



TYBA
SEMESTER - VI (CBCS)

GEOGRAPHY PAPER - VII
ECONOMIC GEOGRAPHY

SUBJECT CODE : 86609

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April 2023, Print - I

Published by	: Director Institute of Distance and Open Learning , University of Mumbai, Vidyanagari, Mumbai - 400 098.
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DTP Composed & Printed by	: Mumbai University Press, Vidyanagari, Santracruz (E), Mumbai
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TYBA GEOGRAPHY PAPER – VII

ECONOMIC GEOGRAPHY

Units	Nameofthe Unit/Subunit
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Unit– 2.: Economic Activities	
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DEFINITION: NATURE AND SCOPE OF ECONOMIC GEOGRAPHY

Unit Structure :

- 1.1 Objectives
- 1.2 Introduction
- 1.3 Subject discussion
- 1.4 Definition
- 1.5 Nature and scope of economic geography
- 1.6 Relationship of economic geography with other branches of social science
- 1.7 Concept and operation of economy
- 1.8 Resources: Concept, Classification and Importance in Economy
- 1.9 Summary
- 1.10 Check your Progress/Exercise
- 1.11 Answers to the self learning questions
- 1.12 Technical words and their meaning
- 1.13 Task
- 1.14 References for further study

1.1 OBJECTIVES

By the end of this unit you will be able to:

- Learn the Definition of economic geography.
- Understand Nature and scope of economic geography.
- Discuss Relationship of economic geography with other branches of social science.
- Learn Concept of economic region.
- Understand Importance of economic geography.

1.2 INTRODUCTION

In this chapter we are going to learn the definition of economic geography along with nature and scope of the same. The relationship of economic geography with other branches of social

sciences will also be studied. Concept of economic region and importance of economic geography will be studied in the latter part of this unit.

1.3 SUBJECT-DISCUSSION

From ancient times, Geography has been popularly known for its curious nature. In the later period this subject started to study the actions and reactions between man and the various factors on the surface of the earth. In the recent past, Geography developed with its different branches such as Physical Geography, Human Geography, Political Geography, Economic Geography etc. Economic geography is equally an important branch of geography that deals with the relations of physical and economic conditions to the production and distribution of commodities. Actually it is the study of man and his economic activities under varying sets of conditions. Geographers have different opinions regarding the definition of the subject. Even though their opinions meet at a common point of accord, where it means the study of the spatial distribution of man's economic activities in relation to its environment, be it physical or non-physical. Economic geography has a very broad scope.

1.4 DEFINITION OF ECONOMIC GEOGRAPHY

Economic Geography is the study of man and his economic activities under varying sets of conditions. Geographers are of different opinion as regards the definition of the subject. In fact, different geographers have defined economic geography in a different way but their opinion about the meaning is the same. So we can say, economic geography is the study of the spatial distribution of mans economic activities in relation to its environment be it physical or non-physical. According to **Hartshorn and Alexander** "Economic geography is the study of the spatial variation on the earth surface of activities related to producing, exchanging and consuming goods and services.

1.5 NATURE AND SCOPE

Economic Geography is the study of the location, distribution and spatial organization of economic activities across the world. It is one of the traditional disciplines of geography. In the early

1910's, economic geography was mostly concerned with production, exchange and consumption of goods by people in different areas of the world. Most of the geographers have defined the nature and scope of economic geography in terms of three basic questions.

- a. Where is the economic activity located?
- b. What are the characteristics of the economic activity?
- c. To what other phenomena are the economic activity related? To the above studies two new questions has been added.
- d. Why is the economic activity located where it is?
- e. Would it not have been better located elsewhere, to better satisfy certain economic and social criteria?

Later the content of study shows that economic geography has proved its importance in various periods of its growth. If we go back to 1882, the German scholar **Gotz** has defined economic geography as “A scientific investigation of the nature of world areas in their direct influence of goods.” **George Chisholm**, the father of modern economic geography, thought that the primary use of economic geography is “to form some realistic development of the future course of commercial development as far as that is governed by geographical conditions.” In 1910, **Ellsworth Huntington** considered that all sorts of material, resources, activities that play in the work getting are the subject of economic geography. In simple words we can say economic geography investigates the diversity in basic resources of the different parts of the world. It studies differences in economic development in different regions or countries of the world. It studies about transportation and trade how they developed and how are they affected by physical environment. According to **E.B. Shaw** “Economic geography is concerned with the distribution of mans productive activities over the surface of the earth”. Thus it is clear that economic geography mainly deals with mans productive activities and their relationship with environmental conditions.” Thus the scope of economic geography is very vast. It is vast both in temporal and the spatial terms. Economic geography does not only put emphasis on the current situation but also tries to find out the scope going back into the time. It studies about ancient, medieval, 19th century, 20th century, recent and present studies. Economic geography has enormous spatial scope. It includes spatial locations from the ocean bed to the mountain top. It also includes the economic activities and possibilities in the outer space like the moon, the mars etc. It also includes economic activities which are present in the horizontal direction like the lithosphere, biosphere and hydrosphere. It includes the studies of the continents. Thus we see economic geography has a global scope. Economic geography has an applicability scope. In economic geography there is a scope for studying various theories which are included in the subject. Economic geography has a scope of practical application as well. Economic geography has enormous theoretical scope. It not only involves the explanation of activities already present in the landscape but also involves the selection of future location of a country.

1.6 RELATIONSHIP OF ECONOMIC GEOGRAPHY WITH OTHER BRANCHES OF SOCIAL SCIENCES

Economic geography has a close connection with other branches of social sciences. Infact it has a very close relation with economics. Economic geography studies the problems in the regional distribution of economics laws. It studies about the operations of economic laws. It also examines about various types of resources which are found in different regions. Economic geography also studies the regional structure of the economy as a whole. Thus economic geography and economics are closely related. Economic geography also has close ties with physical geography. Economic geography is interconnected with historical geography, demography as well as economic cartography. It also occupies an important place in military geography. It has been argued that Economic geography and economics meet at several points. This can be well understood with the help of examples. Long distances and difficult topography affect the ability to distribute goods. Similarly factors like climate or economic activity present in the area affect the kind of goods and services people want. The distribution of natural resources also has a huge impact on the economy. Again we see the economic development of a region determine where and how people live. Again many locations discussed in Economic geography or many economic activities about which we study in Economic geography have references in history. Thus we can say Economic geography which is an important branch of geography and which studies about agriculture, industries, trade resources, transport and communication has very close relationship with economics and other branches of geography.

1.7 CONCEPT AND OPRATION OF ECONOMY

What Is an Economy?

An economy is a complex system of interrelated production, consumption, and exchange activities that ultimately determines how resources are allocated among all the participants. The production, consumption, and distribution of goods and services combine to fulfill the needs of those living and operating within the economy.

An economy may represent a nation, a region, a single industry, or even a family.

- An economy is a system of inter-related production and consumption activities that ultimately determine the allocation of resources within a group.
- The production and consumption of goods and services as a whole fulfill the needs of those living and operating within it.
- Market-based economies, also called free market economies, are self-regulated, allowing goods to be produced and distributed in response to demand from consumers.

- Command-based economies are regulated by a government body that determines the goods which are produced, their quantities, and the price paid for them.
- In the modern world, few economies are purely market-based or command-based.

Definition: Nature and Scope of
Economic Geography

1.8 RESOURCES: CONCEPT, CLASSIFICATION AND IMPORTANCE IN ECONOMY

Meaning Concept of Resource:

Etymologically, ‘resource’ refers to two separate words —‘re’ and ‘source’ —that indicate any thing or substance that may occur unhindered many more times. The term ‘Resource’ had no special significance till the early part of the twentieth century.

Only in 1933, when the eminent professor of economics Erich W. Zimmermann promulgated his famous “**Concept of Resource**”, the idea became so popular that numerous articles and papers started pouring in the contemporary Economic Geographical literature. Urgent need was felt to identify the new concept as a separate and important branch of study.

Prof. Zimmermann’s inimitable definition runs: “The word resource does not refer to a thing or a substance but to a function which a thing or a substance may perform or to an operation in which it may take part, namely, the function or operation of attaining a given end such as satisfying a want. In other words, the word resource is an abstraction reflecting human appraisal and relating to a function or operation”. So, resource satisfies individual human wants or attains social objectives. It also refers to the positive interaction between man and nature. Man is, of course, the most important and integral part of resource creation, as he is situated in the top of the hierarchy of resource consumption. Only the satisfaction of human beings converts anything or a substance into resource. A thing or substance is not considered as resource when it fails to give satisfaction to human beings. Proven reserves of petroleum in the midst of inaccessible terrain or in the abyss is not considered resource as they fail to yield any satisfaction to either society or individual.

Geo-thermal energy in this contemporary world is considered to be the most useful resource, but, till recently, this heat-flow was not considered as resource—because man was absolutely ignorant about its uses.

CLASSIFICATION OF RESOURCES:

In general, resources are classified into two groups:

- (a) **Material resources, and**
- (b) **Non-material resources.**

Material resources are tangible substances, e.g., petroleum, iron ore, copper, water etc.

Non-material resources are intangible substances like health condition, culture, ethics, freedom, environmental harmony etc.

Material or tangible resources are direct, i.e., freely bestowed by nature.

Non-material or intangible resources are cultivated by human beings with the help of increasing knowledge.

Material resources may, again, be sub-divided into two groups:

(i) Organic resources like forest, fish, livestock etc.

(ii) Inorganic resources like iron ore, manganese, mica etc.

On the basis of durability, resources may be classified into two groups:

1. Fund or exhaustible resources that is, not everlasting, destroyed for ever after use, e.g., coal, petroleum, uranium etc.

2. Flow or inexhaustible resources — supply of resource remains unchanged even after renewed use, e.g., river water, sea-wave, sunshine, airflow etc.

Ownership is another parameter to classify resource.

On the basis of ownership resource may be divided into following groups:

(a) International or world resource:

Owned by global population, i.e., the total re-sources owned by all individuals and nations put together. The sum total of all material and non-material resources comes under this category.

(b) National resources:

The sum total of resources of the inhabitants of the nation and resources of the nation itself.

(c) Individual resources:

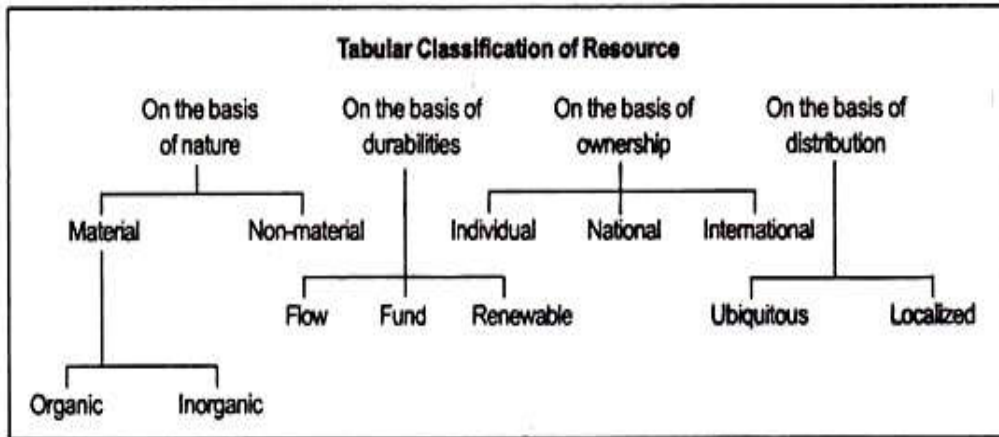
Both tangible resources, i.e., property, money, wealth, and intangible resources, i.e., knowledge, wisdom, health etc. owned by any individual is known as individual resources.

On the basis of the availability of resources, it can be classified into two groups:

(a) Ubiquitous,

(b) Localized.

Ubiquitous types of raw materials are found everywhere, e.g., sunshine, air etc. while localized raw materials are available only in some places, e.g., petroleum, uranium, iron ore etc.



IMPORTANT OF RESOURCES IN ECONOMY:

- (i) They satisfy human wants both individual and social,
- (ii) They are a source or possibility of assistance,
- (iii) They are a means of development and support,
- (iv) They are an expedient,
- (v) They have capacity to take advantage of opportunities, and
- (vi) One relies on them for aid, support and supply.

In fact, “resources are those aspects of man’s environment which facilitates the satisfaction of human wants and the attainment of social objectives” (Encyclo-pedia of Social Sciences). A thing is a resource so far as it affects man as a means of satisfying his wants. In other words, a thing becomes resource by its function in relation to man, therefore, it is said that resources do not exist, they become.

For example, a lump of coal is a resource not because of its shape, color or composition or for its scarcity but because it functions for satisfying some human wants. Thus, resource is something functional but at the same time it must be beneficial to man.

1.9 SUMMARY

Economic geography is one of the subfields of geography and has a variety of definitions. It studies the location, distribution and spatial organization of economic activities across the world along with the problems in the regional distribution of the economy. It also deals with the integrated and comprehensive analysis of the socio-economic and natural conditions. It even deals with the resources of countries and regions. Economic geography also studies the regional structure of the economy as a whole.

Economic geography has a close connection with other branches of social science especially with economics. Economic geography and economics are closely related because Economic geography studies the problems in the regional distribution of economics laws. Economic geography is also very well tied up with physical geography. Geography determines the resource. The resource determines the economic activity. Economics is also closely related to History. The activities of a man in society of any era have a very close relation with the economic matters. So to analyse any period, a historian must possess at least a rudimentary knowledge of the economics.

An economic region is an area in which particular types of commerce take place based on administrative or geographical boundaries. These boundaries come in the form of state lines, international borders or natural geographic landmarks.

1.10 CHECK YOUR PROGRESS/ EXERCISE

1. True False

- a. Economic Geography is the study of man and his economic activities under varying sets of conditions.
- b. Different geographers have defined economic geography in the same way and so their opinion about the meaning is the same.
- c. Economic geography is one of the traditional disciplines of history.
- d. There are 100 international Economic regions.
- e. Economic geography has enormous spatial scope.

2. Fill in the blanks

- a. The wheat belt of Kansas, the citrus growing area of South Texas or the irrigated farmhouses of California are all examples of _____ regions.
- b. The economic region identifies the _____ activities and the _____ available.

- c. The main objective of Economic geography is to examine mans Economic _____ in terms of production and consumptions in the light of his environment.
- d. In 1882, the German scholar Gotz has defined economic geography as “A _____ investigation of the nature of world areas in their direct influence of goods.”
- e. Economic geography investigates the diversity in basic of the different parts of _____ the world.

Definition: Nature and Scope of Economic Geography

3. Multiple choice question

- a. In the early 1910's, economic geography was mostly concerned with
- i. production, exchange and consumption of goods by people in different areas of the world.
 - ii. only consumption of goods by people in different areas of the world.
 - iii. production, and consumption of goods by people in Asia.
- b. Economic geography involves the explanation of activities already present in the landscape along with
- i. involves the selection of the future location of an industry.
 - ii. involves the selection of future location of a country.
 - iii. involves the selection of future location of a linear settlement..
- c. The distribution of natural resources also has a huge impact on the
- i. economy.
 - ii. settlement.
 - iii. population growth.
- d. In North America in the parts of Wyoming and Montana
- i. wheat cultivation is a very important part of the economy.
 - ii. pisciculture is a very important part of the economy
 - iii. cattle ranching is a very important part of the economy
- e. The concept of Economic region is very important tool
- i. for orchard planning.
 - ii. for regional planning.
 - iii. for agricultural planning.

4. Answers the following Questions

1. Define Economic Geography.
2. State the nature and scope of Economic Geography.
3. What are the relationships of Economic Geography with other branches of Social Sciences?
4. Write a short note on “Concept of Economic Region”.
5. What is the importance of Economic Geography?

1.11 ANSWERS TO THE SELF LEARNING QUESTIONS

- 1.a. true
- 1.b. false, different geographers have defined economic geography in a different way but their opinion about the meaning is the same
- 1.c. false, geography
- 1.d. false, 10
1. e. true
- 2.a. Economic
- 2.b. economic, resources
- 2.c. achievement
- 2.d. scientific
- 2.e. resources
3. a i.
- 3.b.ii.
- 3.c.i.
- 3.d.iii.
- 3.e.ii.

1.12 TECHNICAL WORDS

1. **Economic geography**-is the study of the location, distribution and spatial organization of economic activities across the world.
2. **Location**- a particular place or position
3. **Spatial**-relating to space
4. **Economic activities** -Actions that involve the production, distribution and consumption of goods and services at all levels within a society.
5. **Production**-The processes and methods used to transform raw materials, semi-finished goods into goods. Resources are used in this

process to create an output that is suitable for use or has exchange value.

Definition: Nature and Scope of Economic Geography

6. **Exchange**-an act of giving one thing and receiving another in return

7. **Consumption**-the action of using up a resource

1.13 TASK

1. In a world map show the Economic region in North America.

2. In a map of India point out the Economic regions in India.

1.14 REFERENCES FOR FURTHER STUDY

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ECONOMIC ACTIVITIES

Unit Structure:

- 2.1 Objectives
- 2.2 Introduction
- 2.3 Subject discussion
- 2.4 Factors of location of economic activities:
 - a. Physical
 - b. Economic
 - c. Social and
 - d. Cultural
- 2.5 Sectors of economy
 - e. Primary
 - f. Secondary and
 - g. Tertiary
- 2.6 Agriculture and Lumbering: Types and Distribution
- 2.7 Fishing and Animal Husbandry: Types and Distribution
- 2.8 Summary
- 2.9 Check your Progress/Exercise
- 2.10 Answers to the self learning questions
- 2.11 Technical words and their meaning
- 2.12 Task
- 2.13 References for further study

2.1 OBJECTIVES

By the end of this unit you will be able to:

- Learn the Factors of location of economic activities: Physical, Economic, Social and Cultural,
- Understand Sectors of economy: Primary, Secondary and Tertiary.
- Discuss Major primary economic activities: significance and world type.

2.2 INTRODUCTION

In the previous chapter we have learnt the definition, nature and scope of Economic Geography. We have discussed the relationship of Economic Geography with other branches of social sciences, concept of economic region and importance of economic geography. In this chapter we will learn the Factors of location of economic activities that is physical, economic, social and cultural. We will also study the Sectors of economy such as primary, secondary and tertiary. In the latter part of this chapter we will discuss Major primary economic activities their significance and world type.

2.3 SUBJECT-DISCUSSION

Economic activities aim at the production and distribution of goods and services with a view to make them available to consumer at all levels within a society. A nation's economy may be divided into various sectors so that the proportion of the population engaged in the activity sector is well understood. Fisher (1933) developed the classification of economic activities in three main sectors. He classifies the economy into i) primary sector, consisting of agriculture, ii) secondary sector, formed by industry and iii) the tertiary sector, incorporating all other activities that did not fit in the first two sectors. After few years Clark (1940) used the term "services" to apply to all activities of the tertiary sector, treating it as a complement to other sectors. Many physical factors are involved in the location of Economic activities such as, availability of raw materials, power resources, water, labour, markets and the transport facilities. Sometimes many social or cultural factors hold back economic activities. Down the ages social and cultural values have affected economic activities through attitude toward progress. Societies that value achievement, gain a higher level of economic development faster than societies that discourage personal and group achievements. The primary sector of the economy is the sector of an economy making direct use of natural resources that includes agriculture, forestry, fishing and mining. This sector is very important in less-developed countries while it is less important in industrial countries.

2.4 FACTORS OF LOCATION OF ECONOMIC ACTIVITIES: PHYSICAL, ECONOMIC, SOCIAL AND CULTURAL

2.4.1 Economic activities:

Economic activities are the activities that involve the production, distribution and consumption of goods and services at all levels within a society. There are many factors which influence the location of economic activities.

1. Physical factors:

Natural resources are the predominant factor that affects the economic activity of a region. Among which, the land area and the quality of the soil, forest wealth, good river system, minerals and oil-resources, good climatic condition are most important. Hence for economic growth, the existence of natural resources in abundance is essential.

2. Economic factors

Economic factors are outside influence on the marketplace. It may include costs such as wages and availability of capital and market. Banking and insurance are also important. To these we may add interest rates, governmental activity, laws, policies, tax rates, and unemployment. Although all of these factors occur outside the economic activities but they heavily influence them.

3. Social and Cultural factors:

Social factors are things that affect lifestyle, such as religion, family or wealth. These changes over time as communities have become more multicultural, with different races and religions. Among the social and cultural factors tradition of the population are important. Population changes directly affect various economic activities because the structure of the population can change supply and demand of goods and services. For example with the decline of birth rates demand decreases.

2.4.2 Different economic activities influenced by physical, economic, social and cultural factor are as follows:

a) Primary economic activities are mostly dependent on the environmental endowments. Agriculture is subjected to factors like soil fertility, amount of rainfall; temperature etc. All forms of agriculture are controlled largely by temperature. Areas deficient in heat are deficient in agriculture. Topography also affects agriculture. The richness of soil is another important physical factor affecting agriculture. In commercial type of farming transportation facilities play a significant role. Agriculture also requires a supply of large amount of labour. Social factors affect agriculture in a number of ways. The type of farming practiced, be it shifting cultivation, subsistence farming, extensive cultivation or mixed farming, etc., is always related to regional social structure. Cultural factors can also affect the type of crops that are grown. Mining can take place in such an area where mineral deposits are found.

b) For secondary economic activities the main factors are labor availability of energy, land, market, development of transportation etc. Adequate supply of cheap and skilled labour is also necessary for location of an industry. Access to markets is an important factor which the entrepreneur must take into consideration while starting an industry. Industries producing perishable or bulky commodities which cannot be transported over long distance are generally located in close proximity to markets. Transport facilities, also, influence the location of industry. The transportation with its three modes, i.e., water, road, and rail collectively

plays an important role. So the junction points of water- ways, roadways and railways become the centres of industrial activity. Further, the modes and rates of transport and transport policy of Government considerably affect the location of industrial units. Another factor influencing the location of an industry is the availability of cheap power. Water, wind, coal, gas, oil and electricity are the chief sources of power. Finance is required for the setting up of an industry, for its running, and also at the time of its expansion. The availability of capital at cheap rates of interests and in adequate amount is a dominating factor influencing industrial location.

c) For **tertiary economic activities** transportation is very much required. Among the physical factors relief of the land, soil and climate are major determinants. Among the economic factors availability of capital and market, banking and insurance are important. Among the social and cultural factors the role of government, tradition of the population are important. Culture is in fact a very important non – economic factor. Belief and behavior shapes the identity of a society. Cultural personalities affect the location of the economic activities. Religion is another non – economic factor. Class tradition and family are also considered as non – economic factors which determine the location of economic activities. The role of individual and political factor also plays an important role.

2.5 SECTORS OF ECONOMY: PRIMARY, SECONDARY AND TERTIARY:

Economic activities are related to production, distribution, exchange and consumption of goods and services. Economic activities are also known as “Occupation”. Some of the economic geographers have classified economic activities or occupations into 3 broad categories.

- a. Business
- b. Profession
- c. Employment

Generally a country’s economy can be divided into 5 main sectors.

- a. Primary sector
- b. Secondary sector
- c. Tertiary sector
- d. Quaternary sector
- e. Quinary sector

The **primary sector** of the economic extracts products from the earth. Activities associated with primary sector are agriculture, mining, forestry; grazing, hunting, gathering, fishing etc. In a developed country the population of workers in the primary sector is less.

The **secondary sector** of the economic manufactures all finish goods. Activities associated with the secondary sector include automobile production, textile production, chemical industries, ship building industry etc.

The **tertiary sector** of the economic is service industry. This sector provides services to the general population and business activities associated with this sector include retail and whole sale activities, transportation and distribution, entertainments, restaurants, clerical services, media, tourism, insurance, banking, health care etc. in the developed countries a growing population of workers are in this sector.

Quaternary sector of the economic consist intellectual activities. Activities associated with this sector are government, culture, library, scientific research, education etc.

Quinary sector of the economic includes the highest level of decision making in the society. Some consider this sector as the branch of quaternary sector. This sector includes top executives, officials in the government, university, media etc.

2.6 AGRICULTURE AND LUMBERING: TYPES AND DISTRIBUTION

The primary sector of the economic activities is the sector which makes direct use of the natural resource. The main primary activities are.

- a. Agriculture
- b. Forestry
- c. Fishing
- d. Mining

2.6.1 Agriculture

Agriculture is one of the most wide spread activity in the world. However the character of agriculture is not uniform. Scholars have classified different types of agriculture in the world in different categories some of the major type of agriculture are:

a. Shifting Cultivation: In this system the land for cultivation is obtained by clearing he forest with the help of slashing and burning techniques and it is cultivated for a few years till the fertility declines. Then the land is abandoned and a new land is cleared for farming. This is a subsistence type of farming, which is done manually without any use of technology and animal power. This type of agriculture is common in Asia and especially in south -east Asia. This type of agriculture gives more emphasis on grain crops. This type of faming is now on a decline because its spoils nature.

b. Rudimentary sedentary agriculture: This is a substance type of agriculture. Here the land is cultivated continuously year after year.

Fallowing of land is adopted to maintain the soil fertility. This type of agriculture is found in the tropical regions. Besides grain crops rubber is also grown in the system.

c. Intensive subsistence farming: This type of agriculture is found in the area of tropical regions having a high density of population and mostly receiving a high amount of rainfall. Rice is the main crop. This type of agriculture employs a large number of people. Asia and South East Asia has this type of farming. Use of manual power is dominant.

d. Commercial plantations: This type of agriculture is very important in terms of commercial value. The major products of this type of agriculture are tea, coffee, rubber etc. This type of agriculture is developed in Asia, Africa and Latin America. Actually the Europeans started this type of agriculture during the colonial period. This type of agriculture requires a high amount of capital.

e. Mediterranean agriculture: This type of agriculture is found in the Mediterranean region. Wheat, vine yard and citrus fruits are the major crops here. Horticulture is the major activity of this region most of the crops are grown in the winter with the help of winter rains.

f. Commercial grain farming: In this type of agriculture machines are used. This is the major activity in the area of low rainfall and low density of population. Monoculture of wheat is generally practiced in the temperate grass lands of South Africa and Australia this the main type of farming.

g. Life stock and grain farming: This type is commonly known as mixed farming and it is mostly practiced in the humid area of the middle latitude except in Asia. This is typically a Europe type of farming, where crop farming and animal rearing is carried on together. Great Britain and New Zealand are the examples of area where this is practiced.

h. Dairy farming: This type of farming has its origin in Europe. For the development of this farming proximity to the market is very important. Countries like Denmark and Sweden has maximum development of this type of farming.

i. Substance crops and stock farming: In this type crops are grown and life stocks are kept but nothing is sold in the market. This type of farming is common in middle latitudes with lower fertility of soil. In Russia this type of farming is common.

In India we have **8 types of agriculture**. India has a long agricultural history and the second highest crop output in the world. The major types of agriculture are:

a. Shifting agriculture: In India this type of agriculture is practiced mostly by the tribal

- b. Substance farming:** This type of agriculture is seen all over India. Here the farmers grow crops only for their family members.
- c. Intensive agriculture:** In this type, attempt is made to maximize the output of the land by using every possible effort.
- d. Extensive agriculture:** This is a modern type of farming where machinery is used. This type of agriculture generally grows 1 crop in a year.
- e. Commercially agriculture:** The total produce type of agriculture is very high because the produce is exported to other countries for profit eg. Wheat, cotton, sugarcane are grown in Gujarat, Punjab, Haryana and Maharashtra as a commercial crop and they are exported to other countries.
- f. Plantation agriculture:** Rubber, tea, coffee, coconut are grown as a plantation crop in India. Plantation agriculture is mainly carried on Kerala, Assam, Karnataka, and Maharashtra.
- g. Dry land farming:** This is practiced in arid and desert like areas. It is practiced in North West and central India. Crops like jowar, bajra are grown.
- h. Wet land farming:** Many areas in India are affected by heavy monsoon rain and flooding. In this area rice, jute, sugarcane are grown.

2.6.2 Significance and Importance of Agriculture

For decades, agriculture has been associated with the production of essential food crops. Agriculture plays a critical role in the entire life of a given economy. Agriculture is the backbone of the economic system of a given country. The main source livelihood of many people is agriculture. Approximately 20 % of the people directly rely on agriculture as a mean of living.

In addition to providing food and raw material, agriculture also provides employment opportunities to very large percentage of the population. Since agriculture employs many people it contributes to economic development. As a result, the national income level as well as people's standard of living is improved. Infact, agriculture is the main source of national income for most developing countries. A stable agricultural sector ensures a nation of food security.

2.6.3 Forestry/ Lumbering:

Forestry is defined as a practice of creation, conservation and scientific management of forest. The national forest policy of 1952 has divided the forest land on the basis of its functions into 4 main types.

- a. Protection forest
- b. National forest

c. Village forest

d. Tree land

The national commission of agriculture in 1926 has classified the forest into 3 main types.

a. Protection forest

b. Production forest

c. Social forest

There are however 3 different type of forest.

a. Evergreen forest: This forest consists of trees that remain green throughout the year. This type of forest is found in areas receiving more than 200 cm of rainfall and having temperature of 15° to 30°. They occupy 2 % of the earth surface. These forest are very dense, the leaves are very broad. In India ever green forest are found in the western Ghats, in the states of Maharashtra, Kerala and Karnataka. In some patches they are also found In Assam, Arunachal Pradesh, Meghalaya, Nagaland, Tripura, west Bengal, Andaman Nicobar is lands.

b. Deciduous forest: this forest which sheds the leaves in the particular time of the year is known as a deciduous forest.

Deciduous forests are found in different parts of the world including North America, Europe, New Zealand, Australia and Asia. These forests are adapted to with stand environmental changes throughout the year. The trees found in this forest vary from region to region but the common trees of deciduous forest are walnut, chestnuts etc. Deciduous forest generally grown in the area where there is sufficient rainfall to support the tree growth. Generally in the winter season they lose their leave and during the summer season they are green once again.

c. Coniferous forest: These forests are found in the northern hemisphere. Some are found in the southern hemisphere also. The common trees are spruce, hemlock, pines, firs the leaves of these trees are very small and they are needle shaped. The trees are in a shape of a cone. The leaves are waxy and this prevents water loss and the branches of the trees are very soft and flexible. And they point down wards so that the snow can slide.

2.6.4 Significance And Importance of Forestry

Forest provides timber and this is the most economic significance forests. Forest help in climate control, reducing pollution and it's a home of the wild animals. The forest has thick humus layer and has trees which have long roots and they hold the water or preserve the water. This is a very important aspect of forest. As mentioned, forest provides shelter for the wild life. It also helps in tourism at present. Deforestation especially in tropical rain forest has become a major environmental concern. The management of the forest is known as forestry. Forest management has changed considerably over the last few centuries. Now there is sustainable forest management. The

foresters focus on the ecological, social and economic values of the forest in consultation with local communities.

2.7 FISHING AND ANIMAL HUSBANDRY: TYPES AND DISTRIBUTION:

Fishing is the activity of trying to catch fish. There are several techniques to catch fish. Hand gathering, spearing, netting etc. This activity is one of the ancient practices which began during the Paleolithic period. Now modern techniques have started. There is scope of further developments also. There are different types of fishing.

- a. Fisheries are harvested for their values eg. Commercial fishing, recreational fishing etc. There can be salt water fishing or fresh water fishing. There can be Marine fishing or inland water fishing.
- b. Commercial fishing is the activity of catching fish and other sea food for commercial profit. This type of fishing is practiced as an
 - a. industry and far into the ocean under adverse condition. Commercial fisherman generally catches all types of fishes for which there is demand in the world market. Technology is used in commercial fishing. This type of activity has occupational risk.
 - b. Inland fishery is mostly carried on in the rivers and lakes.
 - c. Inland fisheries are an important activity especially in Asia and South East Asia. Here the fishes are caught in less quantity and mostly support individual family or some sold in small unorganized markets.
 - d. Fishing in India is a major industry in the coastal state and it employs about 14 million people. Fish production in India has increased more than 10 folds since independence in 1947. India has 2,512 km of marine cost line. India can be considered as one of the major suppliers of fish in the world. Marine and fresh water catch fishing is rapidly growing in India
1. Aqua culture is the farming of fish and other aquatic activities organism. In India aqua culture is also practiced. Fishing industry is an important part of the economic from the view point of providing employment, nutrition and trade.

- **Significance and Importance of Fishing**

Fishing provides a large quantity of fishes which are used as a source of food. Fishery by-products like fish oil have medicinal value. Fish waste, after extraction of the oil is used as manure. Fishing industry provides a large number of employments. The fishing industry has brought a lot of income to the farmers in particular and the country in general.

- **Mining**

Mining is the extraction of the valuable minerals from the earth. Mining of stones and metals has become a human activity since the pre historic times. Modern mining processing has however changed over time. Mining operations usually create a negative environmental impact.

Mining techniques can be divided into 2 types.

- a. Surface mining
- b. Sub – surface / underground mining

Today surface mining is much more common and produces 85% of the total minerals. Heavy machineries and large drills are often used in mining. Environmental issues like erosion, formation of sink holes, loss of bio – diversity, contamination of soil and ground water are the common environmental effects. Large amount of wastes are produced during mining. In India mining is a major economic activity. It provides raw materials for industrial development.

Primary economic activities are very important in the development of any economy of the world. The primary sector makes direct use of the natural resources, agriculture forestry, fishing and mining. Primary sector is generally a very large sector in the developing countries of the world.

- **Significance and Importance of Mining**

Mining provides important minerals which are the source of raw materials for industries. Mining brings employment, government revenues, and opportunities for economic growth and diversification

2.8 SUMMARY

After going through the chapter we have come to know that the activities which are related to the production, consumption and exchange of things are known as economic activities. Population and economic activities are closely related hence economic activities may vary from person to person. Some may be involved in farming, while others may be involved in industry, business and so on. All these activities are the main source of income of a country. Man is at the helm of all these activities.

The locations of economic activities primarily depend on some physical, economic, social and cultural factors. For example mountains are natural obstruction that blocks access of one area from another. So, this physical feature may act as a hindrance to some economic activities. On the other hand the economic factors are the factors used in producing goods or providing services. Economic factors may be classified as human resources that include labour and management, and nonhuman resources, such as land, capital goods, financial resources, and

technology. Social factors also play a vital role in economic activities which have helped the social and economic development in a society.

There are various sectors of Economic activities. Generally a country's economy can be divided into five main sectors such as, Primary sector, Secondary sector, Tertiary sector, Quaternary sector, and Quinary sector. Primary economic activities are mostly dependent on the environmental endowments and include the production of raw material and basic foods. Both subsistence and commercial agriculture is associated with primary sector activities along with mining, farming and fishing. Cultural factors can also affect the type of crops that are grown as small holdings and inter generation conflicts concerning succession of land hamper agricultural production. Farming may be of different types; highly mechanized Commercial farming, or Subsistence type or Shifting Cultivation. The secondary sector of the economy manufactures

finished goods and the tertiary sector provides services. Quaternary sector of the economic activities consist intellectual activities where as Quinary sector of the economic activities includes the highest level of decision making in the society.

Forestry is the science, art and practice of understanding, managing and using wisely the natural resources associated with, and derived from forest lands. Even though there are a variety of forests, Evergreen forest, deciduous forest and Coniferous forest are best known. The activity of catching fish, either for food or as a sport is known as fishing. This very old activity began during the Paleolithic period. Commercial fishing, recreational fishing, Island fishery are different types of fishing activities found around the world. The process of digging in mines to obtain minerals is known as mining. There are a variety of mining techniques like surface mining and sub – surface or underground mining. Mining plays an important role in a state's economy because industry develops where mining is concentrated.

2.9 CHECK YOUR PROGRESS/ EXERCISE

1. True False

- a. For secondary economic activities the main factors are labor availability of energy, land, market, development of transportation etc.
- b. Adequate supply of cheap and skilled labour is not at all necessary for location of an industry.
- c. Quinary sector of the economic activity consist intellectual activities.
- d. Commercial plantation is very important in terms of commercial value.
- e. Island fishery is mostly carried on in the rivers and lakes.

2. Fill in the blanks

- a. Economic activities are the activities that involve the _____ distribution and _____ of goods and services at all levels within a society.
- b. The Richness of _____ is an important physical factor affecting agriculture.
- c. _____ factors affect the type of farming practiced, be it shifting cultivation, subsistence farming, extensive cultivation or mixed farming.
- d. The junction points of water-ways, _____ and railways become the centres of industrial activity.
- e. Economic activities are also known as “_____”

3. Multiple choice question

- a. In commercial type of farming
 - i. power resources play a significant role.
 - ii. market facilities play a significant role.
 - iii. transportation facilities play a significant role.
- b. Industries producing perishable or bulky commodities which cannot be transported over long distance are generally located
 - i. in close proximity to raw materials.
 - ii. in close proximity to mining areas.
 - iii. in close proximity to markets.
- c. The major products of Commercial plantations are
 - i. tea, coffee, rubber etc.
 - ii. Rice, wheat, pulses etc.
 - iii. Jute, cotton, rice etc.
- d. The forest in which trees remain green throughout the year is known as
 - i. Evergreen forest
 - ii. Deciduous forest
 - iii. Coniferous forest

- e. Aqua culture is the
 - i. farming of fish and other aquatic activities organism.
 - ii. is a process of growing fish and selling it or using its products for domestic or commercial use.
 - iii. the production of silk and the rearing of silkworms for this purpose.

4. Answers the following Questions

1. What are the factors of location of economic activities?
2. What are the different sectors of economy? State the functions of five main economic activities.
3. What do you understand by agriculture?? Give an account of different types of agriculture of the world.
4. What do you understand by Forestry? How did the national commission of agriculture in 1926 classify the forest? What are the important types of forest present in India?
5. State the significance and importance of forestry.
6. Define fishing. What are the different types of fishing? State the significance and importance of fishing.
7. Define Mining. What are the different mining techniques? State the significance and importance of Mining..

2.10 ANSWERS TO THE SELF LEARNING QUESTIONS.

- 1.a. true
- 1.b. false, is necessary for location of an industry.
- 1.c. false, Quaternary sector
- 1.d. true
- 1.e. true
- 2.a. production, consumption
- 2.b. soil
- 2.c. Social
- 2.d. roadways
- 2.e. Occupation
- 3.a.iii.

3.b.iii.

3.c.i.

3.d.i.

3.e.i.

2.11 TECHNICAL WORDS

1. **Aquaculture**- it is a process of growing any aquatic animals and selling them for commercial purposes.
2. **Commercial farming** - Cultivation is highly mechanised.
3. **Shifting Cultivation** - It is the oldest form of agriculture
4. **Primary economic activity**- it is direct use of natural resources that includes agriculture, forestry, fishing and mining.
5. **Secondary economic activity** – it involves the transformation of raw materials into goods
6. **Tertiary economic activity**-it involves the supplying of services to consumers and businesses
7. **Quaternary sector of the economy** – it is a way to describe a knowledge-based part of the economy
8. **Quinary activities** – services focused on creation, re-arrangement and interpretation of new and existing ideas and evaluation of new technologies.
9. **Evergreen forest**-It is a forest that consists mainly of evergreen trees that retain green foliage all year round.
10. **Deciduous forests** -Forests where a majority of the trees lose their foliage at the end of the typical growing season.
11. **Coniferous forest**- forests where vegetation is composed primarily of cone-bearing needle-leaved or scale-leaved evergreen trees

2.12 TASK

1. In a world map point out the areas where Tropical rain forests are found.
2. In a map of India point out the areas where Evergreen forest are found.
3. In a chart compare three main types of economic activities.
4. In a chart compare the characteristics of subsistence and commercial agriculture.

2.13 REFERENCES FOR FURTHER STUDY

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MINERALS AND INDUSTRIES

Unit Structure :

- 3.1 Objectives
- 3.2 Introduction
- 3.3 Subject discussion
- 3.4 Minerals: Importance, Characteristics and Distribution
- 3.5 Factors Affecting Industrial Locations
- 3.6 Weber's Industrial Location Theory
- 3.7 Major Industrial Regions of the World
- 3.8 Summary
- 3.9 Check your Progress/Exercise
- 3.10 Answers to the self-learning questions
- 3.11 Technical Words and Their meaning
- 3.12 Task
- 3.13 References for further study

3.1 OBJECTIVES

By the end of this unit you will be able to:

- Learn the Classification of Industries; Resources Based and Foot Lose Industries
- Understand Weber's Theory of Industrial Location
- Discuss Losch's Theory of Industrial Location

3.2 INTRODUCTION

In the first unit we have studied the definition, nature and scope of Economic Geography along with its relationship other branches of social sciences. In the second unit we learnt the Factors of location of economic activities and the Sectors of economy such as primary, secondary and tertiary. In the present chapter we will study the Classification of Industries; Resources Based and Foot Lose Industries. In the latter part of this unit Weber and Losch's Theory of Industrial Location will be discussed.

3.3 SUBJECT-DISCUSSION

Industries are economic activities that process raw materials and manufacture goods in factories. Industries play a vital role in the development of a country's economy. With the development of industry, modernisation in the agricultural field has been possible. To increase productivity and modernise agriculture we need chemical fertilisers, pesticide and tractors, pump sets respectively. These are all industrial products and without all these, agricultural development and modernisation is not possible. Industries had played a pivotal role in the field of science and technology also. Urbanisation also follows industrialization. In large scale industries where surplus is very high, profits can be re-invested for expansion and development. So, industries help in capital formation and promotion of trade. Although our country India is rich in natural resources but due to lack of capital and technology much of these have not been tapped. Through industrial development resources are properly utilised and transformed into industrial products. This in turn has helped in the economical growth of our nation.

3.4 MINERALS: IMPORTANCE, CHARACTERISTICS AND DISTRIBUTION

What are Minerals ?

The primary material foundation for socioeconomic growth is mineral resources. According to statistics, more than 95% of the energy used by humans, 80% of the raw materials used in industry, and 70% of the raw materials used in agricultural production come from mineral resources. Mineral resources are important to provide a nation with the foundation for industrial development. Fortunately, because of its diverse geological structure, India is endowed with a great range of mineral resources. It has more than a hundred minerals, of which about thirty are important from an economic standpoint. Coal, iron ore, manganese, bauxite, mica, and other materials are a few examples. However, there are insufficient amounts of petroleum and various nonferrous metallic minerals, particularly copper, lead, zinc, tin, and graphite.

Types of Minerals



Types of mineral resources:

Based on their chemical and physical characteristics, minerals can be divided into two primary categories: metallic and non-metallic.

Minerals are basically categorized in two ways:

Metallic Minerals:

Metallic minerals serve as a solid foundation for the growth of the metallurgical industry. This group includes materials that generate metal, such as iron ore and bauxite. Metallic minerals have an outward appearance of metallic lustre or shine.

Ferrous and non-ferrous metallic minerals are subcategories of metallic minerals.

Ferrous: Ferrous minerals refer to all minerals that include iron. Examples of ferrous minerals include chromites, iron ore, and manganese. About three-fourths of the value of all metallic mineral production is made up of ferrous minerals. These minerals offer a solid foundation for the growth of the metallurgical industries, especially those producing iron, steel, and alloys. In terms of ferrous mineral reserves and output, India is in a good position.

Non-ferrous: Iron-free minerals are referred to as non-ferrous minerals. Non-ferrous minerals include copper, bauxite, and others. Except for bauxite, India has little access to non-ferrous metallic minerals.

Non-Metallic Minerals:

Non-metallic minerals lack extractable metals in their chemical makeup and can either be of organic or inorganic origin. They are further divided into two groups, namely mineral fuel and other non-metallic minerals, based on their place of origin. India is blessed with several non-metallic minerals, but only a small number of them are significant from an economic standpoint. They are gypsum, phosphate, kyanite, sillimanite, dolomite, limestone, and mica. Many different sectors, including those that produce cement, fertilizer, refractories, and electrical items, employ these minerals.

Fuel Minerals: Mineral fuels, such as coal and petroleum, are organic in nature and generated from buried animal and plant life. They go by the name of fossil fuels as well.

Other Nonmetallic Minerals: Other non-metallic minerals, like mica, limestone, and graphite, are inorganic in nature.

Characteristics of Minerals:

A mineral's fundamental qualities include the following:

- The mineral Crystal structure is clearly defined.
- They have a definite chemical composition.
- They are naturally occurring.
- They are formed by inorganic methods.
- They are solid in nature.

A rock must exhibit at least three of these qualities in order to be considered a mineral.

Other properties of minerals include their irregular spatial distribution.

Mineral quality and quantity are inversely correlated, meaning that high-quality minerals are rarer than low-quality minerals.

All minerals eventually become depleted. Geologically speaking, minerals take a very long period to produce, and they cannot be instantly replaced when needed.

Distribution of Minerals:

India has an uneven distribution of mineral resources. Mineral resource occurrences are linked to specific categories of geological structure.

The majority of coal reserves are located in the Gondwana system.

There are significant metallic mineral deposits in the Dharwad and Cuddapah systems, including copper, lead, zinc, etc.

The Damodar, Sone, Mahanadi, and Godavari valleys contain more than 97 percent of the world's coal deposits.

Petroleum reserves are found offshore of Mumbai high in the Arabian Sea, sedimentary basins of Assam, Gujarat. The Krishna-Godavari and Kaveri basins contain new deposits.

Major non-metallic minerals found in the Vindhyan system include gypsum, calcium, limestone, and dolomite. In the ancient crystalline rocks of the peninsular plateau region of India, the majority of metallic minerals are found.

Major Mineral Regions of India:

Minerals may occasionally occur in isolated pockets here and there, but they are often concentrated in three large areas throughout India.

Area of the North Eastern Plateau:

It includes the plateaus of Chotanagpur, Orissa, and eastern Andhra.

Rich mineral reserves specifically used for metallurgy can be found in this area.

Rich deposits of several minerals, particularly those used in the metallurgical industry, such as iron ore, manganese, mica, bauxite, limestone, and dolomite, are found in this region.

Along the valleys of the rivers Damodar, Mahanadi, and Son, among others, this area possesses abundant coal reserves.

Additionally, there are significant deposits of copper, uranium, thorium, phosphate, etc. in this area.

Some important minerals:**Iron ore:**

Iron ore resources are fairly numerous in India, and the ore is of very high grade with an iron content of more than 60%. Haematite, magnetite, and limonite make up the three main forms of iron ore found in the nation. In the country's north-eastern plateau region, the iron ore mines are located near the coal deposits. The States of Odisha, Jharkhand, Chhattisgarh, Karnataka, Goa, Telangana, Andhra Pradesh, and Tamil Nadu contain over 95% of the world's iron ore deposits.

types Iron ore	Iron content
Hematite (red ore)	68%
Magnetite (black ore)	60%
Limonite (Yellow ore)	35% -50%

- The districts of Anantapur, Khammam, Krishna, Kurnool, Cuddapah, and Nellore are among those in Andhra Pradesh that have iron ore reserves.
- Additionally, the states of Rajasthan, Maharashtra, and Tamil Nadu contain some deposits. Particularly for export purposes, the mines at Bailadila, Rajhara, and Kiruburu in Chhattisgarh and Odisha are being developed.
- Although Goa's ore is of lower quality, it nevertheless makes an impressive contribution to the nation's overall production. From Mormugao Port, about all of Goa's iron production is shipped to Japan.

Manganese:

- Odisha, Madhya Pradesh, Maharashtra, Karnataka, and Andhra Pradesh are the key production regions. A belt extending from the Maharashtra districts of Nagpur and Bhandara to the Madhya Pradesh districts of Balaghat and Chhindwara has more than 78 percent of India's total manganese ore deposits.
- The largest producer of manganese in the nation is Madhya Pradesh i.e; accounts for 33% of all production nationwide.
- Sundargarh, Rayagada, Bolangir, Keonjhar, Jajpur, Mayurbhanj, Koraput, Kalahandi, and Bolangir are the significant mining regions.
- Another significant producer in the nation, Karnataka contributes 26% of the overall output and has mines in Dharwad, Ballari, Belagavi, North Canara, Chikkmagaluru, Shivamogga, Chitradurga, and Tumkur.
- Manganese, which is mined in the districts of Nagpur, Bhandara, and Ratnagiri, is another key mineral produced in Maharashtra.

Uses of Minerals:

- Both industrialized and developing nations make extensive use of minerals.
- Sand, gravel, brick clay, and crushed rock aggregates are all considered construction minerals. They are employed in the creation of concrete, bricks, and pipes as well as in the construction of homes and roadways.
- Non-metallic industrial minerals are utilized in a variety of industrial processes, such as the production of chemicals, glass, fertilizers, and fillers for paper, plastics, and pharmaceuticals. Salt, clays, limestone, silica sand, phosphate rock, talc, and mica are examples of industrial minerals.

3.5 FACTORS AFFECTING INDUSTRIAL LOCATIONS

Generally, the location of industries is influenced by economic considerations though certain non-economic considerations also might influence the location of some industries. Maximization of profit which also implies cost minimization is the most important goal in their choice of particular places for the location of industries. Let us learn about various factors affecting location of industries.

There are several factors that pull the industry to a particular place. Factors Affecting Location Of Industries are:

1. Availability of raw materials
2. Availability of Labour
3. Proximity to Markets
4. Transport Facilities
5. Power
6. Site and Services
7. Finance
8. Natural and Climatic Considerations
9. Personal Factors
10. Strategic Considerations
11. External Economies
12. Miscellaneous Factors

1. Availability of raw materials:

In determining the location of an industry, nearness to sources of raw material is of vital importance. Nearness to the sources of raw materials would reduce the cost of production of the industry. For most of the major industries, the cost of raw materials forms the bulk of the total cost. Therefore, most of the agro-based and forest-based industries are located in the vicinity of the sources of raw material supply.

2. Availability of Labour:

Adequate supply of cheap and skilled labor is necessary for the industry. The attraction of industry towards labor centers depends on the ratio of labor cost to the total cost of production which Weber calls Labour cost of Index. The availability of skilled workers in the interior parts of the Bombay region was one of the factors responsible for the initial concentration of the cotton textile industry in the region.

3. Proximity to Markets:

Access to markets is one of the important factors affecting location of industries that the entrepreneur must take into consideration. Industries producing perishable or bulky commodities which cannot be transported over long distances are generally located in close proximity to markets. Industries located near the markets could be able to reduce the costs of transport in distributing the finished product as in the case of bread and bakery, ice, tins, cans manufacturing, etc. Accessibility of markets is more important in the case of industries manufacturing consumer goods rather than producer goods.

4. Transport Facilities:

Transport facilities, generally, influence the location of industry. Transportation with its three modes, i.e., water, road, and rail collectively play an important role. So the junction points of waterways, roadways, and railways become humming centers of industrial activity.

Further, the modes and rates of transport and transport policy of the Government considerably affect the location of industrial units. The heavy concentration of the cotton textile industry in Bombay has been due to the cheap and excellent transportation network both in regard to raw materials and markets.

5. **Power:**

Another factor influencing the location of an industry is the availability of cheap power. Water, wind, coal, gas, oil, and electricity are the chief sources of power. Both water and wind power were widely sought as sources of power supply before the invention of the steam engine. During the nineteenth century, nearness to coal fields became the principal locating influence on the setting up of new industries, particularly, for heavy industries. With the introduction of other sources of power like electricity, gas, oil, etc. the power factor became more flexible leading to dispersal and decentralization of industries. Let us dive further and learn some more factors affecting the location of industries.

6. **Site and Services:**

The existence of public utility services, the cheapness of the value of the site, amenities attached to a particular site like the level of the ground, the nature of vegetation, and the location of allied activities influence the location of an industry to a certain extent. The government has classified some areas as backward areas where the entrepreneurs would be granted various incentives like subsidies, or provision of finance at a concessional rate, or supply of power at cheaper rates, and provision of education and training facilities. Some entrepreneurs induced by such incentives may come forward to locate their units in such areas.

7. **Finance:**

Finance is required for the setting up of industry, for its running, and also at the time of its expansion. The availability of capital at cheap rates of interest and inadequate amounts is a dominating factor influencing industrial location. For instance, a review of the locational history of the Indian cotton textile industry indicates that the concentration of the industry in and around Bombay in the early days was mainly due to the presence of rich and enterprising Parsi and Bhatia merchants, who supplied vast financial resources.

8. **Natural and Climatic Considerations:**

Natural and climatic considerations include the level of the ground, the topography of a region, water facilities, drainage facilities, disposal of waste products, etc. These factors sometimes influence the location of industries. For instance, in the case of the cotton textile industry, the humid climate provides an added advantage since the frequency of yarn breakage is low. The humid climate of Bombay in India and Manchester in Britain offered great scope for the development of the cotton textile industry in those centers.

9. Personal Factors:

In deciding the location of industrial units, sometimes an entrepreneur may have personal preferences and prejudices against certain localities. For instance, Mr. Ford started to manufacture motor cars in Detroit simply because it was his hometown. In such cases, personal factor dominates other considerations. However, this kind of domination is rare.

10. Strategic Considerations:

In modern times, strategic considerations are playing a vital role in determining industrial location. During war-time, a safe location is assuming special significance. This is because in times of war the main targets of air attacks would be armament and ammunition factories and industries supplying other commodities which are required for war. The Russian experience during the Second World War provides an interesting example.

11. External Economies:

External economies also exert considerable influence on the location of industries. External economies arise due to the growth of specialized subsidiary activities when a particular industry is mainly localized at a particular center with port and shipping facilities. External economies could also be enjoyed when a large number of industrial units in the same industry were located in close proximity to one another.

12. Miscellaneous Factors:

Historical incidents also play a dominating role in determining the location of industries in certain cases. The development of the cotton textile industry in Lancashire provides an interesting example of this. Further, the size of an industrial unit would also have much influence in choosing a location. This is because the size of industrial units depends upon the radius of the circle within which they can profitably distribute their goods and upon the density of the population living within the circle.

3.6 THEORY OF INDUSTRIAL LOCATION – WEBER

Von Thünen was the first to make an effort to identify the factors that are responsible for the locations of industries. His ideas gave rise to the subsequent work of German geographers such as William Lanyard and Alfred Weber who has great contribution in the development of Least Cost Theory.

3.6.1 Weber's Theory of Industrial Location

Alfred Weber gave his theory in 1909 which was published in the form of an essay in German and subsequently translated in English in 1929. It was only after 1929 that the modern thinking started.

3.6.1.1 Salient Features of Weber's Theory:

- The first and the most important feature of the Weber's theory is its division into two parts:

a. Pure theory and

b. Realistic theory.

- Other features of his theory are that it is based on the deductive method and incorporates all those general factors which attract some areas or regions and ultimately decide the basic location of the industries.

Through the process of cost analysis, Weber came to know that there were certain costs in the total cost of production which are directly influenced by geographical factors.

Geographical conditions vary from place to place and influence the cost of production. But interest and depreciation are not influenced by geographical factors.

3.6.1.2 According to Weber, factors affecting location of industries may be broadly classified into two groups:

1. **Regional factors** or primary causes of regional distribution of industry.
2. **Agglomerative and degglomerative factors** or secondary causes responsible for redistribution of industry.

1. Regional factors:

After examining the cost structures of different industries, Weber came to the conclusion that the cost of production varies from region to region. Therefore, the industry in general is localized at a place or in a region where the cost of production was the minimum.

Again Weber opined that there are two general regional factors which affect cost of production:

i. Transportation cost, and

ii. Labour costs.

In fact, these two are the basic factors influencing location of industries.

i. Transportation costs:

Transportation costs which play an important part in the location of an industry are influenced by the weight to be transported and the distance to be covered.

Generally, industries have a tendency to localize at a place where material and fuel are not difficult to obtain.

Weber has also stated that the basic factors for location of an industry are the nature or type of material used and the nature of their transformation into products.

Weber has divided **raw material into two categories:**

- a. Iniquities and
- b. Specific local raw material.

The iniquities are generally available everywhere whereas the specific or local raw material is found only in a certain area.

According to Weber, material may be of two types:

(i) Pure raw material and

(ii) Gross raw material.

(i) Pure raw material is one which does not lose its weight during production process.

(ii) The gross raw material is that which loses considerable weight in the transformation process in which the finished product is less in weight than the weight of raw material used in its manufacture.

Examples of this type of material are sugar cane and iron ore.

Weber has given a **material index** to show the tendency of industries to get located either at a place where raw materials are easily available or where the markets are closer.

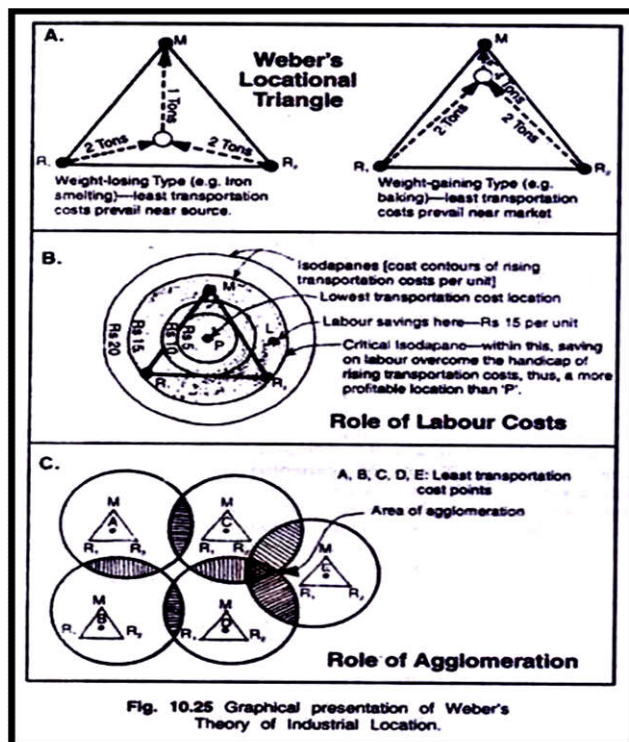


Fig 3.1

The formula given by him is:

Material Index = Weight of Localized Gross Material/ Weight of finished commodity

If the index number is greater than unity, industries will have a tendency to localize at the place of raw materials; in case of its being less than unity, they will get located near the places of consumption or markets. In case of unity, industries may get located at any of the places of raw material or markets depending upon discretion of the entrepreneur and his convenience.

ii. Labour costs also affect the location of industries.

If transportation costs are favourable but labour costs unfavourable, the problem of location becomes difficult to have a readymade solution.

Industries may have tendency to get located at the place where labour costs are low.

But labour and transportation costs should be low for an ideal situation. Whether labour costs will have an upper hand in the location of an industry will be decided by labour cost index

.This can be found by the following formula:

Labour Cost Index = Labour Cost / Weight of Product

If labour coefficient is higher, the industry will get located at the place where costs are low and if labour the coefficient is lower, transportation costs may influence the decision.

2. Agglomerative and Deggglomerative Factors:

Agglomerative factors make industries centralize at a particular place. Such factors may include banking and insurance facilities, external economies and the like. The tendency of centralization is influenced by the manufacturing index which indicates the proportion of manufacturing costs in the total of production. If the coefficient of manufacture is high industries will have a tendency to centralize, if it is low, tendency of decentralization may be visible.

Deggglomerative factors are those which decentralize the location of industries. Examples of such factors are: local taxes cost of land, residence, labour costs and transportation costs. Such factors decentralization because the cost of production stands reduced due to decentralization of shift in location.

Weber has indicated two more possibilities

i. Split in Location.

According to Weber, when weight losing raw materials are used in production and it is advantageous to carry out different activities at different places industries have a tendency of split location.

For example Paper industry, where pulp is prepared at one place and paper manufactured at another.

(ii) Location Coupling.

If wastes remaining after the main production are to be made saleable then some subsidiary industry may take place. This is known as location coupling.

Criticism of Weber's Theory:

The most important criticism against Weber's theory is that it is too simple, unrealistic and imaginary.

The criticisms are as follows:

1. Inadequate Analysis of Transportation Costs:

Weber considers only two factors in transportation costs— the weight to be transported and the distances to be covered. Weber has not given any consideration to some other factors such as quality of goods, topography etc., which also influence transportation costs. Also, Weber has taken transportation cost on the basis of tone-mileage, and not on physical cost basis.

2. Omission of Important Causes of Location:

Weber has included only transportation costs and labor costs among the causes of location, centralization or decentralization of industry. Other factors affecting location, such as climate, credit facilities, cost of capital etc., were not given any consideration.

3. Mathematical Expressions:

Weber has used index numbers and coefficient in his theory which has made it complicated. In fact, the theory is based on technical analysis and has become mathematical in character. This has made it more difficult to understand.

4. Categorization of Raw Materials:

Austin Robinson has regarded the division of raw materials made by Weber as artificial and unnatural.

5. Historical Factors Ignored:

The non-economic factors like historical, social and political factors were not considered by Weber

6. Consumption Centers:

Weber has taken consumption centers as stable whereas consumption centers change and consumers and buyers are generally scattered all over.

7. Overemphasis on Labour Costs:

Weber takes labour centers as fixed and the number of laborers on each center as uncertain. This assumption is imaginary and does not appear sound.

Conclusion: To conclude it can be said in spite of the criticism leveled against Weber's theory, it has its own place. The theory can be made more

3.7 Major Industrial Regions of the World

Industrial regions are areas where industries have concentrated due to favourable geo-economic conditions. These are areas where the manufacturing industry operates on a large scale and employs a large proportion of the population. The spatial distribution of manufacturing units demonstrates a clear trend of localization towards a few select areas; these areas are referred to as 'industrial regions.' The industries are not established at random, but rather in order to maximise profit. Furthermore, there are some methods that can assist entrepreneurs in determining their locational requirements. This article will explain to you about Major Industrial Regions of the World.

Major Industrial Regions of the World

The world's industrial regions are very unevenly distributed across the globe.

Natural and cultural factors are both involved in any explanation of the global distribution of manufacturing regions, but the great differences in the localization of any industrial region can be explained to a large extent by resource availability.

Many industrial centres have sprung up since the development of machinery, where there is an abundance of coal, coal and iron, or extensive water power - the main sources of modern industry - and all such towns are more or fewer business centres.

The world's five major industrial regions. The following are the industrial regions:

- North American Region
- European Region
- Other European Regions
- Asian Regions
- Other Asian Industrial Zones.

- The United States of America contributes roughly one-fifth of the industrial output in this region. Canada is another significant producer.
- Only 5% of these countries' land area contains one-third of their population and nearly two-thirds of their manufacturing output.
- This manufacturing belt has risen to prominence as a result of a combination of historical and environmental factors.
- Important Location Factors
- The early settlement gave eastern cities an advantage in becoming the country's dominant industrial centre.
- Access to Raw Materials- essential raw materials were available (by waterway or natural resources).
- Transportation- The Great Lakes and major rivers played an early role in determining waterway transportation.
- Access to fresh water and power- close proximity to large lakes

The Great Lakes region of North America

- It consists of the eight U.S. states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin, as well as the Canadian province of Ontario.
- Navigable terrain, waterways, and ports fueled unprecedented regional transportation infrastructure construction.
- With significant innovations in both production processes and business organisation, the region is a global leader in advanced manufacturing and research and development.

New England region

- New England is a region in the northeastern United States that includes the six states of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut.
- It has historically been a significant industrial manufacturing centre and a supplier of natural resource products such as granite, lobster, and codfish.
- The majority of exports are industrial products, such as specialised machines and weaponry.
- Industrial and commercial machinery, such as computers and electronic and electrical equipment, account for roughly half of the region's exports.

West Coast region of Canada

- The Canadian West Coast - Western Canada's dominant industries are energy and agriculture, and this region, with only 10 million people, is one of the world's largest net exporters of both energy and agricultural commodities.
- Estimated breakdown: Oil (13% of global reserves; 4% of global output) Uranium (8% of global reserves; 20% of global production), Potash (60% of global reserves; 30% of global production), Wheat, coarse grains, and oilseeds (21% of the global export market for wheat; 10% for oilseeds).

Other Industrial regions in Northern America

- The region of New York-Mid-Atlantic.
- The Midwestern Region
- Region of the North-East
- The region to the south.
- The Western Region
- The Pacific Region.

European Region

- The majority of countries in the European Union, particularly in Western Europe, are highly industrialised.
- Some of the countries are world leaders in manufacturing. Germany, the United Kingdom, Italy, France, and Spain are examples.
- The United Kingdom is one of the world's most industrialised countries. In fact, modern industrialization was largely born on British soil.
- The industrial revolution began in Europe, and as a result, heavy industries on a large scale developed in many parts of Europe.
- Despite industrial development in many parts of the world, Europe remains a major industrial power.
- Industries in Europe are dispersed across many countries, and Europe's manufacturing belt is not continuous.

United Kingdom

- The United Kingdom was the world's first highly industrialised country. The coalfields are closely associated with the majority of its industrial regions.
- The industry is currently declining due to cheaper and more efficient production overseas, as well as old equipment and labour problems at home.

- Nonetheless, the UK's industrial structure is regarded as significant.

North East Coast

- The industrial region of the northeast coast is also fairly close to a coalfield, that of Durham and Northumberland.
- Coal mining and iron and steel production are two of the most important industries.
- In recent years, its economic fortunes have not differed significantly from those of West Cumberland, despite the establishment of a greater variety of steel processing industries as well as other industries such as chemicals.

Lorraine region

- Lorraine is a region of France located in the northeast corner of the country, bordering Germany, Belgium, and Luxembourg.
- This region of France is mostly agricultural, with the rivers Meuse and Moselle flowing through it and rising on the forested slopes of the Vosges.
- The region is well-known for its iron and steel industry, as well as its crystal works.

Germany's Ruhr and Silesia

- The Ruhr valley is a city in North Rhine-Westphalia.
- It is the most densely populated region in Germany and is known for its coal mining and steel industries.

Other Industrial regions in Europe

Germany	France	Italy
<ul style="list-style-type: none"> • The Saar and Middle Rhine Industrial Region. • The Hamburg Industrial Region. • Berlin Industrial Region. • Leipzig Industrial Region. 	<ul style="list-style-type: none"> • The Northern Industrial Region. • The Lorraine Industrial Region. • The Paris Industrial Region. 	<ul style="list-style-type: none"> • The Northern Region (Lombardy, Piedmont, Liguria, etc.). • The Southern Region (Naples).

Other European Regions

- Several other industrial regions can be found in various European countries.
- Swiss Plateau in Switzerland, Stockholm region in Sweden, Rotterdam-Amsterdam region in Holland, and Brussels-Antwerp industrial region in Belgium are all important.
- Separating one European industrial zone from another is a difficult task. In reality, all of these areas are merely sub-regions of a much larger European industrial zone.

The Moscow-Tula Industrial Region

- This is one of the Soviet Union's oldest industrial conurbations.
- Numerous industrial establishments can be found in Moscow, the capital city, as well as other urban centres such as Tula, Gorky, Ivanovo, and Yaroslavl. During its early stages of development, Tula iron ore and Moscow brown coal proved advantageous.
- However, the mineral resources declined later on. However, this region's growth continues unabated.
- The Moscow-Tula region has the highest concentration of industries.
- Iron-steel, heavy chemical, metallurgy, machine tools, refineries, textile, electrical, automobiles, and so on are major industries. This industrial agglomeration accounts for nearly a quarter of total national industrial output.

The Southern Industrial Region

- The great Ukrainian region is the largest industrial area. This region contributed the most iron steel and other metallurgical products.
- The famous Donetsk coal and Krivoi Rog iron ore provided the foundation for the region's overall economic and industrial growth.
- Aside from that, Nikopol manganese is widely used in iron limestone, another raw material found in the region.

The Southern Industrial Region:

- The great Ukrainian region is the largest industrial area in the CIS. This region contributed the most iron steel and other metallurgical products.
- The famous Donetsk coal and Krivoi Rog iron ore provided the foundation for the region's overall economic and industrial growth.

- Aside from that, Nikopol manganese is widely used in iron limestone, another raw material found in the region.

The Ural Industrial Region

- The Ural industrial region owes much of its development to the massive iron ore deposits of Magnitogorsk, Nizhny Tagil, and S erov. Following the establishment of the Communist regime, Rural development was prioritised, and the 'UralKuznetsk Combine' was built to expedite the region's industrialization.
- This region has an excellent communication system, particularly railroads. Several other industries emerged gradually.
- Among these are machine tools, agricultural machinery, chemicals, and so on.

Other Industrial regions

- The Caucasus Industrial Region.
- The Volga Industrial Region.
- The Kuznetsk Industrial Region.
- The Central Asia Industrial Region.

Asian Regions

- No Asian country had a strong industrial base until recent times.
- However, with the rise of some countries in the industrial sector, such as Japan, China, India, Korea, and Taiwan, this region is now posing a serious threat to the traditionally developed nations.
- Indeed, when it comes to the world's future industrialization, Asia is frequently regarded as the dark horse.

Japan's Yokohama region

- Yokohama is the capital city of Kanagawa Prefecture and the second-most populous city in Japan after Tokyo.
- It is a significant commercial hub in the Greater Tokyo Area.
- The city's economy is strong, particularly in the shipping, biotechnology, and semiconductor industries.

China's Manchurian region

- China's Manchurian region is a major industrial hub, with massive coal mines, iron and steelworks, aluminium reduction plants, paper mills, and factories producing heavy machinery, tractors, locomotives, aircraft, and chemicals. Dalian is the main commercial port.

- The only extensively level area is the great Manchurian plain, which is crossed by the Liao and Songhua rivers.
- It has been a major manufacturing and agricultural centre in China because it is fertile and densely populated.

The Calcutta Conurbation

- Broadly, a narrow strip running from Bansberia and Naihati in the north to Budge Budge and Uluberia in the south along the Hooghly River may be taken as the demarcating line of India's oldest and largest industrial region.
- This area has seen the development of several suburban and satellite townships. Notable among these are Howrah, Liluah, Bally, Uttarpara etc
- Jute mills, cotton textiles, chemicals, drugs and pharmaceuticals, engineering, machine tools, automobiles, tobacco, food processing, leather, fabrication, paper, match, and other industries are located in this region.

Other Industrial regions in Asia

Japan	<ul style="list-style-type: none"> • The OsakaKobe Region. • The Chukyo Region. • The North Kyushu Region
China	<ul style="list-style-type: none"> • The Yangtze Valley Region. • The North China Region. • The South China Region.
India	<ul style="list-style-type: none"> • The BombayPoona Megalopolis. • The Ahmedabad Vadodara Region. • The Southern Industrial Region. • The Damodar Valley Region.

Other Asian Industrial Zones

- Aside from these major industrial regions, Asia has a few isolated and dispersed industrial centres.
- Seoul, Chongthu, Taejon, Taegu, Pohang, Ulsal, and Kwangju in South Korea are notable, as are small islands such as Hong Kong and Singapore.
- Karachi, Pakistan, Kuala Lumpur, Malaysia, and Kuwait are important smaller cities.

Other Major Industrial Zones

Major Industrial Zones	Features
Magnitogorsk	<ul style="list-style-type: none"> • Magnitogorsk is an industrial city in Chelyabinsk Oblast, Russia, situated on the eastern side of the Ural Mountains' extreme southern extent by the Ural River. • It was named after Magnitnaya Mountain, a geological anomaly that was almost pure iron. • The area's large reserves of iron ore made it an ideal location for a steel plant. • During WWII, the city played an important role because it supplied much of the steel for the Soviet war machine, and its strategic location near the Ural Mountains meant Magnitogorsk was safe from German Army capture.
Donbas of Ukraine (Donets Basin)	<ul style="list-style-type: none"> • The Ukrainian Donbas (Donets Basin) is a historical, economic, and cultural region in eastern Ukraine. • Since the late nineteenth century, it has been a coal mining area that has become a heavily industrialised territory plagued by urban decay and industrial pollution. • Donbas coal mines are among the most dangerous in the world due to enormous working depths (ranging from 300 to 1200 m) caused by natural depletion, as well as high levels of methane explosion, coal dust explosion, and rockburst dangers.
Kuzbass region	<ul style="list-style-type: none"> • The Kuzbass region is located in southwestern Siberia, where the West Siberian Plain and the South Siberian Mountains meet. • It is one of Russia's most important industrial regions, and it contains some of the world's largest coal deposits. • The region's south is dominated by metallurgy and mining, as well as mechanical engineering and chemical production.

<p>Appalachian region</p>	<ul style="list-style-type: none"> • The Appalachian region is a 205,000-square-mile area that runs from southern New York to northern Mississippi along the spine of the Appalachian Mountains. • The Region's economy, which was once heavily reliant on mining, forestry, agriculture, chemical industries, and heavy industry, has recently become more diverse, and now includes a variety of manufacturing and service industries. • Because Appalachia once produced two-thirds of the nation's coal, coal mining is the industry most commonly associated with the region.
<p>Sao Paulo region</p>	<ul style="list-style-type: none"> • The Sao Paulo region is Brazil's largest city and is known as the "financial capital of Brazil," as it is home to the headquarters of many major corporations as well as the country's most renowned banks and financial institutions. • Once known for its strong industrial character, Sao Paulo's economy has shifted to the tertiary sector, focusing on services and businesses for the country.

3.8 SUMMARY

After going through the chapter we have come to know that industry produces goods within an economy. Utilization of huge volume of natural resources has become possible with the development of various types of industries. Industries can be classified on several bases such as Large Scale Industry, Medium Scale Industries, and Small Scale Industries. On the Basis of raw-material and finished goods industries are classified as Heavy Industries, Light Industries. On the basis of ownership industries may be classified as Private Sector Industries, Public Sector Industries, Joint Sector Industries and Corporative Sector Industries. On the basis of source of raw material industries are classified as Agro Based Industries Mineral Based Industries, Pastoral Based Industries and Forest Based Industries. There are many industries under Miscellaneous Industries too.

To illuminate the various factors that influence the location of industries geographers have taken numerous approaches. Alfred Weber formulated a theory of industrial location in which an industry is located where the transportation costs of raw materials and final product is a minimum. Weber's theory has two parts; Pure theory and Realistic theory. According to Weber Regional factors or Agglomerative and degglomerative factors affect the location of an industry. Even being criticized, Weber's theory has its own place.

August Losch based his theory on the modification of the Walter Christaller's central place theory. His model postulated that there is one superior centre where all goods are produced.

3.9 CHECK YOUR PROGRESS/ EXERCISE

1. True False

- a. Industry is an economic activity concerned with the processing of raw materials and manufacture of goods in factories.
- b. Agro Based Industries depend upon animals for their raw materials.
- c. Industries which require huge labour force for running them are called labour intensive industries.
- d. Petro chemicals are an example of agro based industries.
- e. Agglomerative factors make industries centralize at a particular place.

2. Fill in the blanks

- a. The first and the most important feature of the Weber's theory is its division into two parts: Pure theory and _____.
- b. Through the process of _____, Weber came to know that there were certain costs in the total cost of production which are directly influenced by geographical factors.
- c. Industries which employ a large number of laborers in each unit are called _____ industries.
- d. Industries owned by state and private firms are known as _____ industries.
- e. _____ Based Industries are those industries which obtain raw materials from agriculture.

3. Multiple choice question

- a. Industries which are owned and run by individuals and which employ small number of laborers are called
 - i. small scale industries.
 - ii. Large scale industries
 - iii. Foot loose industries

- b. Industries that are owned by state is a
 - i. private sector industry.
 - ii. public sector industry.
 - iii. joint sector industry.

- c. Paper cardboard, lac, rayon, resin, basket industries are included in
- i. Forest Based Industries.
 - ii. Agro Based Industries.
 - iii. Mineral Based Industries.
- d. Village industries are located in villages and primarily cater to the needs of
- i. urban people.
 - ii. old people.
 - iii. rural people.
- e. Industries may have tendency to get located at the place where
- i. labour costs are low.
 - ii. labour costs are high.
 - iii. transportation costs are high

4. Answers the following Questions

1. Define industry. Classify industry on the basis of Strength of Labour, Ownership, Source of Raw Material and Raw Material and Finished Goods.
2. Write a short note on Miscellaneous Industries.
3. Compare between Resources Based Industries and Foot Loose Industries.
4. Explain the Theory of Industrial Location by Alfred Weber.
5. Explain the Theory of Industrial Location by Losch.
6. Criticise Weber's theory of industrial location.

3.10 ANSWERS TO THE SELF LEARNING QUESTIONS.

- 1.a. true
- 1.b. false, Pastoral
- 1.c. true
- 1.d. false, Resources based industries
- 1.e. true
- 2.a. Realistic theory.
- 2.b. cost analysis
- 2.c. large scale
- 2.d. Joint sector

2.e. Agro

3.a.i.

3.b.ii.

3.c.i.

3.d.iii.

3.e.i.

3.11 TECHNICAL WORDS:

1. **Primary sector**—it is the sector of an economy that makes direct use of natural resources
2. **Secondary sector**- it is the sector of an economy where industries produce a finished, usable product
3. **Industry**-a particular form or branch of economic or commercial activity concerned with the processing of raw materials and manufacture of goods in factories
4. **Large scale industries**: industries with huge infrastructure man power and heavy capital
5. **Medium scale industries**- industries that are in-between large scale and small scale industries
6. **Small scale industries**- it is an industry created on a small budget and produces its goods using small machines, less power and labour
7. **Light industry**- industry that is usually less capital-intensive than heavy industry and uses light raw materials and produce light finished products.
8. **Heavy industry**- industry that is more consumer-oriented than business-oriented and use heavy and bulky raw materials

3.12 TASK

1. In a chart show the classification of industries.
2. In a chart show the salient features of Weber's Theory.

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MODES OF TRANSPORT AND INTERNATIONAL TRADE

Unit Structure

- 4.1 Objectives
- 4.2 Introduction
- 4.3 Subject discussion
- 4.4 Transportation: Importance and influencing factors
- 4.5 Major Transport Patterns in the World
- 4.6 Patterns of International Trade: Composition and Direction
- 4.7 Major International Trade Organisations: WTO, OPEC, SAARC, G-20 and BRICS
- 4.8 Summary
- 4.9 Check your Progress/Exercise
- 4.10 Answers to the self learning questions
- 4.11 Technical words and their meaning
- 4.12 Task
- 4.13 References for further study

4.1 OBJECTIVES

By the end of this unit you will be able to:

- Learn the Modes of transport and transport cost
- Understand bases of spatial interaction
- Discuss recent trend in international trade
- Understand major trading organizations and trading blocs such as WTO, OPEC, ASEAN, SAARC, EFTA, LAFTA, EU, G20, and BRICS

4.2 INTRODUCTION

In the first unit the definition, nature and scope of Economic Geography along with its relationship other branches of social sciences have been studied. In the second unit we learnt the Factors of location of economic activities and the Sectors of economy such as primary, secondary and

tertiary. In third chapter the Classification of Industries; Resources Based and Foot Loose Industries and Weber and Losch's Theory of Industrial Location have been discussed. Now in this unit Modes of transport and transport cost, bases of spatial interaction, Recent trend in international trade and Major trading organizations and trading blocs such as WTO, OPEC, ASEAN, SAARC, EFTA, LAFTA, EU, G20, and BRICS will be studied.

4.3 SUBJECT-DISCUSSION

Transportation and Communication is a tertiary economic activity. One of the primary factors that play an important role in a region's economic growth is the presence of an efficient transportation system. With the advancement of human society, the need of transportation and communication has increased. A well developed transportation system provides adequate access to those regions where vast natural resources of the country are present. Moreover for the economic development of a country means of transports are essential because they connect the distant part of the country as well as helps in increase in the demand for goods. Transport increases mobility of labour and capital. It is observed that transportation is highly developed in the advanced countries.

International trade has given rise to a world economy. It is the exchange of commodities, products, services and capital between people and companies in different countries. International trade has existed for long but increased hugely in the past few hundred years having major impact on international economy. This type of trade encourages greater competition as well as more competitive pricing in the market. International trade was 26 percent of the global economy in 2016.

4.4 TRANSPORTATION: IMPORTANCE AND INFLUENCING FACTORS

Transportation: Importance

- Transport support trade and industry in carrying raw material to the place of production and distribution of finished products for consumption.
- Transport means to make goods available to consumers. Transport makes possible movement of goods from one place to another with great ease and speed.
- Trade means exchange of goods and services. In trade there is movement of goods from surplus areas to scarcity areas.
- The movement of goods is possible only because of transport. In other words, without the help of transport development of trade is not possible.

- Thus, transport plays an important role in economic development and globalisation of trade.
- **Transportation: influencing factors :**

1. Fuel costs

The cost of maritime and land transport is, of course, related to the price of fuel.

As fuel prices fall, container ships and cargo trucks become cheaper to operate and the price of transport goes down. Savings (or losses) are passed on to consumers – either indirectly or through a fuel cost component built into a carrier’s pricing model.

And of course, if fuel prices increase, carriers will pass the additional expense on to merchants.

2. The labor market for commercial drivers

Increasing wages and competition among carriers for truck drivers can have an upward impact on transportation costs.

As older drivers retire, carriers may struggle to find operators for their vehicles.

Recruiting new drivers is difficult; the job can be tough and typically requires a different class of driver licence (courses to certify new commercial drivers can take weeks or even months to complete).

Moreover, many logistics companies struggle to compete with ‘in-house’ truck driving positions that tend to pay better and may offer less stress.

3. Demand for freight

Pricing depends on the volume of product being shipped by operators just as much as it depends on the actual, underlying costs.

If capacity is limited, operators may be inclined to sell limited space at a premium.

On the other hand, if business is slow, a carrier may be talked into offering a more competitive rate, at least in the short term.

4. Customer loyalty

Merchants who can offer a carrier regular, consistent business are well placed to receive a preferential rate, especially if demand across the industry is low.

5. Vehicle capacity

Some trucking companies operate an older, smaller fleet.

While these trucks are entirely adequate, newer trucks are designed to maximize storage space, allowing a truck to split space even further.

6. Government regulation

Regulation may directly impact the freight industry and its bottom line; for example, governments often set maximum driving hours for commercial operators.

Other government regulation may also impact freight costs; for example, New Zealand's Emissions Trading Scheme has been estimated to increase freight costs by several dollars for every thousand kilometers travelled.

7. Geopolitical events

International maritime shipping has become fraught with the dangers of pirates and rogue governments.

The World Bank estimates that the losses from global piracy amounted to approximately USD\$18 billion in 2014, pushing up the price of everyday freight as carriers were forced to change shipping routes and pay higher insurance premiums.

8. Your reputation as a merchant

The price quoted by a carrier will, at least in part, reflect the carrier's expectations as to the packing of pallets and the time to load. If you have a reputation for loading quickly, you may be charged a slightly smaller rate to compensate.

4.5 MAJOR TRANSPORT PATTERNS IN THE WORLD

Transportation is a distinguishable part of any society. The term Transport is derived from the Latin trans ("across") and portare ("to carry"). Transportation is the movement of people and goods from one place to another. One of the key factors that play a pivotal role in a region's economic growth is the presence of a reliable and efficient transportation system. This is mainly due to the fact that a well-developed transportation system provides adequate access to the resources of a society and transports resources from one particular society to other. These resources can range from material things like efficient operation of manufacturing, retail, labour, market to knowledge and skills like movement of doctors and technicians to the places where there is a need of them. The modes of transport are classified on the basis of the way, the vehicle, the motive power used and terminals.

The modes of transport can be broadly divided into three categories:

- Land transport
- Water transport
- Air transport

4.5.1 Land Transport:

Land transport refers to activities of physical movement of goods and passengers on land.

This movement takes place on road, rail, rope or pipe. So land transport may further be divided into

- Road transport,
- Rail transport,
- Ropeway transport,
- Pipeline transport.
- Tramways

Road Transport has been the principle form of competition for the railway. Its main features are as follows:

- It offers flexibility, choice of routes and delivery at the door.
- Roads are the means that connect one place to another on the surface of the land. We have seen roads in our village, in towns and cities. Not all of them look alike. Some of them are made of sand and some may be of chips and cement or coal tar. We find different vehicles plying on roads like bullock carts, cycles, motorcycles, cars, truck, buses, etc. All of these constitute different means of road transport.

Advantages of Road transport

Road transport has the following advantages

- It is a relatively cheaper mode of transport as compared to other modes.
- Perishable goods can be transported at a faster speed by road carriers over a short distance.
- It is a flexible mode of transport as loading and unloading is possible at any destination.
- It provides door-to-door service.
- It helps people to travel and carry goods from one place to another, in places which are not connected by other means of transport like hilly areas.

Limitations of Road transport

Road transport has the following limitations:

- Due to limited carrying capacity road transport is not economical for long distance transportation of goods.

- Transportation of heavy goods or goods in bulk by road involves high cost.
- It is affected by adverse weather conditions. Floods, rain, landslide, etc., sometimes create obstructions to road transport.

Rail transport

Transportation of goods and passengers on rail lines through trains is called rail transport. It occupies an important place in land transport system of our country.

Characteristics of Rail transport:

- It is the most dependable mode of transport to carry goods and passengers over a long distance.
- Besides long distance, local transport of passengers is also provided by local trains or metro-rail in some metropolitan cities.
- Rail transport is available throughout the country except some hilly or mountainous regions.

Advantages of Rail transport:

Rail transport has the following advantages

- It is a convenient mode of transport for travelling long distances.
- It is relatively faster than road transport.
- It is suitable for carrying heavy goods in large quantities over long distances.
- Its operation is less affected by adverse weathers conditions like rain, floods, fog, etc.

Limitations of Railway transport:

Railway transport has the following limitations:

- It is relatively expensive for carrying goods and passengers over short distances.
- It is not available in remote parts of the country.
- It provides service according to fixed time schedule and is not flexible for loading or unloading of goods at any place.
- It involves heavy losses of life as well as goods in case of accident.

Pipelines Transport

In modern times, pipelines are used for various purposes. Water supply to residential and commercial areas is carried on with the help of pipeline.

Petroleum and natural gas are also transported from one place to another through pipelines. This is the most convenient as well as economical mode of transport for petroleum as well as natural gas in comparison to road and rail transport, provided the volume to be transported is large. But the cost of installation and maintenance requires large capital investment.

Ropeway Transport

Ropeway refers to a mode of transport, which connects two places on the hills, or across a valley or river. In the hilly areas, trolleys move on wheels connected to a rope and are used for carrying passengers or goods, especially building materials, food, etc.

Tramways

Tramway is suitable in large cities. It is one of the cheapest, longest, quickest and safest modes of Land Transport. Nevertheless due to certain limitations such as very slow movement, huge investment, inflexibility etc. it is losing its importance. Hence gradually it is replaced by other means of Land Transport.

4.5.2 Water Transport

Water transport refers to movement of goods and passengers on waterways by using various means like boats, steamers, launches, ships, etc. With the help of these means goods and passengers are carried to different places, both within as well as outside the country.

Different Means Water Transport:

- Inland transport
- Ocean transport

Inland water transport

Inland water transport use boats, launches, barges, streamers, etc., to carry goods and passengers on river and canal routes. These routes are called inland waterways.

Ocean transport

Ocean transport refers to movement of goods and passengers with the help of ships through sea or ocean waterways.

Advantages of Water Transport

Water Transport has the following advantages

- It is a relatively economical mode of transport for bulky and heavy goods.
- It is a safe mode of transport with respect to occurrence of accidents.

- The cost of maintaining and constructing routes is very low as most of them are naturally made.
- It promotes international trade.

Limitations of Water Transport

Water transport has the following limitations

- The depth and navigability of rivers and canals vary and thus, affect operations of different transport vessels.
- It is a slow moving mode of transport and therefore not suitable for transport of perishable goods.
- It is adversely affected by weather conditions.
- Sea transport requires large investment on ships and their maintenance.

4.5.3 Air transport

This is the fastest mode of transport.

Importance of Air Transport

- It carries goods and passengers through airways by using different aircrafts like passenger aircraft, cargo aircraft, helicopters, etc.
- Besides passengers it generally carries goods that are less bulky or of high value.
- In hilly and mountainous areas where other mode of transport is not accessible, air transport is an important as well as convenient mode.
- It is mostly used for transporting goods and passengers during natural calamities like earthquake and floods, etc. During war, air transport plays an important role in carrying soldiers as well as supplies to the required areas.

Advantages of Air transport

It has the following advantages

- It is the fastest mode of transport.
- It is very useful in transporting goods and passengers to the area, which are not accessible by any other means.
- It is the most convenient mode of transport during natural calamities.
- It provides vital support to the national security and defense.

Limitations of Air Transport

It has the following limitations

- It is relatively more expensive mode of transport.
- It is not suitable for transporting heavy and bulky goods.
- It is affected by adverse weather conditions.
- It is not suitable for short distance travel.
- In case of accidents, it results in heavy losses of goods, property and life.

4.6 PATTERNS OF INTERNATIONAL TRADE: COMPOSITION AND DIRECTION

International trade is the exchange of capital, goods, and services across international borders. In international trade imports are purchases and exports are sales to foreign countries.

Foreign trade has become very important to the economy of any country in the recent years. Export and import of goods and services have grown rapidly in the recent years. This growth has benefited the standard of living in several ways. With the growth of international trade the employment has increased. Export of goods and services has generated more income. The GDP has also increased. In fact, whenever the export exceeds imports it creates a positive impact on the economy.

International trade is constantly changing. With the change in technology, culture, politics and society, the shape of international trade has to change. Now the countries have good relationship with each other and this is also one of the factors of changing international trade. India, China, Brazil has become the emerging markets and have impacted the international trade in many ways.

In the recent years manufacture products accounted for 60% to 70% of the total goods exported. Oil is another product which forms an important commodity in international trade. However, the share of food and agricultural raw material has decreased. Computer, communication and other services dominate the service export in the recent times. Transport services have also lost its importance in the international trade.

In the present days the multinational Corporations are influencing the international trade. Now especially in Indian context the export of finished goods are higher than the export of raw materials.

4.7 MAJOR TRADING ORGANIZATIONS AND TRADING BLOCS

1. WTO

The World Trade Organization (WTO) is the only global international organization dealing with the rules of trade between nations. The goal is to help producers of goods and services, exporters, and importers conduct their business.

The WTO was born out of negotiations, and everything the WTO does is the result of negotiations. The bulk of the WTO's current work comes from the 1986–94 negotiations called the Uruguay Round and earlier negotiations under the General Agreement on Tariffs and Trade (GATT). The WTO is currently the host to new negotiations, under the 'Doha Development Agenda' launched in 2001.

Where countries have faced trade barriers and wanted them lowered, the negotiations have helped to open markets for trade. But the WTO is not just about opening markets, and in some circumstances its rules support maintaining trade barriers — for example, to protect consumers or prevent the spread of disease.

At its heart are the WTO agreements, negotiated and signed by the bulk of the world's trading nations. These documents provide the legal ground rules for international commerce. They are essentially contracts, binding governments to keep their trade policies within agreed limits. Although negotiated and signed by governments, the goal is to help producers of goods and services, exporters, and importers conduct their business, while allowing governments to meet social and environmental objectives.

The system's overriding purpose is to help trade flow as freely as possible — so long as there are no undesirable side effects — because this is important for economic development and well-being. That partly means removing obstacles. It also means ensuring that individuals, companies and governments know what the trade rules are around the world, and giving them the confidence that there will be no sudden changes of policy. In other words, the rules have to be 'transparent' and predictable.

Trade relations often involve conflicting interests. Agreements, including those painstakingly negotiated in the WTO system, often need interpreting. The most harmonious way to settle these differences is through some neutral procedure based on an agreed legal foundation. That is the purpose behind the dispute settlement process written into the WTO agreements.

2. OPEC

Organization of the Petroleum Exporting Countries is an intergovernmental organization of 13 petroleum-exporting nations, founded in 1960 by the first five members (Iran, Iraq, Kuwait, Saudi

Arabia, Venezuela), and headquartered since 1965 in Vienna, Austria. The 13 countries account for 40% of global oil production and 73% of the world's "proven" oil reserves, making OPEC a major influence on global oil prices.

OPEC's stated mission is "to coordinate and unify the petroleum policies of its member countries and ensure the stabilization of oil markets, in order to secure an efficient, economic and regular supply of petroleum to consumers, a steady income to producers, and a fair return on capital for those investing in the petroleum industry."

OPEC's stated mission is to coordinate and unify the petroleum policies of its member countries and ensure the stabilization of oil markets in order to secure an efficient economic and regular supply of petroleum to consumers, a steady income to producer and a fair return on capital for those investing in petroleum industry. The organization is also a significant provider of information about the international oil market. As of January 2017, OPEC's members are Algeria and Angola, Ecuador, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, UAE and Venezuela. OPEC decision has come to play a prominent role in the global oil market and international relation.

3. ASEAN

The Association of Southeast Asian Nations, or ASEAN, was established on 8 August 1967 in Bangkok, Thailand, with the signing of the ASEAN Declaration (Bangkok Declaration) by the Founding Fathers of ASEAN, namely Indonesia, Malaysia, Philippines, Singapore and Thailand.

The aims and purposes of ASEAN are:

1. To accelerate the economic growth, social progress and cultural development in the region through joint endeavours in the spirit of equality and partnership in order to strengthen the foundation for a prosperous and peaceful community of Southeast Asian Nations;
2. To promote regional peace and stability through abiding respect for justice and the rule of law in the relationship among countries of the region and adherence to the principles of the United Nations Charter;
3. To promote active collaboration and mutual assistance on matters of common interest in the economic, social, cultural, technical, scientific and administrative fields;
4. To provide assistance to each other in the form of training and research facilities in the educational, professional, technical and administrative spheres;
5. To collaborate more effectively for the greater utilisation of their agriculture and industries, the expansion of their trade, including the study of the problems of international commodity trade, the improvement of their transportation and communications facilities and the raising of the living standards of their peoples;

6. To promote Southeast Asian studies; and
7. To maintain close and beneficial cooperation with existing international and regional organisations with similar aims and purposes, and explore all avenues for even closer cooperation among themselves.

ASEAN Member States have adopted the following fundamental principles, as mentioned in the Treaty of Amity and Cooperation in Southeast Asia (TAC) of 1976:

1. Mutual respect for the independence, sovereignty, equality, territorial integrity, and national identity of all nations;
2. The right of every State to lead its national existence free from external interference, subversion or coercion;
3. Non-interference in the internal affairs of one another;
4. Settlement of differences or disputes by peaceful manner;
5. Renunciation of the threat or use of force; and
6. Effective cooperation among themselves.

The ASEAN Vision 2020, adopted by the ASEAN Leaders on the 30th Anniversary of ASEAN, agreed on a shared vision of ASEAN as a concert of Southeast Asian nations, outward looking, living in peace, stability and prosperity, bonded together in partnership in dynamic development and in a community of caring societies.

At the 12th ASEAN Summit in January 2007, the Leaders affirmed their strong commitment to accelerate the establishment of an ASEAN Community by 2015 and signed the Cebu Declaration on the Acceleration of the Establishment of an ASEAN Community by 2015.

The ASEAN Community is comprised of three pillars, namely the ASEAN Political-Security Community, ASEAN Economic Community and ASEAN Socio-Cultural Community. Each pillar has its own Blueprint, and, together with the Initiative for ASEAN Integration (IAI) Strategic Framework and IAI Work Plan Phase II (2009-2015), they form the Roadmap for an ASEAN Community 2009-2015.

4. SAARC

The South Asian Association for Regional Cooperation (SAARC) is the regional intergovernmental organization and geopolitical union of nations in South Asia. Its member states include Afghanistan, Bangladesh, Bhutan, India, Nepal, the Maldives, Pakistan and Sri Lanka. SAARC comprises 3% of the world's area, 21% of the world's population and 3.8% (US\$ 2.9 trillion) of the global economy, as of 2015.

SAARC was founded in Dhaka on 8th December, 1985. Its secretariat is based in Kathmandu, Nepal. The organization promotes development of

economic and regional integration. It launched the South Asian Free Trade Area in 2006. SAARC maintains permanent diplomatic relations at the United Nations as an observer and has developed links with multilateral entities, including the European Union.

The idea of co-operation in South Asia was discussed in at least three conferences: the Asian Relations Conference held in New Delhi on April 1947; the Baguio Conference in the Philippines on May 1950; and the Colombo Powers Conference held in Sri Lanka in April 1954.

In the ending years of the 1970s, the seven inner South Asian nations that included Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka agreed upon the creation of a trade bloc and to provide a platform for the people of South Asia to work together in a spirit of friendship, trust, and understanding. President Zia Ur Rahman later addressed official letters to the leaders of the countries of the South Asia, presenting his vision for the future of the region and the compelling arguments for region. During his visit to India in December 1977, Rahman discussed the issue of regional cooperation with the Indian Prime Minister, Morarji Desai. In 1977, King Birendra of Nepal gave a call for close regional cooperation among South Asian countries in sharing river waters.

In 1983, the international conference held by Indian Minister of External Affairs P.V. Narasimha Rao in New Delhi, the foreign ministers of the inner seven countries adopted the Declaration on South Asian Association Regional Cooperation (SAARC) and formally launched the Integrated Programme of Action (IPA) initially in five agreed areas of cooperation namely, Agriculture; Rural Development; Telecommunications; Meteorology; and Health and Population Activities.

Officially, the union was established in Dhaka with Kathmandu being union's secretariat-general. The first SAARC summit was held in Dhaka on 7–8 December 1985 and hosted by the President of Bangladesh Hussain Ershad. The declaration signed by King of Bhutan Jigme Singye Wangchuk, President of Pakistan Zia-ul-Haq, Prime Minister of India Rajiv Gandhi, King of Nepal Birendra Shah, President of Sri Lanka JR Jayewardene, and President of Maldives Maumoon Gayoom.

5. EFTA

European Free Trade Association (EFTA) is the inter government organization set up for the promotion of free trade and economic integration to the benefit of its four members states.

EFTA was founded on 4th January 1960 on the premises of free trade as a means of achieving growth and prosperity amongst its member's states as well as promoting closer economic corporation between the western European countries. EFTA was founded by the following seven countries; Austria, Denmark, Norway, Portugal, Sweden, Switzerland and the UK.

The immediate aim of the association was to provide a frame work for the liberalization of trade in goods among its members state.

6. LAFTA

Latin America Free Trade Association (LAFTA) was created in 1960 by Argentina, Brazil, Chile, Mexico, Peru and Uruguay. The LAFTA comes into effect in January 2nd 1962. LAFTA had a population of 220 million and produced about \$ 90 billion of goods and services.

LAFTA has brought many constructive results; it also brought problems to individual nations as well as to Latin America as a whole. The goal of LAFTA is the creation of a free trade zone in Latin America to achieve these goals -

1. The council of foreign ministers
2. A conference of all participating countries
3. A permanent council

LAFTA agreement has important limitations. It only refers to goods, not to services, and it does not include a coordination of policies. LAFTA brought new positive changes to Latin America.

7. EU

European Union (EU) is the political and economic union of 28 member states that are located primarily in Europe. EU has developed an internal single market through a system of law that applies in all member states. EU policies aim to ensure the free movement of people, goods and services and capital within the internal market, enact legislation injustices and home affairs and maintain common policies on trade, agriculture, fisheries and regional development.

EU operates through a hybrid system of supranational and inter-governmental decision making. EU traces its origin from the European coal and steel community (ECSE) and the European Economic Community (EEC) covering 7.3% of world population. The EU has also developed a role in internal relations and defense.

8. G20

The G20 (G – 20 or group of 20) is an international forum for the governments and central banks governors from 20 major economics. It was founded in 1999 with the aim of studying reveling and promoting high level discussion of policy issues pertaining to the promotion of international financial stability. It seeks to address issues that go beyond the responsibility of anyone organization. The G20 heads of government or heads of state have periodically confront of summits since their initial meeting in 2008, and the group also hosts separate meetings of finance ministers and central bank governors.

The members include 19 individual countries – Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan South Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, United

Kingdom and United States – along with the European Union (EU). EU is represented by the European commission and by the European Central Bank. Collectively the G20 economies account for around 85% of the gross world product (GWP), 80% of world trade (or, if excluding EU inter trade, 75%), and two – third of the world population.

With the G20 growing in stature after its summit in 2008, its leaders announced on 25th September 2009 that the group would replace the G8 as the main economic council of wealthy nations. Since its inception, the G20s membership policies have been criticized by numerous intellectual, and its summits have been a focus for major protest by anti globalists nationalist and others.

The heads of the G20 nations meet semi – annually. Since November 2011 Cannes summit, all G20 summits have been held annually.

9. BRICS

BRICS is the acronym for an association of 5 major emerging national economies: Brazil, Russia, India, China and South Africa. Originally the 1st four were grouped as “BRICS” (or the BRICS), before the induction of South Africa in 2010. The BRICS members are all leading developing or newly industrialized countries, but they are distinguished by their large, sometimes fast growing economies and significant influence on regional affairs; all five are G20 members. Since 2009, the BRICS nations have met annually at formal summits. China will host the 9th BRICS summits in Xiamen in September 2017.

The term does not include countries such as South Korea, Mexico and turkey for which other acronyms and group association were later created.

As of 2015, the five BRICS countries represent over 3.6 billion people, or half of the world population ; all 5 members are in the top 25 of the world by population, and 4 are in the top 10. The five nations have a combined nominal – GDP of USS16.6 trillion, equivalent to approximately 22% of the gross world product, combined GDP (PPP) of around US \$ 37 trillion and an estimated US \$ 4 trillion in combine foreign reserves. Over all the BRICS are forecasted to expand 4.6% in 2016, from the estimated growth of 3.9% in 2015. The World Bank expects BRICS to growth to pick up to 5.3% in 2017.

The BRICS have received both praises and criticism from numerous commentators. Bilateral relations among BRICS nations have mainly been conducted on the basis of non interference, qualities and mutual benefits.

4.8 SUMMARY

After going through this unit we have learnt that transportation is the means of conveyance or travel from one place to another. Human urge for mobility has paved the way for Society's progress since history began. The history of this mobility or transport is the history of civilization. In remote villages, forest and hilly areas pathways are still important amongst the

different modes of transport. Since ancient civilizations the history of Road Transport started. Gradually it gained its popularity. There were three main types of transportation that increased during the Industrial Revolution: waterways, roads, and Railways. So with the industrial revolution Railway became the pioneer of modern mechanical transport. Railway had the monopoly as the Land Transport unless and until Motor Transport was introduced. Nature has gifted us Waterways. It is the cheapest and oldest form of transport. It is suitable for heavy goods and bulk cargoes. It being natural does not require a huge amount of money in its maintenance. Movement on water is done by using various means like boats, steamers, launches, ships, etc. Rivers are the water highways given by nature. It was highly developed in the pre-railway days. Air transport is the fastest mode of transport. The first flight in the air was made in 1903 for twelve seconds. After the First World War (1914-1918) it was used successfully as a means of transport.

However transports have quite a few limitations too. Due to limited carrying capacity road transport is not economical for long distance transportation of goods and transportation of heavy goods or goods in bulk by road involves high cost. In case of Railway transport it is relatively expensive for carrying goods and passengers over short distances and it is not available in remote parts of the country. Regarding water transport it may be said that as the depth and navigability of rivers and canals vary the operations of different transport vessels also varies accordingly. Air transport is relatively a more expensive mode of transport and is not suitable for transporting heavy and bulky goods.

WE have learnt about the concept of spatial interaction also. It was first used by French geographer Edward Ullman. According to him there are three bases for spatial interaction such as Complementarity, Transferability and Intervening opportunity.

International trade, the economic transactions that are made between countries, has become very important to the economy of any country in the recent years. The rapid growth in export and import of goods and services in the recent years has benefited the standard of living in several ways. Actually whenever the export exceeds imports it creates a positive impact on the economy.

4.9 CHECK YOUR PROGRESS/ EXERCISE

1. True False

- a. Land transport refers to activities of physical movement of goods and passengers on land.
- b. Road transport provides door-to-door service.
- c. Rail transport is available throughout the country even in the mountainous regions.
- d. Air transport is the slowest mode of transport.

- e. Sea transport requires large investment on ships and their maintenance.
- f. Whenever the export exceeds imports it creates a positive impact on the economy.
- g. In Indian context the export of finished goods are lesser than the export of raw materials.
- h. The OPEC or the Organization of the Petroleum Exporting Countries is the only global international organization dealing with the rules of trade between nations.
- i. BRICS is the acronym for an association of 5 major emerging national economies such as, Belgium, Russia, Indonesia, China and South Africa.
- j. OPEC decision has come to play a prominent role in the global oil market and international relation.

2. Fill in the blanks

- a. _____ refers to a mode of transport, which connects two places on the hills, or across a valley or river.
- b. During _____, air transport plays an important role in carrying soldiers as well as supplies to the required areas.
- c. _____ transport is affected by adverse weather conditions.
- d. About _____% of the global oil consumption is for transport activities.
- e. Spatial interaction refers to the _____ of commuters, intercontinental migrants, movements of raw materials and so on.
- f. _____ refers to the cost of overcoming distance.
- g. _____'s stated mission is to coordinate and unify the petroleum policies of its member countries and ensure the stabilization of oil markets
- h. The aims of the Association of Southeast Asian Nations, or ASEAN is to promote _____ studies
- i. _____-was founded in Dhaka on 8th December, 1985.
- j. European Union (EU) is the political and economic union of _____ member states that are located primarily in Europe

3. Multiple choice question

- a. Latin America Free Trade Association(LAFTA) was created in 1960 by
 - i. South Africa, Brazil, China, Mexico, Poland and Uruguay
 - ii. Iran, Iraq, Kuwait, Saudi Arabia, Venezuela
 - iii. Argentina, Brazil, Chile, Mexico, Peru and Uruguay

- b. One of the main features of Road Transport is
 - i. it offers flexibility, choice of routes and delivery at the door.
 - ii. it is available throughout the country except some hilly or mountainous regions.
 - iii. it is used for water supply to residential and commercial areas.

- c. The mode of transport which connects two places on the hills, or across a valley or river is called
 - i. Railway
 - ii. Ropeway
 - iii. Road transport

- d. Water transport refers to movement of goods and passengers on waterways by using
 - i. various means like bus, taxi, car, truck, cycle.
 - ii. various means like passenger aircraft, cargo aircraft, and helicopters.
 - iii. various means like boats, steamers, launches, ships.

- e. EU policies aim to ensure
 - i. the free movement of people, goods and services and capital within the internal market, enact legislation injustices and home affairs and maintains common policies on trade, agriculture, fisheries and regional development.
 - ii. no free movement of people, goods and services and capital within the internal market, and maintains various policies on trade, agriculture, fisheries and regional development.
 - iii. assistance to people in the form of training and research facilities in the educational, professional, technical and administrative spheres

4. Answers the following Questions

1. What are the various modes of transportation?
2. Write short notes on
 - a) Land transportation
 - b) Inland water transportation
 - c) SAARC
 - d) EFTA
 - e) WTO
 - f) OPEC
 - g) ASEAN
3. What are the disadvantages of air transportation?
4. What are the advantages of land transportation?
5. What are the merits of waterways?
6. Compare the merits of land and air transportation system.
7. What do you understand by Bases of Spatial Interaction? State the three bases for spatial interaction.
8. Define International Trade. What are the recent trends in International Trade?

**4.10 ANSWERS TO THE SELF LEARNING
QUESTIONS.**

- 1.a. true
- 1.b.true
- 1.c. false, except some hilly or mountainous regions
- 1.d. false, fastest
- 1.e.true
- 1.f. true
- 1.g. false, in Indian context the export of finished goods is higher than the export of raw materials.
- 1.h. false, World Trade Organization (WTO)
- 1.i. false, Brazil, Russia, India, China and South Africa.

- 1.j. true
- 2.a. Ropeway
- 2.b. war
- 2.c. Air transport
- 2.d. 60%
- 2.e. movement
- 2.f. Transferability
- 2.g. OPEC
- 2.h. Southeast Asian
- 2.i. SAARC
- 2.j. 28
- 3.a.iii.
- 3.b.i.
- 3.c. ii.
- 3.d. iii
- 3.e.i.

4.11 TECHNICAL WORDS:

1. **Trade** - is the activity of buying and selling goods
2. **International** – between or involving different countries
3. **Transferability** - the quality of being transferable or exchangeable

4.12 TASK

1. In a map of India show the important rail routes.
2. Compare the advantages of land transportation against water transportation in tabular form.
3. State the different modes of transportation in land, water and air in tabular form.

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ECONOMIC DEVELOPMENT OF INDIA

Unit Structure

- 5.1 Objectives
- 5.2 Introduction
- 5.3 Subject discussion
- 5.4 Levels of Economic Development in India
- 5.5 Globalization and Indian Economy - its Impact on the Environment
- 5.6 Concept of SEZ and Related Issues in India
- 5.7 Summary
- 5.8 Check your Progress/Exercise
- 5.9 Answers to the self learning questions
- 5.10 Technical words and their meaning
- 5.11 Task
- 5.12 References for further study

5.1 OBJECTIVES

By the end of this unit you will be able to:

- Understand the Economic Development of India
- Discuss Regional Disparities in India
- Learn Globalization and Indian Economy - its Impact on Environment
- Understand Concept of SEZ and Related Issues in India

5.2 INTRODUCTION

In the previous four units Economic Geography has been learnt in details. The definition, nature and scope of Economic Geography, its relationship with other branches of social sciences along with the Factors of location of economic activities and the Sectors of economy such as primary, secondary and tertiary have been studied in the first and second units. In third unit the Classification of Industries; Resources Based and Foot Lose Industries and Weber and Losch's Theory of Industrial Location have been discussed. Modes of transport and transport cost, bases of spatial

interaction, Recent trend in international trade and Major trading organizations and trading blocs such as WTO, OPEC, ASEAN, etc. were the topics of the previous unit. In the present unit we are going to study the Economic Development of India as well as Regional Disparities in India. In the latter part of this unit Globalization and Indian Economy - it's Impact on Environment and Concept of SEZ and Related Issues in India will be discussed.

5.3 SUBJECT-DISCUSSION

India is one of the most populous countries in the world with a population more than 1.2 billion. Economic development of a country with such a huge population depends on both economic and non-economic factors. Agriculture, services and manufacturing industries play a vital role in the development of the Indian economy.

Economic development includes the advancement of economic growth as well as the reduction of inequality and eradication of poverty, increase in employment opportunities and welfare of the masses, etc. It also aims at encompassing human developments. Amartya Sen opines economic development in terms of 'entitlement' and 'capability'. Entitlement refers to the set of alternative commodity bundles that one can command through the totality of rights and obligations that he or she faces.

India is facing acute problem in regional disparities. Per capita income, the proportion of population living below the poverty line, the percentage of urban population of total population, percentage of working population engaged in agriculture, the percentage of workers engaged in industries, infra-structural development etc. are the factors that indicate such imbalances.

A Special Economic Zone (SEZ) is a geographical region that refers to a totally commercial area specially established to promote foreign trade. It has economic laws more liberal than a country's typical economic laws. In the late 1990s the then Union Commerce Minister Murasoli Maran visited the high tech SEZs in China. He was highly impressed by their contribution to the rapid growth of GDP of the country. Hence he thought about taking measures to do the same in India.

5.4 LEVELS OF ECONOMIC DEVELOPMENT IN INDIA

The Indian economy is the third largest economy of the world. The history of Indian economic development can be divided into 3 phases.

- 1. Pre colonial**
- 2. Colonial**
- 3. Post Colonial**

1. Pre-colonial: The economy of India started since Indus Valley Civilization. From Indus valley civilization to 1700 AD can be called pre colonial era. During this phase Indian economy was not very well developed.

2. Colonial: The arrival of East India Company in India caused a huge strain to the Indian economy. The Britishers would buy raw material from India at a cheaper rate and again sold the finished good at a higher rate.

3. Post colonial: When India got independence from British rule in 1947 the process of rebuilding the economy started. During the post-colonial era the 5 years plan were integrated national economy programs. The 1st five years plan (1951-1956) was formulated right after independence and it focused on the development of the primary sector. The 2nd five year plan (1956 - 1961) aimed for rapid industrialization. The 3rd five year plan (1961-1966) stressed on agricultural development and especially on the production of wheat. During this time many primary schools were started in the rural areas. The 4th five year (1969-1974) focused on nationalization of banks and green revolution in India to bring an advancement in agricultural. The 5th five year plan in (1974 - 1978) stressed on employment, poverty and justices. The 6th five years plan (1980 - 1985) made a beginning of economy liberalization. The 7th five years plan (1985 - 1990) stressed on economy productivity. The 8th five years plan (1992 - 1997) stressed on investment on gross domestic product. The 9th five years plan (1997 - 2002) stressed on development on unexploited potential of the country. The 10th five years plan (2002 - 2007) specially aimed to reduce poverty. The 11th five years plan (2007 - 2012) mainly stressed on inductive growth and improvement through education skill development it also aimed for gender equality and environmental sustainability. The 12th five years plan (2012 - 2017) is specially aimed to improve the growth rate.

At present India is the 9th largest economy in terms of GDP. In the year 2000 the percent of growth rate was 5.6 and in 2014 it increased to 6.9. India consumes the 2nd largest amount of oil in Asia Pacific Region after China. India is ranked 133rd on the “Ease of doing business Index” in 205. Corruption in many forms is a problem which is affecting the economy of India. Indian labour force is growing by 2.5% a year, but the employment is growing only at 2.3% a year. Environmental degradation, lack of clean and safe water is the problems which are affecting the economy of India.

Thus we can say that through time, India has witnessed development in all sectors of economy. Agriculture and related sectors employ 60% of the total work force. The Industrial sector contributes 1/4th in the GDP and provides employment to about 1/5th of the total work force. The service industry has shown a very fast growth in India. It is perhaps the faster growing sector in Indian economy. Education, health services and infrastructure is also showing a positive growth. On top of that there is sound governance. Thus, the economy of India is in the path of development in all directions.

India is facing the problem of acute regional imbalances and the indicators of such imbalances are reflected by the factors like per capita income, the proportion of population living below the poverty line, the percentage of urban population of total population, percentage of working population engaged in agriculture, the percentage of workers engaged in industries, infra-structural development etc.

A region may be known as economically backward as it is indicated by the symptoms like excessive pressure of population on land, too much dependence on agriculture, high incidence of rural employment and high degree of under-employment, low productivity in agriculture and cottage industry, under urbanisation, absence of basic infra-structural facilities etc.

In India, some important socio-economic indicators are very prominent to reflect the regional imbalances between various regions or states of the country.

1. State per Capital Income as an Indicator of Regional Imbalance:

The most important indicator of regional imbalance and disparity among the different states of India is the difference in per capita state income figures. In 2000-01, the national average per capita income in India was Rs. 10,254. The states whose per capita income figures were higher than this national average include Punjab, Goa, Haryana, Maharashtra, Gujarat, Karnataka, Tamil Nadu and Kerala.

Moreover, the range of regional disparity in India has been widening continuously is reflected from the differences between per capita income of Bihar at the bottom and that of Punjab at the top.

2. Inter-State Disparities in Agricultural and Industrial Development:

Another important indicator of regional disparities is the differences in the levels of agricultural and industrial development between different states of the country. In India, states like Punjab, Haryana- and part of Uttar Pradesh had recorded a high rate of agricultural productivity due to its high proportion of irrigated areas and higher level of fertilizer use.

Due to the adoption of HYVP or New Agricultural Strategy the combined share of Punjab and Haryana in total production of food grains of the country increased from 7.5 per cent in 1964-65 to 16.8 per cent in 1992-93 and more particularly the share in wheat production was as high as 34.3 per cent in 1992- 93 although these two states accounted for only 4.3 per cent of the total population of the country.

3. Population below Poverty Line:

Percentage of population living below the poverty line in different states is another important indicator of regional imbalance or disparities. The percentage of population living below the poverty line for the whole country was 26 per cent in 1999-2000 and there were 12 states whose

percentage of population living below the poverty line have exceeded this all-India average.

Bihar, Orissa, Madhya Pradesh and Uttar Pradesh are the four states which have the highest percentage of population below the poverty line as well as they have the lowest per capita income in the country.

The main reasons behind this low percentage of poverty in Punjab and Haryana are their strong production base and better distribution of income.

4. Spatial Distribution of industries:

Another important indicator of regional imbalance is the uneven pattern of distribution of industries. Since independence, states like Karnataka, Andhra Pradesh, Kerala, Gujarat, Punjab and Haryana have achieved considerable development in its industrial sector. But West Bengal could not keep pace in its industrial growth as much as other industrially developed states. In this way disparities in industrial growth between different states have been reduced to some extent.

One more thing that is to be noticed is that as the country as a whole has achieved industrial development at a fair rate since independence but the spatial distribution of such industrial development between different states remained almost uneven.

5. Degree of Urbanization:

Disparities in the degree of urbanization are another important indicator of regional imbalance. In respect of urbanization, the percentage of urban population to total population is an important indicator. The all-India average of such percentage of urban population stands at 26 per cent in 1991. The states which are maintaining higher percentage of urban population than the national average include Maharashtra, Tamil Nadu and Gujarat and then followed by Karnataka, Punjab, Andhra Pradesh and West Bengal. Whereas, the states which are having a lower degree of urbanization include Himachal Pradesh, Assam, Bihar, Orissa, Arunachal Pradesh etc.

6. Per Capita Consumption of Electricity:

Per capita consumption of electricity is also another important indicator of regional disparities. States like Punjab, Gujarat, Haryana, Maharashtra etc., having higher degree of industrialization and mechanization of agriculture, have recorded a higher per capita consumption of electricity than the economically backward states like Assam, Bihar, Orissa, Madhya Pradesh and Uttar Pradesh.

7. Employment Pattern:

Employment pattern of workers is also an important indicator of regional disparities. States attaining higher degree of industrialization are maintaining higher proportion of industrial workers to total population. Even the industrially developed states like Gujarat, Maharashtra, Tamil

Nadu and West Bengal are still maintaining a higher proportion of agricultural labourers to total workers as the industrial sector of these states have failed to enlarge the scope of employment sufficiently to engage more and more rural workers.

8. Intra-State Imbalance:

Intra-state imbalance is another important indicator of regional imbalance existing within each particular state. There is a growing tendency among most of the advanced states to concentrate its developmental activities towards relatively more developed, urban and metropolitan areas of the states while allocating its industrial and infra-structural projects.

As for example, in West Bengal, about 70 per cent of its new industrial concentration was located in the Hugli district. Similarly, about 86 per cent of registered factories in Maharashtra were mostly concentrated in a few urban areas, leaving the other potential areas untouched.

5.5 GLOBALIZATION AND INDIAN ECONOMY - ITS IMPACT ON ENVIRONMENT

Globalization is the tendency of investment funds and business to move beyond domestic and national markets to other markets around the globe, thereby increasing the inter connection of the world. Globalization has had the effect of markedly increasing international trade and cultural exchange.

Globalization has had far – reaching effect on our life style. It has led to faster access to technology, improved communication and innovation. Apart from playing an important role in bringing people of different culture together, it has ushered a new era in the economy prosperity and has opened up vast channels of development. However, globalization has also created some areas of concern, and prominent among these is the impact that it has had on the environment. Globalization has featured extensively in the debates on environmentalism, and green activities have highlighted its far – reaching effects. Activist have pointed out that globalization has led to an increase in the consumption of products, which has impacted the ecological cycle. Increased consumption leads to n increase in the production of goods, which in turn puts stress on the environment. Globalization has also led to an increase in the transportation of raw materials and food from one place to another. Earlier, people used to consume locally – grown food, but with globalization people consume products that have been developing foreign countries; the amount of fuel that is consumed in transportation of these products has led to an increase in the pollution levels. Transportation has also put a strain on the non – renewable sources of energy, such as gasoline. The gases that are emitted from the aircraft have led to the depletion of the ozone layer. Apart from increasing the green house effect, the industrial waste that is generated as a result of production has been dumped in oceans. This has killed many under water organism and has deposited many harmful chemicals in the ocean. The damaged caused to eco system from the oil that spilled from

one of the leaking container of British petroleum in 2010 is just one of the examples of the threat globalization poses to the environment.

5.6 CONCEPT OF SEZ AND RELATED ISSUES IN INDIA

A **special economy zone (SEZ)** is an area in which business and trade laws are different from rest of the country. SEZs are located within a country's national borders, and their aims include: increased trade, increased investment, job creation and effective administration. To encourage businesses to set up in the zone, financial policies are introduced. These policies typically regard investing, taxation, trading, quotas, customs and labour regulations. Additionally, companies may be offered tax holidays, where upon establishing in a zone they are granted a period of lower taxation.

The creation of special economy zones by the host country may be motivated by the desire to attract foreign direct investment (FDI). The benefits a company gains by being in a special economy zone may mean it can produce and trade goods at a lower price. In some countries the zones have been criticized for being little more than labour camps, with workers denied fundamental labour rights.

The Special Economy Zone (SEZ) policy in India first came into inception on April 1, 2000. The prime objective was to enhance foreign investment and provide an internationally competitive and hassle free environment for exports.

At present India has eight functional SEZs located at Santa Cruz (Maharashtra), Cochin (Kerala), Kandla and Surat (Gujarat), Chennai (Tamil Nadu), Visakhapatnam (Andhra Pradesh), Falta (West Bengal) and Noida (Uttar Pradesh). Further an SEZ in Indore (Madhya Pradesh) is now ready for operation.

In addition, 18 approvals have been given for setting up of SEZ's on the basis of proposals received from the state governments. State governments will have a very important role to play in the establishment of SEZ's.

5.6.1 Advantages of SEZ in India

Worldwide SEZ's have played a vital role in the promotion of exports, employment generation as well as overall development of an economy. Some of the advantages of SEZ are -

1. **Attracting Foreign Investments:** Free trade and foreign direct investments have been powerful channels for transmission of technology from the industrially developed advanced countries to the developing nations. The process has benefited the both parent companies and the developing countries.
2. **Providing Employment Opportunities:** One of the important objectives of SEZ's is to reduce unemployment by creating employment

opportunities in developing countries. In order to increase the job creating effect, SEZ's are often established in areas where a big number of workers are available. SEZ's in India play an important role in creating employment opportunity.

3. **Promoting Exports:** Generally success of SEZ's policy is just by its ability to enhance foreign investment and promote export.

4. **Technology Gradation and Technology Transfer:** Most of economy and social progress of the past few countries has been due to technology. Most technological improvements in developing countries to a large extent are dependent on the diffusion of technology from advanced countries. SEZ attract export oriented FDI and promotes other forms collaboration between local firms and MNC's.

5.6.2 Disadvantages on SEZ

Following the SEZ act of 2005 and SEZ rules of 2006, the department of commerce has approved the setting up of a large number of SEZ's in different parts of the country. This has generated debates on a number of issues and they can be broadly clubbed under five heads which are as follows:

1. **Loss of Government Revenue:** The SEZ act, 2005 offers various fiscal and non – fiscal incentives and facilities for attracting investments into the SEZ's.

2. **Degeneration of Agriculture and Associated Livelihood Issues:** Currently the most widely discussed issue is the land acquisition for SEZ mostly from farmers. It has been argued that due to the implementation of the SEZ policy in different parts of the country, a large amount of agricultural land will be put to use for industrial purpose and that will have several implications on the livelihood of farmers and food securities.

3. **Uneven Regional Development:** One of the important objectives of planning of India is to secure a balanced growth of the different regions of the country and thereby reduce regional disparities in development. It is essential for the success of democratic planning that the benefits of economic development should reach all the regions of the country.

4. **Misuse of Land of Real Estate:** It has been argued by many cities that in India on the name of industrialization and economic development, the land acquisition act is now being used to take away lands from poor farmers to give these to mega rich private companies for their real estate business.

5. **Discrimination against Existing Industries:** There is a criticism that due to fiscal incentives enjoyed by units in as SEZ, the industries outside SEZ feel they are discriminated by the Government.

The state of Maharashtra has been in the forefront in attracting foreign direct investments for accelerating the pace of economy growth. The SEZ scheme seeks to create a simple and transparent system and procedures for

enhancing productive and the ease of doing business in Maharashtra. According to government of India guidelines SEZ's can be developed in the public, private or joint sectors, or by the state government. They are expected to promote the establishment of large, self – contained areas supported by world – class infrastructure oriented towards export production. Exploiting the full potential of the concept of SEZ's would bring large dividends to Maharashtra in terms of economy and industrial development and the generation of new employment opportunities.

5.7 ENVIRONMENT AND ECONOMIC DEVELOPMENT AND RELATED ISSUES

The issue of economic growth and the environment essentially concerns the kinds of pressures that economic growth, at the national and international level, places on the environment over time. The relationship between ecology and the economy has become increasingly significant as humans gradually understand the impact that economic decisions have on the sustainability and quality of the planet.

Economic growth is commonly defined as increases in total output from new resources or better use of existing resources; it is measured by increased real incomes per capita. All economic growth involves transforming the natural world, and it can effect environmental quality in one of three ways. Environmental quality can increase with growth. Increased incomes, for example, provide the resources for public services such as sanitation and rural electricity. With these services widely available, individuals need to worry less about day-to-day survival and can devote more resources to conservation . Second, environmental quality can initially worsen but then improve as the growth rate rises. In the cases of air pollution , water pollution , and deforestation and encroachment there is little incentive for any individual to invest in maintaining the quality of the environment. These problems can only improve when countries deliberately introduce long-range policies to ensure that additional resources are devoted to dealing with them. Third, environmental quality can decrease when the rate of growth increases. In the cases of emissions generated by the disposal of municipal solid waste , for example, abatement is relatively expensive and the costs associated with the emissions and wastes are not perceived as high because they are often borne by someone else.

The World Bank estimated that, under present productivity trends and given projected population increases, the output of developing countries would be about five times higher by the year 2030 than it is today. The output of industrial countries would rise more slowly, but it would still triple over the same period. If environmental pollution were to rise at the same pace, severe environmental hardships would occur. Tens of millions of people would become sick or die from environmental causes, and the planet would be significantly and irreparably harmed.

Yet economic growth and sound environmental management are not incompatible. In fact, many now believe that they require each other.

Economic growth will be undermined without adequate environmental safeguards, and environmental protection will fail without economic growth.

The earth's natural resources place limits on economic growth. These limits vary with the extent of resource substitution, technical progress, and structural changes. For example, in the late 1960s many feared that the world's supply of useful metals would run out. Yet, today, there is a glut of useful metals and prices have fallen dramatically. The demand for other natural resources such as water, however, often exceeds supply. In arid regions such as the Middle East and in non-arid regions such as northern China, aquifers have been depleted and rivers so extensively drained that not only irrigation and agriculture are threatened but the local ecosystems.

Some resources such as water, forests, and clean air are under attack, while others such as metals, minerals, and energy are not threatened. This is because the scarcity of metals and similar resources is reflected in market prices. Here, the forces of resource substitution, technical progress, and structural change have a strong influence. But resources such as water are characterized by open access, and there are therefore no incentives to conserve. Many believe that effective policies designed to sustain the environment are most necessary because society must be made to take account of the value of natural resources and governments must create incentives to protect the environment. Economic and political institutions have failed to provide these necessary incentives for four separate yet interrelated reasons:

- 1) short time horizons;
- 2) failures in property rights;
- 3) concentration of economic and political power; and
- 4) immeasurability and institutional uncertainty.

Although economists and environmentalists disagree on the definition of sustainability, the essence of the idea is that current decisions should not impair the prospects for maintaining or improving future living standards. The economic systems of the world should be managed so that societies live off the dividends of the natural resources, always maintaining and improving the asset base.

Other issues:

Pollution

Deforestation

Loss of biodiversity

Climate change

Environmental degradation.

5.8 SUMMARY:

After going through this unit we have learnt that the two century long British regime had negative impacts on Indian economy. During colonial period the agricultural sector had low productivity and surplus of labour. Lack of modernisation in the industrial sector and a bad shaped trade etc. put India into economic challenges at the time of independence. In the modern era it is observed that each and every state of India differs in terms of their productive potential and the type of industry they can support. The potential of the states drives the diversified competency of the nation. On the other hand regional specialization provides the impetus for growth of the nation.

Globalization describes a process by which regional economies, societies, and cultures have become integrated through a global network of communication, transportation, and trade. It has made the major environmental damages more prominent, even though it's only indirectly responsible. However, 97 percent of climate scientists agree that humans have changed Earth's atmosphere in dramatic ways over the past two centuries, resulting in global warming. Apart from increasing the green house effect, the industrial waste and many harmful chemicals that has been dumped in oceans has killed many under water organism. Some national, regional and international policies have reduced the negative effects of globalization on the environment.

SEZ is a geographical region that has economic laws more liberal than a country's typical economic laws. Moreover it is a trade capacity development tool. It aims at promoting rapid economic growth and uses tax and business incentives to attract foreign investment and technology. SEZ's are important for the third world countries like India because they have been in the race for rapid economic growth. The SEZ's could drastically improve the economic activity in the country; make the country's export competitive and globally noticeable. The Special Economy Zone (SEZ) policy in India first came into inception on April 1, 2000. At present India has eight functional SEZs located at Santa Cruz (Maharashtra), Cochin (Kerala), Kandla and Surat (Gujarat), Chennai (Tamil Nadu), Visakhapatnam (Andhra Pradesh), Falta (West Bengal) and Noida (Uttar Pradesh). Further an SEZ in Indore (Madhya Pradesh) is now ready for operation. There are several advantages and disadvantages of SEZ in India. However to be economically viable SEZ's should be approved over a large land area at least greater than 1000 acres so that rapid economic growth, profitable and self sustainable development happens in that particular area. The prevalence of Relaxed Tax norms, Labour laws will attract foreign investment and major industries to setup industries in the SEZ's making it profitable.

1. True False

- a. One of the important indicators of regional disparities is the differences in the levels of agricultural and industrial development between different states of the country.
- b. The percentage of population living below the poverty line for the whole country was 36 per cent in 1999-2000
- c. SEZs are located outside a country's national borders.
- d. At present India has eight functional SEZs located at Santa Cruz (Maharashtra), Cochin (Kerala), Kandla and Surat (Gujarat), Chennai (Tamil Nadu), Visakhapatnam (Andhra Pradesh), Falta (West Bengal) and Noida (Uttar Pradesh).
- e. An SEZ in Siliguri (West Bengal) is now ready for operation.

2. Fill in the blanks

- a. At present India is the _____ largest economy in terms of GDP.
- b. The 1st five years plan (1951-1956) was formulated right after independence and it focused on the development of the _____ sector.
- c. The most important indicator of regional imbalance and disparity among the different states of India is the difference in _____ state income figures.
- d. _____ has led to faster access to technology, improved communication and innovation.
- e. _____ has put a strain on the non-renewable sources of energy, such as gasoline.

3. Multiple choice question

- a. The 4th five year (1969-1974)
 - i. focused on nationalization of banks and green revolution in India to bring an advancement in agricultural.
 - ii. stressed on employment, poverty and justices.
 - iii. is specially aimed to improve the growth rate.

- b. A region may be known as economically backward as it is indicated by the symptoms like
 - i. excessive pressure of air on land, too much dependence on fertiliser, high incidence of urban employment and high degree of employment, high productivity in agriculture and cottage industry etc.
 - ii. excessive pressure of population on sea routes, too much dependence on interstate travelling, high degree of under-employment, low productivity in iron steel and cotton industry etc.
 - iii. excessive pressure of population on land, too much dependence on agriculture, high incidence of rural employment and high degree of under-employment, low productivity in agriculture and cottage industry, under urbanisation, absence of basic infra-structural facilities etc.
- c. Pre colonial era can be called
 - i. from Indus valley civilization to 1700 AD.
 - ii. from Indus valley civilization till today.
 - iii. from 1500 A.D. to 1700 AD.
- d. The Industrial sector in India contributes
 - i. $\frac{1}{5}$ th in the GDP and provides employment to about $\frac{1}{4}$ th of the total work force.
 - ii. $\frac{1}{3}$ th in the GDP and provides employment to about $\frac{1}{6}$ th of the total work force.
 - iii. $\frac{1}{4}$ th in the GDP and provides employment to about $\frac{1}{5}$ th of the total work force.
- e. The main reasons behind low percentage of poverty in Punjab and Haryana
 - i. are their strong industrial base and better distribution of finished products.
 - ii. are their strong production base and better distribution of income.
 - iii. are their weak production base and weaker distribution of income.

4. Answers the following Questions

1. Write a short note on the history of Indian economic development.
2. What is Regional Disparities in India? State the important socio-economic indicators that reflect the regional imbalances between various regions or states of the country.

3. What is SEZ? What are the advantages of SEZ in India?
4. Make a comparative study between the advantages and disadvantages of SEZ in India.
5. What happened to the Indian economy with the arrival of East India Company?

5.10 ANSWERS TO THE SELF LEARNING QUESTIONS.

- 1.a. true
- 1.b.false, 26
- 1.c.. false, SEZs are located within a country's national borders
- 1.d.true
- 1.e. false, Indore (Madhya Pradesh)
- 2.a. 9th
- 2.b. primary
- 2.c. per capita
- 2.d. Globalization
- 2.e. Transportation
- 3.a.i.
- 3.b.iii.
- 3.c i.
- 3.d.iii.
- 3.e.ii.

5.11 TECHNICAL WORDS:

1. **Per Capita Income-** Total national income (GDP) divided by total population.
2. **Globalization-** the process by which businesses start operating on an international scale
3. **Transportation-** the process of being transported
4. **SEZ-** special economic zone (SEZ) is an area where business and trade laws are different from rest of the country.
5. **Economic development-** general improvement in living standards

5.12 TASK

1. In a map of India locate the eight functional SEZs.
2. In a chart make a comparative study of the advantages and disadvantages of the SEZs by using bullets.

5.13 REFERENCES FOR FURTHER STUDY

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QUESTION PAPER PATTERN

Time: 3hours		Marks;100
N.B.1. All questions are compulsory and carry equal marks. 2. Use of Map Stencils is permitted. 3. Draw sketches and diagrams wherever necessary.		
Q.1	Long answer question on Unit-I	20Marks
OR		
	Long answer question on unit –I for 20 Marks or Two short answer questions each 10 Marks	20Marks
OR		
Q.2	Long answer question on Unit-II	20Marks
OR		
	Long answer question on unit –II for 20 Marks or Two short answer questions each 10 Marks	20Marks
OR		
Q.3	Long answer question on Unit-III	20Marks
OR		
	Long answer question on unit –III for 20 Marks or Two short answer questions each 10 Marks	20Marks
OR		
Q.4	Long answer question on Unit-IV	20Marks
OR		
	Long answer question on unit –IV for 20 Marks or Two short answer questions each 10 Marks	20Marks
OR		
Q.5	Long answer question on Unit-V	20Marks
OR		
	Long answer question on unit –V for 20 Marks or Two short answer questions each 10 Marks	20Marks