

INDUSTRIAL ECONOMICS

II MA - ECONOMICS

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Semester - III

UNIT-1

What Is Industrialization

Industrialization is the process by which an economy is transformed from primarily agricultural to one based on the manufacturing of goods. Individual manual labor is often replaced by mechanized [mass production](#), and craftsmen are replaced by assembly lines. Characteristics of industrialization include economic growth, more efficient division of labor, and the use of technological innovation to solve problems as opposed to dependency on conditions outside human control.

Definition of Industrialization

Industrialisation (or **industrialization**) is the period of social and economic change that transforms a human group from an agrarian society into an industrial society. This involves an extensive re-organisation of an economy for the purpose of manufacturing.

As industrial workers' incomes rise, markets for consumer goods and services of all kinds tend to expand and provide a further stimulus to industrial investment and economic growth.

Pattern and Process of Industrialization

Patterns of Industrialization in India

1. Infrastructure
2. Increasing Share of Industry in GDP
3. Heavy and Capital Goods Industries
4. Consumer Durables
5. Chemicals, Petrochemicals and Allied Industries
6. Emergence of Public Sector
7. Liberalisation
8. Sunrise Industries
9. Footloose industry.

Factors of Industrialization

1. Setting the Stage: a. The U.S. has enjoyed many distinct advantages many other countries lack b. Democracy and Capitalism allow for a prosperous nation c. Unity following the Civil War along with Industrialization fever led America to evolve into a super producer
2. Natural Resources: Become goods a. Raw Materials – coal, iron ore, timber b. Fertile soil -> surplus agriculture ----> Industrial Revolution c. Swift moving water = power & transportation
3. Capital (\$) Needed to pay for the production of goods a. Stable currency = safe buying and selling (commerce) b. Corporations formed to raise money through the sale of stock c. Bank loans = start-up for factories and businesses
4. Labor Supply: Used to make goods a. High birth rate b. Immigration from Europe and Asia c. Women & Children
5. Technology: Better ways to make more & better goods a. Telephone = better & faster communication b. Electricity = more production power c. Factory system = faster production i. Interchangeable parts -----> Assembly line ii. Examples Today: Cars, computers, houses d. New inventions = more & better goods
6. Consumers: Bought & used goods & services a. Mail order catalogues expanded sales of goods (Wards & Sears) b. Department stores became common in large cities. c. Overseas Markets = Exports to other countries = more sales
7. Transportation: Linked raw materials to factories & factory goods to consumer markets a. River & canals b. Roads c. Railroads (By 1900 5 Transcontinental Systems in U.S.)
8. Government Cooperation a. High tariffs (tax on imports) -> Buying American goods b. Patent System protected & encouraged inventions c. No Interstate Tax = Free Trade (Rural Free Delivery) d. Land Grants to railroads encouraged westward growth e. Laissez-Faire philosophy = Hands-Off (limited) Government

- Developing countries characterized by a high degree of subsistence production
- Agricultural sector is paramount and important
- While industrialization does not insure development it does have some healthy implications

- It implies: technology application
- It implies: raising productivity per worker
- It implies: releasing labor for other tasks
- But all sectors must move forward and some balance is desirable

Industrial Sectors

- **Primary**-that part of the economy that specializes in the production of agricultural products and the extraction of raw materials. Major industries include mining, agriculture, forestry, and fishing.
- **Secondary**: manufacturing portion of the economy that uses raw materials and intermediate products. Industries include: motor vehicle assembly, textiles, and building and construction activities.
- **Tertiary sector**- the services and commerce portion of an economy. Includes both *consumer* (individuals) and *producer* (firms) services. Repair of capital goods (e.g. ships), haircuts, medical care, and transport (e.g. taxis and air cargo—consumer and producer respectively).
- **Quaternary**- that portion of a region's economy devoted to informational and idea-generating activities (e.g., basic research, universities and colleges, and news media) and includes the production, processing, and consumption of *information*.
- **Quinary** activities involve high level decision making or *control functions* that manipulate the vast resources of private businesses and governments

Comparing Industry versus Agriculture

- Farmer has little control over his environment: pests, drought
- Agricultural production is generally slower and product cannot be quality controlled as in manufacturing
- Agricultural commodities are susceptible to wide price swings in the global market
- Relative inelasticity of demand for agricultural products, i.e. if prices fall more purchases are not assured
- Technology has had a much greater impact on industry than agriculture
- Increased specialization of labor in manufacturing results in higher productivity
- Therefore manufacturing offers a stronger base for raising the level

Industrialization in India: Problems and Obstacles

1. Poor Capital Formation:

Poor rate of capital formation is considered as one of the major constraint which has been responsible for slow rate of industrial growth in India.

2. Political Factors:

During the pre-independence period, industrial policy followed by the British rulers was not at all favourable for the interest of the country. Thus, India remained a primary producing country during 200 years of British rule which ultimately retarded the industrial development of the country in its early period.

3. Lack of Infrastructural Facilities:

India is still backward in respect of its infrastructural facilities and it is an important impediment towards the industrialization of the country. Thus in the absence of proper transportation (rail and road) and communication facilities in many parts of the country, industrial development could not be attained in those regions in spite of having huge development potentialities in those areas.

4. Poor Performance of the Agricultural Sector:

Industrial development in India is very dependent on the performance of the agricultural sector. Thus, the poor performance of the agricultural sector resulting from natural factors is also another important factor responsible for industrial stagnation in the country.

Agriculture provides not only raw materials and foodstuffs but also generates demand for the goods produced by the industrial sector. Thus, this poor performance of the agriculture retards the development of industries in India.

5. Gaps between Targets and Achievements:

In the entire period of planning excepting 1980s, industrial sector could not achieve its overall targets. During the first Three Plans, against the target of 7, 10.5 and 10.7 per cent industrial growth rate, the actual achievements were 6, 7.2, 9 per cent respectively. Since the Third Plan onwards, the gap between the targets and achievements widened.

It is only during the Sixth and Seventh Plan, the industrial sector could achieve its targets. Again in first part of 1990s the industrial sector again failed miserably to achieve its target. This trend is all along against the smooth industrial development of the country.

6. Dearth of Skilled and Efficient Personnel:

The country has been facing the problem of dearth of technical and efficient personnel required for the industrial development of the country. In the absence of properly trained and skilled personnel, it has become very difficult to handle such highly sophisticated computerized machineries necessary for industrial development of the country.

Moreover, inefficiency and insincerity of those personnel engaged in industrial sector has been resulting in huge wastage of resources of the industrial sector. Moreover, social factors like immobility of labour and capital and lack of proper initiative and enterprises on the part of people of India are also highly responsible for this slow pace of industrialisation in the country.

7. Elite Oriented Consumption:

In recent years, a strong tendency to produce rich men's goods has been established among the large industrial houses. Accordingly, the production of "white goods" like refrigerators, washing machines, air conditioners etc. expanded substantially along with the other luxury products.

But the production of commodities for mass consumption has recorded a slow growth rate. This clearly reveals a 'distortion of output structure' of Indian industries, resulting in a recessionary tendency in the market of these luxury products in recent years.

8. Concentration of Wealth:

The pattern of industrialisation in the country has been resulting in concentration of economic power in the hands of few large industrial houses and thus failed to achieve the objective of planning in reducing concentration of wealth and economic power. As for example, Tatas with 38 companies substantially increased their assets from Rs. 375 crore in 1963- 64 to Rs. 14,676 crore in 1991-92.

The assets of Birlas also increased from Rs. 283 crore in 1963- 64 to Rs. 6,775 crore in 1990-91. Similarly other large business houses are also multiplying their assets at a very faster rate and are tightening their stronghold on the economy.

9. Poor Performance of the Public Sector:

In spite of attaining a substantial expansion during the planning period, the performance of public sector enterprises remained all along very poor. A good number of such enterprises are incurring huge losses regularly due to its faulty pricing policy and lack of proper management necessitating huge budgetary provision every year. Thus, the public sector investment failed to generate required surpluses necessary for further investment in industrial sector of the country.

10. Regional Imbalances:

Concentration of industrial development into some few states has raised another problem of imbalances in industrial development of the country. Western region comprising Maharashtra and Gujarat attained maximum industrial development whereas the plight, of the poor states are continuously being neglected in the process of industrialisation of the country in spite of having a huge development potential of their own.

11. Industrial Sickness:

Another peculiar problem faced by the industrial sector of the country is its growing sickness due to bad and inefficient management. As per the RBI estimate, a total number of sick industrial units in India were 1,71,316 as on 31st March, 2003 and these sick industrial units had involved an outstanding bank credit to the extent of Rs. 34,815 crore.

The RBI estimate further disclosed that every seventh small scale unit in India was sick at the end of December 1983. Thus, this growing sickness of industrial units has resulted in a huge problem in the path of industrial development of the country.

12. Regime of State Controls:

Lastly, industrial inefficiencies resulting in perpetuation of regional state controls and regulatory mechanism are standing in the path of industrialization of the country. In recent years, the Government has undertaken some serious measures to make necessary economic reforms in the industrial structure of both the public as well as private sectors of the country.

Although these measures are quite challenging in nature but these are expected to do much headway in removing various obstacles mentioned above and also in attaining industrial development of the country further in the years to come.

UNIT-2

Industrial Location

The geographical site or sites selected by a firm to perform its economic functions. The choice of an appropriate location is influenced by a range of considerations but two are particularly important:

- a. the nature and characteristics of the industrial activity that the firm performs (for example raw material extraction or crop cultivation, the manufacture of intermediate or final products, the provision of a service) and
- b. the relative costs of production at different locations balanced against the cost of physical distribution to target markets, and the importance of closeness to customers as a basis for establishing competitive advantages over rival suppliers.

Industrial location factors

Different industries require different inputs. Industries are more likely to locate where these inputs are readily and cheaply available. Factors that influence where an industry locates include:

- **power supply**
- **communications** - including transport, telecommunications
- **labour supply** - including workers with the right skills
- **access to market** - where the goods are sold
- **grants and financial incentives** - usually from governments
- **raw materials**

Alfred weber theory of industrial location

- Alfred Weber, a German economist, enunciated a systematic theory of industrial location in 1909. Weber's theory of location is purely deductive in its approach. He analyzed the factors that determine the location of industry and classified these factors into two divisions. These are:
 - (i) Primary causes of regional distribution of industry (regional factors)
 - (ii) Secondary causes (agglomerative and deglomerative factors) that are responsible for redistribution of industry.

(i) Primary Causes (Regional Factors)

- According to Weber, transport costs and labour costs are the two regional factors on which his pure theory is based. Assuming that there are no other factors that influence the distribution of industry, except transportation costs. Then it is clear that the location of industry will be pulled to those locations which have the lowest transportation costs. The key factors that determine transportation costs are

(i) the weight to be transported and

(ii) the distance to be covered.

- Weber lists some more factors which influence the transportation costs such as – (a) the type of transportation system and the extent of its use, (b) the nature of the region and kinds of roads, (c) the nature of goods themselves, i.e., the qualities which, besides weight, determine the facility of transportation.
- However, the location of the place of production must be determined in relation to the place of consumption and to the most advantageously located material deposits. Thus, ‘locational figures’ are created. These locational figures depends upon (a) the type of material deposits and (b) the nature of transformation into products.
- Weber classifies and calls those raw materials, which are available practically everywhere as ‘ubiquities’ (like brick-clay, water, etc) and ‘localised’ (like iron-ore, minerals, wood, etc) which are available only in certain regions. It is clear that localized materials play a more important role on the industry than the ubiquities. Further, regarding the nature of the transformation of materials into products, Weber categorized the raw materials as ‘pure’ and ‘weight losing’. Pure materials impart their total weight to the products (eg. cotton, wool, etc) and the materials are said to be ‘weight losing’ if only a part enters into the product (eg. wood, coal, etc.). Hence, the location of industries using weight-losing materials is drawn towards their deposits and that of industries using pure-materials towards the consumption centres.
- Weber further examines the cause of deviation of industrial location from the centres of least transport costs. The existence of differences in labour costs leads an industry to deviate from the optimal point of transport orientation. Geographical distribution of the population would give rise to differences in wages for labour. Naturally, the transport

oriented location of an industry is drawn out and attracted towards the cheaper labour centres. Such migration of an industry from a point of minimum transport costs to a cheaper labour centre may be likely to occur only where the savings in the cost of labour are larger than the additional costs of transport which it ought to incur.

(ii) Secondary Causes (Agglomerative and Deglomerative Factors)

- An agglomerative factor is an advantage or a cheapening of production or marketing which results from the fact that production is carried on at one place. A deglomerative factor is a cheapening of production which results from the decentralization of production i.e., production in more than one place. To some extent these agglomerative and deglomerative factors also contribute to local accumulation and distribution of industry. These factors will operate only within the general framework formed by the two regional factors, i.e., costs of transportation and costs of labour. The advantages which could be derived in this context are external economies.
- The pulls which the agglomerative factors possess to attract an industry to a particular point are mainly dependent on two factors. Firstly, on 'the index of manufacture' (the proportion of manufacturing costs to the total weight of the product) and secondly, on the 'locational weight' (the total weight to be transported during all the stages of production). To deduce a general principle, Weber uses the concept of "co-efficient of manufacture" which is the ratio of manufacturing cost to locational weight. Agglomeration is encouraged with high co-efficient of manufacture and deglomeration with low co-efficient of manufacture and these tendencies are inherent in their nature.

Split Location:

- Productive activities could be divided depending on the nature of raw-materials, industry and market. Weber considers the location for an industry at more than one place. According to Weber, a split of production into several locations will be the rule for productive process which can technically be split. For instance, the first stage of production may be near the raw material deposits and the subsequent stages near the place of final consumption. Likewise, in a paper industry the manufacture of pulp may be carried on near the supplies of the raw materials and the second stage of paper manufacture near the consumption outlet.

Locational Coupling:

- Weber also conceived the advantages of setting up different types of industries in the same locality. The production of quite different articles may be combined in one plant because several raw materials may diverge from a common source. This may be either due to technical or economic reasons: for instance, certain chemical industries, garments factories which manufacture over-coats, shawls, blouses, etc. Locational coupling may also occur due to connection through materials. If the by-product of an industry happens to be the raw material of another industry, then the two industries may select a single place of location. For instance, the dye-stuff industry is connected with other industries using coke, because coal tar (upon which the dye-stuff industry is based) is a by-product of the burning coke.

Criticisms:

- Weber's theory of location has been criticized on various grounds which may be summarized as follows:
 1. Weber has been criticized for his unrealistic approach and deductive reasoning. According to Sargant Florence, vague generalizations cannot provide suitable solutions to the theory of location as non-economic considerations will also influence which are not mentioned in the pure theory. He says that Weber's theory fails to explain locations resulting from historical and social forces.
 2. A. Predohl criticizes Weber's theory as more a selective theory than a deductive theory. The very distinction between primary and secondary is itself artificial, illogical and arbitrary.
 3. Weber assumes fixed labour centres and unlimited supplies of labour which are unrealistic. The rise of industry may create new labour centres and we cannot assume unlimited labour supplies at any centre.
 4. In a competitive market structure, the assumption of fixed points of consumption is unrealistic. Country-wise scattering, usually, of consuming public is a reality and there may be a shift in the consuming centres with a shift in industrial population.

5. A. Robinson also considers Weber's division of raw materials into 'ubiquities' and 'localised' as artificial.

Weber's deductive theory of location, in spite of the shortcomings, is the only theory which has been enjoying the universal acceptance and application, as all the other alternative suggestions are neither complete nor comprehensive.

Sargent Florence's Theory of Location

Definition:

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.

Factors:

They are

- (i) Location factor and
- (ii) Coefficient of localization.

(i) Location factor

Location factor indicates the centralization or otherwise of an industry. If the location factor index is greater than unity, there is a tendency of centralization; on the other hand, if it is less than unity, the otherwise is true. In case of unity, a state of evenness exists this indicates that there is neither centralization nor decentralization.

The location factor index is calculated by using the following formula

$$\frac{\text{No. of workers engaged in a particular industry of an area}}{\text{Total No. of workers engaged in all industries in the area}} \times 100$$

Location Factor Index

$$\frac{\text{Total No. of workers engaged in all industry with area}}{\text{Total No. of industries workers in the country}} \times 100$$

OR

$$\frac{\text{Percentage of workers engaged in a particular industry}}{\text{Proportion of total number of workers engaged in the area to the total industrial workers of the country}}$$

We take an example to explain the use of this formula. Suppose that the population of industrial workers in a country is 500; workers engaged in a given area is 200 and workers engaged in a particular industry (cement, etc.) are 100.

The location factor index will be calculated in the following manner:

$$\begin{aligned} \text{Location factor index} &= \frac{100 \times 100}{200} \\ &= \frac{200}{500} \times 100 \\ \text{or} &= \frac{50}{40} \\ &= 1.25 \end{aligned}$$

The index is greater than 1; therefore, the industry appears to be centralized in that area.

ii. Coefficient of localization:

Coefficient of localization indicates the propensity of concentration of industries. This has no relation as such with the area. If the percentage of workers over different areas is also given in percentage, the variance between the two percentages is divided by 100 which give the coefficient of location.

If this coefficient is zero, it will mean that industries are evenly distributed over all the areas; if the coefficient is unity or one, it indicates concentration of industries in one area. The coefficient being greater or less than unity will indicate tendency of centralization or decentralization respectively.

The coefficient of localization can be calculated in the following manner:

$$\text{Coefficient of Localisation} = \frac{\% \text{ of workers in the area} - \% \text{ of workers in particular industry}}{100}$$

Take an example

Suppose the percentage of workers in the area is 90 and those engaged in a particular industry is 60. The coefficient would be found out in this manner.

$$\text{Coefficient of Localisation} = \frac{90 - 60}{100} = \frac{30}{100} = 0.3$$

Since the coefficient of localization is less than unity or one, industries have a tendency of decentralization in that area. .

Criticism of Sargent Florence's Theory

Following are the points of criticism against the theory of location given by Florence:

1. Ignorance of causes of location:

The theory tells only whether the industry is centralized or decentralised but does not give the causes of such a tendency.

2. Difficulty of knowing propensity of localization

It is difficult to know only on the basis of coefficient of localization whether there is propensity of centralization or decentralization.

3. Ignorance of favorable local conditions

The theory does not care for the favorable local factors influencing centralization of industries.

4. Absence of knowledge of productive capacity

The theory given by Florence emphasizes the number of workers in calculating the index and coefficient but ignores production. It is difficult to know the productive capacity of different areas. In spite of these deficiencies the theory at least suggests a way to know the tendency of localization of industries.

Advantages and Disadvantages of Industrialization

Advantages of industrialization

The growth of industries has resulted in large scale production of goods which are available to the consumer at much cheaper rates.

1. There is saving of time and labor.
2. Industrialization has resulted in a considerable rise in the standard of living of the people.
3. A number of substitutes in consumer goods are available. The customer gets wide variety of choices.
4. There are means to control and check the colossal wastage of human energy that can be used otherwise.
5. Industrialization creates new job opportunities, leading to the removal of poverty to a great extent.
6. Industrialization has also resulted in the development of new modes of transport making quick export and import possible. The world has become a small place.

Disadvantages

The disadvantages of Industrialization are

1. The immediate result is in the gradual disappearance of many natural resources, the pollution of land, water and air.
2. The increase in vehicular traffic, launching of space ships and rockets by competing nations, the incessant working of machines in factories have brought in noise-pollution and dust and smoke.
3. The general dirty and unhealthy conditions in and around the industrial sites have affected human health and happiness. Diseases, unheard of before, are spreading far and wide.
4. There has been an instance of child labor in factories.
5. The exploitation of the poor by the rich has increases increases the crime-rate, isolation and sense of loneliness.
6. The gradual displacement of manpower in industries is ultimately leading to unemployment.
7. There has been a steady decline in spiritual values and well-being of man consequent upon the growth of an artificial, mechanical and materialistic civilization brought about by industrialization.
8. Capitalistic ethics with a craving for more and more money seem to dominate and influence millions of people. The grave uncertainties in the money-market sometimes bring misfortunes for the common people.
9. Inflation sets in, the value of money goes down and the poor working class becomes poorer. Class conflicts, strike, dharnas, gheraos and bandhs and then lockouts cause hardship and unrest. Society faces their impact in various ways.
10. Large scale heavy industries lead to a sharp fall in the number of cottage industries and their gradual disappearance. Regional and local artisans and workers of various trades and professions suffer a great deal.

Economies of Scale

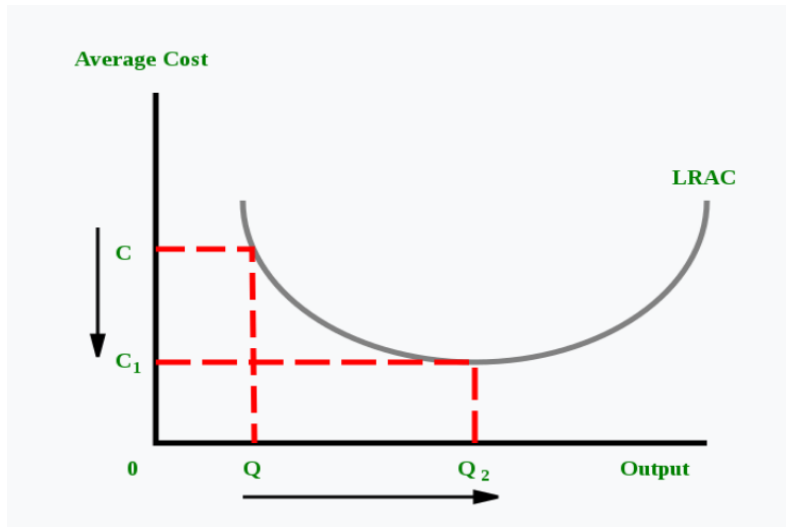
Economies of Scale refer to the cost advantage experienced by a firm when it increases its level of output. The advantage arises due to the inverse relationship between per-unit fixed cost and the quantity produced. The greater the quantity of output produced, the lower the per-unit fixed cost. Economies of scale also result in a fall in average variable costs (average non-fixed costs) with an increase in output. This is brought about by operational efficiencies and synergies as a result of an increase in the scale of production.



Economies of scale can be implemented by a firm at any stage of the production process. In this case, production refers to the economic concept of production and involves all activities related to the commodity, not involving the final buyer. Thus, a business can decide to implement economies of scale in its marketing division by hiring a large number of marketing professionals. A business can also adopt the same in its input sourcing division by moving from human labor to machine labor.

Effects of Economies of Scale on Production Costs

1. It reduces the per-unit fixed cost. As a result of increased production, the fixed cost gets spread over more output than before.
2. It reduces per-unit variable costs. This occurs as the expanded scale of production increases the efficiency of the production process.



The graph above plots the long-run average costs faced by a firm against its level of output. When the firm expands its output from Q to Q_2 , its average cost falls from C to C_1 . Thus, the firm can be said to experience economies of scale up to output level Q_2 . (In economics, a key result that emerges from the analysis of the production process is that a profit-maximizing firm always produces that level of output which results in the least average cost per unit of output).

Types of Economies of Scale

1. Internal Economies of Scale

This refers to economies that are unique to a firm. For instance, a firm may hold a patent over a mass production machine, which allows it to lower its average cost of production more than other firms in the industry.

2. External Economies of Scale

These refer to economies of scale enjoyed by an entire industry. For instance, suppose the government wants to increase steel production. In order to do so, the government announces that all steel producers who employ more than 10,000 workers will be given a 20% tax break. Thus, firms employing less than 10,000 workers can potentially lower their average cost of production by employing more workers. This is an example of an external economy of scale – one that affects an entire industry or sector of the economy.

Sources of Economies of Scale

1. Purchasing

Firms might be able to lower average costs by buying the inputs required for the production process in bulk or from special wholesalers.

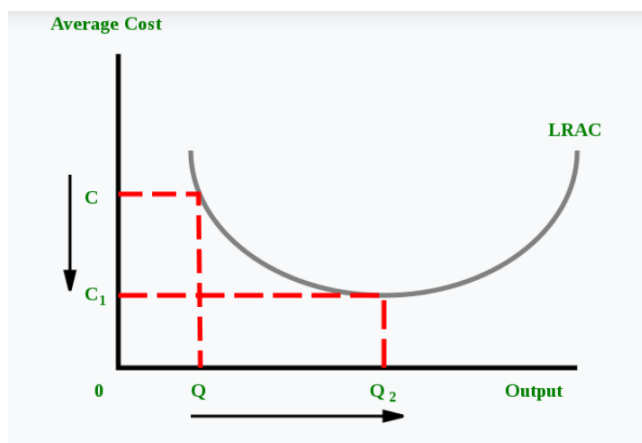
2. Managerial

Firms might be able to lower average costs by improving the management structure within the firm. The firm might hire better skilled or more experienced managers.

3. Technological

A technological advancement might drastically change the production process. For instance, fracking completely changed the oil industry a few years ago. However, only large oil firms that could afford to invest in expensive fracking equipment could take advantage of the new technology.

Diseconomies of Scale



Consider the graph shown above. Any increase in output beyond Q_2 leads to a rise in average costs. This is an example of diseconomies of scale – a rise in average costs due to an increase in the scale of production. As firms get larger, they grow in complexity. Such firms need to balance the economies of scale against the diseconomies of scale. For instance, a firm might be able to implement certain economies of scale in its marketing division if it increased output. However, increasing output might result in diseconomies of scale in the firm's management division.

Unit-III

Small Scale Industries

Small scale industries (SSI) are those industries in which manufacturing, providing services, productions are done on a small scale or micro scale. For example, these are the ideas of Small scale industries: Napkins, tissues, chocolates, toothpick, water bottles, small toys, papers, pens. Small scale industries play an important role in social and economic development of India. These industries do a one-time investment in machinery, plants, and industries which could be on an ownership basis, hire purchase or lease basis. But it does not exceed Rs. 1 Crore. Let us discuss in detail about it.

Essentially small scale industries comprise of small enterprises who manufacture goods or services with the help of relatively smaller machines and a few workers and employees. Basically, the enterprise must fall under the guidelines set by the Government of India. At the time being such limits are as follows,

- For Manufacturing Units for Goods: Investment in plant and machinery must be between 25 lakhs and five crores.
- For Service Providers: Investment in machinery must be between 10 lakhs and two crores.

In developing countries like India, these small scale industries are the lifeline of the economy. These are generally labour-intensive industries, so they create much employment. They also help with per capita income and resource utilization in the economy. They are a very important sector of the economy from a financial and social point of view.

Scope of Small Scale Industries

The **scope of small-scale industries** is quite vast covering a wide range of activities. These are characterized by labour intensive, need less capital and require less sophisticated technology. Infrastructural activities like transport, communication etc.

Characteristics of Small Scale Industries

- Ownership: Such units are generally under single ownership. So it is a sole proprietorship or sometimes a partnership.
- Management: Both the management and the control generally is with the owner/owners. So the owner is actively involved with the daily running of the business.
- Limited Reach: Small scale industries have a restricted area of operations. So they meet local and regional demand.

- **Labor Intensive:** These small scale industries tend to use labour and manpower for their production activities. So their dependence on technology is pretty limited.
- **Flexibility:** These units are more adaptable to their changing business environment. So in case of sudden changes or unexpected developments, they are flexible enough to adapt and keep carrying on. Large industries do not have this advantage.
- **Resources:** They use local and readily available resources. This also helps the economy with better utilization of natural resources and less wastage.

Role of Small Scale Industries in the Indian Economy

Total Production

These enterprises account for almost 40% of the total goods and services produced in the Indian economy. They are one of the main reasons for the growth and strengthening of the economy.

Employment

These small scale industries are a major source of employment in the country. The whole labour force cannot find work in the formal sector of the economy. So these labour-intensive industries provide a livelihood to a large portion of the workforce.

Contribution to Export

Nearly half of the goods (45-55%) of the goods that are exported from India are produced by these small enterprises. About 35% of direct exports and 15% of the indirect exports are from the small scale industries. So India's export industry majorly relies on these small industries for their growth and development.

Welfare of the Public

Other than economic reasons, these industries are also important for the social growth and development of our country. These industries are usually started by the lower or middle-class public. They have an opportunity to earn wealth and employ other people. It helps with income distribution and contributes to social progress.

Role of medium and large scale industries

The **industries** which have 30 million to 100 million rupees as a fixed capital is called **medium scale industry**. and the **industries** which have above 100 million rupees as a fixed capital are called **large scale industries**.

Large Scale Industries

A business can range from a single proprietor enterprise to a large corporation which employs thousands of workers across multiple countries. Based on the scale of business, organizations are classified as micro-enterprises, small-scale enterprises, large scale industries, public enterprises, and multinational corporations. In this article, we will take a quick peek at large scale industries.

What are Large Scale Industries?

Industries which require huge infrastructure and manpower with an influx of capital assets are Large Scale Industries. In India, large-scale industries are the ones with a fixed asset of more than one hundred million rupees or Rs. 10 crores.

The Indian economy relies heavily on such industries for economic growth, generation of foreign currency, and the creation of job opportunities for millions of Indians.

Here are some advantages of large scale industries:

- They provide an impetus to the industrialization of the country.
- Large scale industries, usually, produce capital and basic goods (instruments, machines, chemicals, etc.)
- They are capable of generating funds for the research and development of new technologies.
- Due to the large scale of operations, they have the potential to lower the cost of goods.
- Further, they create opportunities for small-scale and cottage industries to evolve and flourish.
- Also, the employment opportunities created by large scale industries are huge.

Large Scale Industries in India

The term 'large-scale' is generic in nature and includes different types of industries. In India, the following heavy industries fall under the purview of large scale industries:

- Iron and Steel Industry
- Textile Industry
- Automobile Manufacturing Industry

- Over the last two decades, Information and Technology (IT) industry has evolved and has contributed huge revenues while creating thousands of jobs for Indians. Hence, many economists include it in the large-scale industry sector.
- Telecom Industry

It is important to note that these industries are either manufacturing units or those which use both indigenous and imported technologies. Here are some more examples:

Fertilizer , Cement , Natural gas , Coal , Metal extraction , Metal processing , Petroleum , Mining , Electrical , Petrochemical , Food processing units , Tourism , Banking , Sugar , Construction , Automobile , Communication equipment , Cement , Chemicals , Earth movers , Consumer durables (like television, refrigerators, etc.) , Engineering products , Vehicle assembly , Beverages , Agricultural processing , Insurance and Finance.

In recent years, as the markets opened up due to globalization, there has been a mixed effect on large-scale industries. There are some who have managed to attract international customers, foreign trade and technology, tie-ups. However, there are also others who were unable to cope with the competitiveness ushered in by the open market.

Contribution by some Major Industries

Traditionally, India had six major industries. These were Iron and Steel, Textiles, Jute, Sugar, Cement, and Paper. Further, four new industries joined this list namely, Petrochemical, Automobile, Information Technology (IT), and Banking & Insurance. These industries are important for India's economy. Therefore, understanding the growth of these industries can offer a good insight into the relationship between their growth and government policies.

Role of Major Industries in Indian Economic Development

Iron and Steel Industry

Iron and Steel industry is one of the most important industries considering total investments. These are typically public sector plants. Further, the industry offers direct employment to around 2.5 lakh workers.

According to the World Steel Association, India is one of the world's top 10 producers of steel. However, despite the importance of this industry, we import large quantities of steel every year.

Textile Industry (Cotton and Synthetic)

This is a complex industry with two extremes – sophisticated mechanized mills on one end and hand-weaving and hand spinning on the other.

Between the two ends lies the decentralized power loom sector. Taking all three sectors into consideration, the textile industry is the largest industry in India.

It accounts for around 20 percent of the industrial output and also provides employment to over 20 million individuals. Further, it contributes around 33 percent of the total export earnings.

Jute Industry

The jute industry has the capacity to earn foreign exchange. India accounts for around 30 percent of the world's jute output. Further, the jute industry provides direct employment to nearly 2.5 lakh individuals. Also, nearly 40 lakh families derive their living from jute cultivation. the industry has now started using high-speed machines and broadlooms to make carpet backing. Exports have also grown in recent years.

Sugar Industry

India is one of the world's largest sugar producing countries. Further, the sugar industry is India's second-largest agro-based industry.

It employs nearly 3.25 lakh workers and creates indirect employment for around 45 million farmers of sugarcane, agencies of distributive trade, and also subsidiary industries. Also, there are around 400-500 sugar factories in India.

Cement Industry

In 2009-10, there were 148 large cement units and 365 mini cement units in India. Their total capacity was around 230 million tonnes and actual production of around 200.7 million tonnes per year. The cement industry employs over 2 lakh individuals. India is one of the largest cement manufacturing countries in the world too.

Information Technology (IT) Industry

One of the latest entrants to the list, the IT industry is spreading fast in India. Further, with many US and EU firms working with contract agencies in India and China for IT software and services, outsourcing has acquired an international dimension.

This is a win-win situation since the US firms save around 58% of its costs by outsourcing work to India/China and the local economy benefits from global exposure.