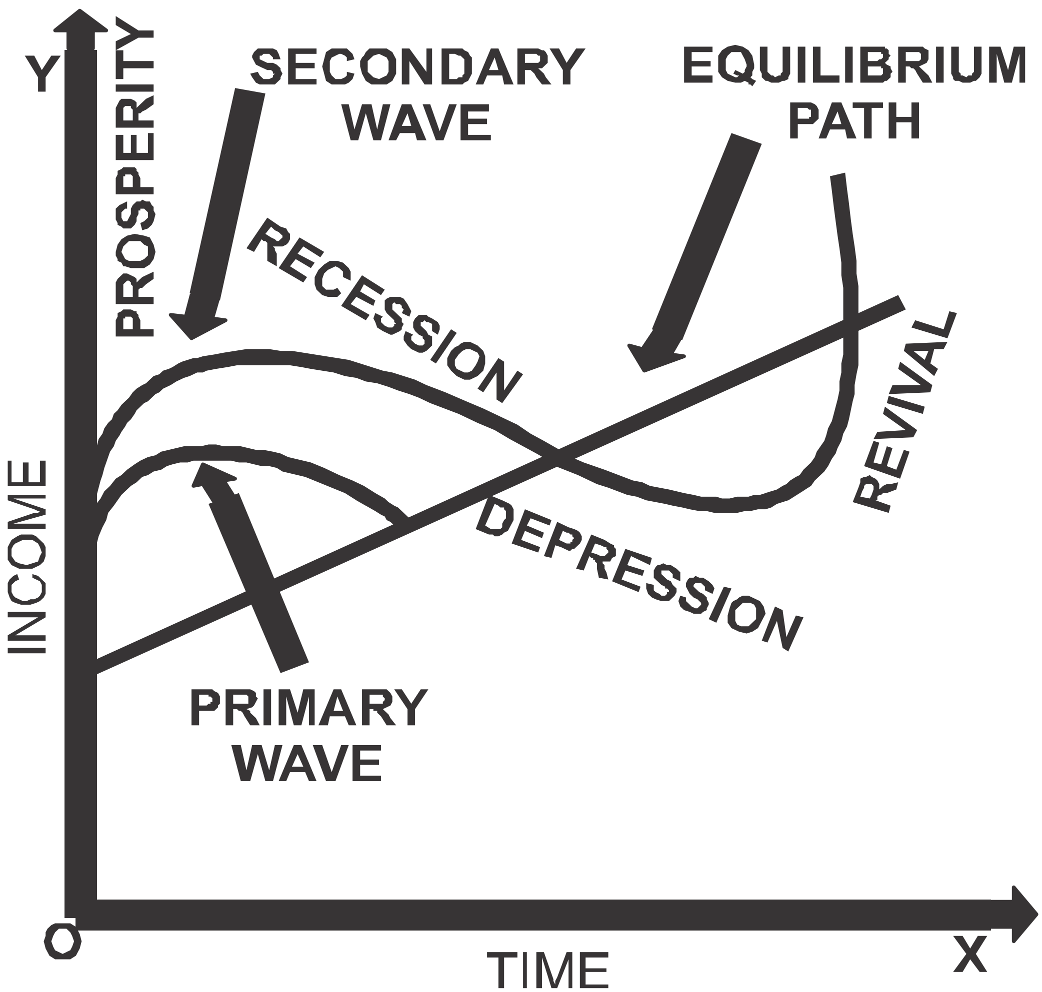

Fig. 5.2

Schumpeter's cyclical process of economic development has been illustrated in the above diagram 5.2 where the secondary wave is superimposed on the primary wave of innovation. In the end, the retake of economic activities leads to revival of the economy.

5.3.6 The Decay of Capitalism:

The economic success of capitalism will eventually lead to its decay. The very success of capitalism undermines the social institutions which protect it and creates conditions for socialism to appear.

Capitalism can maintain itself only so long as entrepreneurs behave like knights and pioneers. Schumpeter holds a very pessimistic view about the survival of capitalism. He advocated capitalist system of production yet he was not unaware of the weakness of this system. Schumpeter gives the following reasons for the disintegration of capitalism—

- **The fall of entrepreneurial function:** Prof. Schumpeter observes that the success of early captains of industry have made innovation a routine activity and carried it in a big business through highly trained managers. The new lords of business are managers and private bureaucrats. This reduces the industrial bourgeoises to a class of wage earners.

- **Destruction of Institutional framework:** Another factor responsible for weakening the foundations of capitalism is the destruction of its institutional frame work. The entrepreneur by his own success tends to destroy not only his economic and social functions but also the institutional framework within which he works.

- **Destruction of Protecting Political Strata:** The destruction of protecting political strata will administer the last blow to capitalist system. The progress of capitalism makes industrialists and merchants economically powerful and they begin to dominate in political field also..

- **The Disintegration of the Bourgeoise Family:** Capitalism has a tendency to disintegrate the bourgeoise family. The parents adopt a realistic approach in their behaviour towards children and start thinking against their leisure, comforts and more freedom. Their traditional idea of family is weakened. Their will to accumulate more and more wealth gradually disappear and their dream of a private dynasty is no longer there.

5.4 Critical Appraisal

- **Role of Innovator over-emphasized:** Innovations are only one of the many factors causing cyclical fluctuations in a capitalistic economy. But it is difficult to differentiate their innovating activity from their ordinary business activity. The innovational activities have become a matter of routine these days and there is no need of special agent like innovator for carrying on such activities. Thus Schumpeter has over glorified the place of innovator in his model.

- **Role of Savings Ignored:** Schumpeter assumed that innovations are financed by the bank credit and this assumption is not much convincing. Banks usually grant short term loans. He assumes that innovations are financed by the borrowings from credit creating banks. In this way this theory ignores the important sources of real savings such as deficit financing, budgetary savings, public borrowings and other fiscal measures.

- **Analysis of Capitalist process not convincing:** This theory explains that rational behaviour of innovators and intellectual class is responsible for the success of capitalism. The Schumpeter's hero i.e. innovator is a forward looking man in the economic matters and he is an adaptable individual who can overcome all sorts of difficulties and obstacles. But in social and political field, he may be quite weak. The success of capitalism depends not only on the personality and behaviour of the innovator but also on the non economic factors.

- **Emergence of Socialism not based on sound reasoning:** Schumpeter's analysis about the emergence of socialism is provocative yet it seems to be one sided and over emphasized. He himself is not quite sure about the way in which socialism will replace capitalism.

- **Circular flow based on Say's Law of Markets:** Circular flow is the first component of the Schumpeterian analysis of economic growth and its features reveal that this concept is very much similar to Say's Law of Markets. The circular flow or Say's law is valid in a stationary society which is not in tune with development process which is dynamic one.

- **Analysis of cyclical process is wrong:** Schumpeter's view that the economic development is the result of the cyclical process is wrong. According to **Nurkse,** "Economic development is related to continuous changes".

- **Undue importance to bank credit:** Bank credit may be important in the short run when industrial concerns get credit facilities from the banks. However, in the long run when the need of capital funds is greater, bank credit is insufficient. For this, business houses have to float new shares, debentures etc. in the market.

- **Innovations are not the main cause of economic development:** Economic development of a country does not depend on innovations only but also on many economic and social factors.

- **Little Relevance for Underdeveloped Countries:** In underdeveloped counties, the class of innovators is very small because of the small extent of the market and the low expectation of profits.

5.5 Schumpeter's theory and Underdeveloped Countries

Schumpeter's theory forms the foundation stone of modern thinking, yet his analysis is not applicable to UDCs, due to the following reasons:

- **Not applicable in Socialist Countries:** This theory is not applicable to majority of UDCs which have socialist system.

- **Lack of entrepreneurship:** The Schumpeterian analysis rests on the existence of entrepreneurial class but UDCs lack adequate entrepreneurship. In such economies, profits are low and low state of technology does not enhance innovational investments in new plants.

- **Different Socio-Economic Order:** UDCs have got a socio economic structure which is entirely different from the socio-economic order that prevailed in western countries. In these countries, certain essentials of growth like economic and social overheads, suitable attitudes and values for economic development already exist but in UDCs, such essentials do not exist.

- **Neglect Savings:** Schumpeter's exclusive emphasis is on bank credit. It ignores savings, deficit financing, budgetary savings, public credit and other fiscal measures.

- **Neglects Consumption:** The Schumpeterian analysis is production oriented and the development process is consumption oriented. This is applied in the current trend towards the welfare state in which demand and consumption play a leading role.

• **Neglects Population Growth:** Schumpeter's theory is also inapplicable to UDCs because it neglects the effect of growth of population. In these countries, high population growth is the main hurdle in the process of development and any theory that neglects population problem cannot be very useful to them.

• **Unsatisfactory Explanation of Inflationary Forces:** In this theory, inflationary impulses form an integral part of the process of development but it involves no secular inflation. The long term price is stable. In an UDC inflationary forces are very powerful.

• **Assimilation of Innovations:** Entrepreneurs in UDCs are not in a position to innovate; rather they adapt innovations taking place in advanced countries.

• **Not Applicable to Mixed Economies:** Schumpeter's innovator is a private entrepreneur who does not fit in the present day mixed economies. In an underdeveloped country, state is the biggest entrepreneur. The main encouragement for development comes from the state and semi-state bodies.

• **Neglects External Effects:** According to **Schumpeter**, "Development is the result of changes that arise from within the economy". But, in underdeveloped countries changes do not take place from within the economy rather they are the outcome of foreign ideas, technology, capital etc.

• **Institutional changes needed:** Institutional changes like organizational structures, skilled labour, spread of trade union activities, appropriate values, attitudes and motivations etc., are needed in underdeveloped countries about which Schumpeter had not spoken a single word.

5.6 Let us sum up

J.A. Schumpeter, a great admirer of the capitalist system, has propounded growth model in his pioneer attempt, **"The Theory of Economic Development".** This theory offers a clear analysis of business cycles and economic development. Schumpeter was optimistic about the future of capitalism but stressed that downfall of capitalism is not due to the failure of the system but over growth of the system beyond limits.It is clear that Schumpeter's theory of economic development is not useful for underdeveloped countries under the existing circumstances.

5.7 Lesson End Questions

A. Long answer types questions:

1. Discuss the main features or elements of Schumpeter's theory of economic development.
2. Do you agree with the view that capitalist development leads to self destruction?
3. To what extent is Schumpeter's model of growth applicable to underdevelopment? Give its main impediments.
4. Explain the following :
   (a) Decay of Capitalism.
   (b) Circular Flow.
   (c) Innovation and Innovators.
5. Briefly state Schumpeter's Theory of Economic Development. Does it apply to a UDC ?
6. Discuss the process of Gross and Decay of Capitalism. Give its limitations.

B. Short answer type questions:

1. Explain the three factors of development as suggested by Prof. Schumpeter.
2. Give the main assumptions of Schumpeter's growth model.
3. Point out any four defects of Schumpeter's model of growth.
4. What is the role assigned to entrepreneur in the process of development?
5. Is Schumpeter's model applicable to less developed countries?
6. Distinguish between innovation and invention.
7. Give the role of innovation in Economic Development.

5.8 Suggested Readings:

1. Lekhi, R.K: The Economics of Development and Planning, Kalyani Publishers, New Delhi.
2. Lekhi, R.K and Sujata Slathia: Economics of Development and Planning, Kalyani Publishers, Ludhiana.
3. Meier, G.M: Leading Issues in Economic Development, OUP, New Delhi.
4. Thirwal, A.P: Growth and Development, Macmillan, London.
5. Todaro, M.P: Development Planning-Models and methods, OUP, New Delhi.

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NURKSE'S THEORY OF DISGUISED UNEMPLOYMENT

B.A. Sem-VI **Unit - II**

EC-601 **Lesson No. 6**

STRUCTURE

6.1 Introduction

The concept of 'disguised unemployment' was introduced into the theory of underdevelopment by **Rosenstein Rodan** in one of his articles namely, “Problems of Industrialization of Eastern and South- Eastern Europe.” It was further elaborated by Ragner Nurkse. According to him, disguised unemployment means that “given the techniques and productive resources, the marginal productivity of labour in agriculture, over a wide range, is zero in overpopulated underdeveloped countries.”

6.2 Objectives

After going through this lesson, you will be able to:-

- Explain the meaning of disguised unemployment;
- State the characteristics of disguised unemployment;
- Discuss how to feed the surplus man power;
- Discuss how to provide tools to new workers;
- State leakages from concealed saving potential and
- Explain solution for plugging the leakages.

6.3 Meaning of Disguised Unemployment

In underdeveloped countries, **“disguised unemployment”** is a situation in which more persons are employed to do a job which can be done with equal efficiency by a less number of workers. For example, ten workers are engaged in cultivation on a limited area of cultivable farm which can be cultivated by seven workers. It implies that all the ten workers are not fully employed. In such a situation, if three of them are withdrawn and are given some alternative job, the total output of the farm will not be reduced. The marginal productivity of these workers is zero and these workers do not contribute to the total production.

6.4 Characteristics of Disguised Unemployment

Prof. Nurkse mentions the following characteristics of disguised unemployment:

(i) Disguised unemployment is in the form of surplus labour engaged in agriculture.

(ii) The disguised unemployment or surplus labour if withdrawn will not reduce the agricultural output.

(iii) The marginal productivity of labour in disguised unemployment is zero.

(iv) It is usually associated with family employment or self- employed labour and not wage labour.

(v) The disguised unemployment exists in overpopulated underdeveloped countries with agricultural base.

(vi) These disguised unemployed can be put to work in capital projects like construction of roads, irrigation, houses, factories, drainage, railways etc.

(vii) The disguised unemployment has a saving potential.

Check your progress.

Note: Write your answer in the space given below:-

Q. 1. What is disguised unemployment?

Ans.____

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Q. 2: Write any two characteristics of disguised unemployment.

Ans.____

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6.5 Explanation of the Nurkse's Theory

Prof. Nurkse's thesis of disguised unemployment is formulated for an overpopulated UDC in which disguised unemployment can be a source of capital formation. With existing techniques of production of agriculture, it is possible to shift the surplus labour force without reducing the agricultural production. Thus, surplus labour force can be put to work on capital projects like irrigation, drainage, roads, railways, houses, factories, training schemes, community development, education and health etc. Nurkse has split up the problems of mobilizing the disguised unemployment as a saving potential into two parts:

(a) How to feed the surplus population transferred to various capital projects?

(b) How to provide tools to the new workers to work with?

6.5.1 Feeding the Surplus Man Power:

The first problem is of the feeding the workers transferred from land to capital creating projects.

Prof. Nurkse says that, "The productive labourers are performing virtual saving, they produce more than they consume. But the saving runs to waste. When unproductive labourers are fed by productive labourers then their virtual saving becomes the effective saving which can be used as a source of capital formation."

The process of converting surplus labour into capital formation becomes self financing if mobilization of the concealed saving potential is 100% success.

In this context, Nurkse remarked, "There is no question of asking the peasant who remain on the land to eat less than before, only for preventing him from eating more. What is wanted is that he goes on feeding his dependents who leave the farm to go to work on capital projects and who in effect continue to be dependent for their subsistence on the productive peasants remaining on the farms".

6.5.2 Financing the tools

Still another problem arises how to provide tools and implements to the labourers that have been transferred to capital creating projects. It is necessary to have some capital tools with which these workers may work.

Prof. Nurkse has correctly mentioned, "The investment workers, before they start building a piece of fixed capital such as road, could after all, sit down and make the most necessary primitive tools with their own hands. They could make their own shovels, wheel borrows, carts, hoists and other things to help them build the road. In the real world, the UDCs of today have the advantage of being able to get capital tools through trade.

He, therefore, holds the view, "Hands would move from the village to the new construction sites, with the hands would also move mouths; and with less mouths to feed in the village the possibility would be created for food to move out of the village to supply to the needs of a swollen army of construction workers, without any fall in the consumption on the part of those remaining in the village."

6.6 Leakage from Concealed Saving Potential

There are three main leakages as,

(i) The peasants on the land may start consuming more food than before, since more food is now available to them.

(ii) The capital project workers are also likely to increase their food production, as they are earning more and will like to improve their standard of living.

(iii) Some leakage may take place due to the cost of transporting food from the farms to capital creating projects. The reduction in subsistence fund reduces the capacity of the economy to feed workers transferred to the investment sector and lowers the saving potential of disguised unemployed.

Therefore, capital formation is possible only when the surplus of foodgrains is fully transferred from the rural to the urban areas without involving any cost.

6.7 Solution for Plugging the Leakages:

There are few suggestions which may be helpful for plugging the leakages. They are:

1. Agricultural taxation: Remaining persons in the agricultural sector are likely to increase their consumption level following the withdrawal of some of their counterparts. The government can tax the surplus in terms of foodgrains and give the same to those engaged on the capital projects.

2. To collect rent in the form of foodgrains: It may be suggested that the government collects rent in terms of foodgrains. But this also leads to many difficulties.

3. Compulsory sale of surplus produce to the Government: The Government may compel the farmers to sell their surplus produce at fixed price. For example, farming family is producing 100 qtls of wheat and to maintain the old standard of consumption only 50 qtls. of wheat are required, the remaining 50 qtls. may be compulsarily purchased by the government at the fixed price. This method is fairly popular in under developed countries.

4. Complementary savings:

(a) Internal and Domestic Sources: Complementary savings may be raised through domestic sources. Urban population may be expected to save more, by reducing their consumption. However it would be important to remember as to what are the consumption items on which expenditure can be reduced. If they can cut expenditure on foodgrains, then the surplus foodgrains may be utilized to neutralize the loss through leakages. However if they save only on items of luxuries and comforts, the problem of leakages may not be solved so easily.

(b) External Sources: External sources may also be explored for additional savings. Majority of the people being poor in less developed countries, domestic savings may not be forthcoming to the desired extent. Thus, complementary saving may be raised through external sources. External assistance should be spent only on the purchase of foodgrains to be used by the persons engaged in the capital projects.

6.8 Criticism of the theory

The various obstacles which come in the way of practical working of this concept are discussed below:

1. Propensity to Consume is not constant: Prof. Nurkse assumes that the propensity to consume of both the newly employed workers and those left on the farms remain constant. In a UDC, the living standard of people is very low and when their income rises, they tend to satisfy their pent up demands and it raise their propensity to consume.

2. Difficult to Mobilize Disguised Unemployed: It is very difficult to mobilize the disguised unemployed persons as they are attached to their land emotionally. They are not prepared to leave their villages and work at new places. They are also under the influence of the social customs and traditions which make them stick to their homes.

3. Unrealistic assumption of Technological Neutrality: Prof. Kurihara is of the opinion "that technological neutrality involved in Nurkse's idea of disguised unemployment as a saving potential is untenable and unhelpful." During the process of industrialization, if the capital goods sector adopts labour saving devices, it will restrict the mobilization of disguised unemployed in the economy.

4. Process is not self financing: In Nurkse's analysis, the problems of payment of wages to the investment workers do not arise because the process of capital formation is not self financing. This assumption is very unrealistic. Payment of wages is necessary to attract the workers on new capital projects.

5. Not Practicable in Democratic States: The mobilization of surplus labour from subsistence to the capital sector might require the use of coercive methods.

6. Marketable Surplus does not Increase: Nurkse has observed that as the disguised unemployment labor is removed from land, marketable surplus is increased in the rural sector. **Kaldor** holds that peasants in UDCs produce for self sufficiency rather than for profits.

7. Unfavourable effects of Increasing Population on Capital Formation: Rapid rate of population retards the rate of capital formation.

8. Not Applicable to directly Productive Activities: Hirschman makes a distinction between permissive and compulsive factors in economic development. But Prof. Hischman hold the view that social overhead capital is 'permissive' factor which serves as an incentive to private investment only while directly productive capital is a ‘compulsive’ factor in economic development. In this way, the use of disguised labor for capital formation as proposed by Prof. Nurkse is only of limited applicability.

9. Collection and Distribution of Food Surplus involves many Problems: Nurkse has failed to visualise the problems connected with mopping up and the distribution of the food surplus from those working in the farms to those working on new capital projects.

10. Inadequacy of complementary savings: The inadequacy of complementary savings may stand in the way of an effective use of disguised unemployment as a source of capital formation.

11. Problem of Inflation: The employment of surplus labour in capital projects may tend to generate inflation in the economy as their demand for consumption goods would rise without any corresponding increase in their output.

12. Fall in Production: Schultz observed that the transfer of surplus labor from agriculture to new capital projects will adversely affect agricultural production. In his own words, “No evidence for any poor country anywhere that would suggest that a transfer of even some small fraction, say 5 per cent of the existing labor force out of agriculture with other things equal, could be made without reducing its production.”

13. Additional Administrative Burden: The starting of new capital projects adds to the administrative and financial burden and UDC fail to bear the rising burden. The new capital projects need safe custody of tools and equipments which puts an additional burden an the administration.

6.9 Let us sum up

From this discussion, it can be easily concluded that the theory of disguised unemployment as a source of a capital formation is not theoretically questionable but it is difficult to put it into practice. The process of capital formation can help UDCs to bring about rapid economic development.

6.10 Lesson End Exercise

A. Long answer type questions:

1. Critically discuss Nurkse's theory of disguised unemployment.
2. Explain Ragner Nurkse's theory of disguised unemployment as a saving potential.
3. What is meant by disguised unemployment? In this context, state Nurkse's theory of disguised unemployment.
4. Discuss critically the concept of disguised unemployment as a source of capital formation.
5. "Prof. Nurkse's scheme of tapping the saving potential of the rural sector of an underdeveloped country through the transfer of disguised unemployed people to the project sites is beset with practical deficiency." Justify the statement.

B. Short answer type questions:

1. Explain the meaning of disguised unemployment.
2. Discuss the main characteristics of disguised unemployment.
3. How to feed the surplus population transferred to various capital projects according to Nurkse's theory?
4. How to provide tools to the new workers to work with, according to Nurkse's theory?

1.11 Suggested Readings:

1. Aggarwal R.C. Economics of Development and Planning, Lakshmi Narain Aggarwal, Agra.
2. Bhagwati, J and Desai, P: India-Planning for Industrialisation, OUP, London.
3. Hayami, Y: Development Economics, Oxford University Press, New York.
4. Haggins, B: Economic Development, Norton, New York.
5. Jhingan, M.L: The Economics of Development and Planning, Vrinda Publications, Delhi.

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MYRDAL'S THEORY OF CIRCULAR CAUSATION

B.A. Sem-VI	**Unit - II**
EC-601	**Lesson No. 7**

STRUCTURE

7.1 Introduction

7.2 Objectives

7.3 Myrdal's Thesis

7.4 Regional Inequalities

7.4.1 Backwash effects of Migration, Capital Movement and Internal Trade

7.4.2 Spread Effects

7.4.3 Backwash vs. Spread Effects

7.4.4 Role of State

7.5 International Inequalities

7.5.1 Backwash effects of Immigration, Capital Movements and International Trade

7.5.2 Spread Effects

7.6 Let us sum up

7.7 Lesson End Exercise

7.8 Suggested Readings.

7.1 Introduction

This theory has been taken from the Ph. D thesis of Prof Gunnar Myrdal, a Noble Prize winner Economist. He was the first Economist to have used the concepts of 'Backwash' and 'Spread Effects' to explain this model.

Prof. Gunnar Myrdal maintains that economic development results in a circular causation process that results in rapid development of developed countries while the weaker and backward countries tend to remain behind and poor.

7.2 Objectives

After going through this lesson, you will be able to:-

- Explain the meaning of Backwash Effects;
- Explain the meaning of Spread Effects;
- Describe Regional Inequalities;
- Discuss International Inequalities;
- State Role of the State and
- Discuss Capital Movements.

7.3 The Myrdal Thesis

Myrdal builds a new theory of economic development which is capable of solving regional and international inequalities on national and international planes. He thinks that theory of international trade in underdeveloped countries must be different from that applicable in the case of developed countries. He tries to explain his theory with 'backwash' and 'spread' effects. He defines:-

Backwash effects as, "all relevant adverse changes...of economic expansion in a locality...caused outside that locality"

Spread effects, on the other hand, refer to "certain centrifugal effects of expansionary momentum from the centers of economic expansion to other regions."

In this way, regional inequalities rise due to strong backwash effects and the weak spread effects in underdeveloped countries. In short, 'backwash effects' have unfavourable effects of economic expansion while 'spread effects' have favourable effects. In an underdeveloped country, the backwash effects are predominant and the spread effects are dampened. This leads to international inequalities and also to regional inequalities within the underdeveloped countries.

7.4 Regional Inequalities

Prof. Myrdal's theory begins with the tendency towards regional inequalities in a single country. In his opinion, developing regions exert a strong agglomerating pull, accelerating their rate of growth and bringing increasing stagnation or decline in other parts of the country.

Free market forces tend to increase regional inequalities. In this connection, he found, if things were left to market forces unhampered by policy interference, industrial production, commerce, banking, insurance, shipping and almost all those economic activities which in a developing economy tend to give a bigger than average return and in addition science, art, literature, education and high culture generally would cluster in certain localities and regions, leaving the rest of the country more or less in a back water.

"Thus, regional inequalities are accentuated when some localities grow at the cost of other regions which stagnate."

7.4.1 Backwash Effects

Migration: The migration of people from backward regions results in regional imbalances. The developing economy will attract young and active people from other parts of the country. This will tend to favour the developing regions and will depress the other backward regions from where people have migrated.

Capital movements: Capital shifts from poorer regions to prosperous regions, where the rate of return is high and capital is more secure. Thus, the progressive regions will draw more and more savings from the poor regions. The scope of better investment in centres of expansion may create capital shortage in backward regions.

Internal Trade: Another inequalizing force is trade which is in favour of developed regions and against the backward regions. The progressive regions will have better competitive advantages and markets.

7.4.2 Spread Effects

These 'spread effects' will try to neutralize the backwash effects to a greater extent. Therefore, the foremost cause of the backwardness of underdeveloped regions had been weaker spread effects and stronger backwash effects, whereby in cumulative process, poverty becomes its own cause.

7.4.3 Backwash Effects vs. Spread Effects

It is never possible to attain equilibrium between backwash and spread effects. In this regard, Prof. Myrdal quotes two broad relations:

(i) Regional inequalities are much wider in the poorer than in richer countries.

(ii) Regional inequalities are increasing in poor countries and diminishing in richer countries.

The chief cause of backwardness of underdeveloped regions has been the weaker spread effects and stronger backwash effects

7.4.4 Role of the State

In poorer countries, national policies have increased inequalities to manifold. The free play of market price, mechanism and Laissez-faire policy have created more regional inequalities in the presence of weaker spread effects. Therefore, the governments of underdeveloped countries should adopt egalitarian policies to reduce the backwash effects and strengthen the spread effects in order to eliminate regional inequalities and raise the tempo of continuous economic development.

Check your progress.

Note: Write your answer in the space given below:-

Q. 1. Define Backwash effects.

Ans.____

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Q. 2: Define spread effects.

Ans.____

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7.5 International Inequalities

According to **Prof. Myrdal**, rich and advanced countries are becoming rich while underdeveloped or poor countries are becoming backward and no equalizing force operates to correct inequalities in economic development.

7.5.1 Backwash Effects:

(a) **Immigration**: Youth, skilled and literate will move from underdeveloped countries to developed countries. This is what we call brain drain, as it took place during British period and even after independence. Literate and qualified people from India moved to Britain.

(b) **Capital Movements:** Not only the people moved but capital resources also moved to Britain from India. People invested in British Companies and MNCs.

(c) **International trade:** Thus, international trade may have strong backwash effects in underdeveloped countries. As Myrdal puts, “Trade operates as a rule with a fundamental bias in favour of richer and progressive countries than less developed countries”.

7.5.2 Spread Effects

Advanced countries have strong spread effects than poor countries, as was observed in India and England in nineteenth and first half of twentieth century. The strong spread effects of growing economy of England had overpowered Indian economy which was responsible for development of British economy at the cost of Indian economy.

7.6 Let us sum up

Myrdal's concept of backwash and spread effect has made successful departure from the earlier theories. With this model, he tries to analyze why poorer regions remain agricultural and traditional with low level of productivity and thus, fail to make any headway in accelerating the process of industrialization. In short, this model combines national and international forces which tend to keep backward countries in the world in the cumulative process where 'poverty becomes its own cause.' It is true that it leads to regional disparities and world inequalities. The free play of market forces and unhampered trade has tended to crush the export potential of such countries. This results in a great gap between import and export of underdeveloped countries which in turn has made economic development a costly affair

7.7 Lesson End Exercise

A. Long answer type questions:

1. Make a critical appraisal of the theory of Prof. Myrdal.
2. What are the main contents of Backwash effect and Spread effects of Myrdal's theory?
3. What are the regional and international inequalities among the countries of the world? State whether Myrdal's thesis has successfully met the problem of inequality? Discuss in detail.
4. Write short notes on :

   (i) Role of State.

(ii) Backwash vs. Spread Effects.

(iii) Capital Movements.

B. Short answer type questions:

1. Discuss the main features of Backwash Effects.
2. What is the role of State?
3. Explain Backwash Effects and Spread Effects.
4. What do you mean by International Inequalities?
5. Explain in detail regional in-equalities.

7.8 Suggested Readings:

1. Kindleberger, C.P: Economic Development, McGraw Hill, New York.
2. Lekhi, R.K: The Economics of Development and Planning, Kalyani Publishers, New Delhi.
3. Lekhi, R.K and Sujata Slathia: Economics of Development and Planning, Kalyani Publishers, Ludhiana.
4. Meier, G.M: Leading Issues in Economic Development, OUP, New Delhi.
5. Thirwal, A.P: Growth and Development, Macmillan, London.
6. Todaro, M.P: Development Planning-Models and methods, OUP, New Delhi.

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MYRDAL'S THEORY OF CIRCULAR CAUSATION

B.A. Sem-VI **Unit - II**
EC-601 **Lesson No. 8**

STRUCTURE

8.1 Introduction

Prof. W. A. Lewis has presented a theory of economic development with unlimited supplies of labour. The theory was first of all published in the form of an article in the Manchester School in May 1954. Prof. Lewis has tried to revive the classical model and had firmly stressed that the classical assumption of unlimited supply of labour is more relevant under conditions prevailing in majority of UDCs. Prof. Lewis has studied the process of economic development in the dual or two sector economy with special reference to UDC. The marginal productivity of labour is negligible, zero or negative. These countries have large population along with unlimited supply of labour. The surplus population exists not only in agricultural sector but also among petty traders, causal workers and domestic servants. Surplus labour is found even in those sectors where people work for wages. For example, let us suppose, five workers are needed to cultivate one hectare of land. If instead, ten workers are working, then five are surplus, thus are unemployed. Their marginal productivity will be zero. By gainfully utilising this surplus labour, the rate of capital formation can be accelerated for economic development.

8.2 Objectives

After going through this lesson, you will be able to:-

- Explain meaning of Dual Economy;
- Describe Capitalist Surplus;
- Discuss the role of different factors in Capital Formation and
- Explain the end of Growth Process.

8.3 Assumptions

Prof. Lewis' model is based on the following assumptions:

1. There exists an unlimited supply of labor in the economy.
2. The economy is dualistic in nature.
3. The cost of imparting training and skill to the unskilled labor is assumed to remain constant through time.
4. The production in the expanding capitalist sector takes place according to the principle of profit maximization.

5. The capitalist sector operates by employing the reproducible capital and wage labor.

6. The subsistence sector does not make use of reproductive capital.

7. The per capita output in the subsistence sector is considerably smaller than that in the capitalist sector.

8. The relationship between the capitalist and the subsistence sector lies in the fact that as former expands it draws labor from the latter.

9. The wages which the expanding capitalist sector has to offer are determined by the earnings in the subsistence sector.

10. The magnitude of investment in capitalist sector is not absolutely larger in relation to population growth.

11. In this economy, capital and natural resources are highly scarce in relation to population.

8.4 Features of Lewis' Theory

The main features of Lewis model of unlimited supply of labor are given below—

8.4.1 Two Sector Economy or Dual Economy

W.A. Lewis believes that most of the underdeveloped countries of the world live under a heavy pressure of population due to rapid growth of population. In such economies, unlimited supply of labor is available at a subsistence wage. According to Lewis, underdeveloped countries have the dual economy and hence can be divided into two sectors- (i) the capitalist sector and (ii) the subsistence sector. The capitalist sector is that part of the economy which uses reproducible capital and pays capitalists for the use thereof. The use of capital is controlled by capitalist sector which hires the services of the labourers. It may be either private or public. The average wages are quite high. The people are generally advanced, literate, sophisticated and skilled in the capitalist sector. They employ labourers for wages in mines, factories and plantations etc. for earning profits. The output per head is high. On the other hand, the subsistence is that part of the economy which does not use reproducible capital.

In this sector, the output per head is quite low as compared to the capitalist sector. The average productivity of labour is low and people are generally backward, illiterate, and unskilled. Thus, there are less similarities between the two sectors and the development is lopsided.

Under the above circumstances, the main problem is to provide gainful employment to the unlimited supplies of labour. Thus, it is clear that gainful employment can be provided to unlimited labour force when rate of investment is at least 12 to 15 per cent of the national income.

In order to provide employment to the unlimited supply of labour, new industries can be set up or existing industries expanded without limit at the current wage rate by drawing up labour from the subsistence sector. The main source where the labours would be coming for employment at the subsistence wage as economic development proceeds are "the farmers, the casuals, the petty traders, the retainers (domestic and commercial), women in the household and population growth". It implies the mobilization of labour from the subsistence sector where the marginal productivity of labour is quite low to the capitalist sector where the wages are high and the marginal productivity of labour is also high. According to Lewis, the capitalist sector needs skilled workers for its expansion and the supply of this type of labour cannot be regarded unlimited in these countries. In this connection, Lewis argued that skilled labour is only a quasi bottleneck or a temporary bottleneck which can be removed by providing training facilities to unskilled labour.

8.4.2 Capitalist Surplus

Now, how the unlimited supply of labour is converted into capitalist surplus which is an essential prerequisite of growth. The main objective of capitalists is to maximise their profits. The capitalist surplus is the difference between the marginal productivity of labour and the capitalist wage. The capitalist sector starts drawing labour from the subsistence sector on account of higher wages. Their contribution to output is also higher despite higher wages. In this way surplus is generated in the capitalist sector. Lewis termed this surplus as the 'capitalist surplus'. The capitalist surplus is reinvested in the new capital assets by the entrepreneurs. It leads to capital formation in the economy. This investment creates new jobs for the unemployed labours withdrawn from the subsistence sector. The supply of labour is supposed to be perfectly elastic at the capitalist wage rate. Thus, the labour continue to be available at the existing capitalist wage rate. Thus the circular process of surplus generation, increased investment and increased demand for labour continues to steer the system out of the state of underdevelopment. In short, the process of economic development continues till the capital- labour ratio rises and the supply of labour becomes inelastic, and surplus labour disappears. Thus the capitalist formation depends on the capitalist surplus.

Diagrammatic Representation: Lewis theory of unlimited supply can be explained in the following diagram 8.1.

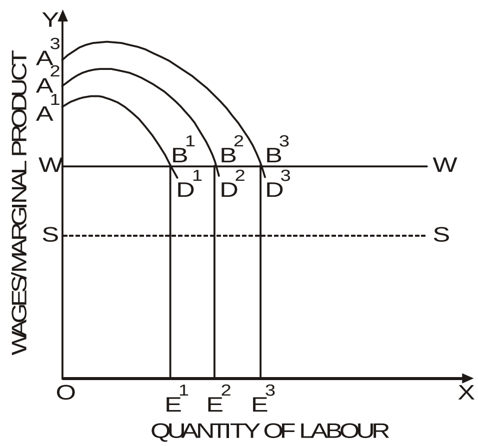

Fig. 8.1

In the diagram, quantity of labour employed is shown on OX axis and the marginal productivity has been shown on OY axis. OS is the wage rate in the subsistence sector and OW is the wage rate in capitalist sector.

The supply of labour is unlimited, as shown by the horizontal supply curve of labour WW. At the start when OE^1 labour is employed in the capitalist sector, its marginal productivity curve is A^1D^1 and the total output of this sector is $OA^1B^1E^1$. Out of this labourers are paid wages equal to the area OWB^1E^1. The remaining area WA^1B^1 shows surplus output. This is the capitalist surplus or total profit earned by the capitalist sector. As this surplus is reinvested, the curve of marginal productivity shifts upward to A^2D^2. The capitalist surplus and employment are now larger than before being WA^2B^2 and OE^2 respectively. Further reinvestment raises the marginal productivity curve and the level of employment to A^3D^3 and OE^3 and so on, till the entire surplus is absorbed in the capitalist sector. After this, the supply curve will slope from left to right upwards like an ordinary supply curve, and wages and employment will continue to rise.

According to **Lewis**, the technical progress may be recognized as capital saving device and labour saving device. In both ways, the technical progress tends to enhance profits or capitalist surplus and employment in the capitalist sector.

Check your progress.

Note: Write your answer in the space given below:-

Q1. Explain dual sectors of Lewis' theory.

Ans.____

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Q. 2: What do you understand by Capitalist Surplus?

Ans.____

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8.5 Role of different factors in Capital Formation

The role of different factors in capital formation is explained as below—

(a) Relation between Capital, Technical Progress and Productivity: Lewis is of the opinion that the growth of technical knowledge outside the capitalist sector is important, as it raises the level of wages and reduces the capitalistic surplus. But inside the capitalist sector, technical knowledge and capital, work in the same direction to raise the surplus and to increase employment. Capital formation and technical progress result not in raising wages, but in raising the share of profits in national income. The application of technical knowledge requires new investment and whether new knowledge is capital saving or labour saving. Capital and technical knowledge also work together. Hence, in the present analysis growth of productive capital and growth of technical knowledge are treated as single phenomenon and both tend to raise profits and employment, not wages.

(b) Role of Private Capitalists and State: In the developing countries with surplus labour, only 10 percent of people with the highest income, who receive around 40% of the national income, save. The wage earners and salary classes save hardly 3.5 percent of national income. The landlords, money lenders, princes, traders, priests etc. are engaged in prodigal consumption rather than in productive investments. It is thus state capitalists and domestic private capitalists who create capital out of profits earned by them. Lewis argued that once a capitalist sector has emerged, then it is matter of time before it becomes sizeable.

(c) Role of Bank Credit: Capital creation is possible not only through profits but also through bank credit. The underdeveloped countries suffer the problems of idle resources and scarcity of capital. In their case, credit creation works in the same manner as profits have their impact on capital formation. It will boost both employment and output. Of course, investments financed through bank credit can be inflationary. Prices will rise when surplus labour is employed in capitalist sector and is paid out of the created money. It is because then income will go up but the production of consumer goods output will remain the same. It will be possible only in the long-run. Once the production of consumer goods start, prices will show downward trend. Thus with capital formation, there is continuous rise in output, employment and profits. As higher profits lead to higher savings, a time may come when savings increase so much so that the new investments are financed without the bank credit.

(d) Role of Savings: Savings play a crucial role in the development of an economy. According to Lewis, "The central problem in the theory of economic development is to understand the process by which a community which was previously saving and investing 4 or 5 percent of the national income or less converts itself to an economy where the voluntary saving is running about 12 to 15 percent of national income or more."

Prof. Lewis observes that savings are to be done by people who receive profits or rents. But in the countries, those receiving rents are highly prone in their consumption and hence there is no savings. Lewis felt that if we take savings increasing as a proportion of national income in any economy, we may take it for granted that this is because the share of profits in the national income is increasing. Thus, saving increases relatively to national income because the income of the savers increases relatively to national income.

The major reason for the poverty of underdeveloped countries is that their capitalist sector is small. If these countries had a larger capitalist sector, profits would be a greater part of their national income and savings and investment would also be correspondingly greater. Prof. Lewis also found that the capacity to save in underdeveloped countries is not as small as generally it is assumed.

8.6 End of Growth Process

Lewis model shows that if unlimited labour is available at constant real wage, the capitalist surplus will rise continuously and annual investment will be in rising proportion of national income. But this process of economic growth cannot go forever. It comes to an end when there is no surplus labour.

According to Lewis, the growth process comes to an end due to following reasons:

(i) The capitalist sector expands so rapidly that it reduces absolutely the population in subsistence sector. The average productivity rises because there are few mouths to share the product and after sometime, the capitalist wage begins to rise which lowers the capitalist surplus. It reduces the capital formation and reserves the expansionary process.

(ii) The increase in the size of capitalist sector relative to subsistence sector may turn the terms of trade against the capitalist sector and this may force the capitalist to pay workers a higher percentage of their product in order to keep their real income constant.

(iii) The subsistence sector adopts new techniques of production, real wages would rise in the capitalist sector and so reduce the capitalist surplus.

(iv) The workers in the capitalist sector imitate the capitalist way of living and agitate for higher wages and if successful in getting their wages raised the capitalist surplus and rate of capital formation will be reduced.

Open Economy: If growth is badly affected by any of these factors, capital formation can be encouraged by continuing mass immigration. It can also be done by exporting capital to those countries which have surplus labour at subsistence wages.

Lewis has himself ruled out these two possibilities:

(a) Mass immigration of unskilled labour is not possible, because other countries with higher wages do not allow it.

(b) Export of capital means the excess of imports over exports. It will lead to adverse balance of payments. If the cost of imported goods is high, then money wages cannot be reduced. The adverse balance of payments can be controlled through strict exchange control.

8.7 Critical Appraisal

Though Lewis' model has provided a deep and perceptive analysis of the various problems of underdeveloped countries, yet it is not free from criticism. This model is criticized on theoretical and practical grounds on the basis of following points:

1. Unrealistic Assumption: The theory assumes a constant wage rate in the capitalist sector until the supply of labour is exhausted from subsistence sector. This seems to be unrealistic because the wage rate continuously rises over time in the industrial sector of an underdeveloped economy. The assumption of unlimited labour supply in underdeveloped countries is not much relevant as it is not applicable to the countries like South America and South Africa. To some extent, it is applicable to Asian countries. The surplus labour exists in rural areas, where as there is full employment in urban sector. Even this assumption is at variance with reality.

2. Limited Supply of Skilled Labour: Another limitation of this model is that if we assume unlimited supply of unskilled labour, then, the supply of skilled labour is definitely limited in underdeveloped countries. This will create difficulties in carrying out programs of industrialization and economic development. Prof. Lewis admits himself that limited supply of skilled labour is only a temporary bottleneck which can be removed by providing facilities for training labour. But the fact is that the problems of skill formation are not easily overcome especially in backward and underdeveloped economies.

3. One Sided Theory: Prof. Lewis does not consider the possibility of progress in agricultural sector, thus, it is one sided theory. As the industrial sector develops with the transfer of surplus labour, the demand for food and raw materials will rise, which will, in turn, lead to growth in agricultural sector.

4. Lack of Entrepreneurs: Lewis' theory of unlimited supply of labour is based on the assumption that a capitalist class exists in underdeveloped countries. The entire process of growth depends upon the existence of such a class which has necessary skill to accumulate capital. In underdeveloped countries, a rising level of profits does not necessarily induce a rising level of reinvestment. It may encourage speculative activities i.e. a large number of existing entrepreneurs may turn to speculators to reap extra gains from the emerging shortage in the economy.

5. Neglects of Aggregate Demand: Lewis neglects the problem of aggregate demand. He thinks that whatever is produced in capitalist sector, is consumed by itself or is exported. He fails to consider the demand for products of capitalist sector by the subsistence sector. If there is shortage of demand for the products of capitalist sector, the growth process may come to halt.

6. Unequal distribution of Income: This model is criticized on the ground that it perpetuates unequal distribution of income. With the migration of rural population to urban sector, the supply of labour increases and the competition among the job seekers pushes the wages down which results in widening the income gap. Prof. Meier and Baldwin have expressed the view that unequal distribution of income does not contribute as much to the productive investment as might be expected. Hence, it is generally observed that high income groups dissipate their savings on unproductive things like precious articles, real estate etc.

7. Migration is not Easy Task: The migration of labour force from subsistence to capitalist sector is not so easy as is pointed out in the Lewis' model. It has been observed that of all the commodities, labour is the most difficult to transport. The labourers have so deep affection for land and homes that they can't think of leaving them. Therefore, in under developed countries, there are socio-cultural barriers to occupational and geographical mobility which hinder the migration of the workers.

8. Savings are not done by Capitalist Sector alone: It is not true to say that bulk of the savings are done by the capitalist sector alone in LDCs. Lewis himself admits this, in particular case in of Japan where bulk of the savings are done by the low income groups. Low income groups save in order to make their future secure and high income groups spend more because of influence of demonstration effect.

9. Marginal productivity of labour is not zero: Prof. Schultz does not agree that the marginal productivity of labour in over-populated underdeveloped countries is zero or negligible. If it were so, the subsistence wage would be zero. The fact is that every worker receives the subsistence wage in the form of cash. So, it is difficult to find out the exact number of surplus labourers who are to move to the capitalist sector and these are hardly 5 percent.

10. Mobility of Labour not Easy: Higher capitalist wage will not lead to the movement of surplus labour from subsistence sector to capitalist sector. People are so intensely attached to their family and land and they do not want to leave their kith and kin. The differences in languages and customs, problems of congestion, housing and high cost of living in the capitalist sector etc. also stand in the way of mobility of labour of this sector.

11. Multiplier process does not operate in LDCs: This model assumes that capital accumulation takes place when the capitalist class reinvests profits. It pre-supposes the operation of investment multiplier which is not applicable to UDCs. If the profits are reduced or price of wage goods rises, the process of capital formation will stop before all the surplus labour is absorbed.

12. Adoption of Capital Intensive Techniques: It is observed that the rate of labour absorption depends upon reinvestable surplus. But in most underdeveloped countries, capitalists are under no compulsion to adopt labour intensive techniques. Hence, they try to adopt capital intensive techniques, the productivity per capita may increase and consequently marginal productivity curve may shift, but such shift has no favourable effect on level of employment. Even in LDCs, the landlords try to introduce technical progress by mechanisation of agriculture. The policy in both agriculture and industry is caused by labour displacement rather than labour absorption.

13. Leakage in Growth Process: Dr. A.M. Khusro opines that this model is not applicable for industrialization of underdeveloped countries, as it requires exploitation of saving potential inherent in the disguised unemployment. There are several leakages in the process which fail to convert disguised unemployment into saving potential.

(i) Price insensitivity of farmers.

(ii) Decline in the marketed surplus.

(iii) The supplies to non-agricultural sector may not increase due to increase in hoarding propensity of farmers, wholesale and retail dealers.

These leakages hinder the operation of multiplier in UDC with the fact that expansion process fails to become a development stimulant.

14. Inflation is not Self Destructive: Prof. Lewis presumes that inflation for the purpose of development is self destructive, but this assumption does not hold good in the context of developing economies which are characterized by market imperfections, inelastic supply of working capital, limited productive capacity and high propensity to consume. Inflation is not self destructive, rather it is self cumulative. It is a phenomenon which is influenced not by domestic factor alone. It is influenced by external factors over which governments have little or no control. Inflation creates more problems than it solves.

15. Productivity falls with Migration of Labour: Prof. Lewis assumes that when surplus labour is withdrawn from subsistence sector to capitalist sector, the agricultural production remains unaffected in the subsistence sector. But the withdrawal of workers from the farms will reduce output.

According to Prof. Schutlz, "there is no evidence for any poor country anywhere in the world which suggests that a transfer of even some fraction say 5 percent of existing labour force out of agriculture, with other things remaining equal, could be made without reducing its production". Prof. Higgins is of the opinion, "It is not possible to transfer a large number of workers permanently and for full time from peasant agriculture to industry without a drop in agricultural production".

16. Inefficient Tax Administration: Prof. Lewis' argument that taxation will mop up increasing income, cannot be accepted because that tax administration in underdeveloped countries is not so efficient and developed.

8.8 Let us sum up

Keeping the above facts in mind, one cannot deny the utility of Lewis' model in the process of economic development. It explains the role of capital formation in LDCs where labour is surplus and capital is scarce. Lewis has interpreted the various development parameters such as population growth, technical progress, investment of profits, credit creation, international trade etc. which provide the model a touch of realism. This model has some analytical value, as it emphasizes the structural and economic differences between urban and rural labour force. It is the process of labour transfer that links them together.

8.9 Lesson End Exercise

A. Long answer type questions:

1. Critically examine the Lewis' Model of unlimited supply of labour.
2. "Inflation for the purpose of capital formation is very different kettle of fish. It is self destructive. Prices begin to rise but are sooner or later overtaken by rising output and may in the last stage end up lower than they were at the beginning". Comment.
3. How far is Lewis' theory applicable to over populated underdeveloped countries?
4. What determines the subsistence wage at which the surplus labour is available for employment in capitalist sector? Discuss.

B. Short answer type questions:

1. Give the views of Prof. Lewis on unlimited supply of labour.
2. Mention the main assumptions of the model given by Prof. Lewis.
3. Explain the main features of Lewis' model.
4. Give any four shortcomings of Lewis' model.
5. Write short notes on :
   (a) Dual Economy.
   (b) Role of Savings.
   (c) End of Growth Process.
   (d) Role of State & Private Capitalist.
   (e) Role of Bank Credit.
6. How is capital formation done through Bank Credit as explained by Lewis?
7. Explain the process of Growth according to Prof. Lewis.
8. State the main features of Lewis' Theory of Unlimited Supply of Labour.

8.10 Suggested Readings:

1. Hayami, Y: Development Economics, Oxford University Press, New York.
2. Haggins, B: Economic Development, Norton, New York.
3. Jhingan, M.L: The Economics of Development and Planning, Vrinda Publications, Delhi.
4. Kindleberger, C.P: Economic Development, McGraw Hill, New York.
5. Kumar, Pushpam(ed.): Economics of Environment and Development, Ane Books, New Delhi.
6. Lekhi, R.K: The Economics of Development and Planning, Kalyani Publishers, New Delhi.
7. Lekhi, R.K and Sujata Slathia: Economics of Development and Planning, Kalyani Publishers, Ludhiana.

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ROSTOW'S STAGES OF ECONOMIC GROWTH

B.A. Sem-VI **Unit - II**

EC-601 **Lesson No. 9**

STRUCTURE

9.1 Introduction

Dear learners, we have already studied four partial models of Economic development in this unit. It is the last but a very interesting model. Economic Development is a multi-dimensional phenomenon. The economic development is influenced by both economic and non-economic forces. W.W. Rostow has laid much emphasis on social and institutional factors as vital agents of economic development. In fact, the non-economic factors play a major role in economic development. Many economists are of the opinion that a country passes through different stages during the course of its development and hence, it is possible to split the process of development into specific stages of economic growth.

9.2 Objectives

After going through this lesson, you will be able to -:

- Explain the meaning and features of Traditional society;
- Discuss Pre-conditions for Take -off;
- Describe the Take- off;
- State conditions of Take- off;
- Explain the Drive to maturity and
- The Age of high mass consumption

9.3 The Theory

W.W. Rostow in his 'The stages of Economic Growth', (1960) has discussed historical perspective of economic development. According to Prof. W.W. Rostow, the process of economic development can be divided into following five stages :

1. The Traditional Society
2. The Pre-conditions for take-off.
3. The Take-off.
4. The Drive to Maturity.
5. Age of High Mass Consumption.

Let us explain these five stages in detail.

9.4 The Traditional Society

W.W. Rostow, has described traditional society "as one whose structure is developed within limited production functions, based on Pre-Newtonian science and technology, and Pre-Newtonian attitudes towards physical world". It means the structure of traditional society was based on primitive technology and orthodox ideas of people. The modern facilities or science and technology were absent.

In the traditional society, the social structure was such that family played a dominant role. Political power is centered in the hands of landlords. Bulk of the population is engaged in agriculture, which is a major source of income of the state. The Pre-Newtonian era is called traditional society.

9.4.1 Features of Traditional Society:

The traditional society has the following main features:

(*i*) **Dominance of Agriculture:** In this stage, bulk of the people were engaged in agriculture. But agriculture was backward, as primitive methods of production were adopted.

(*ii*) **Dominance of Family and Caste System:** In the traditional society, there was hierarchical system in which family and class system played a dominant role.

(*iii*) **Political Power:** The landlords controlled political power under traditional society. The landlords exploited the natural resources of the country for their self-interest.

(*iv*) **Techniques:** In the traditional society, old techniques were employed which were based on Pre-Newtonian science and technology.

(*v*) **Law of Diminishing Returns:** In the traditional society, the diminishing returns prevailed in agriculture.

(*vi*) **Unproductive Expenditure:** The expenditure incurred in this stage by the state was unproductive like building up of memorials, expensive funerals, expenditure on luxuries by rulers etc.

(*vii*) **Application of Malthusian theory:** The increase and fall in the population was based on the law of Malthusian theory of population in traditional society. Thus, both birth rate and death rate are quite high.

(*viii*) **Ignorance about Development Avenues:** In traditional society, people remain ignorant about development avenues.

(*ix*) **Economic Activities:** The economic activities are totally traditional *i.e.* simple tools and implements are used and confined only to meet domestic needs.

9.5 Pre Conditions of Take- Off

The second stage of economic growth is the pre-conditions for take-off. In this stage, we study all those changes which transform the traditional society into pre-conditions for take-off. In this stage, besides economic factors, we also study the non-economic factors like political, social, cultural etc. This stage has duration of around 100 years which shapes the economy for the stage of take-off.

"The second stage of growth embraces societies in the process of transition, this is the period when the pre-conditions for take-off are developed."

- W.W. Rostow

Kindleberger is of the view that pre-conditions stage brings slow changes in particular in attitudes and organizations. In this stage, we find occupational, geographical and social mobility. Transport becomes cheaper whereas commerce spreads. There is also adoption of new production functions in agriculture and industry. Education also spreads. There is also emergence of new investors and entrepreneurs. Also we find a network of financial institutions which help in boosting savings. Further, trade, both domestic and foreign, shows upward trend. Thus, pre-conditions for take-off is an era when society prepares itself for sustained growth.

The pre-conditions for sustained industrialization, according to Rostow, have usually required three radical changes in three non industrial sectors. These are:

1. There should be an expansion of Social Overhead Capital, SOC i.e. development of transport, communications, roads etc. The maintenance of law and order also requires the expansion of SOC.

2. The radical changes should take place in agriculture so as to raise its productivity. The rise in the agricultural productivity is essential to sustain industrialization and to meet the requirements of the growing population.

3. There should be an expansion of foreign trade. Foreign capital and technical know-how help to sustain industrialization in the initial stages of development. Exports are necessary to pay off external debts.

9.5.1 Features of the Pre-Conditions for Take off

(*i*) **Importance of non-agricultural sector:** Now, there is less dependence on agriculture as compared to traditional society. It is because other sectors like industry, transport, trade etc. are in the process of development.

(*ii*) **Expansion of social overhead capital:** The government spends a part of its income in creating infrastructure i.e. social overhead capital like rail, roads, hospitals, dams, schools, colleges etc.

(*iii*) **New Ideology:** The dogmatic views are replaced by new ideas.

(*iv*) **Technological Advancement:** Technological development can be seen in this stage, due to which there is increased capital formation. As a result, investment level also shows upward trend.

(v) **Exports and Imports:** In this stage, finished goods, capital goods and machinery are imported but raw-materials, minerals and semi-finished goods are exported.

(*vi*) **Rate of Savings and Investment:** The rates of savings and investment during this stage are likely to be under 5 percent of the Net National Product of the Economy.

(*vii*) **Stress on Development of Transport:** More stress is laid on the development of transport and communication.

(*viii*) **Economic and Social Costs:** A part of the government revenue is devoted to the construction of roads, dams and bridges besides schools, hospitals and research institutes. So, there is development of infrastructure.

(*ix*) **Decline in Birth Rate:** Birth rate starts declining in this stage. People are less desirous of enlarging their family size.

(*x*) **Change in Views:** There is a perceptible change in the views of the people. They become confident of increased production with appropriate utilization of the resources.

(*xi*) **End of Conservatism:** Unnecessary conservatism comes to an end and the economy is driven on the path of modernization.

9.6 The Take- Off

The third significant stage of growth is the stage of take-off. The period of this stage is 20 to 30 years, during which the economic development process is automatic and the economy becomes self-reliant. New Industries are set up which start generating savings due to which investment level goes up, which in turn helps in raising national income. Once the economy enters into self-generating growth, economic forces accelerate the process of economic development. The self-reliant growth is also known as take off, an initial push, a big push, a critical minimum effort, a great leap forward. All the concepts mean that economic growth starts with a bang, and not with a whisper.

"Take-off is an industrial revolution, tied directly to radical changes in methods of production, having their decisive consequences over a relatively short period of time." **-Rostow**

It is also called 'a great watershed in the life of modern societies'.

In the following table, we find tentative take off years of different countries as given by Rostow

S. No.	Country	Take-off
1.	U.K.	1783-1802
2.	France	1830-1860
3.	U.S.A.	1843-1860
4.	Germany	1850-1873
5.	Japan	1878-1900
6.	Russia	1890-1915
7.	Canada	1896-1914
8.	China	1952
9.	India	1952

9.6.1 Conditions for Take-Off

Prof. Rostow had suggested the following three related conditions for making the growth process self sustained:

1. A rise in the rate of productive investment from about 5 per cent or less to over 10 per cent of national income or net national product.
2. The development of one or more substantial manufacturing sectors, with a high rate of growth.
3. The existence or quick emergence of a political, social and institutional framework which exploits the impulses of expansion in modern sectors.

Rate of Investment:

Rostow had suggested that the rate of net investment should be over 10 per cent of national income, if an economy is to enter the stage of self propelling growth. The growth in the national output should outstrip the growth of population because it is only under this condition that a growth in per capita income can be achieved. If the capital rate is assumed to be 3.5 : 1 and if population growth rate is 1 to 1.5 per cent per annum then at least 10.5 to 12.5 per cent of the net national product must be invested regularly in order to achieve 2 per cent growth of per capita income.

An adequate supply of loanable funds is essential for raising the rate of investment in the economy.

For attaining adequate finance for take off, it is necessary that:

(*a*) the community's surplus over consumption does not flow into the hands of those who will waste it by hoarding, luxury consumption or low productivity investment out-lays ;

(*b*) institutions for providing cheap and adequate working capital be developed ;

(*c*) one or more sectors of the economy must grow rapidly and the entrepreneurs in these sectors must plough back a substantial portion of their profits to productive investment; and

(*d*) foreign capital can profitably be utilized for building up social and economic overheads.

Development of Leading Sectors:

Another condition for take-off is the development of one or more leading sectors in the economy.

There are generally three sectors of the economy.

1. **Primary Growth Sector: According to Rostow,** "Primary growth sectors are those where possibilities for innovation or the exploration of newly profitable avenues or hitherto unexplored resources yield a high growth rate and set in motion expansionary forces elsewhere in the economy". The development of cotton textile industries in Britain during the 18th century provided necessary momentum for the development of other sectors of British economy.

2. Supplementary Growth Sector: Rostow explains that supplementary growth sectors are those "where rapid advance occurs in direct response to or as a consequence of advance in the primary growth sectors." For example, in England, the development of cotton textile industries led to the development of coal, iron and engineering industries.

3. Derived Growth Sector: According to Rostow, "Derived growth sectors are those where advancement occurs in some fairly steady relation to the growth of total real income, population, industrial production or some other overall modestly increasing variable." Growth of population and industrial workers require increase in agricultural output, development of industrial colonies, expansion of transport and other social overhead capital. Agriculture, industry, housing and transport etc. are included in derived growth sectors.

Cultural Framework that Exploits Expansion:

The last requirement for takeoff is the existence or emergence of cultural framework that exploits the impulses to expansion in the modern sector. A necessary condition for this is the ability of the economy to mobilize larger savings out of an expanding income to raise effective demand for the manufactured products and to create external economies through the expansion of the leading sectors.

The take off stage is explained with the help of Fig. 9.1

The horizontal axis represents the NNP and the vertical axis amount of savings, net investment and capital. OS is the saving schedule. $K_0 Y_0$, $K_1 Y_1$ are the curves of capital output ratio drawn as downward sloping. They are drawn parallel to each other to have a constant capital output ratio i.e.

$$\frac{OK_0}{OY_0} = \frac{OK_1}{OY_1}, \frac{TY_0}{Y_0Y_1}$$

g Marginal capital output ratio

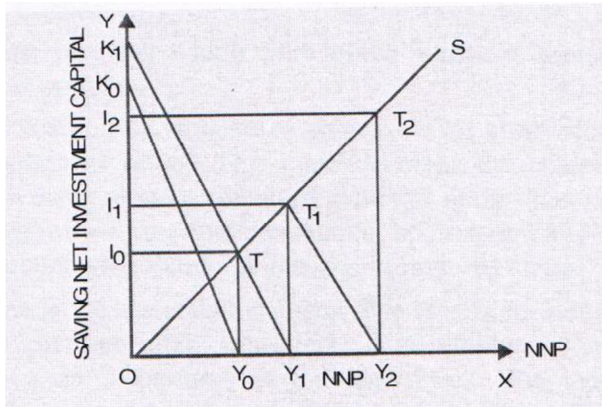

Fig. 9.1

In the beginning, the society has very flat saving curve and very steep capital output ratio curve in the pre take off stage. It implies that people save little out of their income and the capital- output ratio is high. In the time period O, as OI_0 net investment is made, it tends to increase capital stock which becomes productive in time period 1 and raises NNP to OY_1. Then in the take-off stage when OI_1 investment takes place, some major stimulus leads to the growth of productive capital more quickly leading to a fall in capital- output ratio to T_1Y_1/Y_1Y_2. As a result, the investment pattern changes and capital- output ratio becomes flatter. It is T_1Y_2 NNP increase to OY_2 which further raises net investment to OI_2. The economy has taken off and this pattern of growth is continued till it becomes self sustained.

9.7 The Drive to Maturity:

It is defined as the period when a society has effectively applied the range of modern technology to the bulk of its resources.

It is a period of long sustained growth extending over four decades. New production techniques take place of the old ones. During this period, the rates of saving and investment reach such a magnitude that economic development becomes automatic. As the economy drives to maturity, the overall capital per head increases. New leading sectors are created. The proportion of population engaged in rural pursuits declines, people prefer to live in urban areas and the structure of the country's foreign trade undergoes a radical change. Working force becomes technically skilled. Real wages rise. The working force organizes itself in order to have greater economic and social security.

Prof. Rostow has given the following symbolic dates for technical maturity of some countries:

Great Britain	1850
United States	1900
Germany	1910
France	1910
Japan	1940
Russia	1950
Canada	1953

The significant changes which take place within a society in drive to maturity stages are given as under:

(*i*) **The composition of work-force changes.** This class becomes more skilled. Their real wages start rising. This class develops the tendency for urbanization and prefers to enjoy modern amenities available in the cities. Rostow estimated that the percentage of working force depending upon agriculture declines from 75 per cent to 20 per cent when economy reaches its maturity stage.

(*ii*) **The character of leadership changes.** The control of industries passes into hands of efficient and polished managers. The employers and employees consider themselves as co-partners in the enterprises. The industrial peace and social security becomes the hallmarks of the maturity phase of the society.

(*iii*) As the maturity phase of the economy comes to close, the society becomes fed up with the miracles of the industrialization and starts aspiring for something new. The society prepares itself to embrace the change.

9.8 The Age of High Mass Consumption

In this stage, the leading sectors of the economy produce durable consumer goods and services like automobiles, refrigerators, televisions, VCRs, ACs, etc.

"The balance of attention of the society....shifts from supply to demand, from problems of production to the problems of consumption". -**Rostow**

Rostow favoured the view that economic welfare can be raised by three methods:

(*i*) The aim of the government is to raise power and influence beyond the country.

(*ii*) There should be more equitable distribution of income. This can be done through progressive taxation, increased social security and leisure, to the working force.

(*iii*) To create new commercial centres and leading sectors like consumer durables, automobiles etc.

Features of High Mass Consumption

(*i*) There is enormous increase in national and per capita income.

(*ii*) The living standard of the people goes up, as the consumption level of people goes up.

(*iii*) The rate of investment of this stage goes up to the tune of 20% or more.

(*iv*) There is substantial improvement in the employment opportunities.

(*v*) The labourers organize themselves and hence form unions.

(*vi*) The foundation of a welfare-stage is laid-down.

(*vii*) Aggregate and per capita income become quite high.

(*viii*) Consumer sovereignty increases.

(*ix*) Society assumes the role of welfare state.

(*x*) Tendency of migration of population from villages to the cities.

(*xi*) More financial security prevails.

(*xii*) Consumption of comforts and luxuries rises.

Check your Progress:

Note: Write your answer in the space given below:-

Q. 1. Mention the five stages of Rostow'theory of Economic Development.

Ans.____

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Q. 2: Write down three conditions of Take Off stage.

Ans.____

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9.9 Limitations

The concept of take off, no doubt, carries a wide acceptance among UDCs, yet it is a dangerous weapon. It has to be used with care by the planners of poor countries.

There are certain limitations which do not allow the concept to work properly, which are stated as under:

1. Capital-output ratio not constant: While calculating the capital requirement for take off period, Rostow assumes capital-output ratio as fixed. This implies constant returns to scale. This assumption is valid in case of advanced economies. But UDCs are characterized by the predominance of agriculture and primary production. Thus, the planners of UDCs cannot rely upon constant capital-output ratio for calculating the capital requirement for take off.

2. It ignored the removal of unemployment: The concept of take off has been criticized on the ground that it does not consider the problem of unemployment at all. Most of the UDCs are faced with the problem of unemployment. The concept of take off is of little utility to UDCs as it fails to consider the urgent problem like unemployment.

3. Economic development not spontaneous: The concept of take off suggests an element of spontaneity which is of little significance in the context of UDCs.

4. Aeronautical concept not correct: Prof. Bicanic does not agree with the symbolical presentation of the take off as it appears to him like a light flying animal just got off from the earth and floating in the air. It is not a take off but a very painful process which every UDC has to go through.

5. Removal of obstacles not discussed: The concept of take off suggests the conditions for accelerating the pace of development, but fails to throw light for the removal of certain obstacles faced by UDCs.

6. Element of ambiguity: Another limitation of the concept is that there is an element of ambiguity in this concept of take off when applied to UDCs. During the take off, investment increases with a rise in the national income which is not possible without reducing average propensity to consume or increasing APS.

9.10 The Take- Off and India

After making detailed study of different stages of take-off as given by Prof. Rostow, question arises whether India has achieved the stage of take-off or not. This we can decide only after seeing the presence of the conditions of take off. W.W. Rostow is of the view that the first stage of take-off is that the rate of investment should be more than 10% of national income. Now we would see whether the rate of investment in India is more than 10%. At the beginning of the first plan i.e. during 1950-51 the rate of investment was 5.5% of national income.

But during 1960-61, the rate of investment went upto 12.5% whereas it further went upto 13.8% in 1965-66. Similarly during the period of fourth plan i.e., 1973-74 the investment rate was 14.55. It authenticates that India has entered the stage of take-off during 1960-61.

The second condition for take-off is the development of one or more leading sectors. Now we need to examine whether leading sector has developed in India or not. From the first to the eighth five year plan, all the leading sectors had developed. Green revolution in 1966 is the proof before us. In the successive five year plans too, we exerted for self-reliance and a self-generating economy. It testifies the development of agricultural sector. Industrial sector also developed satisfactorily. There was enormous development of cotton and textile industries, iron and steel industry, tea industry, jute industry etc. The means of transport and communication also spread. Export sector also showed upward trend. This proves that leading sectors had developed in India. That is why, we can conclude that Indian economy has already entered the stage of take-off.

The third important condition of take-off is social and cultural awakening which is present in the Indian economy. There is a big change in the attitudes and outlook of the people. New technology has been adopted in all sectors. Social overhead capital has been widely spread over. The development of infrastructure has been given top priority. There is also political awakening among the people as seen in General Elections. Foreign trade has expanded. Liberalization, Privatization and Globalization has brought the country close to the world economy. All these factors prove that India had already achieved the take-off stage of Rostow's theory.. India is now in the fourth stage of Rostow's theory i.e 'The Drive to Maturity'.

9.11 Critical Appraisal

Rostow's analysis of economic growth has aroused a mixed reaction. On the one hand, his treatment of growth is highly commended, while on the other, the same piece of economic literature is severely criticized.

1. Traditional society not essential for development: A number of nations such as the United States, Canada, New Zealand and Australia were born free of traditional societies.

2. Pre-conditions need not precede Take off: It is not essential that pre-conditions must precede take off. The agricultural revolution and accumulation of SOC in transport must take place before take-off. The experiences of most of the countries tell us that development in agriculture continues even in the take off stage.

3. Overlapping of different stages: The stages of economic growth mentioned by Rostow are not mutually exclusive and they may overlap each other. The characteristics of earlier stages are mixed up with the characteristics of later stages.

4. Difficult to divide growth process in distinct stages: Most of the growth economists do not agree with the possibility of dividing history into specific stages of development. Those stages are not inevitable like birth and death, nor do they follow a sequence like childhood, adolescent, maturity and old age.

5. Criticism of the Take Off: The most widely discussed, severely criticized and controversial stage is the take off.

(a) Dates of take-off are doubtful.

(b) Possibilities of failure not considered.

(*c*) Growth rate of investment is arbitrary.

(*d*) Some specific industries cannot be leading sectors.

(*e*) Little difference between first and third condition.

(*f*) Not empirical.

6. Concept of self sustained growth misleading: According to Prof. Kuznets, no growth is purely self sustaining or purely self limiting. Economic growth is a struggle and it will be wrong and misleading to call it self-generating or self sustained at any stage.

7. Rostow— a false Prophet: In the history of ideas, any proposal is welcomed which helps us understand the past and build a promising future. Rostow's attempt did not appear to succeed in either direction.

8. The stage of Drive to Maturity is puzzling: It contains all the features of the take off stage, such as rate of net investment over 10 per cent of national income, development of new production techniques, leading sectors and institutions. Then where lies the need for a separate stage where growth process becomes self sustained? It can be self sustained in take off stage also.

9. Stage of High Mass Consumption not chronological: The stage of high mass consumption is so defined that certain countries like Australia and Canada have entered this stage before even reaching maturity.

10. Lack of basis: Rostow failed to provide any basis of distinctly separating one stage from the other. It is difficult to ascertain when a particular stage begins and the other ends.

11. Not applicable to all countries: According to Prof. Meir, "Rostow's stages of analysis may not be applicable to all countries. Some countries may, infact, jump certain stages during their growth process."

12. Uncertainty: It fails to predict the course of events with regard to economic growth. Also, what would happen after the 5th stage of growth is beyond the canvas of Rostow's growth analysis.

9.12 Let us sum up

On the basis of the views expressed above, one should not conclude that Rostow's approach to the problem of growth is theoretically unsound or practically useless. His analysis is unique, as it highlights the importance of social and institutional factors in theory of economic development. Economic growth is not only a function of economic forces but of non economic forces too. Rostow appears to be first economist who made a bold attempt by incorporating the non-economic forces in this theory of economic growth.

9.13 Lesson End Exercise

A. Long answer type questions:

1. Discuss the five stages of growth, as described by Prof. W.W. Rostow.
2. "The third plan was conceived as the first stage of a decade or more intensive development leading to a self reliant and self generating economy." Explain.
3. To what extent is the Take off Theory of Rostow applicable to UDCs?
4. Critically examine the Rostow theory of Growth.
5. How far is Take off of Rostow applicable to India?
6. "Economic historians are sceptical about the dates of Take off as suggested by Prof. Rostow." Comment.

B. Short answer types questions:

1. What are the four basic factors responsible for rapid growth of leading sectors?
2. Discuss Rostow's concept of the pre-conditions to Take off.
3. Discuss the Take off stage of economic development. Is this analysis misleading?
4. What connection is there between the conception and later stages?
5. Write short notes on:

   (*a*) Traditional Society.

   (*b*) The Take Off.

   (*c*) Capital-output ratio not constant.

   (*d*) Silence over removal of unemployment.

9.14 Suggested Readings

1. Aggarwal R.C. Economics of Development and Planning, Lakshmi Narain Aggarwal, Agra.
2. Lekhi, R.K: The Economics of Development and Planning, Kalyani Publishers, New Delhi.
3. Lekhi, R.K and Sujata Slathia: Economics of Development and Planning, Kalyani Publishers, Ludhiana.
4. Meier, G.M: Leading Issues in Economic Development, OUP, New Delhi.
5. Thirwal, A.P: Growth and Development, Macmilion London.
6. Todaro, M.P: Development Planning-Models and methods, OUP, New Delhi.

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ROLE OF AGRICULTURE IN ECONOMIC DEVELOPMENT

B.A. Sem-VI **Unit - III**

EC-601 **Lesson No. 10**

STRUCTURE

10.1 Introduction

Agricultural sector plays a strategic role in the process of economic development of a country. It has already made a significant contribution to the economic prosperity of advanced countries and its role in the economic development of less developed countries is of vital importance. In other words, where per capita real income is low, emphasis is being laid on agriculture and other primary industries. The history of England is clear evidence that Agricultural Revolution preceded the Industrial Revolution there. In U.S.A. and Japan also, agricultural development has helped to a greater extent in the process of their industrialization. "Thus industrial and agricultural developments are not alternatives but complementary and are mutually supporting with respect to both inputs and outputs." It is seen that increased agricultural output and productivity tend to contribute substantially to an overall economic development of the country. According to Prof. Kinderberger, Todaro, Lewis and Nurkse etc., agriculture makes its contribution to economic development in several ways, viz., (1) by providing food and raw material to non-agricultural sectors of the economy, (2) by creating demand for goods produced in non-agricultural sectors, by the rural people on the strength of the purchasing power, earned by them on selling the marketable surplus, (3) by providing investable surplus in the form of savings and taxes to be invested in non-agricultural sector, (4) by earning valuable foreign exchange through the export of agricultural products and (5) by providing employment to a vast army of uneducated, backward and unskilled labour. As a matter of fact, if the process of economic development is to be initiated and made self-sustaining, it must begin with agricultural sector.

10.2 Objectives

After going through this chapter, students will be able to -:

a. Explain Agriculture sector;

b. Discuss Role of agriculture in economic development;

c. Describe Agricultural growth and economic development in India.

10.3 Role of agriculture in Economic Development

The agriculture sector is the backbone of an economy which provides the basic ingredients to mankind and raw material for industrialization. Therefore, the role of agriculture for the development of an economy may be stated as below:

1. Contribution to National Income: The lessons drawn from the economic history of many advanced countries tell us that agricultural prosperity contributed considerably to economic advancement. It is correctly observed that, "The leading industrialized countries of today were once predominantly agricultural while the developing economies still have the dominance of agriculture and it largely contributes to the national income.

2. Source of Food Supply: Agriculture is the basic source of food supply of all the countries of the world—whether underdeveloped, developing or developed. Due to heavy pressure of population in underdeveloped and developing countries and its rapid increase, the demand for food is increasing at a fast rate. If agriculture fails to meet the rising demand of food products, it is found to affect adversely the growth rate of the economy. Raising supply of food by agricultural sector has, therefore, great importance for economic growth of a country.

Increase in demand for food in an economy is determined by the following equation :

$$D = P + 2g$$

Here, D stands for Annual Rate of Growth in demand for food.

P stands for Population Growth Rate.

g stands for Rate of Increase in per Capita Income.

2 stands for Income Elasticity of Demand for Agricultural Products.

3. Pre-Requisite for Raw Materials : Agricultural advancement is necessary for improving the supply of raw materials for the agro-based industries especially in developing countries. The shortage of agricultural goods has its impact on industrial production and a consequent increase in the general price level. It will impede the growth of the country's economy. The flour mills, rice shellers, oil & dal mills, bread, meat, milk products, sugar factories, wineries, jute mills, textile mills and numerous other industries are based on agricultural products.

4. Provision of Surplus: The progress in agricultural sector provides surplus for increasing the exports of agricultural products. In the earlier stages of development, an increase in the export earnings is more desirable because of the greater strains on foreign exchange situation needed for the financing of imports of basic and essential capital goods.

5. Shift of Manpower: Initially, agriculture absorbs a large quantity of labour force. In India, still about 62% labour is absorbed in this sector. Agricultural progress permits the shift of manpower from agricultural to non-agricultural sector.

6. Creation of Infrastructure: The development of agriculture requires roads, markets, storage, transportation, railways, postal services and many others and the development of commercial sector.

7. Relief from Shortage of Capital: The development of agricultural sector has minimized the burden of several developed countries which were facing the shortage of foreign capital. If foreign capital is available with the 'strings' attached to it, it will create another significant problem. Agriculture sector requires less capital for its development, minimizing problem of foreign capital.

8. Helpful to Reduce Inequality: In a country which is predominantly agricultural and overpopulated, there is greater inequality of income between the rural and urban areas of the country. To reduce this inequality of income, it is necessary to accord a higher priority to agriculture. The prosperity of agriculture would raise the income of the majority of the rural population and thus the disparity in income may be reduced to a certain extent.

9. Based on Democratic Notions: If the agricultural sector does not grow at a faster rate, it may result in the growing discontentment amongst the masses which is never healthy for the smooth running of democratic governments. For economic development, it is necessary to minimize political as well as social tensions. Thus, development of agriculture sector is also relevant on political and social grounds.

10. Create Effective Demand: The development of agricultural sector would tend to increase the purchasing power of agriculturists which will help the growth of the non-agricultural sector of the country. It will provide a market for increased production. In underdeveloped countries, it is well known that the majority of people depend upon agriculture and if their income increases, they will be able to consume the non- agricultural goods. Similarly improvement in the productivity of cash crops may pave the way for the promotion of exchange economy which may help in the growth of non-agricultural sector. Purchase of industrial products such as pesticides, farm machinery etc. also provide boost to industries.

11. Helpful in Phasing out Economic Depression: During depression, industrial production can be stopped or reduced but agricultural production continues as it produces basic necessities of life. Thus, it continues to create effective demand even during adverse conditions of the economy.

12. Source of Foreign Exchange for the Country: Most of the developing countries of the world are exporters of primary products. These products contribute 60 to 70 per cent of their total export earnings. Thus, the capacity to import capital goods and machinery for industrial development depends crucially on the export earnings of the agriculture sector. If exports of agricultural goods fail to increase at a sufficiently high rate, these countries are forced to incur heavy deficit in the balance of payments resulting in a serious foreign exchange problem.

13. Contribution to Capital Formation: Underdeveloped and developing countries need huge amount of capital for its economic development. In the initial stages of economic development, it is agriculture that constitutes a significant source of capital formation. Agriculture sector provides funds for capital formation in many ways as, (i) agricultural taxation, (ii) export of agricultural products, (iii) collection of agricultural products at low prices by the government and selling it at higher prices. This method is adopted by Russia and China, (iv) labour in disguised unemployment, largely confined to agriculture, is viewed as a source of investible surplus, (v) transfer of labour and capital from farm to non-farm activities etc.

14. Employment Opportunities for Rural People: Agriculture provides employment opportunities for rural people on a large scale in underdeveloped and developing countries. It is an important source of livelihood. Generally, landless workers and marginal farmers are engaged in non-agricultural jobs like handicrafts, furniture, textiles, leather, metal work, processing industries and in other service sectors. These rural units fulfill merely local demands. In India, about 70.6% of total labour force depended upon agriculture in 1951 and this percentage fell to 54% in 2004-05.

15. Improving Rural Welfare: It is true that rural economy depends on agriculture and allied occupations in an underdeveloped country. The rising agricultural surplus caused by increasing agricultural production and productivity tends to improve social welfare, in particular in rural areas. The living standard of rural masses rises and they start consuming nutritious diet including eggs, milk, ghee and fruits. They lead a comfortable life having all modern amenities—a better house, motor-cycle, radio, television and use of better clothes.

16. Extension of Market for Industrial Output: As a result of agricultural progress, there will be extension of market for industrial products. Increase in agricultural productivity leads to increase in the income of rural population which in turn lead to more demand for industrial products, and thus development of industrial sector.

Check your Progress.

Note: Write your answer in the space given below:-

Q. 1. Why is agriculture known as Primary sector in underdeveloped countries?

Ans.____

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Q. 2. Explain briefly the role of agriculture as a source of food supply in a country.

Ans.____

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10.4 Agriculture Growth and Economic Development

Agricultural sector of India is now standing on the cross-roads of development particularly after the introduction of economic liberalization in the country since

1991. Economic liberalization has made many efforts to reduce government interferences and to remove unnecessary restrictions in economic activities

Under the trend of globalization and the set up of international trade under World Trade Organization (WTO) regime, there is a considerable reduction in production subsidies paid by developed countries to their farmers and rolling back of some of the non-tariff barriers which have restricted agricultural trade. This may help to promote agricultural exports being a comparative and competitive advantage. From the Indian point of view, the effect of Globalization and WTO regime on Indian agriculture is a kind of mixed bag. The new WTO arrangements have definitely raised the prices of agricultural inputs. At the same time, India's market opportunities in exports of agricultural commodities have increased automatically. The reduction in export subsidies on agriculture by developed countries will make Indian agricultural exports more competitive in world markets. Thus Mr. Bibek Deb Roy of Indian Institute of Foreign Trade (IIFT) opines "If agriculture is liberalized there will be higher input prices. But there will also be higher output prices and it is slightly unfair to look at the hike in input prices alone". In short, under the prevailing circumstances, it is felt that under the WTO, whatever negative aspects the Indian agriculture will face that can be suitably neutralized by responding to its positive aspects. Let us focus on its impact on Indian agriculture as a result of economic liberalization.

1. **Raising the Production of Foodgrains:** India has been experiencing the increase in the production of foodgrains particularly after the inception of new agricultural strategy (i.e., Green revolution). Annual growth rate of 2.08 per cent was recorded during seventies and 3.5 percent in eighties. It is felt that if the country maintains 4 per cent growth rate in agricultural production, then after meeting its domestic demand, the country can export the surplus amount of foodgrains to the foreign countries.

2. **Increasing Trend in Horticultural Output:** The diversity of physiographic, climate and soil characteristics enables India to grow a large variety of horticultural crops which includes fruits, vegetables, spices, cashewnut, coconut,

cocoa, arecanut, root and tuber crops, medicinal and aromatic plants etc. India is the largest producer of fruits, and second largest producer of vegetables. India is the largest producer of cashew. Thus horicultural exports of the country contributes nearly 25 per cent of the total agricultural exports.

3. Diversification of Agriculture: Agriculture is not only meeting the demand for foodgrains but also other needs of development. In recent years, agricultural sector has been diversified to produce commercial crops and horticultural crops viz., fruits, vegetables, spices, cashew, arecanut, coconut and floricultural products as well as dairy and other animal husbandry products. The demand for these products has been increasing considerably.

4. Increase in Floricultural output: About 31,000 hectares of land spread over Karnataka, Tamil Nadu, Andhra Pradesh and West Bengal are under flower production. Since the inception of liberalization, commercial farming of floricultural activities has been increasing gradually. The demand for Indian cut flower is increasing continuously in the international market.

5. Agricultural Exports: Another important emerging trend of agriculture is the increasing volume of agricultural exports. Agricultural exports are playing an important role in expanding economic activities along with generating employment opportunities. Trade policy reforms have provided an opportunity to Indian exporters to export agricultural products to overseas market. In order to tap future potential, Indian exporters are required to improve their processing and package facilities.

6. Food Processing: Economic liberalization has made ample scope for the development and expansion of food processing industry in India. Fruits and vegetables being perishable in nature, are facing a huge loss worth 3000 crore every year. In order to prevent such loss, the National Horticulture Board is making necessary steps for providing infra-structure and for the packaging, storage and transportation of horticultural products. It also provides employment opportunities in export business.

7. Rising Productivity of Agricultural Resources: Another impact of liberalization has been felt that it boosted the productivity of agricultural resources. Improvement in the productivity of resources is being done through better allocation of resources and latest technology between different areas. Stress is laid on export oriented policies, applying new improved technologies in food processing and marketing and giving stress on planting crops as per geographical suitability.

8. Developing Agriculture in Backward Areas: In the Post-Green Revolution period, application of new agricultural strategy, research and technology was very much restricted in the production of two main crops i.e. wheat and rice. But under the liberalization wave, with the growing demand for agricultural exports, many new areas of agricultural operations have become favourable. In backward areas, having no irrigation system, dry land farming is becoming popular. The other activities like horticulture, floriculture, animal husbandry, fishery etc. have been encouraged.

9. Developing New Biological Techniques: During the period of Green revolution, increasing application of chemical fertilizers and pesticides were encouraged extensively in order to meet the growing demand for food required to feed the rising population. But, rising population, ever-increasing demand for food and unlimited exploitation of natural resources have created a grave threat to the environment as well as to the agricultural sector. In order to save and protect the environment as well as the agricultural sector from any further damage, increasing use of biological technology for agricultural operation has been favoured and emphasis is being given to develop new biological technology.

10. More Employment Opportunities in Agricultural Sector: As a result of Green Revolution and Mechanization, there is considerable fall in employment opportunities in the rural areas. Even special employment programs could not serve the purpose. But increasing potentiality of the agricultural sector as having emerged from the liberalization/ globalization wave has set up new trends in horticultural, floricultural and animal product and has created ample opportunities and scope for employment of huge number of population. This allied sector being labour intensive, can provide better solution to the unemployment problem especially in rural India.

46% of male workers and 65% of female workers got employment (2008-11) in India.

11. Growing Volume of Subsidies: The volume of subsidies granted to agriculture, in respect of fertilizer, irrigation and electricity charges etc. has been increasing in our country. Out of these, about 75 per cent is allotted to the area of fertilizers and foodgrains. Under the present era of liberalization, although there is a move to reduce the volume of subsidies in the budget, still political compulsions have prevented the government to undertake that move.

12. Growing Trend of Investment in Agriculture: Agricultural sector is experiencing a growing trend in the volume of its investment during the post liberalization period. But the volume of public sector is declining.

13. Institutionalization of Agricultural Credit: The wave of liberalization has encouraged the institutional agricultural credit. In the initial stage of Post Independence period, Indian farmers were depending too much on unorganized sources of agricultural credit, i.e. on village money lenders, landlords, traders etc. who charge exorbitantly higher rate of interest. But with the massive flow of agricultural credit, mainly through commercial banks, credit provided by various agencies has increased. Thus it has been observed that the wave of liberalization has had several favourable effects on the agricultural sector of the country.

10.5 Let us sum up

From the above explanation, we conclude that agricultural development is must for the economic development of a developing country. Even developed countries lay emphasis on agricultural development. Agriculture progress is essential to provide food for growing non- agricultural labour force, raw materials for industrial production, revenue to Government and to earn foreign exchange.

10.6 Lesson End Exercise

A. Long answer type questions:

1. Review the role of agriculture in the economic development of an underdeveloped country.

2. Do you think that agriculture should be regarded as the backbone in an underdeveloped economy? Explain.

3. "Agriculture is a vital source of economic growth, employment and better distribution of income in underdeveloped countries." Discuss with illustrations.

4. Discuss the role of agriculture in the economic development of a country.

5. Describe the emerging trends in Agriculture Growth on account of Globalization.

6. Comment on the impact of Globalization and Liberalization on Indian Agriculture. Justify with arguments.

B. Short answer type questions:

1. Discuss the role of agriculture as a source of food supply to a country.
2. Explain the role of agriculture with reference to capital formation.
3. Write a note on agriculture expansion as a part of economic development.
4. Explain how agriculture acts as a source of foreign exchange earnings.
5. State the role of agriculture in the national income of a developing country.
6. Define the concept of Globalization.
7. State any three emerging trends of Agricultural Growth.
8. Examine any three effects of Globalization on Indian Agriculture.

10.7 Suggested Readings:

1. Lekhi, R.K: The Economics of Development and Planning, Kalyani Publishers, New Delhi.

2. Lekhi, R.K and Sujata Slathia: Economics of Development and Planning, Kalyani Publishers, Ludhiana.

3. Meier, G.M: Leading Issues in Economic Development, OUP, New Delhi.

4. Thirwal, A.P: Growth and Development, Macmillan, London.

5. Todaro, M.P: Development Planning-Models and methods, OUP, New Delhi.

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INDUSTRILIZATION AND ECONOMIC DEVELOPMENT

B.A. Sem-VI **Unit - III**

EC-601 **Lesson No. 11**

STRUCTURE

11.1 Introduction

Before British period, India was industrially more advanced as compared to the economies of the West-European countries. The Britishers systematically destroyed the industrial base of India. As a result, India inherited a weak industrial base at the time of independence. Due to multiple economic problems, it was not possible for India to adopt capitalism or socialism. So India chose a path of mixed economy. Mixed economy means a compromise between the pure capitalistic and socialistic economic principles.

Since independence, India has been trying to build up a sound industrial base. India started to develop different types of industries with the help of economic planning. On 6th April, 1948, Government of India had announced First Industrial Policy Resolution for accelerating the industrial development of the country.

11.2 Objectives

After going through this lesson, you will be able to:-

- Explain Industrialization and Economic Development;
- Describe Industrial Pattern;
- Discuss Problems of Industrialization and
- Discuss Suggestions for Rapid Industrial Growth.

11.3 Industrialization and Economic Development

The following points justify the rationale of industrialization in India.

1. Utilization of Natural Resources: Utilization of huge volume of natural resources has become possible with the development of various types of organized and unorganized industries in the country. The country still possesses a huge volume of mineral, forest and agro-based resources which remain underutilized. Development of new industrial units can tap these natural resources to the fullest extent.

2. Balanced Sectoral Development: From the very beginning, Indian economy has been depending too much on agriculture as major portion of the total population and capital are engaged in agriculture which is again influenced by some uncertain factors like floods and droughts. Thus, Indian economy is facing an unbalanced sectoral development. Thus, growing industrialization in the country can attain balanced sectoral development and thereby reduce too much dependence of the economy on the agricultural sector.

3. Accumulation of Wealth: Development of industries helps the country to accumulate higher volume of wealth for the welfare of the nations, as the per-capita output in industry is much higher than that of agriculture. Moreover, the development of industries assist the economy to develop its trading activities, transport, communication, banking, insurance and other infrastructure facilities.

4. Development of Markets: Development of different industries has led to the development of markets for various raw materials and finished products in the country.

5. Contribution to Government Exchequer: With the gradual industrialization of the economy, the contribution of government revenue has also been widened extensively due to increasing collection of corporate taxes, sales taxes and excise duties. Moreover, the public sector enterprises are contributing a good amount of resources to the central exchequer.

6. Attaining self-reliance: Industrialization has been helping the nation to attain self-reliance. Production of various important goods and successful implementation of import substitution measures have helped the country to minimize its dependence on foreign imports. This has helped the country to save precious foreign exchange.

7. Leading Sector to Economic Growth: Industrialization is considered crucial to development strategy, as it lifts out stagnation. It brings forth both backward and forward linkage effects. The success of western countries followed by an Asian country, Japan, is the standing instance of what industrialization can do to a nation. Similarly, in the words of Pt. Nehru, “Real progress must ultimately depend on industrialization. Throughout the world, industrialization has indeed become the magic word of the mid twentieth century.”

8. Gainful Employment Opportunities: No wonder, industrial development can greatly increase gainful employment opportunities specially in less developed countries. Generally, these countries are characterized by the existence of surplus labour. Thus, it opens avenues for employing the surplus labour.

9. Raising Productivity: The modern industry can directly or indirectly help to raise productivity of the economy. This is due to better organization and technology. Moreover, it is accompanied by the expansion of tertiary sector. Again, it improves the productivity of the agricultural sector by providing it with improved and scientific inputs.

10. Development of Agricultural Sector: In fact, agriculture and industry are the two arms of an economy. Both are interdependent and the development of one sector promotes the other. This interdependence relates to (i) supply of raw material and inputs from agriculture to industry and vice versa, (ii) supply of wage goods to industrial sector, (iii) the supply of materials for building up economic and social overheads in the agricultural sector and (iv) the supply of basic consumption goods to the agricultural population. Similarly, manufacturing sector cannot remain developed for long without agricultural development. In short, development and modernization of industry and agriculture sector go side by side.

11. Useful for Foreign Trade: The nature of foreign trade should also undergo a change with industrialization of the country. It has been noticed that foreign trade of less developed countries is dominated by primary products but industrial development may lead to a change in the composition and direction. This is clear from the fact that India witnessed a spectacular increase in non-traditional items of export on account of industrial development.

12. Favourable Balance of Payments: Another crucial role played by industrialization is that it promotes exports resulting in favourable balance of payments. Generally, balance of payments is unfavourable in the early stages of development due to import of technology, capital goods and raw-materials. With industrialization, there is generation of export surplus.

13. Higher National Income and Per Capita Income: There is proper utilization of natural resources with the adoption of latest and modern techniques of production. It leads to higher national income and per capita income, increased employment and greater production, which further leads to national prosperity.

14. Capital Formation: Industrialization promotes capital formation as a crucial catalyst of economic prosperity. Truly, industrial development brings in good profit and more income which in turn leads to greater saving and investment. One of the reasons of Japan's industrialization is that it ranks first so far as capital formation is concerned.

15. Sign of Higher Standard of Living and Social Change: A country cannot produce goods and services of high quality in order to attain decent living standard without the progress of industrial sector. In other words, industrialization has been regarded as a vital instrument for eradicating poverty and misery of poor lots. In addition to it, occupational mobility of labour, developed communication, education and infra-structure are associated with industrialization. In turn, it leads to social change in the country.

16. Useful for Defence: Industrial development is also helpful for the defence of a country. The more an industrialized country produces arms and ammunition, the more it can strengthen its defence.

17. Specialisation and Division of Labour: Industrialization involves the organization of production in business enterprises, which is characterized by specialization and division of labour. In fact, specialization is based on the application of modern technology which is a supplement to human efforts and motivates for the objectives of minimizing costs per unit and maximizing return. Therefore, industrialization results in all round progress of the country.

Check your progress.

Note: Write your answer in the space given below:-

Q. 1. When did the Govt. of India announce its first Industrial Policy Resolution? What was the need for it?

Ans.____

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Q.2. Write down any two points to justify the rationale of industrialization in India.

Ans.____

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11.4 An overview of Industrial Pattern

The important changes that have occurred in the industrial pattern during the period of planning are given as under:

1. Increase in the share of industrial sector in GDP: The share of the industrial sector in Gross Domestic Product has slowly but consistently increased over the planning period. The share of industry in GDP at factor cost increased from 13.3% in 1950-51 to 21.6% in 1980-81, 24.4 percent in 2001-02 at 1993- 94 prices and 26.4% in 2006-07.

2. Growth of Infrastructural Industries: Modern industrial development is not possible without a substantial expansion of the infrastructure industries. The latter include electricity, coal, steel, crude petroleum, petroleum refinery and cement.

3. Building up of Heavy and Capital Goods Industries: The second plan based on the Mahalanobis model gave much importance to the development of heavy machine building industries and capital goods industries with a view to strengthening the industrial base of the economy. A wide range of engineering goods, iron and steel, metals and metal based products etc. are now produced within the country itself.

4. Shifts in Favour of Consumer Goods and Intermediate Goods: The structure of the industrial economy has shifted distinctly in favour of intermediates and consumer goods and reflects declining significance of basic and capital goods in the country's industrial economy.

5. Declining role of Public Sector: With increasing emphasis on liberalization and privatization, the Government of India is gradually withdrawing from the industrial sector. The number of industries of the public sector has been drastically pruned. The Govt. has explicitly expressed its desire to bring down its equity in all non-strategic public sector undertakings to 26% or lower and to close down public sector units that cannot be revived. The emphasis of the Govt. is on privatization of public sector enterprises via disinvestment.

The above analysis clearly brings out that the focus of the Govt. in recent years has been on privatization and consumer goods led industrial growth.

11.5 Problems of Industrialization:

The process of industrial growth has certain problems which require immediate attention. Some of these problems are mentioned below:

(i) Gap between Targets and Achievement: The review of targets and achievements of every plan shows that there is a great difference in both. The rate of growth is very slow than the fixed targets. For instance, Fifth Plan achieved 5.5 per cent growth rate against its target of 7.9 per cent. Similar trend was found in the Sixth Plan. In the following Plans also, there is a gap between targets and its achievements. Therefore, gap between targets and achievements is a matter of deep concern for all of us.

(ii) Under Utilization of Capacity: A large number of industries suffer from under-utilization of capacity. According to an estimate, it varies between 50 to 60 per cent.

(iii) Industrial Sickness: The incidence of sickness in large and medium scale industries has increased manifold in recent years. It not only aggravates the problem of unemployment but also creates adverse climate for industrial investment.

(iv) Elite Oriented Consumption Pattern: Another unfavourable aspect is that the production of industrial goods caters to the needs of only rich consumers, while the requirements of common masses have been marginally met.

(v) Growth of Big Houses: Inspite of various policy measures adopted by the government (MRTP Act and Licencing Policy), the share of big houses in the total assets of the private corporate sector has increased. This resulted in the concentration of economic powers in few hands.

(vi) Increase in Regional Imbalances: Perhaps, the most serious weakness is that industrial development has remained concentrated in a few advanced states of Maharashtra, Gujarat, West-Bengal and Tamil Nadu. These states account for a very large proportion of about 80 percent of the industrial activities of the country. Other states get only a small share (Bihar, Orissa and Madhya Pradesh).

(vii) Non-Proper Employment Planning: Another constraint that has been noticed in the industrialization of the country is that it lacks a proper employment planning. It favoured capital-intensive techniques while the need of the hour is to adopt labour-intensive techniques in the country.

(vii) Poor Productivity Performance: The productivity performance in the industrial sector has been poor and dismal. According to a study made by the Dr. Hallis Chenery, it was observed (covering 40 countries), that India is at the bottom in terms of increasing capital output ratio in manufacturing sector.

11.6 Suggestions for Rapid Industrial growth:

Following suggestions can go a long way in overcoming the above stated problems:

1. Modernization and Technological Upgradation: There is dire need for modernization and technological upgradation of existing industries in the country. For this purpose, it is necessary to rationalize fiscal policy. Therefore, public financial institutions should come forward in this regard.

2. To Remove Bottlenecks: For the rapid industrial growth of an economy, infrastructural bottlenecks like power and coal etc. should be effectively removed. In the allocation of resources, their share should go up.

3. Favourable Climate: The country has to create favourable investment climate. However, changes of pre-exemption of capital under the illusion that liberalization would be a short- lived phenomena, cannot be excluded. The open door policy must guard the interests of domestic producers.

4. Long-term Rational and Stable Fiscal Policy: The long term rational and stable fiscal policy is badly needed for industrial growth of a country. The policy should be such as may protect the long run growth of industrial sector.

5. Policy for Sick Units: The policy regarding sick units should be framed to protect the interests of private as well as public sector.

6. Equal Distribution of Income: There is a great need for stepping up the public investment and the inflow of foreign resources to productive channels. Therefore, in order to make the proper utilization of these resources, and upgradation of technology and enhancing optimum scale of operation, income must be equally distributed.

7. Optimum Utilization of Resources: Steps should be taken to ensure the optimum utilization of resources. This leads to economies of scale, reduction in cost of production and improvement in quality.

11.7 Let us sum up

Industrialization has a major role to play in the economic development of the under-developed countries. The Government of India recognized the significant contribution that industrialization could make to the development process, "as a base for the growth of the primary sector, as a catalytic agent for the development of infra-structure, as a stimulant to generation of technologies through research and development and as a growth multiplier". Therefore, industrialization results in an all round progress of the country.

11.8 Lesson End Questions

A. Long answer type questions:

1. Define Industrialization. What is its significance?
2. What role can be assigned to Industrialization?
3. Point out the pattern of Industrial Development in India with special

reference to nineties.

4. Identify the shortcomings of Industrialization, suggesting measures to rectify the same.

B. Short answer type questions:

1. Define Industrialization.
2. Give three arguments for the importance of Industrialization.
3. Mention any three points of slow growth of Industrialization.
4. Explain four points of revival of Industrialization during eighties.
5. Point out any four points of Industrial Development.
6. Discuss any three problems of industrialization.
7. Point out any three suggestions of Industrialization.

11.9 Suggested Readings:

1. Aggarwal R.C. Economics of Development and Planning, Lakshmi Narain Aggarwal, Agra.
2. Bhagwati, J and Desai, P: India-Planning for Industrialisation, OUP, London.
3. Hayami, Y: Development Economics, Oxford University Press, New York.
4. Haggins, B: Economic Development, Norton, New York.
5. Jhingan, M. L: The Economics of Development and Planning, Vrinda Publications, Delhi.

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CAPITAL FORMATION AND ECONOMIC DEVELOPMENT

B.A. Sem-VI	**Unit - III**
EC-601	**Lesson No. 12**

STRUCTURE

12.1 Introduction:

The process of economic development of an economy is really a complex phenomenon and is greatly influenced by varied factors such as social, economic, cultural as well as political. Natural Resources, capital growth of scientific and technological knowledge and many others have a strong bearing on the process of economic growth.

12.2 Objectives

After going through this lesson, you will be able to-:

- Understand the meaning of Capital;
- Explain the utility of Capital;
- Discuss the meaning of Capital Formation;
- Discuss the significance of Capital Formation in Economic Development and
- Describe the process of Capital Formation.

12.3 Meaning of Capital

Precisely, capital is defined as the produced means of production.

"Capital goods are reproducible wealth used for the purposes of production." A United National Study states, "As those goods resulting from economic activity which are used for future production of other goods." The basic characteristic of capital is that it is man made and its stock can be increased by human efforts. The aggregate stock of capital in an economy is made up of all construction and improvements attached to the land, machinery and equipment in the hands of producers, private and public inventories in the hands of businessmen and net balance of claims against foreign countries at any point of time. **–Colin Clark**

In fact, capital must be confined to plant, equipment and inventories. It is an instrument of propelling economic development and increased productivity should also be included in investment in technical knowledge of the population and improvements in education and skills. Similarly, in the process of long term economic progress, the productivity raising function of capital is performed not only by plants and machinery but also by human capital.

12.4 Utility of Capital in Economic Development

Prof. Simon Kuznets and Prof. Ragnar Nurkse regarded that capital occupies a central place in the theory of economic development.

They accepted its manifold role as given below :

1. **Helpful in Raising Productivity Per Capita:** Capital is helpful in raising productivity per capita, as the stock of capital in an economy is closely related to the possibilities of effecting changes in the scale of technology of production. In fact, the economy remains in a better position to enjoy the advantages of large scale and increased production.

2. **Method of Production:** Rapid capital accumulation may further lead to an increased supply of tools and machinery per worker. They enable them to use mechanical devices for producing goods.

3. **Necessary for Implementation of Production.** With rapid growing population, increased capital accumulation is a pre-requisite for expanding production and providing employment to the growing labour force.

12.5 Meaning of Capital Formation

The word 'capital formation' is used in narrow sense as well as in a broader sense. However, in a narrow sense, it means physical capital stock which includes machines, machinery etc. In a broader sense, it includes non physical capital or human resources consisting of public health, efficiency, visible and invisible capital.

"The meaning of capital formation is that society does not apply the whole of its productive activity to the needs and desires of immediate consumption but directs a part of it to the making of capital goods, tools and instruments, machines and transport facilities, plants and equipments and the various forms of real capital that can so greatly increase the efficiency of productive effort." **–Prof. Nurkse**

"Capital formation consists of both tangible goods like plants, tools and machinery and intangible goods such as high standards of education, health, scientific tradition and research." **–Dr. Singla**

12.6 Significance of Capital Formation in Economic Development

The significance of capital formation can be easily acknowledged from the following:

1. Formation of Sound Infrastructures: The foremost significance of capital accumulation especially in its initial stages is that it promotes the establishment of social overheads in the poor countries, as these countries need these infrastructures on priority. In fact, the possibility of economic development gets strength on the basis of the size and extent of the available conditions in the economy like transportation, communication, banking, power and other social security steps. In this way, capital accumulation or formation goes a long way in the development of basic capital goods in underdeveloped countries.

2. Maximum Utilization of Natural Resources: In underdeveloped countries, there is increase in the capacity of risk taking by capital formation by which fresh sources of natural resources are made available. It is made possible through proper and thoughtful exploitation of natural resources. Besides, extra capital formation exploits the economys' natural resources on the basis of modern techniques.

3. Proper use of Human Capital Formation: Capital formation plays an extraordinary role in the qualitative development of human resources. Human capital formation depends on the people's education, training, health, social and economic security, freedom and welfare facilities for which sufficient capital is needed. Labour force needs up-to-date implements and instruments in sufficient quantity so that with the increase of population there will be an optimum increase in production and increased labour is easily absorbed.

4. Improvement in Technology: In underdeveloped countries, capital formation creates overhead capital and necessary environment for economic development. This helps to stimulate technical progress. In fact, technical progress has become a necessary condition for the present day economic progress and speed of economic progress depends on the rate of technical progress.

5. High Rate of Economic Growth: The higher rate of capital formation in a country means the higher rate of economic growth. Generally, the rate of capital formation or accumulation is very low in underdeveloped countries in comparison to advanced countries. In the case of poor and underdeveloped countries, the rate of capital formation varies between one per cent to five per cent while in advanced countries, it even exceeds 20 per cent. In brief, higher rate of capital formation is an indicator of higher rate of economic growth in a country.

6. Agricultural and Industrial Development: Modern agricultural and industrial development needs adequate funds for adoption of latest mechanized techniques, inputs, setting up of different industries, heavy or light. Deficiency of capital at their disposal leads to lower rate of development and capital formation. In fact, the development of both these sectors is not possible without capital accumulation.

7. Lesser Dependence on Foreign Capital: In underdeveloped countries, process of capital formation increases dependence on internal resources and domestic savings by which dependence on foreign capital is reduced. Country can attain self-sufficiency and can get rid of the dependence on foreign capital.

8. Increase in Economic Welfare: By the increase in rate of capital formation, public is getting more facilities. As a result, common man is more benefitted economically. Capital formation leads to unexpected increase in their productivity and income and this improves their standard of living. This helps in raising the welfare of the people in general. Therefore, capital formation is the principal solution to the complex problems of poor countries.

12.7 Process of Capital Formation

Capital formation or accumulation undergoes three main stages :

(*i*) creation of savings ; (*ii*) mobilization of savings ; and (*iii*) investment of savings.

Let us explain the process of capital formation through these three stages:

1. Creation of Savings: The creation of savings is the first stage of capital formation. It means that there must be an increase in the volume of real savings, so that the resources may be used for the production of consumption goods and further may be released for other purposes. Therefore, for capital formation, some current consumption has to be sacrificed for obtaining a large part of flow of consumer goods in the near future. The creation of savings depends upon the power to save, will to save and facility to save.

2. **Mobilization of Savings:** The next process of saving is that it must be mobilized for being converted into investible funds. For this purpose, the existence of banking and other financial institutions is must. Banking facilities give considerable help to promote high rate of mobilization and channelization of saving. In brief, sound and efficient banking system enables investors to invest more and more.

3. **Investment of Savings:** The final stage is the investment of savings into capital goods. It needs a class of efficient, dynamic, daring and skilled entrepreneurs. An able and efficient entrepreneur is always ready to make investments for the production of capital goods. In short, both saving and investment are crucial for capital accumulation.

Check your progress.

Note: Write your answer in the space given below:-

Q. 1. What do you understand by the word Capital?

Ans.____

Q. 2. Explain Capital Formation.

Ans.____

Q. 3. **Name all the three stages of Capital Formation.**

Ans.____

12.8 Reasons for low rate of Capital Formation

Some of the important causes responsible for low rate of capital formation can be summarized under the following heads :

1. Low Level of National Income and Per Capita Income: The root cause of capital deficiency in underdeveloped countries is low level of real national and per capita income which limits the motives of savings and investments. Due to lack of desired investments, capital formation does not increase. Hence, due to low production, there is low national and per capita income which in turn, leads to low capital formation. Unless the vicious circle of poverty is broken, the rate of capital formation cannot be raised.

2. Lack of Demand for Capital: Another cause of low rate of capital formation in underdeveloped countries is lack of demand for capital.

"Due to low productivity in underdeveloped countries, people have low real income and thus, purchasing power is low and so due to low demand, investment has bad effect which again reduces national income and productivity and rate of capital formation remains low." **-Prof. Nurkse**

3. Lack of Supply of Capital: Like demand of capital, lack of supply of capital is also responsible for low capital formation. Due to lack of necessary supply of capital in underdeveloped countries, the process of capital formation does not accelerate. As a result, capital formation remains at low level.

4. Small size of Market: Due to small size of domestic market, investment is not encouraged in poor countries. It does not expand the work of economic development and modern machines cannot be used, as extra quantity produced has no market access.

"Investment motive is limited by the size of market." **–Nurkse**

5. Lack of Economic and Social Overheads: Basic overheads like roads, buildings, communication, education, water, health etc. are generally lacking in underdeveloped countries and provide an improper atmosphere for the capital formation.

6. Lack of Skilled Entrepreneurs: Able and efficient entrepreneurs are not available in underdeveloped countries. Due to absence of risk-taking entrepreneurs, establishment of industries and expansion is quite limited and industrial diversification is not carried out.

7. Backwardness of Technology: Underdeveloped countries also face the problem of technical knowledge. Production is carried on old and less productive techniques. As a result, these countries have low productivity and per capita production.

8. Lack of Effective Fiscal Policy: Lack of effective fiscal policy or financial policy in underdeveloped countries also retards capital formation to some extent. Burden of taxation is too much, which is out of people's capacity to bear as their income is quite low. Besides, inflationary circumstances accrue and prices soar extremely high. Hence, if effective fiscal policy is not carried out, economic power acts in such a way that the whole development process is disturbed.

9. Demographic Reasons: In underdeveloped countries, the growth rate of population is very high which keeps the rate of capital formation at a low level. It is because, most part of their income is spent on bringing up the additional numbers. Thus, there is little scope of saving and as a result, it disturbs the growth of capital formation.

12.9 Steps to raise the Rate of Capital Formation

The most important problem facing an underdeveloped country is to raise the rate of capital formation. This problem is two-fold. First, how to increase the propensity to save of the common man in the lower income groups, and secondly, how to utilize current savings for capital formation.

Therefore, the rate of capital formation can be raised by

(*i*) domestic savings as well as (*ii*) external resources.

Domestic Savings:

The following measures can be adopted to increase the domestic savings:

1. Drive to Save: Common masses can be persuaded to save in their own interest or in the interest of their family. They should be educated and motivated to develop the habit of saving for their children, for building houses or as a safeguard against old age, sickness or any other emergency. In the same fashion, issuing of saving certificates, bonds are also helpful in mobilizing savings. The profits of saving should be advertised, so that general people may tend to change their attitude. With this type of incentive, they will learn to save.

2. Establishment of Financial Institutions: In poor and less developed countries, people hoard their unspent current income and invest in jewellery, gold, property etc. Therefore, such countries must have well organized financial institutions where countrymen may easily deposit their unspent money with confidence. In this regard, well developed capital and money market can give impetus. Moreover, money collection process should be simple so that even the layman does not find any hardship in depositing and getting loans. Special attention should be made to establish various institutions on sound footing like Insurance, Compulsory Provident Fund, Provident-cum-Pension schemes and opening of new banks especially in rural areas and cooperative societies.

3. Reduction in Income Inequalities: It is a common fact that the people in underdeveloped countries possess lower marginal propensity to save. High income group spend more money on luxury goods; thus, their savings are less. Therefore, resources should be equally distributed in these countries so that low income groups may have more income and this may lead to increase in the size and quantity of domestic savings.

4. Fiscal Measures*:* As voluntary saving is not sufficient for capital formation in poor and backward countries, the Government can mobilize the resources through fiscal policy. Taxation is an effective instrument of fiscal measure for reducing consumption and transferring resources for productive investment. By the way of taxation, the government can take away a portion of the surplus resources of the people and can either make it available to the private investors or can itself utilize it for capital construction projects. Further, public borrowing is another method of diverting resources from unproductive to productive channels.

5. Reduction in Consumption: Prof. R. Nurkse and Prof. W.A. Lewis are of the opinion that saving can be raised by restricting consumption. It is argued that the level of consumption of the common people in underdeveloped countries is extremely below the subsistence line. Therefore, the rate of savings can be increased by curtailing the conspicuous consumption of the rich.

"There is no other road to economic development than a compulsory rise in the share of that national income which is withheld from consumption and devoted to investment." **-Prof. Gunnar Myrdal**

6. Proper Utilization of Natural Resources: There are profuse human and natural resources but they are not properly exploited. With the proper development of technical knowledge, education and training facilities, productivity of labour can be enhanced and model techniques can be put to their best use. This will lead to rise in the rate of saving and capital formation which in turn will increase the labour efficiency..

7. Utilization of Hoarded Resources: In underdeveloped countries, people invest their extra saved income in hoarding of ornaments, precious gold, jewelley etc.. Moreover, they are not ready to part with gold and jewellery and are reluctant to invest in gold bonds or certificates voluntarily. It is, therefore, necessary that government in such countries should take steps so that such possessions beyond a permissible limit are prohibted. Private trading in gold should be regulated. Proper care should be taken to stop the smuggling of gold into the country. The use of pure gold for manufacturing ornaments should be banned. In this manner, hoarded resources like gold can be utilized for making investment in productive channels, which, in turn leads to capital formation.

8. Utilization of Disguised Unemployment: It is a widely accepted view that there exists a saving potential in the disguised unemployment in over populated countries of the world. If this potential is effectively utilized, it can become a major source of capital formation.

External Sources:

Domestic sources for capital formation are generally scarce and they are required to be supplemented by external sources which are discussed below:

1. **Private Foreign Investment:** The less developed and poor countries take the advantage of the foreign investment from private foreign investment which is in the shape of private business firms or persons. Foreign investors invest with the feelings of making more profits from modern techniques and efficient management.

2. **Loans, Grants and Aid from Foreign Government:** These methods are used from foreign governments through imports of heavy machines, instruments, other capital goods. Furthermore, loans, grants are also given to the needed countries. Foreign loans and grants generally have deep burden on the domestic government and major portion of national income goes as interest to the concerned country. Therefore, proper care should be made to use these loans for productive purposes.

3. **Restriction of Imports:** It means that restriction should be imposed on all luxury imports. The saved foreign currency should be used to import only essential goods. This process will certainly lead to increase in capital formation.

4. Terms of Trade: Another vital source of achieving means for capital formation in underdeveloped countries is the favourable terms of trade. It means, if the terms of trade are made in favour of such countries, they are in a position to import large quantities of capital goods. Domestic economy is also saved from instability.

12.10 Let us sum up:

Capital formation or capital accumulation is regarded as the key factor in economic development of an economy. The vicious circle of poverty, according to Prof. Nurkse, can be easily broken in underdeveloped countries through capital formation. It is capital formation that accelerates the pace of development with fuller utilization of available resources. As a matter of fact, it leads to increase in the size of national income, employment and output.

12.11 Lesson End Exercise

A. Long answer type questions:

1. What is Capital? Estimate its utility as a determinant of economic development.
2. Define Capital Formation. Examine the significance of Capital Formation in the development process of underdeveloped countries.
3. Describe the process of Capital Formation in an economy. Why is the rate of capital formation low in less developed countries?
4. 'Capital is necessary but not a sufficient condition of Economic Development'. Comment.
5. 'Key to Higher Productivity and expanding levels of Income and Employment lies really in stepping up the rate of capital formation'. Do you agree with the statement?
6. Explain the various stages of Capital Formation. Which factors affect Capital Formation the most in developing countries like India?
7. Explain the concept of Capital Formation. How can it be measured?

8. What are the causes of Low Rate of Capital Formation in underdeveloped countries? Enumerate measures to raise rate of capital formation.

9. Discuss the role of Domestic Sources and External Sources in Capital Formation.

10. Bring out drawbacks in the Domestic Source of Capital in less developed countries. Give suggestions to improve the same.

11. Point out the causes of low rate of Capital Formation. Suggest remedies to raise capital formation.

B. Short answer type questions:

1. What is Capital?

2. Define Capital Formation.

3. Describe the process of Capital Formation in an economy.

4. Why is the rate of capital formation low in less developed countries?

5. 'Capital is necessary but not a sufficient condition of Economic Development'. Comment.

6. Mention the various stages of Capital Formation.

7. Write short notes on Capital Absorption with stability.

8. 'Taxation as a source of Domestic Saving'. Comment.

12.10 Suggested Readings:

1. Jhingan, M.L: The Economics of Development and Planning, Vrinda Publications.

2. Kindleberger, C.P: Economic Development, McGraw Hill, New York.

3. Lekhi, R.K: The Economics of Development and Planning, Kalyani Publishers, New Delhi.

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5. Meier, G.M: Leading Issues in Economic Development, OUP, New Delhi.

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POPULATION GROWTH AND ECONOMIC DEVELOPMENT

B.A. Sem-VI **Unit - III**

EC-601 **Lesson No. 13**

STRUCTURE

13.1 Introduction

Population is both the 'means' and the 'end' of economic activities. In fact, population growth and economic development are closely related to each other. The influence of population growth upon economic development of a country has always been a point of attraction. Adam Smith wrote, "The annual labour of every nation is the fund which originally supplies with all the necessaries and conveniences of life." It was only Malthus and Ricard**o** who created an alarm about the adverse effects of population growth on the economy. Underdeveloped countries are passing through the stage of population explosion. This population explosion has nullified whatever gains of economic development have accrued to them during the past few decades. Hence we shall study the relationship of population with economic development of a country.

13.2 Objectives

After going through this lesson, you will be able to:-

a. Explain Population and Economic Development;

b. Discuss Population as an Accelerating Factor;

c. Describe Population as a Retarding Factor.

13.3 Population and Economic Development:

Population is closely related with economic development. Population influences economic development and economic development influences population. It is correctly stated that, "**Population is wealth to a nation or may be a liability.**"

Population is an imperative source of economic development but under some circumstances it becomes a growth retarding factor. It is an important source of supplying cheap labour, which in turn helps in producing commodities at low cost. The large population also encourages division of labour and large scale production. It also boosts demand, enlarges the market size and provides much needed inducement to invest and provides sufficient manpower to exploit country's natural resources. This is particularly the case where the majority of people depend upon agriculture for their livelihood.

Thus, the pattern of population growth and the environment in which the growth takes place are the important factors which decide whether population will be a growth promoting or growth retarding factor. The supply of capital, level of technology, quality of manpower and urge for innovations also determine the nature of effect of population on economic development. In a technologically advanced country with abundance of capital, rapidly growing population will be an economic necessity and will have growth promoting effects. On the other hand, in capital poor and technologically backward country, rapidly growing population is a burden and it tends to neutralise the efforts on society towards its development. The whole economic development is eaten away by population explosion. Poverty, crimes and unemployment dominate the economy.

13.4 Population as an Accelerating Factor or Benefits of Population

Population can accelerate economic growth of an economy in the following manner:

1. Population determines Capital formation: A growing population may enable a country to divert a larger portion of its labour force towards the capital creating projects. A large number of workers in labour surplus economies are employed in rural sector (disguised unemployment). These persons can easily be transferred to capital creating projects without adversely affecting the agricultural production. In this way, surplus manpower can go a long way to help in raising the rate of capital formation.

2. Supply of Manpower as an Essential Factor for Economic Development: The size and quality of manpower is a major determinant of the pace of economic development in an economy. Economic development is a function of natural resources, manpower, capital and technology. Manpower is the most important and dynamic factor in the process of growth. Thus, as a source of manpower supply, population growth is an essential factor for economic development. There is a particular phase in theory of demographic transition, when the age-structure of population is favourable or conducive to development. India is currently passing through this stage. Indian demographic dividend shall give ample opportunities for development.

3. Population as an Incentive for Development: It is argued that population is a both a means as well as an end of economic activity. People are not only the producers of wealth but they also consume wealth. As consumers, they provide demand for commodities and create demand for further expansion. Furthermore, larger domestic market will permit greater economies of scale and diversified productive structure providing more varied employment opportunities to the growing population. Thus, a growing population provides a necessary incentive for economic development of a country.

4. Population as a Source of Economic Growth in Industrially Advanced Countries: A technical trained and skilled labour force is regarded as human capital. Improvement in the quality of manpower can be a major contributor to economic growth in a country. It is true that the growth of tangible capital stock depends to a considerable extent on human capital formation in an economy. The quality of manpower can be improved through a process of increasing knowledge, the skills and the capacities of the people. This process of human capital formation can lead to greater productivity per worker and higher rate of growth for the economy.

5. Improvement in Techniques and Productivity: It is felt that population growth leads to improvement in techniques and productivity. Trained and efficient labour force is regarded as human capital. Improvement in the quality of manpower can be major contribution to economic growth in a country. The trained and skilled labour force is a valuable asset which is responsible for improving techniques and productivity. It helps to promote human skill. According to Kendrick, "A substantial part of the rise in growth rate of America is the result of the increase in labour productivity there." Thus the improvement in techniques and labour productivity can be a key source of economic development.

6. Adds to the Number of Producers etc.: It is also argued that increased population adds to the number of producers, entrepreneurs, scientists, engineers, educationists, doctors and technologists etc. They can prove a boon to the economic development of a country.

7. Population leads to Greater Production: As long as the size of population is small in relation to the availability of capital and land resources, an increase in the number of people will bring about greater output. With the availability of greater manpower, it will become possible to have greater and more intensive division of labour which will further result in raising the production. It also results in the greater specialization. All this will result in external and internal economies of production. Therefore, growth of population would lead to division of labour, specialization and would also bring faster technological progress.

8. Population as a Creator of New Knowledge: According to Simon Kuznets, “Growth of economic output is a function of the growth of the stock of tested knowledge.” A larger population would mean an increase in the number of these creative minds, stock of new knowledge will increase and the society will be able to produce larger output.

Check your Progress.

Note: Write your answer in the space given below:-

Q.1. Write down briefly the relationship between Economic Development and Population.

Ans.____

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Q.2. Mention any two favourable effects of population growth on economic development.

Ans.____

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13.4 Population as a Retarding Factor or Negative Effects

Population may be considered as a hinderance in the way of economic development of a country. In a ‘capital poor’ and technologically backward country, growth of population reduces output by lowering the per capita availability of capital. Too much population is not good for economic development. Population can be a limiting factor to economic development because of the following reasons:

1. Population reduces the Rate of Capital Formation: In underdeveloped countries, the composition of population is determined to decrease capital formation. Due to higher birth rate and low expectation of life in these countries, the percentage of dependents is very high. Nearly 40 to 50 per cent of the population is in the non-productive age group which simply consumes and does not produce anything. In under developed countries, rapid growth of population diminishes the availability of capital per head which reduces the productivity of its labour force. Their income, as a consequence, is reduced and their capacity to save is diminished which, in turn, adversely affects capital formation.

2. Higher Rate of Population requires more Investment: In economically backward countries, investment requirements are beyond its investing capacity. A rapidly growing population increases the requirements of demographic investment which at the same time reduces the capacity of the people to save. This creates a serious imbalance between investment requirements and the availability of investible funds. Therefore, the volume of such investment is determined by the rate of population growth in an economy. Some economists have estimated that for maintaining the present level of per capita income, 2 per cent to 5 per cent of national income must be invested if population grows at 1 per cent per annum. These factors are mainly responsible for stagnation in such economies.

3. It reduces Per Capita Availability of Capital: The large size of population also reduces per capita availability of capital in less developed countries. This is true in respect of underdeveloped countries where capital is scarce and its supply is inelastic. A rapidly growing population leads to a progressive decline in the availability of capital per worker. This further leads to lower productivity and diminishing returns.

4. Adverse Effect on Per Capita Income: Rapid growth of population directly effects per capita income in an economy. As long as the rate of population growth is lower than the per capita income, rate of economic growth will rise but if population growth exceeds the rate of economic growth, usually found in the case of less developed countries, per capita income may fall.

5. Large Population creates the Problem of Unemployment: A fast growth in population means a large number of persons coming to the labour market for whom it may not be possible to provide employment. In fact, in underdeveloped countries, the number of job seekers is expanding so fast that despite all efforts towards planned development, it has not been possible to provide employment to all. Unemployment, underemployment and disguised employment are common features in these countries. The rapidly rising population makes it almost impossible for economically backward countries to solve their problem of unemployment.

6. Rapid Population Growth creates Food Problem: Increased population means more mouths to feed which, in turn, creates pressure upon available stock of food. This is the reason, the under-developed countries with rapid growing population are generally faced with a problem of food shortage. Despite all their efforts to raise agricultural production, they are not able to feed their growing population. Food scarcity affects economic development in two respects. Firstly, inadequate supply of food leads to undernourishment of the people which lowers their productivity. It further reduces the production capacity of the workers. Secondly, the deficiency of food compels to import foodgrains which places as unnecessary strain on their foreign exchange resources.

7. Population and Farming: In less developed countries, the majority of population lives in rural areas, where agriculture is their mainstay. The growth of population is relatively very high in rural areas and it has disturbed the land-man ratio. Further, it has increased the problem of disguised unemployment and reduced per capita farm product in such economies, as the number of landless workers has largely increased followed by low rate of their wages. The low farm productivity has reduced the propensity to save and invest. As a result, these economies suffer largely for want of improved farm techniques and ultimately become victim of the vicious circle of poverty.

8. Population and Vicious Circle of Poverty: Rapid growth of population is largely responsible for the perpetuation of vicious circle of poverty in underdeveloped countries. On account of rapid growth of population, people are required to spend a major part of their income on bringing up their children. Thus savings and rate of capital formation remain low, there is reduction in per capita income, rise in general price level etc. leading to sharp rise in cost of living. No improvement in agricultural and industrial technology, shortage of essential commodities, low standard of living, mass unemployment etc. lead to the vicious circle of poverty.

9. Reduction in Efficiency of Labour Force: The labour force in an economy is the ratio of working population to total population. If we assume 50 years as the average life expectancy in an underdeveloped country, the labour force is in effect the number of people in the age group of 15-50 years. During the demographic transitional phase, the birth rate is high and the death rate has declined and due to which the larger percentage of total population is in lower age group of 1-15 years. This implies that comparatively there are few persons to participate in productive employment. To overcome this demographic transition stage, it is essential for less developed countries to bring down their fertility rate.

10. Rapid Population declines Social Infrastructure: A welfare state like India is pledged to meet social needs of the people adequately and for this, the government has to spend a lot on providing basic facilities like education, housing and medical aid. But rapid increase in population make this burden all the more heavy.

11. Adverse Effect on Environment: Rapid population growth leads to the environmental change. Rapid population growth has increased the ranks of unemployed men and women at an alarming rate. Due to this, a large number of people are being pushed to ecologically sensitive areas such as hill sides and tropical forests. It leads to the cutting of forests for cultivation, leading to several adverse environmental changes. Besides all this, the increasing population growth leads to the migration of large number to urban areas. This results in air, water and noise pollution in big cities and towns.

12. Obstacle to Self Reliance: The excessive population growth is an obstacle in the way of attaining self reliance, because we need more food in order to meet the needs of increasing population and on the other hand, it cuts down export surplus heavily. Reduction in exports makes us unable to pay for imports and we have to depend on foreign aid. Thus, the aim of self reliance cannot be achieved without controlling the population.

13. Declining trend of Agricultural Development: In less developed countries, when the population increases, the land-man ratio gets disturbed. Per capita availability of land for cultivation declined from 1.1 acre in 1911 to 0.6 acre in 1971 in our country which makes the size of holdings very small. The small size of holdings makes adoption of modern technology, means of irrigation and mechanization impossible. Thus, the growth of population retards agricultural development.

14. Growing Population lowers Standard of Living: The standard of living is determined by their per capita income. The increase in population leads to an increased demand for food products, clothes, houses etc., but their supply cannot be increased due to the lack of factors like raw materials, skilled labour and capital etc. The cost and prices rise which raise the cost of living of the masses. This brings the standard of living low. Poverty breeds large number of children which increases poverty further and vicious circle of poverty. Thus, population growth lowers the standard of living of masses.

13.6 Let us sum up:

We can conclude that upto a limit i.e till Optimum population is reached, population can act as an accelerating factor and after that it acts as a retarding factor for economic development. For example- rapid population growth of India has been proving to be a great obstacle to the success of economic development. All the fruits of economic development through Five-year Plans have been eaten up by the rapid growth of population. On the other hand, rapid industrialisation, followed by the growth of population proved boon to the economic development of developed countries.

13.7 Lesson End Exercise

A. Long answer type questions:

1. Discuss the relationship between Economic development and Population.
2. State briefly positive and negative effects of Population Explosion.

Or

Prove whether population explosion is an accelerating or retarding factor for economic development.

3. Explain the following :
   (a) Population is an accelerating factor.
   (b) Population is a retarding factor for economic development.

B. Short answer type questions:

1. Give any two favourable effects of Population explosion.
2. Write any two adverse effects of population explosion.
3. Prove that population is an incentive for Development.
4. 'Population determines capital formation'. Explain.
5. How far is population the creator of unemployment?

13.8 Suggested Readings:

1. Aggarwal R.C. Economics of Development and Planning, Lakshmi Narain Aggarwal, Agra.
2. Lekhi, R.K: The Economics of Development and Planning, Kalyani Publishers, New Delhi.
3. Lekhi, R.K and Sujata Slathia: Economics of Development and Planning, Kalyani Publishers, Ludhiana.
4. Meier, G.M: Leading Issues in Economic Development, OUP, New Delhi.
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ROLE OF INTERNATIONAL TRADE AND ECONOMIC DEVELOPMENT; FOREIGN AID AND ECONOMIC DEVELOPMENT

B.A. Sem-VI **Unit - III**

EC-601 **Lesson No. 14**

STRUCTURE

14.1 Introduction

There have been different views regarding the role of foreign trade of a country in its economic development. The classical and neo-classical economists have particularly emphasised the growth promoting effects of international trade. They held the opinion that foreign trade could make an impressive contribution to a country's development. Trade was considered to be a device for achieving productive efficiency. D.H. Robertson has made the observation that trade is 'an engine of growth'. Though he has made this observation in the context of the 19th century developments, a number of economists maintain that it is equally true even today. Prof. Haberler and Sir Alec Cairncross have tried to maintain the traditional position that foreign trade can contribute substantially to the development of primary goods exporting countries. According to Prof. Haberler "international trade has made a tremendous contribution to the development of less developed countries in the 19th and 20th centuries and can be expected to make an equally big contribution in the future, if it is allowed to proceed freely".

On the contrary, Gunnar Myrdal and Raul Prebisch have argued that foreign trade has inhibited industrial development in poorer nations and that the classical doctrine of free trade has resulted in international inequalities. According to this point of view, foreign trade has led to international inequality whereby the rich countries have become richer at the expense of poorer countries. For the underdeveloped countries, expansion of foreign trade does seem to have helped very much in raising domestic standards of living. Recently, some of the economists have gone to the extent of arguing that foreign trade far from encouraging growth of underdeveloped countries has actually retarded it by dualistic nature of the economy.

Now, a crucial question arises before the developing countries. Can foreign trade have a favourable role in the development of a country? Both the supporters and critics of international trade as an instrument of economic development have strong arguments to offer. It is, therefore, necessary to analyse in greater details the growth- promoting or beneficial effect of international trade in the context of underdeveloped countries.

The second issue worth discussion is that of foreign aid. We shall also be studying about this concept in detail.

14.2 Objectives

After going through this lesson, you will be able to:-

- Explain International Trade and Economic Development;
- Discuss the Role of International Trade in Economic Development and
- Describe the Growth- Promoting Effects.
- Explain Foreign Aid.

14.3 Role of International Trade in Economic Development:

The role of foreign trade in economic development is considerable. It has worked as an engine of growth as has been witnessed by Great Britain in 19th century and by Japan in 20th century as explained by D.H. Robertson. Even in recent times, the outward-oriented growth strategy adopted by Newly Industrialized economies of Asia like Hong Kong, Singapore, Taiwan and South Korea etc. has enabled them to overcome the constraints of small and poor underdeveloped economies.

Foreign trade contributes to economic development in a number of ways like:

1. Foreign trade helps to explore the means to import capital goods, without which no process of economic development can initiate.
2. Foreign trade facilitates price-stability. The demand supply imbalances which hinder the initial stages of growth can be easily rooted out by the mechanism of foreign trade.

3. Foreign trade generates pressures for dynamic change through competitive pressure from imports, pressure of competing for export markets and a better allocation of resources.

4. Foreign trade allows fuller utilization of capacity, increased exploitation of resources and economies of scale.

14.4 Growth Promoting or Beneficial Effects

The growth promoting or beneficial effects of international trade can broadly be studied under the following heads:

1. Benefits for International Specialization: International trade enables a country to enjoy the advantages of international specialization according to comparative costs. Every country specializes and exports those commodities which it can produce cheaper in exchange for what others can provide at a lower cost. When a country specializes according to its comparative advantage, it gains an increase in real income and consequent rise in the standard of living of its people. J.S. Mill emphasized this aspect of international trade and maintained that trade according to comparative advantage, results in a 'more efficient employment of productive forces of the world' and this may be considered as the 'direct economical advantage of foreign trade'.

2. Widening of Market and Raising Productivity: It is argued that the productivity gains arise out of extension of market as a consequence of foreign trade. Improvements in productivity result from greater division of labour, a higher degree of mechanization and greater possibility of innovation. It is said that foreign trade, by widening the extent of the market and the scope of the division of labour, permits a greater use of machinery, stimulates innovations, overcomes technical indivisibilities, raises the productivity of labour and generally enables the trading country to enjoy increasing returns and economic development. **J**. S. Mill has categorized them as indirect dynamic benefits arising out of foreign trade. Thus foreign trade, by extending the size of the market, exercises a dynamic influence on the economy. In turn, it helps to raise the production at higher trade. As a result, country enjoys the benefits of external and internal economies of scale.

3. **Helpful for High Growth Potential:** Foreign trade can also help in the development of a country, enabling it to exchange domestic goods having low growth potential for foreign goods with high growth potential. Prof. J.R. Hicks while emphasizing this growth promoting aspect of international trade observes that trade offers an opportunity for the exchange of goods with less growth potential for goods with more growth potential, thereby quickening the progress. It provides an opportunity for importing capital goods and materials required for development purposes. The import of machinery, transport equipment, vehicles, power generation equipment, road building machinery, medicines, chemicals and other goods with high growth potential provides greater benefits to the developing countries.

4. **Educative Effect of Trade:** It is maintained that international trade can serve as a vehicle for the dissemination of technological knowledge. A deficiency of knowledge can be the biggest handicap in the development of a country and this deficiency can be effectively removed through contact with more advanced economies. The technical know-how and skills is an indispensable source of technological progress. Thus, foreign trade can have an educative influence on the people of developing countries and can help them in bringing about technological and industrial revolution.

5. **Capital Formation:** It is said that foreign trade helps to increase capital formation. The capacity to save increases as real income rises through the more efficient resource allocation associated with international trade. Foreign trade also provides stimulus for investment and thus it tends to raise the rate of capital formation. This stimulus comes from the possibility of realizing increasing returns in wider markets that foreign trade provides. Moreover, by allowing economies of large scale production, the access to foreign markets makes it profitable to adopt more advanced techniques of production. Thus, international trade, by creating conditions for increased capital formation in underdeveloped countries, can help in their economic development.

6. Basis of Import of Foreign Capital: International trade also helps in promoting development by creating suitable conditions for the import of foreign capital. Haberler argued that trade is a vehicle for the international movement of capital from the developed to the underdeveloped countries. The amount of capital that an underdeveloped country can obtain from foreign countries depends to a considerable extent on the volume of its trade. The larger the volume of trade of a country, the greater will be the volume of foreign capital that can be expected to become available to it. It is an established fact that it is much easier to get foreign capital for export industries because they have a built-in solution of the transfer problem.

7. Healthy Competition: Foreign trade also helps in economic development by providing healthy competition and keeping in check inefficient monopolies. The more competitive an economy is, the more efficient it will be.

According to **J.S. Mill**, "The foreign trade benefits an underdeveloped country indirectly by encouraging healthy competition and checking inefficient monopolies. Healthy competition is essential for the development of the export sector of such economies and for checking inefficient exploitative monopolies that are usually established on the grounds of infant industry protection."

Similarly **Prof. Hicks** opines, "Foreign trade accelerates the rate of economic development of underdeveloped countries. They get opportunities for improved techniques. There is expansion in the size of market. Domestic and foreign goods are easily available. Income, output and employment of the country increases. The countries such as Singapore, Arab countries, Brazil, Malaya, Japan, Korea, Taiwan, Hongkong etc. get tremendous progress due to international trade".

8. Foreign Trade helps in breaking Vicious Circle of Poverty: The underdeveloped countries are characterized by the existence of vicious circle of poverty. It implies, low income, deficiency of demand and lack of demand accounts for low supply which in turn accounts for low income. But, international trade enables underdeveloped countries to produce more of those goods in which they enjoy greater comparative advantage. Consequently, production, income and employment in these countries increase leading to increase in demand. This increase demand is partially met by domestic production and partially by foreign imports. In this way, exports and imports of various products help in breaking the vicious circle of poverty.

9. Efficient use of means of Production: International trade, it is felt, provides better ground for efficient use of various resources due to its comparative advantages. According to **Prof. J.S. Mill** it adds to the efficiency of production. In underdeveloped economies, agriculture is backward and subsistence farming is the rule. With the development of trade, use of latest and improved techniques of production become possible in agriculture as well in industrial sector. This, in turn helps to increase the efficiency of means of production. The commercialization of agriculture becomes possible. Similarly, many new industries come into being and some of them are meant for the production of export goods only.

10. Import of Capital Goods & Export of Primary Goods: Another direct advantage of foreign trade for the economic development of underdeveloped countries is that, these countries can industrialize themselves by importing necessary capital goods like machinery, semi-finished products and industrial raw materials from industrialized developed countries. In return, these countries can export primary goods and mineral resources and thus solve the problem of balance of payments. In this way, import of capital goods and export of primary goods are possible.

11. Employment Generation: Rising exports give rise to employment in the related activities and industries. Rising imports may facilitate industrialization, better agricultural and better development of many activities, functions and facilities. There is certainly a greater scope for employment in packaging, transportation and storage etc.

14.5 Let Us Sum Up

Thus we can conclude that International trade has growth promoting effects on all the developing and underdeveloped economies. It accelerates the rate of economic development in these economies.

Check your progress I.

Note: Write your answer in the space given below:-

Q.1. 'Trade is an engine of Growth' who has given this statement?

Ans.____

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Q.2. Give four benefits of International Trade.

Ans.____

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14.6 Introduction to Foreign Aid

When domestic resources are insufficient to finance the expanding industrialization process in LDCs and developing countries they have to depend upon foreign capital. Out of many types of foreign capital, Foreign Aid is one of them

14.7 Meaning of Foreign Aid

Foreign aid means financial assistance provided by the developed countries and international financial institutions like The World Bank, International Development Association (IDA), International Finance Corporation (IFC), International Monetary Fund (IMF) etc. the regional financial institutions, such as, the Asian Development Bank (ADB), the African Development Bank etc. The main feature of foreign aid is that in most of the cases it is not to be returned to the lender country. It flows in the form of assistance, outright grants and concessional loans to under developed and developing countries. Outright grants do not have any obligation to repay and therefore, have no problems attached to them. On the other hand, loans or concessional loans have to be repaid along with interest. This causes a number of problems, if the recipient country is not using it strictly in accordance with the approved development program. It can be stopped at any time by aid giving country.

14.8 Why do developed countries give aid?

The motives of developed countries in giving aid to the developing countries can be divided into the following three categories (i) humanitarian (2) Economic and (3) Political.

1. Humanitarian Motive: In times of natural calamities like floods, droughts, earth–quakes, epidemics etc. many developed countries and international organizations come forward to help the needy countries. Such aid is generally provided in terms of food, medicines, clothing, services of doctors, nurses etc. In terms of its total magnitude, it is only a small part of total aid.

2. Economic Motive: A number of developed countries realized that unless they share their prosperity with the developing countries, strong hurdles will emerge in their own path of progress. It is because international markets will fail to expand rapidly, if the developing countries continue to have poverty. Even otherwise, since a large part of the aid is provided in terms of loans and is tied to the purchase of goods from the donor countries, it benefits developed countries as their industrial activity gets a boost. This leads to an expansion of industrial production and employment opportunities in the donor countries.

3. Political Motive: The important factor determining the quantum and type of foreign aid is the political interests of donor countries. This is especially true in case of major donor countries like USA, UK, Erstwhile USSR, France etc. Those developing countries have been given preferential treatment which are friendly to developed countries and are strategically and geographically important to them.

After an intensive study of foreign aid provided by developed countries to developing countries, well known economist Todaro concludes that, "…. the allocation of foreign aid is rarely determined by the relative needs of developing countries. Most bilateral aid seems unrelated to development priorities, being based largely on political and military considerations and the unpredictable whims and adhoc judgments of donor decision makers."

14.9 Why do developing countries accept aid?

Foreign aid helps in filling up the investment-saving gap, technological gap and the foreign exchange gap in the developing countries. It also helps to create basic economic infrastructure, exploitation of natural resources and even undertake the initial risk of investment in developing countries. The basic argument is that the developing countries are either faced with a shortage of domestic savings to match investment opportunities or shortage of foreign exchange to finance imports of capital and intermediate goods required for setting up industries. By helping developing countries in filling up all these gaps, foreign aid can contribute significantly to their growth process.

14.10 Tied Vs. Untied Foreign Aid

Foreign Aid either be tied or untied. Tied aid may, either be project tied or country tied or both. In case of project tied aid, assistance is made available to the developing country only for the execution of a specific development project e.g. building a dam, setting up of an iron and steel industry, hospital, road, bridge etc. In case of country tied aid, the recipient country is bound to purchase the goods it requires only from the donor country. In the case of project and country tied aid, these two conditions have to be present simultaneously i.e. goods are required to be purchased only from the donor country and only for the execution of a specific project. Even the ships meant for importing those commodities are provided by donor country only at a high rate of freight.

On the contrary, untied foreign aid is one in which the recipient country is free to use it as it likes, keeping in view its plan requirements and availability of domestic resources.

14.11 Which is better of the two?

From the point of view of recipient country, untied aid is better than tied aid for the major reasons given below:

(i) Tied aid restricts the freedom of the recipient country to use aid in the manner it deems fit. This may distort its allocation of investment resources.

(ii) The granting of aid for a particular project may be in a large part illusory, since the project actually financed by aid may be quite different from the one to which aid is tied.

(iii) Tied aid is usually costly. It has been estimated that the tied aid increases the cost of the project even by more than 30% of the recipient country. Even the cost of procurement of tied aid is high.

(iv) Tied aid may limit the choice of technology and may force the recipient country to adopt a highly capital intensive technology which may be inappropriate in a labour surplus country.

(v) Tied aid may also increase the risk of interference by the developed country in the domestic affairs of the recipient country.

Check your Progress II.

Note: Write your answer in the space given below:-

Q. 1. What is meant by Foreign Aid?

Ans.____

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Q. 2. Define Tide Aid.

Ans.____

Q. 3. Define United Aid.

Ans.

14.12 Importance of Foreign Aid

The importance of foreign aid can be mainly judged from the following reasons:

1. Solution to the Problem of Capital Deficiency: The underdeveloped countries are generally designated as 'capital poor' or 'low-saving and low-investing' economies. The rate of domestic savings in these countries is highly inadequate to meet the requirement of their economic development. Majority of the people are living on the subsistence level. Besides, it is not possible to increase the rate of domestic savings to any significant extent. It is not possible for these countries to develop rapidly with their domestic resources alone. Foreign aid can help to bridge the gap between the rate of domestic savings and required rate of investments, if these countries are to develop at a fairly rapid rate. A modest requirement of development needs at least 10 percent investment of their national income in these countries. But domestic saving is inadequate to meet the requirements of capital formation. Therefore, foreign aid can supplement their meager savings and help in raising the rate of capital formation to a greater extent. Foreign aid also facilitates the mobilization of domestic resources and makes possible the starting of highly capital intensive projects. Hence foreign aid is indispensable for economically backward areas.

2. Technical Knowledge and Specialized Capital Equipment: These countries are not only 'capital poor' but also lack technology required for rapid economic development. They require trained personnel, technical know-how and expert opinion. They also need modern machines and equipments. Foreign aid can help to solve the problem of technological backwardness of these countries. Therefore, foreign aid is significant not only as a source of additional savings but also as a supplier of modern technology and specialized capital equipment to underdeveloped countries.

3. To Correct Adverse Balance of Payments: Foreign aid is also crucial from the aspect of its favourable effect on the balance of payments of the recipient country. These countries have generally an unfavourable balance of payments. Economic development tends to affect the balance of payments adversely, as the huge imports of capital goods, technical know - how and raw materials are required to carry on the development programs. On the other side, the exports from these countries are sluggish because of high cost of production and increased domestic consumption. In this way, underdeveloped countries suffer from a continuous pressure on their balance of payments. Foreign aid can help to solve the foreign exchange crisis to a greater extent in these countries. Thus, according to Dr. Bright Singh, external assistance becomes unavoidable in mobilization of resources in a country, as it gives guarantee of releasing sufficient amount of foreign exchange to carry on the development programs.

4. Foreign aid helps to Maintain the Production Level: Another significance is that capital imports can be of immense help in maintaining the level of industrial production in less developed countries by providing essential raw materials, semi manufactured goods, machines, tools and equipments. These countries are not in a position to import their requirements out of their own foreign exchange earnings. As a result, they have to resort to foreign aid in order to maintain the level of production in the country.

5. Helpful in the Development of Economic and Social Overheads: It is a hard fact that underdeveloped countries lack in the necessary infrastructure for development like rails, roads, canals, power projects and other economic and social overheads. Since their development requires a huge capital investment and a long gestation period, these countries are unable to undertake these heavy projects with the aid of domestic resources. Foreign aid can be very helpful in the pace of economic development. It lays down the foundations of rapid economic development in these countries.

6. To Break Vicious Circle of Poverty: Foreign aid is useful to break the vicious circle of poverty and market imperfections.

In the opinion of **Prof. Nurkse**, "The use of foreign resources is one way to breaking the vicious circle of poverty and low capital formation. The flow of foreign capital and other resources will provide an increase in productivity fast enough to outrun population growth and thus launch a process of cumulative expansion, and will acquire a sufficient portion of this capital in foreign exchange to permit importation of raw materials and equipment needed for development, in addition to essential food stuffs."

7. Rapid Rate of Capital Formation: Underdeveloped countries have slow rate of capital formation. But with foreign aid, rate of capital formation can easily be speeded up, as this imported capital is employed in heavy capital intensive industries such as machinery, steel and fertilizer etc.

8. Proper Use of Natural Resources and Risky Projects: In underdeveloped countries, capital is very shy and the private enterprise is reluctant to undertake risky projects like the exploitation of untapped natural resources. Foreign aid covers up this deficiency by opening new ventures and new areas of business activity. It goes into pioneering enterprises involving all risks. Thus the investment of foreign aid results in opening up inaccessible areas and tapping up of new and exploited natural resources in the country.

9. Helpful in Combating Inflation: Underdeveloped countries generally suffer from inflationary pressure during the initial stage of their development. Inflation in these countries is the outcome of the disequilibrium between demand and supply. Public investment program on a mass scale generates demand ahead of the supply of goods. This in turn creates inflationary pressure in the economy. Foreign aid is helpful to minimize inflationary pressure through import of food and other consumer goods. In either way, foreign aid keeps inflationary pressures under control.

10. Tends to Increase Productivity, Income and Employment: With the inflow of capital, the labour in the country is equipped with modern tools which in turn raise its productivity. A rise in labour productivity results in higher real wages for the workers and cheaper goods for the consumers. In general, in this way, foreign aid leads to setting up of new industries which provide greater income and employment for its growing population.

14.13 Dangers of Foreign Aid

Foreign aid tied with strings has not always been a pure blessing for the underdeveloped countries. Despite various advantages, it has got its own dangers. As a result, these countries are sometimes reluctant to import capital on the mass scale. These dangers may be both economic and political. The main disadvantages of foreign aid have been summarized as under:

1. Heavier Burden as Compared to Domestic Loans: The worst danger of foreign aid is that it raises the burden even more than domestic loans. Moreover, because their repayment requires the transfer of scarce foreign exchange resources from the borrower to the lender countries, for the payment of such loans foreign currency is needed in abundance. Further, other foreign exchange resources of under developing countries are too meager to bear the burden of repayment and service charges of these loans. In other words, the repayment burden of foreign loans may compel to make further borrowings to meet their commitment. Thus a country gets trapped in a vicious circle of borrowings.

2. It Exercises Adverse Effect on Long Term Balance of Payments: Some economists have aptly remarked that foreign aid exercises adverse effect on long term balance of payments. The repayment of foreign loans may involve a country into balance of payments difficulties. Payment of interim and installment of foreign loans exercises further pressure on their balance of payments and may aggravate the situation further. In such a situation it becomes a pre-requisite for them to take further loans to make payments of their old debts/loans.

3. Dependent on Foreign Countries: Still another serious danger of foreign aid is that a country remains dependent on other countries. Such dependence may be fatal for its economic and political freedom. Political strings are generally attached to foreign loans, which compel the developing countries to join one or other power blocs. Besides that, transfer of foreign capital on a mass scale strengthens the economic and political stronghold of the creditor countries over debtor countries. Thus it becomes difficult for the developing countries to maintain their neutrality.

4. Less Scope for Potential Domestic Investment: It is feared that foreign aid by utilizing the available most profitable opportunities of investment in the country may narrow down the scope for domestic investment. It is extremely doubtful that foreign aid, if confined to the development of basic and heavy industries, may assume a dominating role in the economy and may start interfering in the economic and political policies of the country. Sometimes, foreign aid fluctuation becomes a challenge to the stability of domestic market and obstructs economic development.

5. Free Flow of Foreign Aid Distorts the Pattern of Development: If foreign aid is allowed to flow freely in the developing counties, it will tend to upset the priorities fixed by them for development purposes. In the present era, most of the countries have adopted planning for the rapid economic development and have fixed up definite priorities for the allocation of investment. In this region, uncontrolled flow of foreign aid may distort the entire pattern of priorities in less developed countries. In a sense, free flow of foreign aid may not be in the best interests of developing countries.

6. Exploitation of Natural Resources for Selfish Ends: The colonial history of the past furnishes specific instances when foreign aid has been utilized as an instrument of economic exploitation of their vast natural resources for the benefit of another country. Such exploitative use of foreign aid has got a bitter history for the developing countries.

Prof. R. Nurkse, in this connection, has rightly observed that "Foreign capital in underdeveloped countries went into extracting industries working mainly for exports to the advanced industrial countries. As a result of this, very little development took place in backward agricultural countries in the past on account of foreign private investments." **Prof**. **H.W. Singlerhas** also expressed the similar view that, "Foreign capital, instead of developing the domestic economies of low income countries, has served to harden, and strengthen the system under which these countries specialized on the production of raw materials and foodstuffs for exports."

7. Not Suitable during Emergency: Imported capital can prove highly prejudicial to the common interests of under developed countries particularly in times of national emergency or wars. This is possible in those cases where basic and key industries are monopolized by foreigners.

8. Drain of Profits: Another danger of imported capital is the drain of profits. Foreign loans drive the industrial and commercial profit out of the less developed countries. This leads to the exhaustion of precious and valuable resources of underdeveloped countries, and the country moves gradually towards impoverishment. Because of the dangers arising out of the foreign aid, the less developed countries should exercise caution in the import of capital from other countries. These countries should not resort to over borrowing and the amount of foreign capital should be effectively utilized and absorbed in the economy. Besides, foreign loans must be taken only when the internal resources are insufficient to meet the requirements of development. The utilization of foreign fund must also be done judiciously. A major part of foreign capital must be utilized in a manner as to promote exports i.e. it must be productively utilized and not wasted at all.

14.14 Let us sum up

After understanding merits and demerits of Foreign Aid, we still conclude that Foreign aid plays a prominent role in the development of underdeveloped countries. It is helpful in accelerating the rate of economic growth in several ways. The inflow of foreign aid provides the recipient country with the means for acquiring local resources for domestic investment. It supplies foreign exchange for importing necessary materials and equipment directly needed for development projects. Further it allows the import of other commodities which will be demanded indirectly as development proceeds and national income rises. Without foreign aid, the pace of development is much slower in Underdeveloped countries.

14.15 Lesson End Exercise:

A. Long answer type questions:

1. Discuss, to what extent, does trade affect the economic development of an economy?
2. Give arguments in favour of foreign trade.
3. Discuss the growth promoting factors of International trade.
4. Bring out the significance of foreign aid in the development of L.D.Cs.
5. State the major dangers of foreign aid in a developing country.
6. Give arguments in favour of foreign aid.

B. Short answer type questions:

1. Give the role of Foreign Trade in Economic Development.
2. How is International Trade an engine of Growth?
3. State any four benefits of International Trade.
4. Define the term ‘foreign aid’.
5. Evaluate foreign aid, stating its significance.
6. How does foreign aid stimulate growth?
7. What do you mean by foreign aid?
8. Give two points which show significance of foreign aid.

14.16 Suggested Readings:

1. Aggarwal R.C. Economics of Development and Planning, Lakshmi Narain Aggarwal, Agra.
2. Lekhi, R.K: The Economics of Development and Planning, Kalyani Publishers,New Delhi.
3. Lekhi, R.K and Sujata Slathia: Economics of Development and Planning, Kalyani Publishers, Ludhiana.
4. Meier, G.M: Leading Issues in Economic Development, OUP, New Delhi. Thirwal, A.P: Growth and Development, Macmilion Londen.
5. Todaro, M.P: Development Planning-Models and methods, OUP, New Delhi.

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LABOUR INTENSIVE TECHNIQUES VS.
CAPITAL INTENSIVE TECHNIQUES

B.A. Sem-VI	**Unit - IV**
EC-601	**Lesson No. 15**

STRUCTURE

15.1 Introduction

Underdeveloped countries are facing acute problems in the path of economic development. These countries generally have a large manpower supply and suffer from scarcity of capital resources. They are faced with an urgent problem of accelerating the rate of economic growth. In order to gear up the economy, what type of techniques should be followed? It means, there is a choice between **labour intensive** and **capital intensive**; agriculture and industry; light or heavy industries. But the ultimate choice lies between labour intensive and capital intensive, which should be selected to promote the rapid pace to economic development. This fact has created considerable controversy about the techniques of production that should be preferred by underdeveloped countries. These countries need such a technique which will best utilize the available human and physical resources. They must make maximum production at minimum cost.

Thus, the ultimate aim is to choose the technique which is more efficient than the other. Here it must be kept in mind that a single technique is not the best alternative in underdeveloped countries due to different geographical position, stage of development, rate of capital formation, level of income and impact of external influences. Generally, where capital is scarce relatively to labour, labour intensive technique is favoured and where labour is scare as compared to capital, capital intensive technique is most suitable.

15.2 Objectives

After going through this lesson, you will be able to:-

- Explain the meaning of technique;
- Discuss the choice of technique;
- Describe the types of techniques;
- Arguments in favour of and against Capital Intensive Technique;
- Arguments in favour of and against Labour Intensive Technique and
- Choose an appropriate Technique.

15.3 Meaning of Technique

According to **Schmookier**, Technique is the social pool of knowledge of the industrial arts. It means technical knowledge used in the production of capital and machinery. In other words, rate of technical progress is the rate at which this knowledge is increasing.

The term technical progress is used in the following situations:

(i) Technological change implies that a given output can be produced with fewer inputs than before.

(ii) More output can be produced, given the same quantities of inputs.

(iii) Existing output undergoes quantitative improvement.

(iv) New commodities are produced.

According to Schumpeter, technical progress is the result of inventions and innovations. Invention is the discovery of some new technique. Innovation consists of the practical application of an invention to production for market.

15.4 Meaning of Choice of Technique:

Every country, whether developed or underdeveloped is keen to maximize the rate of growth by way of optimum utilization of the scarce resources. In this context, choice of technique poses a serious problem. It implies the decision regarding - input - mix for producing goods and services. In other words, the choice of technique refers to choosing amongst the various possible ways of combining factor inputs to produce a given set of goods and services. These 'ways' or techniques may be labour- intensive or capital- intensive of producing goods and services. While choosing the technique, the emphasis should primarily be upon the one that reduces the cost of production.

15.5 Types of technique

There are mainly two types of techniques as.

A. Labour Intensive Technique

B. Capital Intensive Technique

15.6 Labour Intensive Technique:

In simple words labour intensive technique is that which uses comparatively larger amount of labour and small doses of capital. It is that technique by which more of labour and less of capital is required for the process of production. According to Prof. Myint, "labour intensive methods of production are those that require a large quantity of labour with a given unit of capital." With this method of production, it is possible to raise output by using the same amount of capital but greater amount of labour. This technique fulfils two objectives of capital formation and skill. It raises agriculture production through the use of minor irrigation, better seeds, manure, implements and the introduction of short duration crops. Labour intensive technique has been illustrated with the help of diagram 15.1. In this diagram, isoquant Q shows the initial level of output which is being produced at a by using OL labour and OC amount of capital. With the adoption of new technology a higher level of output 'b' as represented by the isoquant Q_1, can be produced by the same amount of capital i.e. OC. In this case, greater amount of labour is used i.e. OL_1. This shows that the technique is labour intensive.

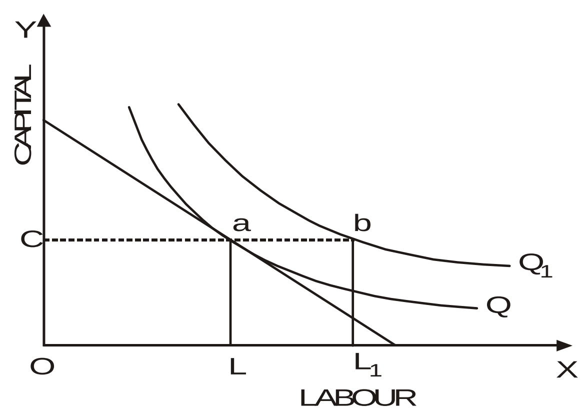

Fig. 15.1

15.7 Capital Intensive Techniques:

Prof. Harvey Leibenstein, Paul Baran, Rostow, Hirschamn Maurice Dobb and Mahalanobis are the chief advocators of capital intensive technique. They consider that this technique is indispensable for accelerating the process of growth. Prof. Paul Baran has the strong opinion about the necessity of using the capital intensive in less developed countries. He observed that such countries should make use of their ability to draw upon the scientific and technological advancement of the more developed countries if they want to industrialize at a faster rate. Capital intensive technique refers to that technique in which larger amount of capital is comparatively used. In such a technique, the amount of capital used per unit of output is larger than what it is in case of labour intensive technique.

Capital intensive technique has been shown in diagram 15.2.

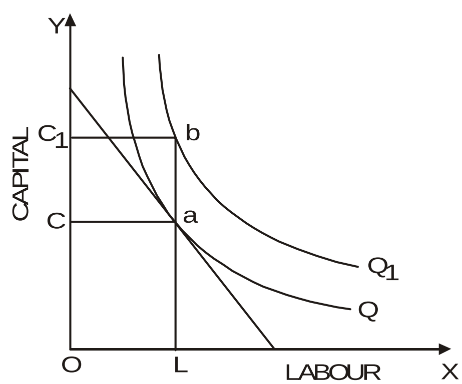

Fig. 15.2

In this diagram, isoquant 'Q' represents the initial level of output at 'a' using OL amount of labour and OC amount of capital. With the introduction of new technique, a higher level of output 'b' is shown by labour (OL) but with greater dose of capital (OC1). Therefore, capital intensive technique is using more capital with the same amount of labour.

CHOICE OF TECHNIQUE

There is a great controversy on the question of choosing between labour intensive and capital intensive technique in less developed countries. While some are in favour of labour-intensive technique, others advocate for the capital-intensive technique. Before formulating any decisive opinion on the important question, let us study the arguments for and against each of these techniques.

Check your Progress.

Note: Write your answer in the space given below:-

Q. 1. What is Labour Intensive Technique?

Ans.____

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Q. 2. What is Capital Intensive Technique?

Ans.____

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15.8 Arguments for Labour Intensive Techniques:

The economists like Nurkse, Lewis, Meier and Baldwin have strongly supported the thesis that underdeveloped countries should adopt the labour intensive technique rather than going after the capital intensive technique. The arguments in support of the use of labour intensive technique are as follows:

(1) More Employment Generation: It needs no argument to say that labour intensive techniques are more employment generating. Underdeveloped countries face the scarcity of capital and abundance of manpower. The capital labour ratio in these countries is very low. So, labour intensive technique is indispensable if the problem of unemployment and disguised unemployment is to be resolved.

(2) Utilization of Scarce Capital : Underdeveloped countries suffer from an acute shortage of capital and entrepreneurial resources. Keeping these facts in mind they will have to select a technique which can economise the use of these scarce resources. Thus, the adoption of these methods of production is more suitable in underdeveloped countries as it will release the scarce capital resources for other important uses.

(3) Decentralization: The use of labour intensive techniques will confer the benefits of decentralization and avoid the evils of factory system. As these techniques are invariably associated with small and cottage industries, they can be fruitful in the establishment of an economically decentralized society. The present democratic governments have desired to attain decentralization with social justice.

(4) Favourable Effect on Distribution of Income: Labour intensive technique is also favoured because it has favourable effect on distribution of income. A labour intensive project will tend to raise the income level of a relatively large number of low income workers. By providing more employment, these methods of production tend to provide a higher degree of economic equality to a common man.

(5) Higher Level of Consumption: Labour intensive technique will be a useful method to raise the present level of consumption. These techniques tend to raise the level of wages. These increased wages will automatically be spent on consumption. In a sense, labour intensive technique will ensure a higher level of consumption of the working classes.

(6) More Production at Cheaper Rate: Another argument advanced in favour of labour intensive technique is that it provides the cheaper way of raising output in less developed countries. In a poor country, the social price of labour is likely to be low or even zero compared with the high price of capital. Therefore, the most efficient use of resources in a poor country will tend to favour labour intensive methods.

(7) Creation of Economic and Social Overheads: It is also argued that labour intensive technique would also mean a considerable saving in expenditure on the development of economic and social overheads. Industries using these techniques are usually set up in villages. Less spending is made on the building of houses, development of roads and other means of transport and providing civic amenities. Thus, there is a considerable scope of saving of expenditure on economic and social overheads.

(8) Control on Inflationary Pressures: Labour intensive techniques have a counter-inflationary effect and hence they are preferred in developing countries. These techniques ensure quick and rapid increase in the supply of consumer goods which in turn is helpful in combating the inflationary pressure which has become a common feature in most of the underdeveloped countries.

(9) Saving of Foreign Exchanges: The adoption of labour intensive techniques would mean a considerable saving of foreign exchange resources. In short, these techniques are helpful to solve the problem of foreign exchange.

(10) Social Equality: It is also pointed out by some supporters of labour intensive technique that it provides social justice, as it is helpful to increase the income of a common man at village level.

(11) Better Utilization of Local Resources: Labour intensive techniques are adopted in small scale industries and rural industries. Thus, there is ample scope of utilization of local resources.

(12) Scope for Employment to Children and Women: Labour intensive technique is also supported on the ground that it provides employment opportunities to children and women.

Arguments Against Labour Intensive Techniques

Some critics have opposed labour intensive technique on the following grounds. They have mentioned:

(i) Labour intensive technique is static and of short term in nature, which cannot be applied in the long run period.

(ii) As this technique leads to redistribute incomes in favour of those who have low marginal propensity to save, this results in low rate of capital formation.

(iii) There is no possibility of improved and more advanced skill during the course of labour intensive techniques.

(iv) The production process is very costly.

(v) No possibility of research and modernization.

15.9 Arguments in favour of capital Intensive Technique:

The strong arguments have been forwarded by those who support the use of capital intensive technique. In the opinion of Prof. W.Galenson and H.Leibenstein, "Successful economic development particularly in the case of gross backwardness, hinges largely upon the introduction of modern technology on a large scale as far as possible."

However, the arguments in favour of capital intensive technique have been advanced as under:

(1) Rapid Rate of Economic Growth: The use of capital intensive techniques results in much quicker and more rapid economic growth as compared to labour intensive techniques. If capital intensive techniques are adopted, a large share of national income will be going to entrepreneurs, in the shape of profits and a small share will be going to wage earners. As entrepreneurs' propensity to save is high, a large portion of these profits will be saved and invested which would result in higher rate of capital formation and further accelerate the growth process.

(2) Modern and Efficient Method of Production: With the help of capital intensive techniques, goods can be produced at a lower cost. Under labour intensive methods of production, the consumers have to pay higher prices; while under capital intensive technique of production, one obtains cheaper goods produced on a large scale with modern methods.

(3) Rise in Standard of Living: The availability of goods at lower prices leads to raise the standard of living, as public gets cheap goods and more goods for use. Hence, capital intensive techniques ensure a rise in standard of living.

(4) Higher level of Output Per Worker: The use of capital intensive techniques enhances the productivity of labour and raises greater output per worker.

(5) Labour Intensive Techniques turned into Capital Intensive Technique: Labour intensive techniques ultimately prove to be more capital intensive than the capital intensive techniques themselves in the long period.

(6) Emergence of Most Efficient Productive Units: The implementation of capital intensive techniques would lead to the emergence of efficient productive units with most advanced type of techniques. It ensures the benefits of modern technology to the economy. On the other hand, the labour intensive techniques would result in the establishment of inefficient units operating with most backward and obsolete techniques.

(7) Far Reaching Effects: The spread effects of capital intensive techniques are much wider and stronger. The use of this type of techniques would have a far-reaching effect on the process of economic development in an economy.

(8) Creation of Social Overheads: Capital-intensive techniques are essentially for the development of economic and social overheads. Therefore, development of infrastructure is a pre-condition for their rapid economic growth. Moreover, these projects are generally highly capital intensive.

(9) More Profitable: The experience of different countries shows that capital intensive techniques are more profitable as compared to labour intensive techniques. This is due to the fact that capital intensive techniques enjoy more economies of large scale production.

Arguments Against Capital Intensive Techniques:

The use of the capital intensive techniques is legitimately doubted in the early stages of economic development. In a sense, serious doubts have been raised by economists about the feasibility of using capital intensive techniques in less developed countries. The arguments against the use of capital intensive techniques have been put forth as follows:

(1) It Needs Huge Amount of Investment: Underdeveloped countries are usually labour surplus economies, and so highly capital intensive techniques do not suit them as they require huge capital investment which is beyond their reach.

(2) Adverse Effect on Balance of Payments: The use of capital intensive technique will require huge import on machinery, tools, implements and technical know- how. This is likely to aggravate the balance of payments difficulties of such countries.

(3) Difficulty of Maintenance: Import of machinery and equipment will not only be costly affair, it may also create other obstacles regarding the repairs, maintenance and availability of spare parts. Moreover, it is also expected that some of the equipments will be unutilized or remain under-utilized. In this connection, a UNO Report observed that "automatic devices suited to conditions in advanced industrial countries, are often left unused in underdeveloped countries."

(4) Wasteful use of Capital Resources: Capital intensive technique involves a wasteful use of meagre capital resources of the underdeveloped countries. According to Prof. Kindleberger, "Much of the adoption of modern technology is mere demonstration effect on the side of production, the attempt to run before one can walk. Such technology wastes capital, since it uses it too intensively in a narrow sector and requires ignoring opportunities for profitable investment."

(5) Absence of Basic Facilities: The adoption of modern capital intensive techniques requires sufficient power, transport and communication facilities, adequate supply of technically trained personal and a large number of related services. But in practice, these facilities are largely absent in underdeveloped countries.

15.10 An Appropriate Technique for Under Developed Countries:

On the basis of above discussion, it can be concluded that both types of techniques must be suitably utilized in underdeveloped countries. We are quite aware that these countries are in grip of vicious circle of poverty. A rapid rate of economic growth is their immediate need. But it is not possible to attain rapid economic growth without technology and with obsolete methods of production. As a result, capital intensive methods should be given a top priority in the planning of these countries. But at the same time, unemployment and disguised unemployment is their major concern. Millions of unemployed and semi employed persons cannot be ignored even on humanitarian grounds in these countries. They have to be provided with employment opportunities and for that, labour intensive technique is the last resort. Keeping all these aspects in view, it will be unwise to adhere to any one of these techniques. The best course for such countries is to have such a combination of the methods of production which would ensure a high rate of growth of income on one side and a rise in level of consumption and employment on the other. In other words, two techniques shall have to be judiciously combined to secure the conciliation of these two conflicting objectives.

15.11 Let us sum up:

Both the techniques have their plus points and negative points. So a developing country like India should combine both the techniques to get best results.

15.12 Lesson End Exercise

A. Long answer type questions:

1. Give the different types of techniques. Explain with arguments for and against it.
2. Explain labour intensive and capital intensive techniques of production. Give arguments in favour and against each technique.
3. Distinguish between labour intensive and capital intensive techniques. Which is most suitable for U.D.Cs?
4. Choice of techniques is a difficult task before the planning authority in a developing country. Discuss.
5. Write in detail on appropriate technique for U.D.Cs.

B. Short answer type exercise:

1. What is technique?
2. Define labour intensive technique.
3. Explain capital intensive technique.

4. What do you mean by choice of technique?
5. Give four arguments in favour of labour intensive technique.
6. Give four merits of capital intensive technique.
7. Explain the concept of appropriate technique.
8. Which technique of production will you choose in a country with surplus labour and scarcity of capital? Explain.

15.13 Suggested Readings:

1. Kindleberger, C.P: Economic Development, McGraw Hill, New York.
2. Lekhi, R.K: The Economics of Development and Planning, Kalyani Publishers, New Delhi.
3. Lekhi, R.K and Sujata Slathia: Economics of Development and Planning, Kalyani Publishers, Ludhiana.
4. Meier, G.M: Leading Issues in Economic Development, OUP, New Delhi.
5. Thirwal, A.P: Growth and Development, Macmillan, London.
6. Todaro, M.P: Development Planning-Models and methods, OUP, New Delhi.

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MEANING OF ECONOMIC PLANNING AND NEED FOR PLANNING IN UNDER-DEVELOPED COUNTRIES

B.A. Sem-VI	**Unit - IV**
EC-601	**Lesson No. 16**

STRUCTURE

16.1 INTRODUCTION:

Dear learners, in this lesson, we will learn about history, meaning and definitions of planning given by famous Economists. We will study why Economic Planning is needed in underdeveloped and developing countries of the world?

16.2 Objectives:

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

- Explain of the meaning of Economic Planning;
- Discuss Definitions;
- Describe the features of Economic Planning and
- Explain the need for Economic Planning.

16.3 History of Economic Planning:

The concept of planning is quite old. The idea of economic planning in its present form is comparatively new. The first author was Prof. Kristian Schonheyder, a Norweyian economist who greatly emphasized the idea of economic planning in a small treatise published in 1910. The idea was given some practical shape in Germany during the First World War, when it was used as an effective technique for carrying on war administration in the country. However, as soon as the war was over, the idea of economic planning was discarded. In 1928, the Soviet Union gave the idea of economic planning a real shape when it formulated its first five year plan. After the great depression of 1930's, many capitalistic countries turned to economic planning as a solution for their economic ills. After the Second World War, the war-devastated countries of Europe were compelled to economic planning to rehabilitate themselves. Lastly, the attainment of political freedom by some of the colonial countries in South East Asia gave further stimulus to the idea of national economic planning as a means of securing rapid economic growth within a short period.

As for India, the first to advocate the idea of planning for India was Shri M. Visvesvaraya who wrote the first book on planning entitled, 'Planned Economy for India' in 1934. In 1937, the Indian National Congress set up the National Planning Committee under the chairmanship of Pt. Jawahar Lal Nehru for preparing National Plan in India. In the mean while, some leading industrialists of Bombay were convinced of the need for planning in India and prepared a plan in 1944 which came to be known as 'Bombay Plan.' Some other plans such as 'People's plan' drafted by M.N. Roy, Gandhian Plan by S.N. Agarwal were also prepared.

Soon after independence, the Government of India set up the National Planning Commission in 1950. First Five Year Plan (1951-56) was implemented from 1st April 1951.

16.4 Meaning of Economic Planning

Economic planning refers to an activity which is comprised of ends or aims which a society wants to achieve and the means with which these ends are sought to be achieved. The ends are set by planners, keeping in view the needs of the countries concerned as well as the possibilities open to them. The means to attain these ends too are described by planners. The ends and means are thus laid down before the action starts or before the plan is put into operation. State is the vehicle through which the operation of the economic plan takes place. Economic planning is essentially a way of organizing and utilizing economic resources to maximum advantage in terms of well defined socio-economic goals.

16.5 Definitions:

Michael, P. Toder, in 'Development Planning and Models and Methods' defined it. "as the conscious efforts of a central organization to influence, direct and in some cases, even control changes in the principal economic variable of a certain country or region over a course of time in accordance with a predetermined set of objectives."

Dickinson defines, "Planning as the making of major economic decisions what and how is to be produced, how, when and where it is to be produced, to whom it is to be allowed, by the conscious decision of a determinate authority, on the basis of comprehensive survey of the economic system as a whole".

M. R. Todaro, 'Economic Planning is concerned with the whole economic life or the entire activity of an economic unit'.

From the above definitions, one can easily make out the idea that planning is a systematic program to encompass a gamut of economic activities in a country over a specific time. It is like a deliberate control and direction of the economy by a central authority for the purpose of achieving definite targets. Thus it aims at policies of enlarging production, re-allocation of resources or distribution within a specified period of time.

16.6 Features of Economic Planning:

Economic Planning has been adopted in different parts of the world for various reasons. In socialistic countries, where there are state owned means of production, planning has become an institutional need while in capitalistic countries where private ownership exists **(Laissez faire),** It is necessitated for the use of resources. In less developed countries or in developing countries, it is favoured to overcome the bottlenecks and for bringing all round development. After 'world depression', economic planning has become the darling in underdeveloped countries of the world. The most cherished elements involved in a good plan are as under :

(i) Definite Objective: Planning means conscious and deliberate undertaking for a definite objective. For instance, economic planning has the objective to accelerate the rate of growth, eliminate the trade cycles, bring the stability and attain full employment in the economy.

(ii) Central Planning Authority: The existence of a central planning authority is another feature of economic planning. It is responsible for preparing different schemes of development and coordinating the various activities. The central planning authority takes all decisions related to production and consumption in an economy.

(iii) Democratic Character: Another pioneer feature is its democratic nature. No doubt, various plans are prepared by experts but at the same time, adequate opportunities are provided to the people to actively participate at various levels. Being federal structure of Indian Constitution, the Union Government only uses its fiscal, monetary and physical controls to guide and give direction in consequence with the economic plans.

(iv) Only an Advisory Role of Planning Commission: No Planning Commission is the apex body. It provides the necessary perspective, guidance and coordination. Furthermore, it serves as a close link between different agencies so that functioning may be smooth.

(v) Comprehensiveness: Another important characteristic of planning is its comprehensiveness in scope. As central planning authority takes all decisions regarding production, consumption and distribution, thus, it must cover the entire economy. In other words, planning must be effective so that the planning of one sector may not be nullified by the absence of planning in other sectors.

(vi) Planning for Consumption: In a centrally planned economy, it should not be confined to production alone but at the same time it must cover the distribution and consumption also. In other words, the planning authority should not decide just what and how to produce, but it must keep in mind and decide accordingly among whom it is to be distributed.

(vii) Rational Allocation of Resources: Generally, in under-developed countries, available resources are scarce and these resources are allocated in such a manner as to get maximum social welfare. It needs to fix up priorities relating to economic development, thus, allocation of resources in accordance to these fixed priorities. These scarce resources are also allocated to eliminate wastages for maximizing social welfare.

(viii) Feasible Policies and Targets: A good planning is based on the initial resources of the country to achieve the feasible policies and targets. In this way, domestic resources are planned for attaining economic stability.

Check Your Progress.

Note: Write your answer in the space given below:-

Q1. Write briefly meaning of Economic Planning.

Ans.____

Q. 2. Write any two features of Economic Planning.

Ans.____

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16.7 Need for Economic Planning:

The following are arguments in favour of planning:

1. **Optimum Use of Resources:** Under economic planning, resources are optimally used. There is no doubt that resources are also fruitfully used under laissez faire policy, but these are exclusively induced by profit motive and self-interest. But under economic planning, resources are used so as to increase social welfare and social security. It is economic planning which helps in reducing wasteful expenditure.

2. **Rapid Economic Development:** Planned economy is more useful than unplanned one in case of rapid economic development. Under economic planning, new resources are discovered, which help in raising the level of investment and national income. The path of economic development is well-defined and priorities are already fixed under economic planning. But under laissez faire, economic development cannot be rapid as resources are not allocated according to plan.

3. **Economic Stability:** Under unplanned or laissez faire policy, we find emergence of cyclical fluctuations i.e. ups and downs in the economy. In other words, in such economies, we find booms, depression, unemployment, over production etc. In order to bring economic stability, various policies like monetary, fiscal etc. are adopted. But under planned economy, we find economic stability. Not only that, economic stability is always maintained through planning.

4. **Balanced Growth:** For economic development, we need all the sectors of the economy to develop in a balanced manner. This objective can be achieved through planning only. All countries interested for achieving balanced growth should resort to

planning. It helps in achieving regional development. Balanced development accrues various advantages like optimum use of human and natural factors, industrialization, increase in national income, increase in the productivity of labour etc.

5. Better Solution of Basic Problems: Basic economic problems like what to produce, how much to produce are solved in an effective manner through the mechanism of economic planning. Resources are used rationally, keeping in view the social interests. People get regular supply of necessary goods and services under planning. Supply is matched with the demand.

6. Right use and Conservation of Natural Resources: Under economic planning, Government ensures proper use and conservation of natural resources. While making use of these scarce resources, it is ascertained that there is least possible wastage. These resources must be used for the benefit of the entire society and not a particular class of it. Economic planning ensures that there is no reckless cutting of trees and water resources are tapped economically.

7. Less Inequality in the distribution of Wealth and Income: Economic planning seeks to reduce inequalities in the distribution of wealth and income. It is the constant effort of the government to narrow the gulf between the rich and the poor classes. To achieve this objective, rich class is burdened with progressive taxation and poor-class is provided with free social services. In other words, Government takes different measures to reduce the gap between rich and the poor.

8. Production according to Needs: Another advantage of planned economy is to produce goods and services according to the needs of the economy. Under economic planning, allocation of economic resources is done in such a manner that maximum speed in the process of economic development is achieved. Under planning, time and resources are fruitfully used, which raise the living standards of the people. Chronic problems like unemployment and poverty are wiped out.

9. Social Justice: Under capitalistic unplanned economy, each person wants to maximize his profits. But under planned economy, each state wants to maximize social welfare. The capitalists, in order to maximize profits, exploit the labour. This leads to inequalities in income which is harmful for social justice. But, under planning, planners try their best to reduce inequalities. On the other hand, they try to increase investment and production. Thus planning helps in bringing social justice.

10. Distribution of Resources between Present and Future: The resources of a country have to be distributed between present and future. In an unbalanced economy, the natural resources of a country may be used ruthlessly. It may happen that all the natural resources of the country may be used in the current period and there may be hardly anything left for the future use. On the contrary, the resources of the country are used in a planned manner under economic planning. It means future needs of the country are kept in mind. Through planning, it is also ensured that the natural resources are not wasted and these resources are not used for any particular group of the society.

11. Useful during Wars: During war periods, we require a lot of resources to meet war needs. Not only that, even top priority has to be given to the resources for war purposes. Besides war, other needs of the people have also to be kept in mind. Under planned economy, when all the resources are centrally controlled, any emergency can be easily brought under control by diverting the resources from less useful purposes to more useful purposes.

12. Attainment of Full Employment: The capitalistic unplanned economies have failed to provide employment to all those who are willing to work at the existing wage rate. We have found an increase in unemployment in such economies. Under planned economies, those projects are launched which provide maximum employment. In this way, economic planning is very fruitful to solve the problem of unemployment.

13. Farsightedness: The economic planning is useful, as it takes into account future uncertainties while fixing its targets. In other words, it is the objective of the planning authority to see that the plan is so framed and executed as to keep proper watch on future needs of the country.

16.7 Let us sum up

Economic planning proved to be a grand success in many countries. This made the concept very popular in all the countries of the world even in capitalistic economies like UK and USA. For underdeveloped countries, planning is regarded as panacea for all their economic problems.

16.8 Lesson End Exercise

A. Long answer types questions:

1. Define economic planning. Give its features.
2. What do you know about economic planning? Mention its main features.
3. Why is economic planning needed in U.D.Cs? Point out its main benefits.

B. Short answer type questions:

1. What is economic planning?
2. Give the main features of planning.
3. Why is planning needed in an underdeveloped economy?

16.9 Suggested readings:

1. Aggarwal R.C. Economics of Development and Planning, Lakshmi Narain Aggarwal, Agra.
2. Bhagwati, J and Desai, P: India-Planning for Industrialisation, OUP, London.
3. Hayami, Y: Development Economics, Oxford University Press, New York.
4. Haggins, B: Economic Development, Norton, New York.
5. Jhingan, M.L: The Economics of Development and Planning, Vrinda Publications, Delhi.

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PRE-REQUISITES OF ECONOMIC PLANNING : CENTRALIZED AND DECENTRALIZED PLANNING

B.A. Sem-VI	**Unit - IV**
EC-601	**Lesson No. 17**

STRUCTURE

17.1 Introduction

Dear learners, in the previous lesson, we have studied about the history of Economic Planning and meaning, features and need of Economic Planning. In this lesson, we will study Pre-requisites of successful Planning and Centralized and Decentralized Planning. We will understand what type of planning is good for India and Why.

17.2 Objectives

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

- Explain Pre- requisites of successful Planning;
- Discuss centralized Planning;
- Discuss decentralized Planning;
- State objectives of decentralized Planning;
- Describe importance of decentralized Planning
- Discuss decentralized Planning and India.

17.3 Pre-requisites of successful planning

Economic planning is a very complex task and its success depends upon several factors such as good plan formulation, proper plan policies to achieve the desired targets, proper implementation, people's participation, peaceful law and order conditions etc. prevailing in the country. Thus the success of a plan depends largely on the circumstances and conditions in a country. Govt. should be strong and efficient and economic organization should be sound. Since planning requires efficient control and direction, it is obvious that a weak and unstable Govt. cannot properly implement the plan. The vastness of some of these countries, regional diversity in resources, inadequate means of communication, low educational levels of the people, immobility of labour etc. need special attention before formulating the economic plan.

The various pre-requisites for successful planning are given below:

1. **Central Planning Authority**

The first and the foremost condition for successful planning is the setting of Central Planning Authority. For instance, in India there was Planning Commission (1950 to 2014) and now NITI AAYOG (Since 2015)* and in Russia there is GOSPLAN. This body carries a group of experts, economists, statisticians, engineers etc. who deal with the different aspects of the economy. They suggest measures for the proper implementation of the plan.

2. **Reliable Statistical data**

A pre-requisite for the sound and successful planning is the availability of necessary statistical information. A survey of the existing and potential resources has to be undertaken about raw-material, capital, human and natural resources of the country. Hence setting up of a Central Statistical Organization was a necessary step towards this.

3. **Specific Objective**

Another imperative condition for the success of economic planning is the specific objective. The prescribed objectives should be definite and laid down in an order of priority, keeping in view the urgency of the problems of the Economy. Moreover, objectives should not be too many in number but should be realistic, mutually compatible, flexible and feasible within means.

4. **Fixation of Targets and Priorities**

It is equally necessary to fix the targets and priorities and further capability of their achievements. In other words, those schemes or projects which are required to be executed first, should be given top priority and less significant projects should have low priority. In the words of Lewis, "Sound governmental planning consists of establishing intelligent priorities for the public investment program and formulating a sensible and consistent set of public policies to encourage growth in the private sector."

5. **Suitable Economic Organization**

For the success of planning, there must be suitable economic organizations which promote but do not hinder the progress of the country. In other words, socialistic economic organization in which means of production are socialized is a basic condition for the realistic planning in a country. But on the contrary, the experience of capitalistic countries shows that private enterprise never promotes planning. In this regard, Charles Bettelheim has rightly observed, “For genuine economic planning, socialism of the means of production is needed.” Similarly, Prof. G. Myrdal suggested, “The underdeveloped countries, if they are to catch up with the industrially advanced countries of the West, must adopt the Soviet Pattern of planning as the fundamental system for their economic development.”

6. Strong and Stable Government

The success of economic planning also depends on the strong and stable government with a high degree of authority. Planning process is in danger in many under developed countries due to frequent changes in their governments. In this matter, India is fortunate enough as it enjoyed considerable political stability during the period of its planning. In fact, authoritarian type of government is more suitable for the success of planning. It has been noticed that planning in a democratic set up is a difficult job.

7. Fair and Efficient Administration

The administrative machinery with a high degree of honesty and efficiency plays very pioneer role in the formulation and implementation of plans. Our country has a bitter experience in this regard. Even the best plans fail due to corrupt, inefficient, inactive and lethargic administration. In most of the poor and backward countries, there is a great paucity of trained and competent administration and technical personnel which is chief constraint in the development of the country. Prof. W.A. Lewis considers a strong, competent and fair administration as the first condition for the success of the plan.

8. Mobilization of Resources

The success of planning is based on the proper mobilization of financial resources of the country. In an underdeveloped country, resources are inadequate and irregular, ineffectively developed and mobilized to the required extent. Thus, resources should be mobilized through monetary, fiscal and other measures for the development of backward economies. Under these circumstances the plan should frame such policies for mobilizing resources which may fulfill the financial requirements without inflationary and balance of payment pressures.

9. Proper Balancing in the Plan

The success of plan largely depends on the maintenance of proper balancing in the economy, so that lop sided development may be checked beforehand. It needs proper balance between production of producer-goods and consumer-goods; the development of agricultural and industrial sectors; the private and public sector; labour- intensive techniques and capital-intensive techniques and internal and external trade. Furthermore, it also requires balance between saving and investment; supply and demand; as well as physical and financial balance of the economy. The lack of proper balance in any sector leads to disequilibrium, which thereby creates so many other hardships in the economy.

10. Proper Development Policy

For the success of economic planning, the state must have proper development policy to avoid any pitfall in the process of development. Prof. Lewis has laid certain conditions for the development policy as :

(a) investigation of development potential of national resources, scientific research and market research

(b) provision of specialized training facilities ;

(c) provision of sufficient infra-structure ;

(d) improved legal framework of economic activity ;

(e) better commodity and security markets;

(f) better credit insurance and banking facilities ;

(g) better utilization of resources ;

(h) avoidance of misuse of resources ;

(i) promotion of saving, both at private and public level ; and

(j) assisting potential entrepreneurs at domestic and foreign level.

11. Flexibility in Planning

Economic planning can be realistic only if it has the quality of flexibility and adaptability. In other words, a plan should not be rigid, but flexible as far as possible. It should be dynamic in nature and adapt itself to continue even in the changed circumstances of the economy.

12. Economy in Administration

For the success of planning, every effort should be made to have economy in administrative machinery of the government. According to S. Narayan. “The people must have confidence that every pie that they pay to the government through taxation is properly utilized for their welfare and development and not dissipated away.”

13. A Theory of Consumption

In underdeveloped countries, it is pre-requisite that there should be theory of consumption. They must not follow the consumption pattern of advanced countries. But it must be democratic and prime attention must be accorded to goods that are within the range of the common masses. Underdeveloped countries should not produce luxuries of life. Thus, austerity must be the hall-mark of the consumption theory.

14. Public Cooperation

Public cooperation is considered to be another important tool for the success of economic planning in a democratic country. Planning needs the unstinted cooperation of the people. Moreover, planning is above party politics. According to Prof. Lewis, “Popular enthusiasm is both the lubricating oil of planning and petrol of economic development- a dynamic force that makes all things possible. Economic planning, therefore, can get success only if it attains the whole hearted cooperation from all political parties as well as every section of the society.

15. International Relations

For the success of economic planning, a country must have good and cordial international relations. As far as possible, country should not associate with any power bloc at all and international relations should be maintained only on non-political grounds. Underdeveloped countries are always in need of foreign capital, technical know-how and other assistance. They can only draw their favour if they maintain relations in good terms. Therefore, an underdeveloped country which is committed to economic planning, must maintain harmonious and friendly relations with others countries of the world.

From various conditions laid down above, one can conclude that any country can make economic planning successful and effective only if these conditions are fully maintained in a true sense.

Check your Progress I.

Note: Write your answer in the space given below:-

Q.1. What are the important pre-requisites for successful planning?

Ans.____

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Q.2. Do you agree that Central Planning Authority is the first and foremost condition for successful planning?

Ans.____

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CENTRALISED AND DECENTRALISED PLANNING

17.4 Centralised planning

The process of framing, adopting, executing supervising and controlling the plan is done by central planning authority. Planning authority determines targets and priorities. It is the duty of the planning authority to bring harmony in the planning process. This type of planning comes from the top to the bottom. This plan determines the equality and cohesion. The central planning authority determines the basic policies in view of the regional and local needs. All investment decisions are taken in accordance with goods and targets fixed by the central planning authority. All economic decisions like what to produce, how to produce, where to produce and to whom it is to be allocated are exclusively decided by the central authority. All aspects of the economy are controlled by the central authority. Again the prices and wages are also fixed by the planning authority.

The central planning authority may ask the regional bodies to implement their part of the national plan; but all the implementation will be done under the direct supervision of the central planning authority. Thus, in case of centralized planning which is also known as 'planning from above', all the powers of taking vital decisions regarding formulation, adoption and supervision over implementation are entrusted by the central planning authority.

Merits: Since single and all powerful planning authority enjoys all powers in respect of formulation and implementation of a plan, this type of planning possesses certain advantages, such as, expeditious decision making, logical consistency, effective and efficient execution of the plan, all leading to substantial results as regards achievements of predetermined targets and objectives.

Demerits: Centralized Planning also suffers from many defects such as lack of flexibility, non involvement of people in plan formulation, lack of co-operation of the people, vastness of the task of evolution and implementation involved, inefficiency and therefore failed to attain targets within specified time period.

Oscar Lange criticized centralized planning as it is not democratic in nature and character. The complete process of planning is regulated and controlled by central planning authority. This planning is inflexible due to which it has less adaptability. There is no economic freedom at all. Further, the disequilibrium arising on account of centralized planning cannot be easily corrected.

17.5 Decentralized Planning:

Under this planning, responsibility lies with local and regional officials who take economic decisions about the plan. In other words, this planning starts from the grass root. In other words, this type of planning is from bottom to top. Under this, plan is framed by the central planning authority by consulting different administrative units of the country. The plan incorporates plans under central, state and local schemes. Also plans are prepared for different industries too. But individual firms are free to take their own decisions about investment and output. Prices are determined by market mechanism even though there are government controls. There is complete economic freedom in consumption, production and exchange.

There are several regional and even lower level planning bodies. These bodies enjoy the power of formulating plans for their own regions taking into consideration local needs, local background, local priorities and so on. But these regional planning agencies or boards are required to formulate their regional plans within the broad framework of the national plan, previously discussed and agreed upon by all parties concerned. This plan has been adopted in England and France.

Merits: In the case of decentralized planning, the advantages are that there is no concentration of power in the hands of small body of persons. Since people are involved and consideration is given to different regional and local needs and resources, this planning becomes more representative of people's needs, aspirations and priorities. Since people feel involved in planning directly or through their elected representatives, decentralized planning is more likely to enlist voluntary co- operation of people.

Demerits: Under this planning, each region may make excessive demand without reference to nation's resource position. This would make pruning of regional plans necessary. Political pressure may exert undue influence, with the consequence that some regional plans may suffer unjustifiable cuts and those with political pulls may have bigger regional plans not justified on logical grounds. This means co-ordination of different regional plans poses a serious problem so that the final shape of the plan may be a sort of compromise.

Check your progress II.

Note: Write your answer in the space given below:-

Q. 1. Briefly explain Centralized Planning.

Ans.____

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Q. 2. What is Decentralized Planning?

Ans.____

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17.6 Choice between Centralized and Decentralized Planning

Decentralized planning is superior to centralized planning. It provides economic freedom and flexibility in the economy. Dependence on market mechanism results into shortages or surpluses in the production of goods and services. The adjustment can be made only through government. If there are shortages of goods, it will lead to inflationary pressures. These inflationary pressures can be controlled through price controls and rationing. But these create more problems than what they solve. Also it is not possible to coordinate the decision of the planned and unplanned activities. This may lead to disequilibrium in the demand for and supply of goods and services. Again decentralized planning provides economic freedom and incentives to the market economy, while centralized planning provides cohesiveness to the economy.

17.7 Micro Level Planning or Decentralized Planning in India:

Decentralized planning or micro level planning is a kind of percolation of planning activities. It is process from the centre to the sub state levels, i.e. district, sub-division, block and village level. Since the inception of First Plan, the importance of decentralized planning was emphasized in order to achieve active people's participation in the planning process. The Government appointed the Balwant Raj Mehta team in 1957. It recommended constitution of elected statutory local bodies with its required resources, power and authority along with a decentralized administrative system operating under its control. Accordingly, the Panchayati Raj System was introduced in the country.

Since then, the process of decentralization in the planning and developmental activities has been continuing. In 1969, the Planning Commission issued some guidelines on the introduction of district planning. Again, in 1977, M.L. Dantwala working group recommended specific guidelines for the introduction of block-level planning. After that, Ashok Mehta Committee also submitted its report on Panchayati Raj in 1978. Moreover, the Economic Advisory Council to the Prime Minister finally presented its report on Decentralization of Development Planning and its implementation in the states in 1983. Finally, in 1984, the Group on District Planning submitted its report, and this was considered as the basis of proposals on decentralized planning or planning at micro level under the Seventh Plan.

Accordingly, the Planning Commission of India introduced the decentralization planning in the country for the first time during the Seventh Plan. From the very beginning, India has adopted the system of centralized planning with little variation. But with the passage of time, there has been radical departure in the planning process in India from a centralized to a decentralized one where the decision making in the planning process has been reversed from a 'top to bottom' type to a 'bottom-to-top' type.

Thus, the decentralized planning or the micro level planning is a kind of planning at the grass-root level or planning from below. Planning process in a country is having various tiers, viz., centre, state district, sub-division, block and village. Under this type of planning, emphasis has been given to the introduction of district planning, sub divisional planning and block-level planning so that this type of planning may work at village level.

In India, Governmental activities are being performed right from the central level to states and then to local, i.e. to the districts level (Zilla Parishads) taluk level (Panchayat Samities) and also to the village level (Gram Panchayats). But it was felt in the meanwhile that this type of centralized planning process is not at all conductive to optimum utilization of plan resources.

Thus in order to get a better response, the Planning Commission of India introduced the decentralized planning since the Seventh Plan. Although in most of the states of India, the decentralized planning was extended to district level, yet in some small states like Assam, West Bengal etc., the same plan was decentralized up to sub-division level. Accordingly, in order to conduct the planning activities at the sub-divisional level, the sub-division Planning and Development Council was formed at every sub-division in some of the states with the public representative from the different levels. This council is preparing various developmental plans for agriculture, irrigation, elementary education, road building, forestation fishery, industrialization, community development etc. of different sub-divisions of various states. This council is entrusted to submit the required estimates of developmental works of different departments and then prepare and implement sub-divisional plan as per the approved outlay. Decentralized planning or micro level planning is very much important in India, where majority of the population lives in rural areas. This type of planning raises the involvement of the people in implementing the plan.

Besides, decentralized planning is being prepared keeping in view local problems and on the basis of local resources potential. Thus under the present economic scenario, the decentralized planning is considered as the core strategy in respect of planning for economic development.

17.8 Objectives of Decentralized Planning

Decentralized planning or planning at micro level is introduced with certain definite objectives in India.

The following are the important objectives of decentralized planning:

1. Effective implementation of poverty eradication programs;
2. Ensuring balanced regional development for meeting minimum needs of the people;
3. To ensure active public participation in the development process of different sectors and
4. To attain balanced development throughout the country with active participation of the people.

17.9 Importance or Factors Responsible for Adoption of Decentralized Planning in India:

The importance or factors responsible for adoption of decentralized planning in India are stated below:

1. Planning becomes realistic and flexible: Decentralized planning or micro level planning is considered as more realistic, as it maintains a close coordination between locally available resources, local skills, local manpower and local requirements. It is considered as a flexible one as it is easily adjustable and adaptable under the changing local conditions and requirements. Moreover, it is practical one as it can fulfill the normal requirements of the rural population.

2. Better linkages between villages and small towns: Considering the huge size and proportion of rural population in India, it is observed that proper linkages must be established between far away small villages with adjacent small towns by developing appropriate infrastructural facilities like roads, improved transport facilities, marketing and storage facilities, health and sanitation facilities viz., panchayat house, village roads, schools, tanks etc. which can supplement rural income. It also helps to raise the standard of living of the rural population and other welfare activities.

3. Promote people's participation: Decentralized planning can promote active participation of local people in implementing various local programs. Thus it can involve local communities in such development activities.

4. Development of Agriculture: Decentralized planning or micro level planning is suitable for the development of agricultural and allied activities, such as animal husbandry, horticulture, fisheries, forestry along with development of village and cottage industries.

5. Minimizing Wastage of resources: Wastage of resources can be reduced to a minimum under micro level planning. It is because, people participating in these developmental activities keep close watch over the utilization of fund as well as on the implementation of plan projects.

6. Trickle down Effects: Decentralized planning can show more trickle down effects in respect of poverty alleviation programs and employment generation in rural areas. Various projects are selected for generating huge productive employment opportunities in the rural areas. Moreover, this can build up various types of community assets.

7. Social Services: Decentralized planning is helpful in raising the level of social services by launching various programs such as, health nutrition, drinking water, education etc. in a more effective and quicker way.

8. Use of Non-conventional energy sources: Decentralized planning is helpful in utilizing the various non-conventional energy sources such as solar power, wind, animal and plant wastes etc. in rural areas. Such utilization of non-conventional energy sources requires various agencies, which can work in close association in villages and small towns and can also provide necessary technical and financial support.

9. Simple Planning process: Decentralized planning process is more simple and transparent. It has a close link with democracy, co-operation and development. It has a vast scope for the active involvement of political and social forces at the suitable level.

17.10 Measures for improving the working of Decentralized Planning in India:

In India, economists, social scientists and political thinkers consider the decentralized planning as the sole solution of serious economic problems like poor growth rate, poverty, inequality, unemployment, imbalanced growth, regional inequalities etc. During centralized planning period, the country has failed to tackle all these economic problems in a suitable manner. Thus, in order to tackle these problems effectively, the planning process in India has adopted decentralized planning at the gross root or local level. Although the Seventh Plan has introduced the decentralized planning process in a serious manner, in true sense, the Eighth Plan (1992-97) has given special emphasis on the decentralized planning process for local area planning.

Some of the important measures are given below:

(i) Panchayati Raj Institutions of the country should be strengthened for the effective implementation of decentralized planning.

(ii) Proper organizations of marginal and small farmers, landless agricultural labour, artisans, scheduled castes and scheduled tribes and other back-ward classes should be made for their proper representation in local bodies.

(iii) For wiping out regional disparities regarding economic development, decentralized planning should be adopted simultaneously among all the states of the country. The country should adopt a uniform policy throughout the country to yield better results.

(iv) Land reforms and other institutional reforms must be introduced for effective implementation of decentralized planning.

(v) In order to have successful implementation of decentralized planning at the district level, district planning bodies should be formed by taking various experts from different disciplines.

(vi) State governments should make necessary arrangements for providing funds in adequate quantity for Panchayati Raj Institutions along with mobilization of local private capital.

(vii) In order to make effective and successful implementation of decentralized planning, modalities of its implementation have to be sorted out. Role of such agencies need to be clearly defined and demarcated.

17.11 Let us sum up

From the above cited measures, we can say that decentralized planning or planning at micro level is the need of the hour. Decentralized Planning had yielded attractive results in our country.

***NOTE: Replacement of Planning Commission by Nitiayog**

65 year old Planning Commission was dissolved and replaced by NITI (National Institution for Transforming India) Ayog on January 1, 2015. In fact, three days after taking over as Prime Minister, PM Narender Modi received an evaluation report which suggested that Planning Commission be replaced by 'Control Commission'. Later, from 15-17 August 2014, officials of Planning Commission were discussing about a body which would be a diluted version of National Development and Reform Commission (NDRC) of China. Finally, NITI Ayog was established on January 1, 2015. Prime Minister is the ex-officio chairperson of NITI Ayog. The first vice-chairperson was Arvind Panagariya, a noted Economist. The new body's establishment is a reflection of the changed time. Policy makers have now realized that Planning Commission was not serving the purpose required by the economy to move forward. The NITI Ayog, which would act as a government think tank is more relevant. It has its own objectives of a shared vision, resolution of different disputes, focus on technology upgradation etc.

17.12 Lesson End Exercise

A. Long answer type questions:

1. Define economic planning. Give pre-requisites of successful planning.
2. What do you know about Centralized Planning? Mention its main

objectives.

3. Why is economic planning needed in UDCs? Point out its problems, if any.
4. Give the classification of economic planning in the form of Centralized and Decentralized planning.
5. Define micro level planning. State its significance and objectives.

B. Short answer type questions:

1. What is Centralized Planning?
2. Give the merits of Centralized Planning.
3. Why is planning needed in UDCs?
4. Distinguish between Centralized and Decentralized planning.
5. Compare and contrast between Centralized and Decentralized planning.
6. Briefly explain :
   Centralized and decentralized planning.
7. What do you mean by micro-level planning?
8. State briefly the objectives of micro-level planning or decentralized planning.
9. Evaluate the significance of micro-level planning.
10. Give any four measures for the improvement of micro-level planning.

17.13 Suggested Readings:

1. Aggarwal R.C. Economics of Development and Planning, Lakshmi Naraian Aggarwal, Agra.
2. Bhagwati, J and Desai, P: India-Planning for Industrialisation, OUP, London.
3. Hayami, Y: Development Economics, Oxford University Press, New York.
4. Haggins, B: Economic Development, Norton, New York.
5. Jhingan, M.L: The Economics of Development and Planning, Vrinda Publications, Delhi.

CAPITAL - OUTPUT RATIO - MEANING AND IMPORTANCE IN PLANNING

B.A. Sem-VI **Unit - IV**
EC-601 **Lesson No. 18**

STRUCTURE

18.1 Introduction

18.2 Objectives

18.3 Meaning of Capital-Output Ratio

18.4 Factors affecting Capital-Output Ratio

18.5 Explanation of Capital-Output Ratio

18.6 Uses of Capital- Output Ratio

18.7 Arguments in favour of high Capital-Output Ratio

18.8 Arguments in favour of low Capital- Output Ratio

18.9 Limitations of Capital-Output Ratio

18.10 Let us sum up

18.11 Lesson End Questions

18.12 Suggested Readings

18.1 INTRODUCTION:

There is a close relationship between capital investment and income growth in the economy. Capital is not only the requirement, but an important determinant of the growth rate in the country. It is generally assumed that growth of real national income is a function of capital formation. The relationship between the increase in the quantity of capital investment and consequent increase in output is called capital-output ratio. It can be easily applied to the problem of growth in underdeveloped countries. The capital- output ratio can be employed for the determination of current rate of national income growth, if the savings ratio for the economy is known.

18.2 Objectives:

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

a. Explain the meaning of Capital- Output Ratio;

b. Discuss the factors affecting Capital- Output Ratio;

c. Describe the uses of Capital-Output Ratio;

d. Discuss the Arguments in favour of high Capital-Output Ratio and

e. State Arguments in favour of low Capital- Output Ratio.

18.3 Meaning of Capital- Output Ratio:

The concept of capital- output ratio expresses the relationship between the value of capital invested and the value of output. In other words, Capital- output ratio is the ratio of increase in output or real income to an increase in capital.

"The capital- output ratio may be defined as the relationship of investment in a given economy or industry for a given time period to the output of that economy or industry for a similar time period." **-G. Rosen**

There can be different capital- output ratios for different industries and also for different sectors of an economy. If in any economy, the capital- output ratio is 4:1, it means that 4 units of capital are required to produce one unit of output. So the capital coefficient will be 4.

18.4 Explanation of Capital-Output Ratio:

The capital- output ratio is of two types–Average Capital Output Ratio

(ACOR) and Marginal or Incremental Capital Output Ratio (ICOR). The average capital output ratio indicates the relationship between the existing stock of capital and the resultant flow of current output. The incremental capital output ratio expresses the relationship between the amount of increase in output y from a given increase in stock of capital 'DK'. This can be indicated as DK/DY.

If we consider the whole economy and we have a given plan period, so that plan covers 'n' years, then,

$$\text{ICOR} = \frac{\sum_{t=1}^{n} I_{(t)}}{Y_{(t+n)} - Y_t}$$

Where t+n is the terminal year of the plan. This concept is mostly used in LDCs.

In other words, "the average capital output ratio refers to everything that has been invested in the past to the whole income. The marginal ratio refers to all that has been added in recent period to the capital or income." The former is static concept, while the latter is dynamic.

The ACOR and ICOR are explained in the Fig.18.1.

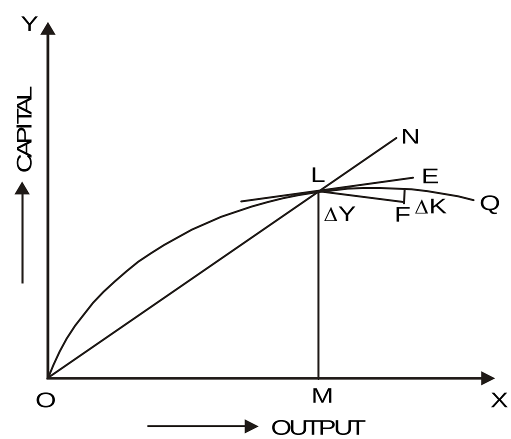

Fig. 18.1

The output is taken along X-axis and capital on Y-axis. The average capital output ratio is measured by the slope of a line from the origin to the function relating capital to total output. In the Fig. 18.1, OLQ is such a function and ON is the ray that passes through the point L so that ACOR $= \frac{LM}{OM}$ and

ICOR is measured by the tangent drawn to the function at point L.

$$ICOR = \frac{EF}{LF}(= \Delta K / \Delta Y)$$

The concept of capital- output ratio is applicable not only to an economy, but also to its different sectors. However, the capital- output ratio in different sectors is different. If the sector is using capital intensive technique, the capital goods industries have very high sectoral capital- output ratio; while in the sector using labour intensive technique, the capital- output ratio will be low.

Transport, communications and capital intensive industries will have high capital- output ratios; while the capital- output ratio in the agricultural sector, manufactured consumers goods industries and service industries is generally low.

Check your Progress.

Note: Write your answer in the space given below:-

Q. 1. What is Capital-Output Ratio?

Ans.____

____

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Q. 2. Write a definition of Capital-Output Ratio given by any famous Economist.

Ans.____

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18.5 Factors Affecting Capital- Output Ratio (COR):

Capital-output ratio differs from country to country. The size of capital-output ratio in an economy basically depends upon the size of output that can be obtained by a particular capital input. The larger the size of output that can be obtained by the given input, the lower will be capital-output ratio.

Various other factors affecting capital- output ratio are discussed below:

1. **Amount of Capital Employed:** The capital- output ratio depends upon the proportion of national income invested annually in a country.

2. **Supply of Natural Resources:** The capital- output ratio depends upon the availability of natural resources. A country having abundant natural resources will have low capital-output ratio due to the possibility of substituting natural resources for capital. On the other hand, the scarcity of capital resources raises the capital output ratio. For example, in Norway, the capital-output ratio is high due to scarcity of natural resources.

3. **Degree of Technological Development:** Technological advance also alters the capital- output ratio. If the technological progress is accelerated by major innovations, which is capital intensive, the capital ratio is bound to be higher, while if the technological innovations are labour intensive, the capital output ratio is low.

4. **Urbanization:** The migration of rural population to urban areas necessitates larger investment in house building industry, health and sanitation activities and the consequence is a high capital- output ratio.

5. **Industrialization:** It also tends to increase the capital- output ratio, while the agricultural economy has low capital- output ratio.

6. **Composition of Investment:** Capital output ratio also depends upon the rate of investment. It is directly proportional to the rate of investment. For example, if in a country heavy investments are made in public works like railways, roads, schools, colleges and hospitals, the capital- output ratio will be high. If the investment is made in agriculture and small scale cottage industries, then COR is low.

7. Spread of Education: The general and technical efficiency of the working people can be increased by the spread of education and it leads to better use of capital equipments, due to which capital- output ratio falls.

8. Growth of Population: Hegen pointed out that in industrial countries with rapidly growing population, the capital- output ratio tends to be low. In case of UDCs, rapid growth of population may adversely affect the capital- output ratio. If the growing population is absorbed in agriculture, it will not raise the capital- output ratio because agriculture is less capital intensive. But on the other hand, if the increased population is concentrated in towns, it will definitely raise capital- output ratio because more capital will have to be invested to meet the requirements of more houses, power, water, schools etc.

9. Pattern of Demand: The pattern of demand also alters the capital- output ratio. Given the prices and incomes in a perfectly competitive economy, changes in tastes and preferences of the consumers may change the pattern of demand through time, which in turn has an impact on the demand for capital and on capital- output ratio. For example, the demand for synthetic materials and products like terylene, nylon etc. has led to the establishment of plants, thereby raising capital- output ratio.

10. Efficiency of Handling Capital Equipments: Capital- output ratio also depends upon the efficiency with which new type of capital equipments are handled. Efficient handling of equipments avoid wastes and so the capital- output ratio is low. The ratio of capital to output directly depends on the extent to which existing capital is utilized. The higher the degree of capital utilization, the lower will be the capital- output ratio; and if the capital equipment is underutilized, then the capital- output ratio will be high. Thus the utilization of capital equipment is proportional to the capital- output ratio.

11. Quality of Organization Skill: A country with a high managerial and organizational skill will have a low capital- output ratio and vice versa and it is for the betterment of the country to use its capital equipment and other productive resources to the fullest extent so that it can have larger output.

12. Change in Factor Prices: A change in factor prices affects the capital-output ratio to the extent that capital can be substituted for other factors of production. Changes in the rate of interest or wages may affect the demand for capital, thereby affecting the capital- output ratio. A rise in the rate of interest will make capital costly and if wages are low, some substitution of capital by labour will take place which will lower capital- output ratio. On the other hand, a rise in wages and a fall in the rate of interest will lead to a substitution of labour by capital which will raise capital-output ratio.

18.6 Uses of Capital-Output (COR):

Capital- output ratio plays a vital role in development planning. It is an important tool in the hands of the planners, through which they can estimate the capital requirements of the economy. The sectoral capital- output ratio can help in deciding up the pattern of investment in an economy that generally suffers from paucity of capital resources and hence it is very necessary that its capital resources are rationally utilized. It helps in arranging the industries in an order of priority. Thus, it can be concluded that over all capital- output ratio can be utilized for estimating capital requirements for the whole economy, while capital- output ratio for individual sectors, industries or processes may be used to estimate capital requirements, sector by sector.

The concept of ICOR can be used to determine the current rate of income growth of a country. It can be obtained by dividing the current investment rate by incremental capital output ratio. Let

Y $\rightarrow$ Net national income

DY $\rightarrow$ Absolute increase in net national income

F $\rightarrow$ Net investment in economy

I/Y $\rightarrow$ Rate of investment

ICOR $\rightarrow$ I/Y Then the rate of national income growth is

$$g = \frac{1}{Y} + \frac{F}{\Delta Y} \text{ or } \frac{I}{Y} \times \frac{\Delta Y}{F}$$

If I/Y = 10% and ICOR = 4 Then g = 2.5%.

Various estimates of capital output ratio in less developed countries have been put forward by various economists. Some estimates are high and some of them are very low. It is a matter of controversy that capital- output ratio in underdeveloped countries should be high or low. Some of the economists are of the opinion that capital- output ratio in underdeveloped countries should be high as compared to the one in the developed countries, while others are of the opinion that it should be low.

Various estimates of capital- output ratio in poor countries have been put forward. A group of experts appointed by the United Nations used a ratio ranging from 2 : 1 to 5 : 1 ; Kurihara has assumed a ratio for majority of underdeveloped countries to the tune of 5 : 1 ; Singer in his model of economic development estimates a ratio 6 : 1 in the non agricultural sectors and 4:1 in the agricultural sector and on an average takes ratio 5 : 1 ; Rosenstein-Rodan assumes that the ratio is at least 3:1 and 4:1[1], while Lewis regards this ratio to lie between 3:1 and 4:1[2]. According to H.K.M. Singh the range of capital output ratio in developed countries is believed to lie between 2.9:1 and 4:1 and in underdeveloped countries this ratio may be supposed to lie between 1.5:1 and 2:1[3]. In India the ICOR on an average works out to 2.4 for the first three plan periods[4].

18.7 Arguments in favour of High Capital-Output Ratio:

The following arguments are generally in favour of High Capital-output ratio:

1. Capital-output ratio in underdeveloped countries is expected to be high due to the wastage of capital resources. Due to the use of primitive methods of production, there is a considerable wastage of capital resources in these countries.

2. In most of the underdeveloped countries, the supply of natural resources is limited and they have to substitute them more and more by capital which raises capital- output ratio.

3. The underdeveloped countries also require several economic and social overheads such as transport, power, housing and education which are bound to be capital intensive.

4. Technological backwardness is another main cause of high capital- output ratio. Capital is less productive due to the backward technology. Level of technique is low and growth of knowledge is slower.

5. The capital- output ratio is bound to be higher in underdeveloped countries where a large quantity of capital is needed to utilize unutilized and underutilized natural resources.

6. As the development proceeds in underdeveloped countries, demand pattern tends to shift towards more capital intensive industries. The use of capital intensive methods of production raises the capital- output ratio. Certain types of economic overheads may not be immediately fully utilized due to the stagnant character of the economy. The initial phase of underutilization pushes up the capital- output ratio.

7. In underdeveloped countries, the interest rate is very high and as a result, capital- output ratio is also high.

8. In underdeveloped countries, the new plants and enterprises are located away from the sources of raw-materials, capital investment may be larger which in turn increases capital- output ratio.

9. The main cause for high capital- output ratio in underdeveloped countries is the fact that these countries are comparatively less efficient in making capital goods which raises the price of capital equipments. The comparative inefficiency in making capital goods raises the cost of capital and is responsible for keeping capital output ratio high.

18.8 Arguments in favour of Low Capital- Output Ratio:

The case for low capital output ratio for underdeveloped countries is argued by some economists on the basis of following assumptions:

1. The investment of capital in underdeveloped countries is found to increase the output cosiderably due to the existence of large scale of unutilized and

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1. Meir & Baldwin, 'Economic Development.'
2. W.A. Lewis, Ibid.
3. H.K.M. Singh, 'Demand Theory and Economic Calculation in a mixed Economy.
4. Fourth Five Year Plan-1966-74, Government of India, Planning Commission.

and underutilized natural resource. The fuller utilization and underutilization of resources results in lower capital- output ratio.

2. Due to the scarcity of capital, an underdeveloped country is bound to use capital saving inventions and they adopt generally labour intensive techniques which require small amount of capital.

3. The capital- output ratio is declining due to the increasing population.

4. The fuller utilization of the existing capital makes the capital- output ratio low.

5. In these countries, a small investment of capital will be followed by substantial gain in labour productivity which will tend to keep the capital- output ratio low.

6. If in the early stages of development, it is planned to concentrate on agricultural development and other labour intensive industries, the capital- output ratio will be low.

7. Since capital is not fully utilized in underdeveloped countries, the rate of depreciation is lower which means longer life of plant and equipment and low capital- output ratio.

8. In planned economies, output per unit of capital is higher than that in unplanned economies which will lead to low capital-output ratio.

18.9 Limitations of Capital-Output Ratio:

The main limitations of this concept are as under:

1. Lack of Reliable Data: In the words of Planning Commission, "Precise calculations of the capital- output ratio can be made only in the light of concrete programs of development and technical data regarding costs and output." But the accurate data is not available in underdeveloped countries.

2. Capital- Output Ratio does not remain constant: The capital-output ratio does not remain constant over a long period of time and hence it cannot be used effectively for forward planning. For example, in India, the first plan assumed marginal capital- output ratio as 3 :1 in the beginning but by the end of the plan it was 1.8 : 1 and as a result there is a wide disparity between the projected ratio and actual ratio.

3. Not a reliable tool of analysis: Capital- output ratio is dependent upon a number of assumptions. So it cannot be a reliable tool in the hands of planners. The major factor that will change the value of capital-output ratio is the extent to which other agents of production are utilized in the productive process but which are not counted as part of increment to capital stock. Thus a change in the efficiency of any of the complementary factor of production will automatically imply a corresponding change in capital- output ratio.

4. Not applicable in depression: During depression, all increases in capital are followed by a fall in output and thus this concept of capital- output ratio becomes useless in such a situation.

5. Ignores Human Capital: The capital- output ratio also fails to tell us anything about investment in human capital in the form of social overheads needed to achieve a certain rate of economic growth.

6. Technological changes: The concept of capital- output ratio is based on the assumption that there is no change in the general art of production, whereas it is generally seen that a technological innovation may increase output with same amount of capital or the same output may be had with less capital.

7. Price Fluctuations: Price fluctuations introduce another complication in ascertaining the capital- output ratio. The fluctuating prices of capital as well as output impose a serious limitation on the usefulness of capital-output ratio.

8. Presence of under utilization of capacity: The use of capital- output ratio as a tool for economic planning is circumscribed by the presence of under employment or excess capacity that is generally found in underdeveloped countries. Hence it is difficult to calculate capital- output ratio accurately.

9. Over- emphasis on Capital: The concept of capital- output ratio lays more emphasis on the rate of capital in economic development. The capital- output ratio approach introduces the bias that capital is the only or the main source of development in underdeveloped countries, but this is not true as output is influenced by so many other factors like the quality of manpower, level of technique etc. which cannot be ignored.

10. Absurd assumptions: The concept of capital- output ratio is based on the implicit assumption that when capital increases, the supply of the other factors also increases. But in less developed countries, the other factors like technical personnel, entrepreneurship, power, transport etc. are scarce. Thus this context cannot be applied to the problems of underdeveloped countries.

18.10 Let us sum up:

Despite various limitations, the concept of capital-output ratio is widely used as an important device in planning. Though it is weak, yet it appears to produce more meaningful results in the long run than in short period. It is analytically useful while considering the importance of capital in economic development.

Prof. Higgins lays down the following guidelines for the successful use of the concept of capital- output ratio.

1. The measurement of ICOR should be attempted only if data is available for long period.
2. If the period covered by the data is less than three or four years, every effort must be made to make sure that the period is normal.
3. The undertaking of development plan itself changes the capital- output ratio and straight forward projections of past ICOR in the same country is not satisfactory.
4. The purpose of calculating ICOR is only to determine total capital requirements and it should not be used for establishing priorities among investment projects or sectors.

18.11 Lesson End Question

A. Long answer type question:

1. Discuss the main factors that affect the Capital-Output Ratio.
2. What is Capital-Output Ratio? Give its significance at various stages of development as a tool of plan formulation.
3. Give argument in favour of high Capital-Output Ratio.
4. To what extent is low Capital-Output Ratio favoured for developing economies?
5. Describe briefly the limitations of Capital-Output Ratio.
6. Make a case for Capital-Output Ratio in underdeveloped countries with special reference to India.
7. 'The Capital-Output Ratio varies from industry to industry and from country to country and also varies over a period of time." Why?

B. Short answer type questions:

1. What is Capital-Output Ratio?
2. Write any four factors affecting Capital-Output Ratio.
3. Discuss Uses of Capital-Output Ratio.
4. Discuss any two arguments in favour of Capital-Output Ratio.
5. Write down any four limitations of Capital-Output Ratio

18.12 Suggested Readings:

1. Aggarwal R.C. Economics of Development and Planning, Lakshmi Narain Aggarwal, Agra.
2. Bhagwati, J and Desai, P: India-Planning for Industrialisation, OUP, London.
3. Hayami, Y: Development Economics, Oxford University Press, New York.
4. Haggins, B: Economic Development, Norton, New York.

5. Jhingan, M.L: The Economics of Development and Planning, Vrinda Publications, Delhi.

6. Kindleberger, C.P: Economic Development, McGraw Hill, New York.

7. Lekhi, R.K: The Economics of Development and Planning, Kalyani Publishers, New Delhi.

8. Lekhi, R.K and Sujata Slathia: Economics of Development and Planning, Kalyani Publishers, Ludhiana.

9. Meier, G.M: Leading Issues in Economic Development, OUP, New Delhi.

10. Thirwal, A.P: Growth and Development, Macmillan, London.

11. Todaro, M.P: Development Planning-Models and methods, OUP, New Delhi.

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MODEL QUESTION PAPER

Semester-VI

DEVELOPMENT ECONOMICS

Time Allowed : 3 Hours ***Maximum Marks : 80***

Note :- Attempt any **four** questions from Section-A. Each question in this section carries **6** marks and should be answered in **250** words. From Section-B, attempt any **four** questions in all selecting one question from each **unit.** Each question in this section carries **14 marks** and should be answered in not more than **600** words.

Section-A

1. Explain role of technology in economic growth of a country.
2. What is sustainable development? Write down its objectives.
3. What is meant by 'Backwash Effects' and 'Spread Effects' in Myrdal's theory circular causation?
4. How far is 'Take off' stage of Rostow's theory applicable to India?
5. Explain how agriculture acts as a source of foreign exchange earnings.
6. Justify with the help of four arguments rationale of industrialisation in India.
7. What is Economic Planning? Give its main features.
8. What is Capital-Output Ratio? Name the main factors that affect the Capital-Output Ratio.

Section-B

Unit-I

1. Explain how Human Development Index (HDI) is constructed. What are the difficulties faced in the measurement of HDI while constructing it. 10,4

Or

Define Economic Growth and Economic Development. Distinguish between Economic Development and Economic Growth. 4,10

Unit-II

2. Discuss the features of Schumpeter's theory of economic development. Is this theory of development applicable to a developing country like India? 10,4

Or

What is disguised unemployment? In this context, explain Nurkse's theory of disguised unemployment. Is this theory applicable to an underdeveloped country? 3,8,3

Unit-III

3. Define the term 'foreign aid'. Bring out the significance of foreign and in a developing country. 4,10

Or

Define Capital Formation. Examine the significance of Capital Formation in the Development of Underdeveloped countries. 4,10

Unit-IV

4. Why has India adopted decentralized planning since seventh five year plan? Suggest measures to improve it. 10,4

Or

Distinguish between Labour Intensive and Capital Intensive Techniques. Which one is more suitable for India and why? 10,4