LESSON 7
LOCATION OF THE BUSINESS

LOCALIZATION OF BUSINESS AND BUSINESS COMBINATIONS

Context

Success of an organization largely depends upon suitable location as well as effective strategy for management of resources. It also involves efficient analysis of the business environment, both internal and external, so that it can optimize the opportunities available in the market. This analysis may take the form of expanding the business or integrating different units of an organization or supporting organizations. While Mergers and Acquisitions can do former, later can take place by forward integration and backward integration.

Contents:

Location of the business and business combination

1. Theories of Location
2. Factors affecting Location
3. Scale of Operations
4. Size of Business Firm
5. Meaning and Types of Business Combination

Objectives:

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

- Introduction
- Choice of Location
- Objectives of Location
- Limitation and Problems
- Weber theory of Location
- Sargent theory of Location
- Factors affecting Localization
- Scale of operations
- Size of business firm
- Meaning and types of business combinations

Introduction:

Location of Business

Selection of a suitable site for establishing a business unit is the major decision of any of the organisation. The location can be realistic and unrealistic. Investing in realistic location is the important and feasible decision before starting a business. One of the significant factors affecting the successful operation of any type of business organization, be it large or small, is the location of the organization. We are aware that the main objective of a business organization is to make profit and sustain it. Management of the organization can be efficiently

run if the size, location contribute to the economies of all kinds of business processes, i.e., production, distribution etc.

It is important to note here that the suitable location of the organization does not imply the most favorable location where the cost of production and distribution are lowest. Rather it means that all factors that influence the running of an organization is optimized to their maximum benefit.

Decision regarding location of business organization involves three areas –

1. Determination of the region where the plant is to be located
2. Choice of the city where the plant is to be situated.
3. Choice of the specific site where the plant must be located.

"Optimum location is that which, after consideration of all factors affecting costs of products to be manufactured and delivered to customers, will afford the enterprise greatest advantage to be obtained by virtue of location".

Success of an organization largely depends upon suitable location as well as effective strategy for management of resources. It also involves efficient analysis of the business environment, both internal and external, so that it can optimize the opportunities available in the market. This analysis may take the form of expanding the business or integrating different units of an organization or supporting organizations. While mergers and acquisitions can do former, later can take place by forward integration and backward integration.

Definition: "an appropriate location is important to the efficient and economical working of a plant whereas an inappropriate location may restrict the growth and efficiency of the enterprise, because it exercises a great influence on the cost of production and distribution".

Choice of good location

It is important because

1. It is a long-term decision
2. Errors in deciding locations are very difficult and expensive to rectify
3. In the location it has a bearing on the plant lay out of machinery, equipment's, and process of production

Objectives of location

- To find out the optimal utilization of plant
- Reduces the cost of production
- Gathering of resources
- Reduce the cost of distribution
- Easy availability of producers and buyers.

Limitations and problems

a. Establishment related problems

b. Expansion related problems

a. Establishment related problems

1. Problems in shifting of product from one place to another
2. Changes in government policies
3. Shift in population
4. Inefficiency of local resources
5. Environmental conditions

b. Expansion related problems

1. Inefficiency of place
2. Government policy
3. Availability of extra/ useful resources
4. Lack of Faith in the market

Factors that influence location decision:

Many factors influence decision making regarding location of the business. All these factors can be categorized under two broad groups: -

1. Primary factors (Controllable Factors)
2. Secondary factors (Uncontrollable Factors)

Factors which generally influence in deciding the location of a plant are-

Primary Factors:

Raw material: there are two types of raw materials 1. Ubiquities and 2. Ambiguities (localized raw material).

Ubiquities are raw materials that re generally found everywhere (water, Clay etc.) and hence the ubiquities have no influence on the location of industries. The localized raw materials are those which are found only in certain localities, viz., coal, Iron, ore, cotton, sugarcane, etc., these localized raw materials are of two types viz., raw materials, which lose weight in the process of production and those which impart their entire weight to the finished product.

From the point of view of minimization of transport costs, the nature of raw material is of great importance. Certain raw material is of weight-losing character, say sugarcane. Such materials lose much of their weight while passing through the process of production has a result, the finished product is lighter than the raw materials used in its manufacture. Apart from these considerations, it is suggested that the promoter of an industrial venture must view the supply of raw material from other different angles also.

Market: The advantage of proximity to market is not only in the transport cost but also in the personal touch between the producers and consumers. In addition, the increased demand for rapid and regular delivery of small consignments and the practice of offering

after sale services made it imperative for the producers to be near the consumers or at least to open branches in those centers.

Fuel and power: The problem of fuel and power can also be solved with reference to the nature of raw materials. The industries, which use very large quantities of coal, are generally located near the coalmines.

Transport: The facilities for transport available in a particular region and the policy of freight rates are also of great importance.

Labour: Another important factor influencing the location of industries is labour. Industries can be started only at a place where the right type of labour is abundantly available at reasonable wages.

Secondary Factors:

1. Another factor of some importance has been the momentum of an early start. There are several places where, to begin with, only one or two factories were started.
2. Industrial atmosphere is also one of the significant factors influencing the location of business.

Apart from above mentioned factors, some important secondary factors and strategic considerations are listed as below: -

3. Personal factors
4. Historical factors
5. Political Stability
6. Special concessions and benefits.
7. Balanced regional developed of industries.
8. Location patterns.

Objectives of deciding good location

1. To find out the optimal utilization of plant
2. Reduces the cost of production
3. Gathering of resources
4. Reduce the cost of distribution
5. Easy availability of producers and buyers.

Limitations and problems

a. Establishment related problems

b. Expansion related problems

- Establishment related problems:

1. Problems in shifting of product from one place to another
2. Changes in government policies
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- Expansion related problems

1. Inefficiency of place
2. Government policy
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THEORIES OF LOCALIZATION

a. Weber's theory

b. Sargent Florence theory

(A) Weber's Theory of Location

Weber's theory of location

Given by Prof. Alfred weber of Germany in 1909. This theory is considered as the first scientific theory of location.

Weber's approach to the problem of industrial location is through variations in the cost of production caused by regional differences. On an analysis of various components of costs, Prof. Weber conclude that except raw material, labour, and transport charges, others do not show any significant variations in costs among different regions. Therefore, he laid down three regional factors of location, viz., raw material prices, cost of labour, and cost of transportation. He has also pointed out that the differences in the raw material cost from region to region are due to the distances over which they have to be transported and hence they are considered as form of transport cost.

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. He singled out two special cases. In one the weight of the final product is less than the weight of the raw material going into making the product. This is the weight losing case. In the other the final product is heavier than the raw material that require transport. Usually this is a case of some ubiquitous (everywhere available) raw material such as water being incorporated into the product. This is called the weight-gaining case.

Prof. Weber also stated that cheap labour is available only in certain centers and due to the influence of this factor the location may be deviated from the point of minimum transportation cost.

Transport cost, as per Weber depends only the weight to be transported and the distance to be covered. Transport charges are to be incurred in every industry either for transporting raw materials to the place of the production, and for transporting finished goods to the Centre for consumption and for both.

Weber also classified all raw materials into localized material and ubiquities. Localized raw material is those which confined to specified place such as Iron, ore, coal, lime stones, wood etc., and ubiquities are common material which are available everywhere such as bricks, clay, sand water etc.,

Classification of materials-

Weber classified materials in two categories i.e.

- Ubiquitous materials and
- Localized materials

Ubiquitous materials are those materials which are available everywhere e.g., water, sand, clay, brick etc. whereas

Localized materials are confined to regions, e.g., coal, iron-ore, cotton, cement etc.

Localized materials exercise considerable influence on industrial location, but ubiquitous materials are insignificant.

Weber observed that the influence of localized materials varies according to their behaviour in the process of production.

On this basis, further localized materials are sub-divided into two categories like-

1. Pure materials
2. Gross materials

Pure or non-weight- losing materials- are those materials which do not lose much of their weight in the process of production e.g.- cotton, wool, iron ore. These materials do not pull plants to their place of deposit because the cost of transportation remains the same for both "*raw materials and finished products".*

Gross or weight-losing materials – are those materials which impart a small part or none of their weight to the finished product e.g., sugarcane, coal and seeds etc. These materials attract production towards places of their deposits as the weight of materials to be transported

in many times more than the weight of the finished product. As per Weber, it is advisable that industries like – sugar which use gross raw materials tend to be located near the source of materials for e.g., sugarcane farms.

Weber developed a mathematical formula based on his observation to measure the relative pull of materials and the market on industrial location. This ratio called as "material index" which can be calculated as

$$\text{Material index} = \frac{\text{Weight of localized material}}{\text{Weight of the finished product}}$$

Industries with a high material index more than one tend to be located the near of source of materials while those with a low material index less than one are attracted towards the market. Weber expressed his views that "the material index measures the total weight to be moved in a locational figure per unit of product which is known as 'locational weight' of the respective industry. All industries whose material index is not greater than one and whose 'locational weight', of the respective industry is not greater than two lie at the place of consumption". A plant is generally attracted towards the Centre of consumption when ubiquitous materials had substantially to the weight of product.

Labour cost (Primary Factor) -

Labour costs generally relates to primary factor which influence the location of industries, the reason is availability of cheap labour. Any plant may deviate from the point of least transportation cost when the saving in labour cost is greater than additional cost of transportation at the next center. Points of equal deviation from the place of minimum cost of transportation is measured by 'Isophanes'. Isodapanes represent point of equal transportation cost including assembling cost of materials and distribution cost of finished product. On the one hand any of these points touch a cheaper labour center and may correspond with the economies of labour and on the other hand the additional transportation cost.

It is called the critical Isodapanes. If the actual labour center lies within the area of critical Isodapanes then migration of the industry takes place the result in greater economy in labour cost than the extra transportation cost involve.

The pull of labour basically depends upon labour cost per unit of product and locational weight. Labour cost per unit of finished product is measured by labour cost index i.e proportion of labour cost to the weight of the product, locational weight is the weight to be transported during the process of production.

Weber's formula – Labour coefficient= Labour cost index

Locational weight

Higher the labour coefficient, greater is the tendency for a plant to be located near the centre of cheap labour supply.

Secondary factors-

Basically, secondary factors of location of plant lead to the concentration or dispersal of industries. Weber called these factors as *agglomerative and deagglomerate factors*.

The point for locating an industry that minimizes costs of transportation and labor requires analysis of these factors:

Material Index

The point of optimal transportation based on the costs of distance to the "material index" - the ratio of weight to intermediate products (raw materials) to finished product.

In one scenario, the weight of the final product is less than the weight of the raw material going into making the product -- the *bulk-reducing industry*. For example, in the copper industry, it would be very expensive to haul raw materials to the market for processing, so manufacturing occurs near the raw materials. (Besides mining, other primary activities (or extractive industries) are considered material oriented: timber mills, furniture manufacture, most agricultural activities, etc. Often located in rural areas, these businesses may employ most of the local population. As they leave, entire cities lose their economic base.)

In the other, the final product is heavier than the raw materials that require transport. Usually this is a case of some ubiquitous raw material, such as water, being incorporated into the product. This is called the *weight-gaining industry*.

Labor

The labor distortion: sources of lower cost labor may justify greater transport distances and become the primary determinant in production.

A. UNSKILLED LABOR – Industries such as the garment industry require cheap unskilled laborers to complete activities that are not mechanized. They are often termed "ubiquitous" meaning they can be found everywhere. Its pull is due to low wages, little unionization and young employees.

B. SKILLED LABOR - High tech firms, such as those located in Silicon Valley, require exceptionally skilled professionals. Skilled labor is often difficult to find.

Criticism of Weber's theory-

- Weber's theory of location of plant has been criticized on the grounds like – The assumptions taken by the Weber are seems oversimplifies and unreal. As such, with regards to the transportation cost. He stated that, transport cost in terms of weight and distance alone. But the cost of transport also depends on the types of transport and quality of goods.

1. *The theory is based upon over simplified and unrealistic assumptions-*

Firstly, the assumption means it is not true that there are fixed centers of consumption. In actual practice, the consumers of a product are usually widely scattered that is not possible to pinpoint a fixed point of consumption in relation to which transportation cost may be calculated. Moreover, there may be a shift in the consumption centers with a shift in population. Consumption centers are the cause as well as the effect of the change in industrial location.
Secondly, it is objectionable that to assume transportation rates are uniform throughout the country. In real sense the freight rates generally vary from one region to another. Weber calculated the cost of transport only based on weight and distance. He overlooked the influence the mode of transportation. So, the transportation costs is not very realistic.
Thirdly, assumption is not correct that there are fixed centers with unlimited supplies of labour. Further, wage levels do not remain constant when there is a high degree of concentration or localization of industry at one place. So, the theory is devoid of reality which cannot serve a scientific analysis of the factors affecting the location.

2.*Weber's approach to location is lopsided and his selection of factors is arbitrary* –
This theory does not focus on different factors like – climate, government policy and personal linking which may exercise important influence in location. The theory is based empirical analysis of actual facts.

3. *The classification of factors as 'primary' and 'secondary' is arbitrary-*
Any particular factor which is prime significance to the location of one industry may have little influence in case of another industry. The pull of a particular factor changes with time and place. Therefore, materials are often drawn from a large number of alternative fixed points which divert artificial to divide raw materials into ubiquitous and localized materials.

4. *Weber's theory is founded upon for faulty analysis-*

The theory is overburdened with technical considerations and is devoid of the considerations of costs and prices.

Despite its shortcomings, Weber's theory of location of plant is important analytical tool for the study of industrial location. A shift in location arises because of the changes in factors of production e.g. –

- Land
- Labour
- Capital and
- Transport

Change in the combination of the factors generally cause a change in location. So location is considered as a variation of the widely accepted general theory of substitution.

(B) Sargent Florence's theory of location of plant-

This theory is based on statistical analysis of data. He criticizes the Weber's theory by geographical location. According to him the relation of an industry to an area is not so important as the relation of the industry to the distribution of the occupied population as a whole

Professor Sargent has followed the inductive method in formulating his theory of location. Sargent's theory is more practical and realistic than that given by Weber. After properly analyzing statistical data, Sargent tried to ascertain the tendency of location of industries.

On the basis of production census he has tried to find out the statistical measures of location and has not accepted the traditional view of the geographical context, not the region or area as such but the working population in that area is more important. Sargent has used two new concepts in his theory of location.

Sargent Florence has given inductive theory of location which is based upon statistical analysis of data. He expressed his views "the relation of an industry to an area is not so important as the relation of the industry to the distribution of the occupied population as a whole". He used two new concepts namely -

1. Location factor
2. Coefficient of localization

These generally measures the relationship between distribution of industry and occupational distribution of population.

Location factor –

It is basically an index of the degree of concentration of any industry in a particular region. This index is based on the idea that location can be construed as the degree of dissimilarity between the geographical distribution of industry and the geographical distribution of the country's population, expressed as-

$$\text{Location factor} = \frac{\text{Total number of workers employed in an industry in the region}}{\text{Total number of workers in the industry throughout the country}} \div \frac{\text{Total numbers of workers of the region}}{\text{Total number of workers in the country}}$$

The location factor for each region would be one or unity if an industry is evenly distributed over the whole country. If the location factor exceeds one, it indicates that the region has a higher share of the industry than what is legitimately due to it. A location factor of less than one shows the region is not having a sufficient share of the industry.

The indices can reveal only the existing pattern of industrial location in a country, and they are incapable of explaining the causes of a particular form of industrial concentration. Theory also does not throw any useful light on the correct distribution of an industry among different regions. So, it cannot serve a guide in the formulation of a national policy on the location of industries.

Coefficient of localization –

It is an index of the propensity of a particular industry for concentration in any part of country. The coefficient of localization is related a particular industry rather than to a particular region. It is the sum of plus deviations of the regional percentages of workers in a particular industry from the corresponding regional percentage of workers in all industries.

Merits-

Theory provides useful information on the distribution pattern of industries in a country based on which the government can find out whether steps are required for the dispersal or concentration of industries in different regions.

The location factors take into consideration the number of workers employed in a particular region. No. of workers is a simple and convenient basis of comparison.

Conclusion-

Florence theory is a useful diagnostic tool, but it cannot serve as independent theory of location of plant. As a statistical technique it can be used in conjunction with a theory of location to verify the analysis. For an entrepreneur, the theory has little determinative value.

Split location-

Split location relates to more than one place of location for an industry. This position generally occurs when the location is technically feasible to separate the different stages of production in one industry and when the separated process can be carried on independently at different places. In this position, split location is likely to be more economical. In first stage, production generally involves the use of gross materials which may be located near the source of raw materials so to minimize transportation cost on the other end the second stage of working up of pure material may batter be located near the place of final consumption. For e.g. in case of cotton textile industry, ginning factory should be located near the cotton farms and the spinning or weaving plants near the market.

Weber's views in some cases this arrangement may be economical to locate independent industrial processes at one place. When different raw materials diverge from a common source, the production of different articles may combine in one plant. Two different industries can select the same place of location because the reason by- product of one industry constitutes the raw material of the other industry. For e.g., distilleries are generally located near sugar factories as they utilized molasses which is a by- product of sugar industry.

Agglomerative factors-

"**Agglomerative factor** is an advantage or a cheapening of production or marketing which provide results that production is carried on to a considerable extent at one place" Whereas "**Deagglomerate factor** is a cheapening of production which results from decentralization of production".

Agglomerative factors generally relate to the external economies, e.g.-

- development of auxiliary industries like-
  banking, insurance, transport, warehousing
- supply of skilled labor, etc.

These ideas result from the concentration of industries at a particular place.

On the other hand

(B) Deagglomerate factors relates to the external dis-economies e.g.-

- Rise in wage rates
- Rise in rents
- Rise in taxes
- Rise in cost of land, etc.

These factors generally arise due to excessive localization of industries and indicate the cause geographical dispersal of industries.

Weber provided formula to measure the influence agglomerative and deagglomerate factors:-

$$\text{Index of manufacture} = \frac{\text{Total manufacturing cost}}{\text{Locational weight}}$$

Index of manufacture is the ratio of manufacturing costs to the total weight of the product. High index of manufacture tends to agglomerate while industries with low coefficient tend to deviate from the point of minimum transport and minimum labour costs.

Agglomeration and deagglomeration

Agglomeration is the phenomenon of spatial clustering, or a concentration of firms in a relatively small area. The clustering and linkages allow individual firms to enjoy both internal and external economies. Auxiliary industries, specialized machines or services used only occasionally by larger firms tend to be in agglomeration areas, not just to lower costs but to serve the bigger populations.

Deagglomeration occurs when companies and services leave because of the diseconomies of industries' excessive concentration. Firms who can achieve economies by increasing their scale of industrial activities benefit from agglomeration. However, after reaching an optimal size, local facilities may become over-taxed, lead to an offset of initial advantages and increase in PC. Then the force of agglomeration may eventually be replaced by other forces which promote deagglomeration.

(2) Size of Business Firm

Meaning:

This refers to the scale of firm's operations. We have already discussed that profitability of an organization largely depends on suitable location as well as suitable size. Size of a business organization means large, small and medium in common parlance. Nevertheless, this very classification is very confusing and complex in itself. Questions may be raised as to those parameters on which the size is determined. In other words, determination of the size of business firm is completely related with the profitability dimension. Whatever be the size of the organization, it totally concentrates on the profitable expansion and influence over the environment.

While measuring the size of an organization, we need to take certain parameters. However, it is important to note that these parameters are again based on approximation only. Given below are some standard parameters that can be used as a measurement of the size.

- Assets: this refers to the value of the total assets of firms.

- Investment: Also known as, net worth of the firm is one of the significant measurements of the size. Ministry of Micro, small and medium enterprises, govt. of India measures the size as per the capital investment in firms.
- Material consumption: Another important measurement of the size that takes into account total amount of raw material and power consumed by the firm in a given period.
- Employment: this may also be taken as a parameter of measurement of size of the firm.

Apart from above mentioned standards of measurement of size following parameters are also taken into account:

- Total Value of Sales and
- Total value of output.

The size of the business firm depends upon its efficiency and profitability for which we have to understand following terms:

1. Plant and it establishment
2. Firm (establishment of a production house)
3. Industry (group of firms working on regular in nature)
4. Input and output (inputs are net worth, assets, workers, employees raw material, numbers and capacity of plants. Output includes volume and value

Factors affecting the size of the business

- Optimum size of the firm: every businessman wants to expand the size of the business to survive for long-term in the market keeping in view the capacity and techniques.
- Technical factors: mechanism, labour, work in progress, time etc.
- Managerial factors: optimum managerial size of the unit, experts of the particular departments, internal administration of the firm.
- Financial factors: capital availability, sources available for capital generation, cash in bank, and cash at hand.
- Marketing factors: dealers and suppliers.
- Risk and fluctuations: uncertainty, risk and changing in business policies internally and externally
- Political factors: changes in governments policies.

Benefits of Large Size organizations: -

A few economies that arise from large scale of operation can be pointed as below:

- Easy Finance
- Division of Labour
- Efficient Research and Development facility
- Use of latest technologies
- Large share of market
- Economy in operations
- Larger benefit to the society
- Employment Generation
- Skilled management
- Lower overheads
- Better creditworthiness, etc.

Answer following questions

Q1. Explain the theory of location?

Q2. Explain the parameters on which size of the firm is determined?

Q3. Write the factors affecting the size of the firm?

Q4. Explain Weber theory in detail?

Q5. Explain Sargent theory in detail?

Q6. Differentiate between Weber's Theory and Sargent Theory?