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**M.A. ECONOMICS
SEMESTER - I**

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AS PER NEP 2020)**

**INDUSTRIAL
ECONOMICS - I**

Prof. Ravindra Kulkarni
Vice-Chancellor,
University of Mumbai,

Prin. Dr. Ajay Bhamare
Pro Vice-Chancellor,
University of Mumbai,

Prof. Shivaji Sargar
Director,
CDOE, University of Mumbai,

**Programme Co-ordinator : Dr. Rajashri Pandit
& Writer**
Asst. Prof. in Economics,
Incharge Head Faculty of Commerce,
CDOE, University of Mumbai, Mumbai

Course Co-ordinator : Dr. Gopal Eknath Ghumatkar
Asst. Prof. in Economics,
CDOE, University of Mumbai, Mumbai

Course Writer : Dr. Vitthal Shankar Sontakke
DES's Kirti College, Dadar, Mumbai

: Dr. Krishnan Nandela
Principal, Swayam Siddhi College of
Commerce, Bhiwandi, Thane

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Name of the Course
INDUSTRIAL ECONOMICS- I

Semester-I

Credit-2

Module 1: Introduction to Industrial Economics

(Lectures 15)

Meaning and Scope of Industrial Economics. Need and Significance of the Study of Industrial Economics. Economic & Agricultural Development and Industrialization. Factors Affecting Industrial Development. Industrial Development under Plans in India. Role, problems, and future of Private and Public sector industries in India.

Module 2: Market Structure

(Lectures 15)

Some Concepts: - Plant, Firm, and Industry. Market, Market Structure, and Market Power. Market Conduct and Market Performance. Industrial Combinations- causes, mergers and amalgamations, Industrial monopoly, control of monopolies, Contestable Market, Product Differentiation, Economies of scale and scope, Meaning of Industrial Location. Determinants of Industrial Location. Weber's & Florence's Theories of Industrial Location.

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Module 1

INTRODUCTION TO INDUSTRIAL ECONOMICS

Unit Structure :

- 1.0 Objectives
- 1.1 Introduction
- 1.2 Nature of Industrial Economics
- 1.3 Scope of Industrial Economics
- 1.4 Need & Importance of Industrial Economics
- 1.5 Economic, Agricultural Development and Industrialization
- 1.6 Factors Affecting Industrial Development
- 1.7 Questions

1.0 OBJECTIVES

- To understand and study the meaning, nature and scope of Industrial economics
- To study the need and significant importance of industrial economics
- To study the concepts and interrelationship between Economic, agricultural development and Industrialization
- To study factors affecting industrial development

1.1 INTRODUCTION

Industrial economics is a branch of economics that focuses on the study of the structure, behaviour, and performance of industries, with a particular emphasis on the decision-making processes of firms within these industries. It seeks to understand how markets for goods and services function, how firms compete and cooperate, and how government policies can impact industrial outcomes.

Industrial economists use economic models, empirical analysis, and case studies to explore these concepts and gain insights into the functioning of markets. This field is crucial for policymakers, businesses, and researchers seeking to understand and improve the efficiency and competitiveness of industries.

Industrial Economics

Industrial Economics is a branch of Economics. It is the application of microeconomic theory to the analysis of firms, markets, and industries. It explains and draws inferences about the effectiveness with which scarce resources are used; and points out policies that might improve the situation. Industrial Economics is primarily concerned with the evolution of the industry as a process in time at both the macro level, the sector or industry level, and the firm level.

One of the key areas in Industrial Economics understands the structure and its effect on the performance of the industry. Industrial Economics uses different theoretical models to understand the behaviour of firms. Initially, the focus was to understand the structure of the market and observe the performance of the firm concerning the structure of the firm. But over the years the approach has changed, and the efficiency of individual firms is now given importance.

Industrial Economics is the study of firms, industries, and markets. It looks at firms of all sizes – from local corner shops to multinational giants such as WalMart or Tesco. And it considers a whole range of industries, such as electricity generation, car production, restaurants and service sectors.

When analysing decision making at the levels of the individual firm and industry, Industrial Economics helps us understand such issues as:

- The levels at which capacity, output, and prices are set;
- The extent that products are differentiated from each other;
- How much firms invest in research and development (R&D)
- How and why firms advertise
- How firms employ
- How firm negotiate to pay wages as well as how they settle disputes.

Industrial Economics also gives insights into how firms organize their activities, as well as considering their motivation. In many microeconomics courses, profit maximization is taken as given, but many industrial economics courses examine alternative objectives, such as trying to grow market share.

There is also an international dimension – firms have the option to source inputs (or outsource production) overseas. As such, while industrial economics more frequently uses skills and knowledge from microeconomics courses, macroeconomic concepts are sometimes employed.

One of the key issues in industrial economics is assessing whether a market is competitive. Competitive markets are normally good for consumers (although they might not always be feasible) so most industrial economics courses include analysis of how to measure the extent of

competition in markets. It then considers whether regulation is needed, and if so the form it should take. There is again an international dimension to this, as firms that operate in more than one country will face different regulatory regimes.

Industrial Economics uses theoretical models to understand firm and regulatory decision making, and so students should expect to use diagrams and maybe some basic mathematical models, including game theory. In addition, researchers often develop empirical statistical models to identify relationships between variables of interest: for example, to understand the relationship between product pricing, advertising, and profits. While most courses will not require students to conduct their own empirical analysis (that is left to the econometrics courses) understanding and interpreting empirical results is an important skill.

The nature and scope of industrial economics encompass a wide range of topics and considerations related to the structure, behavior, and performance of industries. Here's an overview of the key aspects:

1.2 NATURE OF INDUSTRIAL ECONOMICS

Industrial economics is a distinctive branch of economics which deals with the economic problems of firms and industries, and their relationship with society. In economic literature, it is known by several names with marginal differences such as 'Economics of Industries', 'Industry and Trade', 'Industrial Organization and Policy', 'Commerce' and 'Business Economics' etc. The name 'Industrial Economics' was adopted in the early fifties perhaps through the writings of P.W.S. Andrews. At present there is no clear-cut consensus on the name of the subject. There are two broad elements of industrial economics. The first one, known as the descriptive element, is concerned with the information content of the subject. It aims at providing the industrialist or businessman with a survey of the industrial and commercial organizations of his own country and of the other countries with which he might come in contact. It would give him full information regarding the natural resources, industrial climate in the country, situation of the infrastructure including lines of traffic, supplies of factors of production, trade and commercial policies of the governments and the degree of competition in the business in which he operates.

In short, it deals with the information about the competitors, natural resources and factors of production and government rules and regulations related to the concerned industry. The second element of the subject is concerned with the business policy and decision-making. This is the analytical part dealing with topics such as market analysis, pricing, choice of techniques, location of plant, investment planning, hiring and firing of labour, financial decisions, product diversification and so on.

It is a vital part of the subject and much of the received theory of industrial economics is concerned with this. However, this does not mean that the first element, i.e. descriptive industrial economics, is less important. The

two elements are interdependent, since without adequate information no one can take proper decision about any aspect of business.

Microeconomic Focus:

Industrial economics primarily operates at the microeconomic level, examining the behavior of individual firms and their interactions within specific industries.

Strategic Decision-making:

It delves into the strategic decisions made by firms, such as pricing, production, investment, and entry/exit strategies, to understand how these decisions shape market outcomes.

1.3 SCOPE OF INDUSTRIAL ECONOMICS

Industrial Economics uses theoretical models to understand firms and regulatory decision making, and so students should expect to use diagrams and may be some basic mathematical models, including game theory. In addition, researchers often develop empirical statistical models to identify relationships between variables of interest: for example, to understand the relationship between product pricing, advertising and profits.

There are three major approaches to the study of industrial organization: the first approach is primarily descriptive and provides an overview of industrial organization. The second, price theory, uses microeconomic models to explain firm behaviour and market structure. The third approach is oriented to public policy as to economic regulation, antitrust law and more generally, the economic governance of law in defining property rights, enforcing contracts, and providing organizational infrastructure

Key concepts and areas of study in industrial economics include:

1. Market Structure Analysis:

Examining different market structures, including perfect competition, monopoly, oligopoly, and monopolistic competition. Analyzing the impact of market structure on competition, pricing, and efficiency.

2. Market Conduct:

Studying how firms behave in the marketplace, including pricing strategies, product differentiation, advertising, and efforts to gain a competitive advantage. Investigating collusion and the formation of cartels among firms.

3. Market Performance:

Assessing the overall efficiency of markets in terms of resource allocation, production costs, and consumer welfare. Evaluating the presence of market power and its implications for economic outcomes.

4. Entry and Exit:

Identifying barriers to entry that may limit new firms from entering a market. Understanding factors that influence firms' decisions to exit a market.

5. Regulation and Policy:

Analyzing the role of government intervention, including anti-trust policies and industrial regulations. Assessing the impact of public policies on market outcomes.

6. Game Theory and Strategic Interactions:

Utilizing game theory to model and analyze strategic interactions among firms. Understanding the dynamics of competition and cooperation in industries.

7. Technological Change and Innovation:

Investigating the role of technological advancements in shaping industry dynamics. Examining the impact of innovation on competition, market structure, and performance.

8. Globalization and International Trade:

Exploring the effects of globalization on industries, including trade patterns, cross-border investments, and global competition. Analyzing the implications of international trade policies on industrial outcomes.

9. Environmental and Social Considerations:

Incorporating environmental and social dimensions into the analysis, such as sustainability practices and corporate social responsibility.

10. Interdisciplinary Nature:

Industrial economics often draws insights from other disciplines, including finance, strategy, operations research, and political economy.

11. Practical Applications:

Industrial economists provide valuable input for policymakers, regulators, and businesses seeking to enhance competition, formulate effective industrial policies, and address market failures.

In summary, industrial economics is a dynamic field that investigates the economic dynamics of industries, offering insights into market behaviour, competitiveness, and the role of government policies. Its scope is broad, covering various aspects of firm behaviour, market structure, and the impact of external factors on industrial outcomes.

1.4 NEED & IMPORTANCE OF INDUSTRIAL ECONOMICS

The need and importance of industrial economics are underscored by its role in understanding, analyzing, and influencing the behavior of firms and markets within various industries. There are several reasons highlighting the significance of industrial economics:

1. Efficient Resource Allocation:

Industrial economics helps ensure efficient allocation of resources by studying how firms produce, distribute, and price their goods and services. This understanding is crucial for maximizing societal welfare.

2. Competition and Consumer Welfare:

By examining market structures and firm behavior, industrial economics contributes to the promotion of healthy competition. This, in turn, benefits consumers through lower prices, improved product quality, and greater innovation.

3. Market Performance Evaluation:

Industrial economists assess the performance of markets in terms of efficiency, productivity, and equitable distribution of resources. This evaluation aids in identifying areas for improvement and optimizing economic outcomes.

4. Policy Formulation:

Governments rely on insights from industrial economics to formulate and implement policies that foster competition, prevent monopolistic practices, and promote industrial development. Anti-trust laws and regulatory frameworks are often influenced by industrial economic analyses.

5. Innovation and Technological Change:

Understanding the impact of innovation on industries is essential for policymakers and businesses. Industrial economics helps assess the drivers and consequences of technological change, facilitating the adoption of policies that encourage innovation.

6. Strategic Business Decision-making:

Firms benefit from industrial economic analysis when making strategic decisions related to pricing, production, investment, and market entry. Insights into market structures and competition dynamics aid in formulating effective business strategies.

7. Global Competitiveness:

In an era of globalization, industrial economics provides insights into international trade, cross-border investments, and global competition.

Policymakers and businesses use this information to enhance competitiveness on a global scale.

8. Prevention of Monopoly Power Abuse:

Industrial economics plays a crucial role in identifying and addressing monopolistic practices that can harm consumers by leading to higher prices, reduced output, and a lack of innovation. Anti-trust policies are designed to curb such abuses of market power.

9. Public Policy Implications:

Industrial economists contribute to the development of public policies that balance the interests of consumers, producers, and society at large. This includes policies related to environmental sustainability, consumer protection, and social responsibility.

10. Understanding Market Failures:

The discipline helps identify and address market failures, such as externalities and imperfect information, which can distort economic outcomes. Policies and interventions can then be designed to mitigate these failures.

11. Interdisciplinary Collaboration:

Industrial economics often collaborates with other disciplines such as law, political science, and environmental studies, enhancing its ability to address complex economic challenges from multiple perspectives.

In summary, industrial economics is vital for promoting economic efficiency, fostering competition, informing policymaking, and guiding strategic decision-making by businesses. Its insights contribute to the overall wellbeing of economies and societies by ensuring that markets function in the best interests of consumers and society as a whole.

1.5 ECONOMIC, AGRICULTURAL DEVELOPMENT AND INDUSTRIALIZATION

Agriculture and industrial sectors play a significant role in economic development of the country. So Agriculture development along with industrialization are some important concepts which we are going to study in this section.

1. Economic Development : refers to the process by which a country improves the economic, political, and social well-being of its people. It involves increases in GDP, improvement in living standards, reduction of poverty, and greater access to education and healthcare. Following are some key factors contributing to economic development at a faster rate.

a. Capital Accumulation: Investments in physical capital, such as infrastructure, factories, and machinery.

- b. Human Capital:** Education and skill development that increase worker productivity.
- c. Technological Innovation:** Adoption of new technologies that boost productivity.
- d. Institutional Frameworks:** Strong institutions, including legal systems, property rights, and efficient government, are critical.

2. Agricultural Development : It involves improving the productivity, efficiency, and sustainability of agriculture to meet the growing needs of the population. Agriculture helps in Economic Development in the following manner:

- a. Foundation for Growth:** Agriculture being a primary sector often serves as the backbone of the economy in developing countries, providing employment, food, and raw materials.
- b. Increased Productivity:** Advanced agricultural technology, such as mechanization, improved seeds, and fertilizers, lead to higher yields.
- c. Food Security:** Ensuring a stable supply of food is crucial for social stability and reducing poverty.
- d. Income and Export Earnings:** Surplus production can be sold domestically or exported, generating income for farmers and foreign exchange for the country.

3. Industrialization : It is the process of developing industries on a wide scale in a country. It involves shifting from an agrarian economy to one dominated by manufacturing and services economy. Following are some of the key factors which accelerate the growth of industrialization.

- a. Manufacturing Growth:** Establishment and expansion of factories that produce goods on a large scale.
- b. Urbanization:** Industrialization often leads to the growth of cities as people move from rural to urban areas in search of jobs.
- c. Technological Advancements:** Industrialization is closely tied to the adoption of new technologies that improve production processes.
- d. Economic Diversification:** Moving away from reliance on agriculture to a more diverse economy with manufacturing, services, and technology sectors.

1.6 FACTORS AFFECTING INDUSTRIAL DEVELOPMENT

Industrial development refers to the growth and expansion of industries within a region or country. It is a key requirement of economic development and involves the transformation of economies from primarily agricultural to industrial and service-oriented sector. Several factors

influence industrial development, including economic, social, political, and environmental considerations.

1. Natural Resources

- a. **Raw Material availability:** The presence of essential raw materials like minerals, metals, fossil fuels, and water significantly influences the location and growth of industries. Access to these resources reduces production costs and encourages industrialization.
- b. **Energy Resources:** Reliable and affordable energy sources, such as coal, oil, natural gas, and renewable energy, are crucial for industries. The feasibility and scale of industrial operations are depend upon energy availability.

2. Capital

- a. **Investment:** Industrial development requires substantial capital investment for infrastructure, machinery, technology, and research and development. Both domestic and foreign investments play a crucial role in accelerating industrial growth.
- b. **Financial capital:** The availability of credit and financial institutions that provide loans and investment capital is essential for businesses to expand and modernize their operations.

3. Technology and Innovation

- a. **Advanced technology:** The adoption of new technologies, machinery, and production techniques can enhance productivity, reduce costs, and improve product quality, driving industrial development.
- b. **Research and Development (R&D):** Investment in R&D leads to innovation, the development of new products, and improvements in production processes, which are vital for maintaining competitiveness in global markets.

4. Infrastructure

- a. **Transportation and Logistics:** Efficient transportation networks, including roads, railways, ports, and airports, are essential for the movement of raw materials, finished goods, and labour. Good logistics infrastructure reduces costs and improves market access.
- b. **Communication Networks:** Reliable communication systems, including internet and telecommunications, are crucial for coordinating industrial activities, accessing markets, and managing supply chains.
- c. **Utilities:** Access to essential utilities like water, electricity, and gas is fundamental for industrial operations. Consistent and affordable utility services are critical for uninterrupted production.

5. Labor

- a. **Skilled Workforce:** The availability of a skilled and educated workforce is essential for operating complex machinery, managing industrial processes, and driving innovation. Education and vocational training programs play a key role in developing a capable workforce.
- b. **Labour Costs:** Competitive labour costs can attract industries, especially labour-intensive sectors. However, excessively low wages can lead to poor working conditions and limit consumer demand.

6. Government Policies

- a. **Industrial Policies:** Government policies that promote industrialization, such as tax incentives, subsidies, and grants, can encourage the growth of industries. Policies that focus on specific sectors or regions can also stimulate targeted industrial development.
- b. **Trade Policies:** Trade agreements, tariffs, and export-import regulations influence the ability of industries to access global markets. Favourable trade policies can enhance competitiveness and encourage export-oriented industrial growth.
- c. **Regulatory Environment:** A stable and transparent regulatory framework, including environmental regulations, labour laws, and business regulations, is essential for attracting investment and ensuring sustainable industrial development.

7. Political Stability

- a. **Governance:** Political stability and effective governance create a conducive environment for industrial development. Consistent policies, rule of law, and the absence of corruption are critical for long-term investments and industrial growth.
- b. **Security:** A secure environment with minimal risks of conflict, crime, and social unrest is vital for protecting industrial assets and ensuring smooth operations.

8. Market Access

- a. **Domestic Market Size:** A large and growing domestic market provides industries with opportunities for sales and expansion. Consumer demand drives production and encourages firms to scale up.
- b. **Global Markets:** Access to international markets through trade agreements and export promotion can boost industrial growth, particularly in export-oriented sectors.

9. Social and Cultural Factors

- a. **Entrepreneurship Culture:** A culture that encourages entrepreneurship and innovation can lead to the establishment of new industries and the growth of existing ones. Support for small and

medium-sized enterprises (SMEs) is also crucial for industrial development.

- b. Work Ethic and Cultural Attitudes:** Societal attitudes towards work, innovation, and industrialization can influence the pace of industrial development. Societies that value hard work, innovation, and industrial progress are more likely to experience rapid industrialization.

10. Environmental Factors

- a. Sustainability Concerns:** Industrial development must consider environmental impacts such as pollution, resource depletion, and climate change. Sustainable industrial practices are increasingly important for long-term growth and social acceptance.
- b. Environmental Regulations:** Governments may impose regulations to limit environmental damage, which can affect industrial operations and costs. However, these regulations can also spur innovation in green technologies and sustainable practices.

11. Global Economic Conditions

- a. Globalization:** The integration of global markets has a significant impact on industrial development, providing opportunities for exports, foreign direct investment (FDI), and access to advanced technologies.
- b. Economic Cycles:** Global economic conditions, including recessions, booms, and fluctuations in commodity prices, can influence industrial output, investment, and expansion plans.

12. Urbanization and Population Growth

- a. Urbanization:** The growth of urban areas creates demand for industrial goods and services, providing a market for industrial products. Urbanization also leads to the development of infrastructure, which supports industrial growth.
- b. Population Growth:** A growing population increases the demand for goods and services, stimulating industrial production. However, it also requires adequate planning to manage the associated social and environmental challenges.

1.7 QUESTIONS

1. Explain the meaning and scope of industrial economics.
2. Explain why the study of industrial economics is important.
3. Discuss the interrelationship between economic development, agricultural development and industrialization.
4. What are the factors affecting industrial development?



DEVELOPMENT OF INDUSTRIAL ECONOMICS

Unit Structure :

- 2.0 Objectives
- 2.1 Introduction
- 2.2 Phase 1: 1951-1965 - Heavy industrialization & rapid growth
- 2.3 Phase 2: 1966-80 Slow- down in industrial growth
- 2.4 Phase 3: 1981-1996: Revival and boom
- 2.5 Phase 4: Recession during 1991-94
- 2.6 Phase 5: 1994-2002: Deceleration in growth
- 2.7 Phase 6: 2003-2008: boom in industries
- 2.8 Phase 7: 2008-2011: Slow down and revival
- 2.9 Phase 8: The period post-2011 till now
- 2.10 Industrial Organisation and Ownership Structure
- 2.11 Organisational Forms
- 2.12 State/Public Sector Enterprises
- 2.13 Characteristic Features of Public / State Enterprises
- 2.14 Main characteristics
- 2.15 Benefits from Public Sector Enterprises
- 2.16 Private Sector
- 2.17 Characteristics of Private Enterprise
- 2.18 Joint Sector
- 2.19 How a Joint-stock Company is Organised?
- 2.20 Problems / Limitations of Public Enterprises
- 2.21 Questions

2.0 OBJECTIVES

- Enable to empower students about the historical background of industrial development during planning period in India
- It provides understanding on organisation forms and business motives.

2.1 INTRODUCTION

India underwent significant industrial planning periods, particularly after gaining independence in 1947. The country adopted a planned approach to economic development with a series of Five Year Plans, guided by the Planning Commission (now NITI Aayog).

Industrialization has a major role to play in economic development as the industrial sector possesses a relatively high marginal propensity to save and invest. In India, The government launched the industrialization process in the 1950s that has gone through following phases. Following are the phases of industrial growth in India since independence.

2.2 PHASE 1: 1951 - 1965 - HEAVY INDUSTRIALIZATION & RAPID GROWTH

Industrial growth was rapid during the first two decades, especially during the Second Plan and the Third Plan. The Second Plan will go down as a landmark in the industrial history of India in as much as it introduced an industrial revolution in the country - especially in the matter of acquiring basic industrial muscle. The pace continued during the subsequent Third Plan also.

The high rates of industrial growth witnessed during the period were due to:

- i) Emphasis on industrialisation in economic policies,
- ii) The heavy industry-oriented strategy of industrialisation, and the pursuit of industrial growth as a supreme objective in the industrial policy and planning,
- iii) The substantial investments made and the capacities created in industrial sector as follow-up of the first two decisions,
- iv) Growing demands for a variety of new products on the part of the consumers in urban areas and the relatively better-off sections of the community,
- v) Pace of economic expansion which, though not spectacular, was yet made possible by an unusual combination of domestic saving and inflows of resources from abroad. This period of growth has been named the period of "industrial growth with regulation".

This phase had 7% industrial growth with import substitution in all major fields and capital goods (iron steel, heavy engineering, machine building) in the public sector.

2.3 PHASE 2: 1966 - 80 SLOW - DOWN IN INDUSTRIAL GROWTH

Industrial growth slowed down after the Third Plan. Not only did industry stagnate during this period, 'a blatantly elite-oriented production structure' came into existence. The most damaging aspect of this was a steady decline in per capita domestic availability of key wage goods and an increase in the number of people below the poverty line. The structural retrogression took place at two stages:

- i) Growth of basic and capital goods industries was slower than even the meagre average growth in industrial output.
- ii) Where growth was moderately high, a majority of the industries belonged either directly or indirectly to the elite-oriented consumption goods sector. A disproportionately large increase in the output of man-made fibers, beverages, perfumes and cosmetics, commercial and office clocks, finer varieties of cloth, etc., took place. This phenomenon emerged at the cost of allocation of investible funds for mass consumption goods.

In this phase growth slowed to 4 to 4.5 per due to Crop failures (1965-60, border conflicts, freezing of US aid and consequent Currency devaluation, food inflation oil crisis (1975), promotion of SSIs by shifting resources to them etc.

2.4 PHASE 3: 1981 – 1996 : REVIVAL AND BOOM

The industrial scene underwent a change with the onset of the 1980s. Industrial growth rate moved up during this period, and the stagnation which characterized the earlier period could be overcome. The structural distortion brought about in the 1980s also had its effects at the micro-level. Within the secondary sector, the share of the elite-oriented products increased at a perceptibly faster pace than that of others.

The structural distortion at this micro level continued in the 1980s too, but the distortion at the macro level was certainly arrested. Yet another feature of industrial performance over the period was that growth rates of value added were higher in the 1980s than what they were in the 1970s. Once again growth was 7% p-a. This was due to good agricultural performance, better infrastructure, rise in exports due to rupee depreciation, and the liberalization Phase.

2.5 PHASE 4: RECESSION DURING 1991-94

During 1991-92, and subsequently in 1992-93, industrial production suffered a Setback. Both supply and demand factors were responsible for the downturn in industrial production.

- a) On the supply side, the important factors were: import compression, rise in the cost of imports due to the cash margin requirement and the

downward adjustment of the exchange value of the rupee and the tight monetary policy.

- b) On the demand side, the important factors were a perceptible fall in effective demand due to inflationary pressure, reduction in public expenditure, and strict fiscal discipline. All of these factors are interlinked. One led to the other. The setback in industrial production suffered during 1991-93 extended to 1993-94 also.

2.6 PHASE 5: 1994 - 2002 : DECELERATION IN GROWTH

The slowdown in the rate of industrial growth during 1991-94 turned out to be only transitional, an immediate fallout of the stabilisation measures initiated by the government for the macro- economic adjustment of the economy, or to use Prof. N.N. Raj's eloquent words, "while the gears are being changed and new directions are set It may be noted the rate of industrial growth began to accelerate in the problems in competitiveness second half of 1993-94. This was due to problems in poor agricultural growth and slowing down of reforms.

2.7 PHASE 6: 2003 - 2008 : BOOM IN INDUSTRIES

The year 2002-03 opened on a slow note. However, during 2003-04, it became increasingly clear that strong revival was in the offing. In 2004-05, and again in 2005-06 the manufacturing sector grew at 9.1 per cent, 12.5 per cent during 2006-07 and 9.0 per cent during 2007-08. The surge in industrial growth could be attributed to important structural changes in the economy. One is the rise in the savings rate from 23.5 per cent in 2000-01 to 37.7 per cent in 2007-08. Most of this increase came from turnaround in corporate and public savings. Due to the rise in the savings rate, the economy moved to an altogether higher investment rate.

The second important structural change was enhanced export competitiveness that got reflected in the rising share of exports. The total exports (trade plus invisible receipts/GDP) ratio rose sharply from 16.9 percent in 2000-01 to 33.2 per cent in 2007-08. Third change in recent years is financial deepening. The bank assets/GDP ratio rose from 48 percent in 2000-01 to 80 per cent in 2005-06 on the back of a surge in bank credit. One factor in common to these three structural changes has been lower interest rates.

The decline in interest rates helped fiscal consolidation, it boosted firms' competitiveness and led to a huge increase in retail credit. Lower interest rates were made possible by the rise in inflows on both the current and capital accounts. Another boom of the Indian economy was due to massive road building, reduction in interest rates, increase in household sector credit and outsourcing IT experts.

2.8 PHASE 7: 2008 - 2011 : SLOW DOWN AND REVIVAL

The slowdown in manufacturing over successive quarters started from the first quarter of 2007-08. This was more or less replicated by the mining sector and closely followed by electricity. However, in the third quarter of 2008-09, the manufacturing sector witnessed a sharp drop in growth which turned negative in the fourth sector.

Growth of the mining sector declined over successive quarters of 2008-09 to reach a zero rate in the fourth quarter, overall, the index of industrial production increased only 2.4 percent in 2008-09 against 8.5 per cent 2007-08. Growth slowed down in India after the global financial meltdown due to the housing bubble burst in the US. The reasons include failure of monsoon, sluggish world economy, demonetization. India's industrial growth on 2017-18 was 6.6%.

2.9 PHASE 8: THE PERIOD POST - 2011 TILL NOW

The period starting from 2011-12 saw a severe slowdown in industrial growth and production. The slowdown during the period is due to:

- Weak Demand for exports from the Developed Western Countries due to the Global Financial Crisis.
- The slowdown in the Domestic Demand.
- High Interest in India maintained by the RBI, due to persistently high Inflation.
- The slowdown in Private Investment by the private sector due to weak returns on the investments.
- Rising NPAs of the Public-Sector banks has led to weak credit and lending offered by them.
- Failure of past projects of the private sector.
- Government reluctance to increase Public investment due to the stand of maintaining a low fiscal deficit.
- Uncertain Global Recovery.
- European Debt Crisis.
- The slowdown in the prices of commodities in International Commodity markets mainly due to weak Chinese growth and so on.
- COVID-19 Pandemic

2.10 INDUSTRIAL ORGANISATION AND OWNERSHIP STRUCTURE

Industrial Organisation occupies a very significant place on the map of business organisation. It is the fundamental tool for the growth and

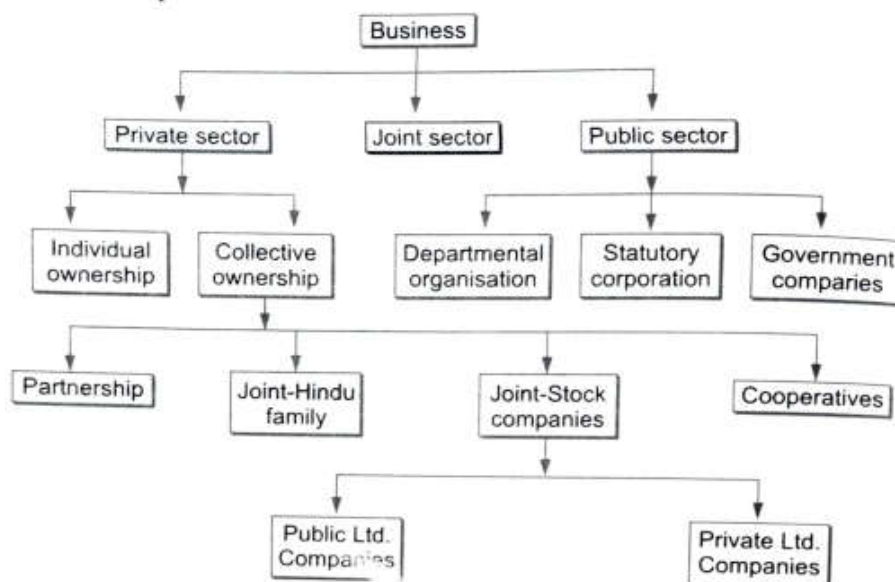
diversification of the industrial economy. It is an index of industrial development.

Industrial organization is a combination of two words industrial and organisation hence, to understand the term industrial organisation, we need to understand the meaning of industry and organisation. The industry is a group of productive enterprise or organisations that produces or supply, goods, services or sources of income. This concept was made by the New Encyclopedia Britannica.

Organisation was defined by J.C. Denyer as: "Organisation is concerned with the arrangement of work, with the division of activities and with the allocation of duties, authority and responsibilities". In this way, the industrial organisation is concerned with organising industrial activities in an integrated and coordinated manner to gain industrial goals. Industry organisation is thus a systematic assemblage of men, machine, materials, market money, and management for the achievement of common goals. It may also be thought of as a complex relationship among human factors and physical factors and work cemented together into a network of systems so that the pre-decided goals can be achieved effectively and efficiently.

2.11 ORGANISATIONAL FORMS

A business firm may be identified based on certain characteristics like the type of ownership and so on. According to this, we can classify the firms in categories like proprietorship, partnership [and corporation. The organizational pattern of firms or Businesses is shown in the chart below:



All firms doing business can be classified into these categories: (i) Private Sector, (ii) Public Sector, and (iii) Joint sector firms, (iv) Cooperative Sector. In the private sector the ownership is exclusively in the hands of the private individuals whereas in the public sector central or state government owns the firm. In the case of joint sector, the government, the

private entrepreneur and the public together share of the firm. Similarly, in a cooperative sector people mark together with common economic objectives organizing themselves on the basis of equality for the fulfillment of objectives. The organisational forms of the firms in each of these three categories may be described briefly as follows.

2.12 STATE / PUBLIC SECTOR ENTERPRISES

The state enterprises refer to those business enterprises whose ownership and management are directly in the hands of the government. Such enterprises are directly managed by the government, Prof. S.S. Khera defines it as the industrial commercial and economic activities carried on by the central government or the state government and in each case either solely or in association with private enterprise so long as it is managed by self-contained management" For example, Railways, post, and telegraph department are the government enterprises.

Encyclopedia Britannica: defined it as such; "The term usually refers to government ownership and active operation of agencies engaged in supplying the public, the goods and services which alternatively might be supplied by privately owned profit-motivated firms.

The definition has emphasized government ownership and absence of profit motive V.K.R.V. Rao stated that "Sectors of economic activity which involves either monopoly conditions of strategic economic power or possession of large resources in private hands should be publicly owned and operated as public enterprises. It also means that it should make it self-available for the building of economic overheads. On the external economics, like transport, power fuel, and basic capital goods without which increase in production of consumption goods and services either on the required scale or necessary economic basis will not be possible.

If we look into the Evolution of the public sector in India, we would say that prior to 1947 there was virtually no public sector in the Indian economy. The expansion of public sector was undertaken as an integral part of 1956. Industrial policy, which gave the public sector a strategic role in the Indian economy. It was felt that only through government intervention in a big planned way the agricultural and industrial production could be accelerated in a big way, and employment opportunities be expanded with the reduction of poverty. In other words, the public sector was thought of as the engine for self-reliant economic growth to develop a sound agricultural and industrial base, diversify the economy, and overcome economic and social backwardness.

2.13 FEATURES OF PUBLIC / STATE ENTERPRISES

The characteristic features of state enterprises are as follows:

1. State enterprises are financed by the government.
2. State enterprises are managed by the government.
3. State enterprises are financially independent.

4. The primary objective of state enterprises is to provide services to society.
5. State enterprises at times are monopoly enterprises such as water, electricity, military equipment, etc.
6. State enterprises help implement government policies and plans.
7. Autonomous functioning of public enterprises provided sufficient autonomy to manage their affairs.

Thus, public enterprises can be defined as an activity of the government whether central, state, or local involving the manufacturing or production of goods including agriculture or making available the services, it has a sound blending of public.

2.14 MAIN CHARACTERISTICS OF PUBLIC SECTOR ENTERPRISES

1. Government Ownership:

The public enterprises should either be wholly owned by the central or state government or local authority or jointly owned by two or more of them. Government ownership means that more than 50% of the equity is held by a public authority. Section 617 of the Indian Company Act clearly specifies that government company means any company in which not less than 51% of the paid-up share capital is held by the central government or by any state government or central government partly and partly by one or more state government". Further, the public corporations and the departmental undertaking are fully owned by the government. The Government manages the enterprises.

2. Public Accountability:

The enterprises are provided funds from the public exchequer. It becomes imperative that they should be accountable to the public through the Parliament whose funds are invested to carry on the activities of the enterprises. This goal is achieved through ministers, government, Parliament, audit bodies, etc.

3. Constituent of Political and Administrative Structure:

The establishment and constituent of public enterprises is a political decision and its operation is controlled at strategic points by a system where the politicians have the final say.

4. Public Purpose:

In public enterprises, social aspects can well precede, supersede, and even engulf business considerations. The public interest in various forms and shapes provides an undercurrent for all its strategic decisions.

5. Wide Coverage of Activities:

Public enterprises are found operating in the vast area e.g., construction, marketing, agriculture, finance, development mining, etc.

6. Economic Enterprise:

In a public enterprise the price charged for the goods and services is expected to cover the cost.

7. Autonomous Functioning:

In spite of the huge investment made by the government, public enterprises are provided sufficient autonomy to manage their affairs in their own fashion. The self-contained management has the right to manage the affairs based on sound business consideration and prudent commercial practices. The government does not interfere in their day-to-day activities. Purpose, public accountability, autonomous functioning, and inherent right to manage and control the enterprise are done by the government.

2.15 BENEFITS FROM PUBLIC SECTOR ENTERPRISES

Benefits derived from public sector enterprises are:

- A. Economic Benefits
- B. Social Benefits

A. Economic Benefits:

Public Enterprises strengthen the economy by providing the following benefits:

1. Public enterprises generate revenue for the government through various means. Dividends, interest on loans, excise duty, octroi; sales tax, and corporation tax are paid to the government by the public enterprises. The revenues generated by public enterprises have risen in recent years.
2. Public enterprises exploit the natural and technological resources of the state. This maximizes the social welfare and development opportunities in the economy.
3. Public enterprises save enormous amounts of scarce foreign exchange either by exporting these surplus goods and services of the country or by making vigorous efforts to substitute imported products.
4. The public enterprises help to reduce regional disparities through a planned dispersal of industries. The claims of relatively backward areas are considered by the government in proper perspective.
5. Public enterprises provide infrastructure facilities for the development of the economy.

6. Development of ancillary SSI units by public enterprises is undertaken to meet the requirements of various supplies. This facilitates the development of subsidiary and incidental industries to the line of manufacture engaged by the public enterprises.
7. Public enterprises also help in reducing unfavorable balance of trade.

B. Social Benefits:

The social benefits of public enterprises are as follows:

1. Public enterprises act as model employers. They at a time provide amenities like housing, medical, conveyance, and other statutory, benefits they show how labour, management, and relation is maintained.
2. Public Enterprise protects the interest of the consumers. By adopting a discriminatory pricing policy they provide goods and services to low-income groups at cheaper prices they provide goods and make an effort to maintain the price line of the goods manufactured.
3. Public enterprises change the environment of the society.
4. Public enterprises generate employment opportunities directly and indirectly.
5. Public enterprises help in reducing disparities of income and wealth.
6. For adoption of a socialistic pattern of society the operation of public enterprises is the prime condition.
7. State enterprises are inspired not by profit motivation but by welfare motivation. Therefore, the consumers are greatly benefitted.
8. Public enterprises can provide a better workforce by employing higher salaries and perks.
9. Public enterprises due to adequate financial resources can use the latest techniques and machines.
10. Suitable only in certain enterprises that can be operated only by public enterprises since they do not generate immediate profits e.g. Transport. Electricity.

2.16 PRIVATE SECTOR

Private sectors or private enterprises refer to all types of individual or corporate enterprises domestic and foreign in any field of productive activity. Private sector enterprises are characterized by ownership and management in private hands, personal initiative, and profit motive.

In the 18th century private sector units were of laissez-faire variety i.e., the private sector was completely free of governmental interferences. Private enterprises were normally small units owned and managed by sole

proprietors. He bore the risk of the business According to L.H. Haney "The sole entrepreneurship in the form of business organisation on the head of which stands an individual is the one who is responsible who directs its operation, who also runs the risk of failure". Therefore, there is one owner, who conducts the use of factors of production, and bears both profits and loss. In a sole proprietorship, the business and its ownership exist together. There is complete secrecy. Their main motive was to earn profit.

But today, the private sector is qualitatively different from corporate industrial units which are owned by the shareholder and managed by professional managers. The latter is not always interested in maximizing profit but has other corporate objectives as well such as expansion, consolidation social conciseness, and social welfare.

2.17 CHARACTERISTICS OF PRIVATE ENTERPRISES

The following are the characteristics of private enterprise:

1. Low cost of production: Since the business is exclusively his own, the single entrepreneur works day and night for the success of his enterprise. He allows no wastage of material in his establishment.
2. Close contact with customers.
3. Close contact with workers.
4. Promptness in decision since it is one man's decision.
5. Security of trade secrets.

Disadvantages:

Disadvantages public enterprises are as follows:

1. Limited economic resources.
2. Inability to face competition from bigger units due to limited capital.
3. No-large scale economics.

The private sector is given the right to develop consumer goods industries, while banks and financial institutions, railways, civil aviation, power generation and distribution, etc. are in the public sector. The whole of agriculture and allied activities, plantation mining internal trade, both retail and wholesale are embraced by private sector. The private sector has indeed come to mean the corporate industrial sector. The private sector was suitable for consumer goods industries which involve limited risk and short gestation period. On the other hand, the public sector investment being autonomous was considered more suitable to low profit yielding long gestation and heavy investment sectors. The infrastructure industries were thus reserved for the public sector.

2.18 JOINT SECTOR

It is known as a corporate form of business. A joint stock company is an association of individuals as shareholders, who are authorized by the government to run a particular business. According to L. H. Haney, "A joint-stock company is, a voluntary association of individuals for profit, having capital divided into transferable shares, the ownership of which is the condition of membership". Large-scale commercial and industrial enterprises are run under the joint stock company system. This system exists in U.S.A., Japan, and Western European countries.

Characteristic Features of Joint-Stock Companies:

They are as follows:

1. The capital of the firm is contributed by a large number of shareholders who are the real owners of the business enterprises.
2. The liability of the shareholder is limited to the value of the shares held by him.
3. The policy-making job of the firm is entrusted to a board of directors who are elected from amongst the shareholders.
4. The actual management of the company is carried on by the paid managers who work under the direct supervision of the Managing Director
5. The joint stock company has a separate and distinct legal entity from that of the shareholders.

2.19 HOW A JOINT-STOCK COMPANY IS ORGANISED?

An entrepreneur conceives of some new enterprise which in his view is likely to yield good profits, under the Indian Companies Act such an entrepreneur is required to gather around him six persons who are interested in the new project. These persons are known as promoters of these company. These promoters will draft a memorandum of association which would include the name of the company, its headquarters, the aims and objectives, the aggregate share capital to be raised from the public, the types of shares to be issued, and the value of each share etc. Besides this another document known as the Article of Association which contains internal rules and regulations of the company. Both documents are submitted to the Registrar of Companies. The Registrar after scrutinizing these documents extends his approval in the form of a certificate known as the certificate of incorporation. With the use of this certificate, the company comes into formal existence, the promoters sell shares through newspaper advertisements to raise the capital from the company.

The joint stock company raises capital either through shares or through debentures. Those who purchase the shares become the shareholders or

part owners of the company to the extent of the value of the shares. They will naturally bear the risk involved in the business of the company. They are not owners. They are merely entitled to a fixed percentage of interest on the amount invested by them in debentures. In case the company meets with failure a prior claim over its assets is enjoyed by the debenture holder.

There are two types of joint-stock companies :

- (i) Private limited company
- (ii) Public limited company.

The former can have 2 to 50 shareholders. The liability of each shareholder is limited to the value of shares held by him. This type of company is debarred under the law from raising funds from the capital market through debentures. The capital contribution comes from the shareholders alone.

In a public limited company, the ceiling is fixed on the number of shareholders. Any number of persons can become shareholders by contributing capital to the funds of the company. The liability of each shareholder is limited to the extent of shares held by him. The public limited company can invite capital subscriptions from the public through newspapers, and advertisements. It can raise funds through the issuing of bonds and debentures. The company has to follow the rules of the Indian Companies Act.

Advantages:

1. **Adequacy of capital:** A joint-stock company raises capital on a larger scale, through selling shares.
2. **Economies of large-scale production:** Since production is done on a large scale, therefore, economies of large-scale production exist.
3. **Limited liability:** Under this system, the liability of a shareholder is limited to the value of shares held by him. The shareholder thus runs only a nominal risk in buying the shares of the company it is therefore seen that men of small means like to invest their surplus fund in the shares of joint-stock companies
4. **Specialised management:** Since it has large resources. A joint stock company can provide specialised management.
5. **Shares of small values:** It checks the concentration of economic control in the hands of a few rich person.
6. **Transferability of shares:** in stock exchanges
7. **Permanent identity of the company:** although directors may change.
8. **Model of economic democracy:** If the works of the director are unfair he can be removed.

Disadvantages:

1. **Separation between ownership and control:** The ownership of the company vests in the hands of shareholders, while management is in the hands of managers, who are paid and do not share profit.
2. **Delay in decision:** The joint-stock company cannot take quick yielding.

2.20 PROBLEMS / LIMITATIONS OF PUBLIC ENTERPRISES

Problems / Limitations of public enterprises are given below:

1. There is a good deal of Red Tapism in government enterprises. The work proceeds slowly in government enterprises. Prompt decisions are not taken.
2. The workers have little or no incentive for hard work in government enterprises. Therefore, work efficiency is low.
3. It is mostly seen that there is only routine working in government departments. There is little spirit of new initiative being displayed by any employee.
4. In public enterprises it is often seen that there is a lack of economic motive.
5. Favouritism, Nepotism reign supreme in government enterprises. High officials generally appoint their kith and kin in government departments.
6. Too much interference by ministers and politicians disrupts autonomy in the working of state enterprises.
7. Unnecessary burden on taxpayers. Since, if there is any financial loss then the burden is borne by taxpayers.
8. In enterprises, there is a lack of concern about cost control, and avoidance of waste. Improvement of efficiency or increasing capacity utilization. Even if they are incurring losses no special concerted efforts are made to reduce that or improve the situation.
9. Public enterprises have poor and weak labour-employee relations.
10. Public enterprises suffer from inefficiency and poor profitability as compared to their counterpart in the private sector.
11. Mounting losses are seen in public enterprises.
12. Political factors influence decisions about location

13. In many cases it was seen that despite the rise in cost, prices may not be increased on non-economic grounds. Often this may lead to back-door taxation of the consumers.
14. The public enterprises may perform poorly due to faulty controls exercised over them.

2.21 QUESTIONS

1. Discuss the various phases of industrial growth in India during Planning period.
2. Explain in brief the meaning of industrial organization and various forms of industrial organization.
3. Discuss the meaning and characteristics of public sector enterprises.
4. Explain the meaning and benefits from the public sector enterprises.
5. Explain the meaning and characteristics of private sector enterprises.
6. Explain the problems of public sector enterprises.



Module 2

MARKET STRUCTURE

Unit Structure :

- 3.0 Objectives
- 3.1 Some Concepts: A Plant, A Firm and An Industry
- 3.2 Introduction : Markets
- 3.3 Market Structure
- 3.4 Firm Competition and Performance
- 3.5 Effects of Monopoly Power

3.0 OBJECTIVES

- To study some basic concepts like Plant, Firm and Industry related to market structure
- To understand the meaning of market and market structure and market power
- To study market conduct and market performance

3.1 SOME CONCEPTS: A PLANT, A FIRM AND AN INDUSTRY

The concepts of a plant, a firm, and an industry represents different levels of economic organization.

1. A Plant

In economic terms, a plant refers to a physical location where goods are produced or services are provided. It is a basic unit of production. It is often referred to as a factory, workshop, or office. Following are the characteristics of a Plant:

- a. **Physical Location:** A plant has a specific geographical location where production or service activities take place.
- b. **Production Process:** It is a place where inputs (raw materials, labour, machinery) are transformed into outputs (finished goods or services).
- c. **Operations:** A plant may be involved in manufacturing, processing, assembling, or providing a specific service.

- d. **Scale:** Plants are vary in size and scale, from small workshops to large factories or production facilities.

Example: A car manufacturing facility where automobiles are assembled

2. A Firm

A firm is a business organization that operates one or more plants and engages in the production and sale of goods or services. It is the decision-making unit in the economy which seeks to maximize profit. Following are the characteristics of a firm:

- a. **Ownership and Control:** A firm is owned and controlled by individuals, partners, or shareholders. It can be a sole proprietorship, partnership, corporation, or other forms of business organization.
- b. **Multiple Plants:** A firm can own and operate multiple plants, often spread across different locations.
- c. **Profit Maximization:** The primary goal of a firm is to maximize profits by efficiently managing its resources and operations.
- d. **Legal Entity:** A firm is recognized as a legal entity, capable of entering into contracts, owning assets, and being liable for its actions.

Example: Toyota Motor Corporation is a firm that operates several car manufacturing plants around the world.

3. An Industry

An industry is a group of firms that produce similar products or provide similar services and compete with each other in the market. It represents the broader sector of the economy associated with a particular type of economic activity. Following are the characteristics of an Industry:

- a. **Similar Products:** Firms within an industry typically produce similar or substitute goods and services. For example, all firms producing automobiles belong to the automotive industry.
- b. **Market Structure:** Industries can be characterized by different market structures, such as perfect competition, monopoly, oligopoly, or monopolistic competition, depending on the number of firms and the nature of competition.
- c. **Classification:** Industries are often classified into primary (e.g., agriculture, mining), secondary (e.g., manufacturing, construction), and tertiary (e.g., services, retail) sectors.

Example: The automotive industry includes all firms involved in the production of cars, trucks, and other motor vehicles, such as Maruti, Tata, Bajaj, Mahindra, Ford, Toyota.

A plant is the smallest unit of production and forms the basis of a firm's operations. Whereas a firm is an organization that owns one or more plants and makes decisions about production, pricing, and investment. And an industry is the aggregation of all firms that produce similar goods or services.

Plants are where actual production happens. Firms manage and control plants, deciding on production levels, marketing, and sales strategies. Industries represent the collective market for goods and services produced by firms, influencing supply, demand, pricing, and competition.

3.2 INTRODUCTION : MARKETS

A Market may be defined as any place or process that brings buyers and sellers together with an objective to enter into a transaction at an agreed price. According to Cournot, market do not refer to any particular place in which things are bought and sold but the whole of any region in which buyers and sellers freely interact with one another so that the price of the same goods tends to become equal easily and quickly. Market is therefore defined as an interrelated group of sellers and buyers for a commodity.

Spatially, markets may be classified as local, national, regional and global. On the basis of quantity of sales, markets may be classified as retail markets and wholesale markets. On the basis of organization, markets may be classified as organized and unorganized markets. On the basis of competition, markets may be broadly classified into imperfect and perfectly competitive markets.

The functions of a market economy are carried out through the market mechanism. Markets are therefore the very basis of an economy. Markets may be found in different forms such as the organized markets for commodities like oil, sugar, wheat, rice, gold, copper, iron, rubber and what have you, financial markets for stocks, shares, currencies of the world and financial instruments of various types, goods markets consisting of various goods and services which are traded through the market mechanism, factor markets through which factor inputs like land, labour, capital and enterprise are traded.

A market need not be a physical place like a shop or a place where shops are located. The market place consists of all those who have goods and services for sale and all those who are interested in buying those goods and services. Large businesses may have global markets because of the developments in technology. For instance, Coke and Pepsi are global products with global demand. Demand and supply are the two sides of the market mechanism. Prices of goods and services are determined largely by the interaction of these two market forces in a market economy. Demand refers to the quantity of goods and services that consumers are willing to purchase at various alternative prices. It shows the extent of value consumers place on the prices of goods and services and satisfaction

gained from such purchase. Supply is the quantity of goods and services that producers are willing to offer for sale at various prices. It refers to the cost of the resources used in the production of goods and services.

The efficiency of the Markets is influenced by the following factors:

- 1. The amount of information about the markets held by consumers and producers and the information available to them. Adequate level of information helps both buyers and sellers to make judicious decisions with regard to buying and selling of goods and services.
- 2. The ease with which factors of production can be put to alternative uses. Greater the substitutability of factors of production, the more efficient will be their re-allocation and the markets will be able to achieve economic efficiency.
- 3. The extent to which price is an accurate signal of the true utility and true cost in determining the level of demand and supply. The market mechanism tends to over-produce demerit goods and under-produce merit goods. Prices of goods and services will be considered accurate only when the positive and negative externalities are internalised.
- 4. The degree to which firms hold monopoly power. Monopoly or market power is considered to be reducing the efficiency of the markets. Economic efficiency cannot be achieved by the market if it has substantial elements of monopoly power.
- 5. The degree to which property rights are clearly defined. In the absence of property rights or in circumstances where property rights are ambiguously defined, there will be very little or no incentive for the market forces to come into their free play. Economic welfare cannot be maximised in the absence of clearly defined property rights.

Markets may be distinguished between each other on the basis of the following criteria:

- 1. The number and size of producers and consumers in the market,
- 2. The type of goods and services being traded, and
- 3. The degree to which information can flow freely.

The market structures with their important characteristic features are shown in Table 3.1 below.

Table 3.1 - Market Structures				
Market Structure	Seller Entry Barriers	Number of Sellers	Buyer Entry Barriers	Number of Buyers
Perfect Competition	No	Many	No	Many

Monopolistic Competition	No	Many	No	Many
Oligopoly	Yes	Few	No	Many
Monopoly	Yes	One	No	Many
Duopoly	Yes	Two	No	Many

3.3 MARKET STRUCTURE

Market structure refers to the characteristics of an organization, that influence the behavior of the firm concerning its decisions regarding the determination of price and output. The structure of a firm is an important element as it affects the behavior of the firm. Market structure changes due to changes in organizational features like the degree of competition among firms, in general, the number of firms, the distinctiveness of their products, elasticity of demand and the degree of control over the price of the product. No market structure remains static, it keeps on changing due to the organizational features and changes in physical, economic, institutional, and technological factors. The market structure keeps on changing due to the following reasons.

1. Production Pattern:

Many factors determine production patterns. The production pattern is determined by many factors. It may change due to technological factors, economic factors, and institutional factors. The market structure changes with keeping pace with such factors. It changes with changes in technology as well as other factors.

2. Demand Pattern:

Demand for a product change because of change in incomes, changes in tastes and preferences of the consumers, changes in fashions, changes in income distribution among consumers, and changes in the market structure should be changed and updated to keep coordination with changes in the demand.

3. Costs and Patterns of Marketing:

The raw material costs, costs of factors of production, marketing functions, etc., further determine the changes in the structure of the markets. Marketing functions like transportation, storage, financing, and providing market information, determine the market structure.

4. Government Policies:

Government policies regarding taxes, subsidies, purchases, and sales affect the performance of market tasks. The market structure should be changed as per the changes in government policy. The functions like level

of sales, purchase of raw material, inventory, quantity to be produced, and taken to market change with changes in the Government's policies.

5. Technological Change:

Technological changes bring changes in the market structure through adjustments in the scale of business, the number of firms, and their financial requirements.

Determinants of Market Structure:

1. Number of Buyers and Sellers:

The number of buyers and firms selling a particular product, determines the effect on the level of competition in the market. If the number of buyers and sellers is large a single seller or buyer has very little impact on the market. The number of buyers or sellers determines the price of the product. If there are very few firms in the market, the firms can influence the price of the products.

2. Economies of scale:

Market structure is also determined by the size of the firm or the level of production. If the output is produced on a large scale, the firm gets advantages of large-scale production, it can keep the price of its products low and gets a competitive advantage. Such firms can capture entire market demand gradually and, it may create a monopoly in the market.

3. Nature of Product:

Characteristics of the product determines the market structure. If the products are homogeneous, it is sold at the same price in the market. But if the commodity is differentiated then it is sold at a different price. If the product is unique and has no other substitute, it creates a monopoly in the market.

4. Entry Barriers:

If the firms are free to move from one industry to another, the price will remain stable. The industry with a greater number of firms getting profit will attract other sellers in the market. This keeps the prices stable due to competition. But if there is no freedom of entry and exit, different prices prevail in the market. This may create a monopoly in the market.

5. Mobility of Goods:

When the factors of production and products can move very easily, the uniform price will prevail in the market. It will make the market competitive. But against this, if the factors of production and products can not move freely then different prices prevail in the market for a different product.

6. Consumers' Knowledge:

If buyers and sellers have perfect knowledge about the market conditions, the sellers cannot charge a different price for the same product, in such a situation the uniform price prevails in the market. then a uniform price prevails in the market. However, if the buyers have imperfect knowledge, sellers can charge different prices.

7. Government Intervention:

Sometimes the Government has a monopoly over the market Markets are indirectly regulated by the government. The government either imposes heavy taxes or makes the business license mandatory to restrict the entry of firms.

Based on the factors determining market structures, the following types of market structures are found:

1. A perfectly competitive market consists of a very large number of firms producing a homogeneous product.
2. Monopolistic competition is also a competitive market where there are a large number of independent firms which have a very small proportion of the market share.
3. Oligopoly in which a market is dominated by a small number of firms which own more than 40% of the market share.
4. Duopoly is a market consisting of only two sellers.
5. Monopoly is a market where there is only one producer or seller of a product or service.
6. Monopsony is known as buyer's monopoly because there is one buyer and many sellers. The single buyer is the monopsonist who can influence the price of the product.
7. Oligopsony consists of few buyers. The oligopoly sellers will have to deal with the increased bargaining power of the oligopsonist buyers in the market. It may also be termed as bilateral oligopoly.

The imperfectly competitive structure reflects realistic market conditions where some monopolistic competitors, monopolists, oligopolists, and duopolists exist and dominate the market conditions.

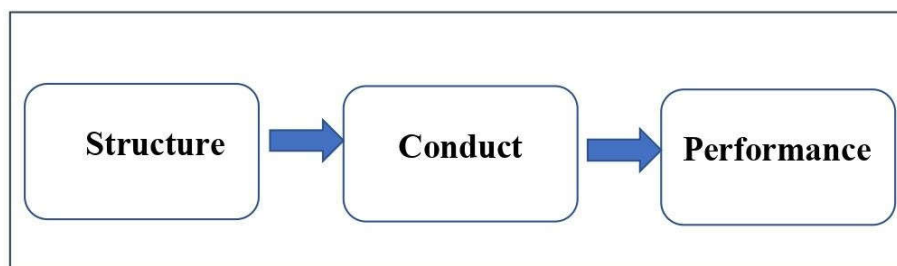
3.4 FIRM COMPETITION AND PERFORMANCE

3.4.1 Structure Conduct and Performance:

Structure Conduct and Performance theory is an integral part of Industrial Economics. It is based entirely upon neoclassical theory. This theory was published by Edward Chamberlin and Joan Robinson in 1933. The technique was further formalized by Mason in 1939. Then the theory was modified by Joe S. Bain in 1951. According to the theory, the market

structure determines a firm's conduct which further determines the performance of the firm. The relationship between the structure to conduct and conduct to performance has been used to study industrial organizations. The relationship is denoted as under.

Figure 3.1: Structure, Conduct, and Performance



As denoted in the figure, the structure determines the conduct of the firm, and the conduct of the firm determines the performance.

The structure illustrates the characteristics and composition of markets and industries in an economy. At the micro level, it is the features of a firm like the nature of commodities they produce and the operations on which they are classified. The number of competitors in the industry, ease of entry, and exit. Market structure is determined based on the degree and nature of competition for goods and services.

Conduct refers to actions taken by the firm or its behaviour or responses of the firm. The conduct or the action of the firm includes product differentiation, pricing of the product, collusion, and exploitation of market power.

Many indicators are applied to measure the performance of a firm. Traditionally it was believed that profitability is the only criteria to measure the performance of a firm, but in modern times it is measured by

The structure conduct and performance have many attributes. Such attributes make the relationship between structure, conduct, and performance more complex. Joe S. Bain studied the cross-section behavior of industries. He explained two situations:

1. High level of concentration:

Concentration refers to the degree of control exercised by the largest firm in the economy over the economic activity. If there is a high level of concentration, there will be less degree of competition. Prices will be higher, and the profits will also be higher. Thus, when there is a high concentration, it will lead to higher profits. Structure (High concentration) will determine the conduct (high prices) which will further determine the performance (high profit). In this case, the structure -conduct-performance has a direct relationship that runs from structure to conduct and conduct to performance.

2. Scale of Economies and Concentration:

It has been mentioned that concentration is determined by barriers to entry. If economies of scale are lower in some industries, then the concentration is higher in such industries. Higher concentration leads to higher profits.

The structure conduct and performance approach were evaluated by Baumol. According to him the cost of production rather than a market structure determines the profit. Similar views were shared by Demsetz from Chicago School. He suggested that high profits may be a sign not of market power but efficiency. In any market, the firm with the lowest costs will be likely to increase in size and market share, there will be pressure on all firms to be efficient. Later the performance was regarded as the expertise and ability of a firm to efficiently utilize the available resources to achieve its objectives.

3.4.2 Competition and Performance:

The structure-conduct-performance approach can be derived through the theories of perfect competition and monopoly.

Table 3.2: Structure, Conduct, and Performance in Perfect Competition and Monopoly

Market	Structure	Conduct
Perfect Competition	• A large number of firms • Free entry to Industry • No intervention by the Government	• Price is determined by the market. • $P = AR = MR$ • $P = MC$ in the long run
Monopoly	• Single firm • High barriers to entry	• Price determined by the firm • Price is above MC

As denoted in the above table the structure of perfect competition leads to the conduct or behavior of the firms in such a way that the price of all the firms is equal to the marginal cost. As a result, the firms in the industry earn normal profits. But the structure of the Monopoly market is such that the firm decides price above the marginal cost as a result the firm earns a super normal profit.

These two models are extremes where the number of firms is infinite versus one and free entry versus no entry. The firms or industrial units follow the conduct which falls between these two extremes. The status of any industry can be found between these two extremes. By observing the structure of that industry in terms of the number of firms, ease of entry, etc., the performance of that industry can be predicted. As one moves from

the industries with many firms to the industry with only a few firms or only one firm, profitability will increase. It will increase from the normal level of profit with many firms to the super-normal level of profit in a monopoly. This suggests that the performance of a firm in a perfect competition structure is such that all the firms in the industries with such a structure earn a normal profit.

3.4.3 Market Structure and Monopoly Power:

The structure of the monopoly market is such that there is only a single seller in the market. As the only seller, the monopolist holds control over the market. Monopoly power is defined as the ability of the seller or producer to charge a greater price than the Marginal Cost. How far the monopolist will become successful to raise the price higher than the marginal cost is determined by the degree of monopoly power. The degree of monopoly power is not the same in the case of all monopolies. It is determined by many factors.

The degree of monopoly power is determined by many factors. According to Aba P. Lerner, the degree of Monopoly power is 0 in perfect competition. In perfect competition, $P=MC$. But in the Monopoly market, $P > MC$. The difference between price and marginal cost is positive in a Monopoly market, the higher the difference between price and marginal cost, the higher the degree of Monopoly Power. This idea is supported by the formula given below.

Lerner's Index of Monopoly Power

The structure of the monopoly market is such that there is only a single seller in the market. As the only seller, the monopolist holds control over the market. Monopoly power is defined as the ability of the seller or producer to charge a greater price than the Marginal Cost. How far the monopolist will become successful to raise the price higher than the marginal cost is determined by the degree of monopoly power. The degree of monopoly power is not the same in the case of all monopolies. It is determined by many factors.

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Lerner's Index of Monopoly Power = $\frac{P-MC}{P}$ Where P- Price,
MC – Marginal Cost.

1. Entry Barriers:

According to Joe S. Bain the structure of a market is determined or differentiated based on entry barriers. The extent of barriers to entry determines the monopoly power. Barriers to entry are the factors that prevent the new firm to enter the industry. According to Bain barriers to entry is “an advantage of established sellers in an industry over potential can persistently raise their prices above competitive levels without attracting new entrants to enter the industry.” George J. Stigler, defined it as “a cost of producing that must be borne by a firm which seeks to enter an industry but is not borne by firms already in the industry.” A major barrier to entry is cost, the new firms who want to enter the market are not able to compete with the already established firms concerning costs. Other barriers to entry are ownership of resources, economies of scale, etc. Higher the entry barrier, the higher the monopoly power.

2. The Number of Firms:

The number of firms in the market is another determinant of monopoly power. In perfect competition, there is a large number of firms in the industry therefore monopoly power in a perfectly competitive market is 0. But as the number of firms tends to reduce monopoly power improves. There are greater chances that the firms in the market with a few numbers of firms can charge prices higher than marginal cost. In a monopoly market, the monopolist is in the position to charge a higher price than the marginal cost.

3. Product Differentiation:

Product differentiation increases the monopoly power of a firm. In the case of homogeneous products, prices different from the price of rival firms can not be charged. As a result, the power of a firm to charge higher prices is weak in perfect competition with homogeneous products. As the degree of product differentiation goes up, the monopoly power becomes higher.

Sources of Monopoly Power:

As mentioned earlier, the formula to measure monopoly power has been introduced by A. P. Lerner. It is called as Lerner's index. The formula is

Monopoly Power = $\frac{P - MC}{P}$ but it is $\frac{1}{e}$ In other words, it is reciprocal to

the elasticity of demand. The smaller the elasticity of demand larger is the monopoly power. The elasticity of demand is an important source of monopoly power. The monopolist gets the power to control the market through the following sources.

1. Elasticity of Market Demand:

In a monopoly market, there is only one firm that produces the product. As a result, there is no difference between the elasticity of the firm's demand

and the elasticity of market demand. Therefore, in this case, the firm's degree of monopoly power is determined directly by the elasticity of market demand. But in any market where close substitutes are available, the elasticity of demand determines the price charged by the producer. In a market with close substitutes, the elasticity of demand is higher, if any firm charges a higher price there will be a greater decrease in the quantity demanded. In such a case the firm has very little power to influence the price.

2. Economies of Scale:

Economies of scale determine the cost structure of the firm. As the firm produces more units of a commodity the fixed cost is distributed over the production. But to get the benefits of scale and lower fixed costs the number of firms in the market needs to be less. If the number of firms in the market is large, the output will increase but the cost may not decrease.

To get the advantage of scale the monopolist may not allow the other firms to enter the market.

3. Control over the Resources:

In very few cases the source of monopoly power is the ownership of inputs required for the production. If a particular firm owns all the input required to produce a particular good or service, then it could emerge as the only producer of that good or service and it can create monopoly power.

4. Sunk Costs:

The sunk costs are the expenditure or costs that cannot be recovered. The sunk costs can be the source of monopoly power. A new firm in an industry requires to incur costs to establish itself in the industry. If entry into the industry is difficult, the cost to establish the business will be greater. If the cost required to establish a business is unlikely to be recovered, the business cannot be established. Such firms find it difficult to exit the market. Their exit is costly. Costly exits make the entry of the firms into the industry more difficult. In such cases, monopoly power is higher.

5. Government Restrictions:

Sometimes the Government provides some special benefits to some business firms. Such benefits become the source of monopoly power. State and local governments have commonly assigned exclusive permission or rights to conduct business in a specific market. Such rights or special permissions may create monopoly power. Governments might also regulate entry into an industry or a profession through licensing and certification requirements. Governments also provide patent protection to inventors of new products or production methods to encourage innovation; these patents may afford their holders a degree of monopoly power.

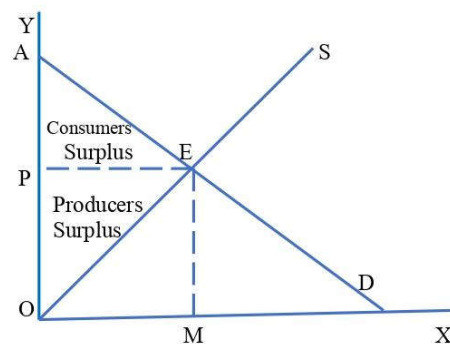
3.5 EFFECTS OF MONOPOLY POWER

The structure-conduct-performance approach implicitly explains that monopoly leads to poor performance and is harmful to economic welfare. Harberger was the first to measure the reduction in welfare caused by the exercise of market power in 1954. He studied industry-level data and explained that the activities of the manufacturing sector of the USA in the 1920s resulted in a reduction of welfare equivalent to 0.1 percent of GNP. Economists like Schwartzman (1960), Bell (1968), Worcester (1973), and Siegfried and Tiemann (1974), Cowling and Mueller (1978) also estimated loss of the welfare due to monopoly power. Following are the effects of monopoly power.

1. Effect on Consumers:

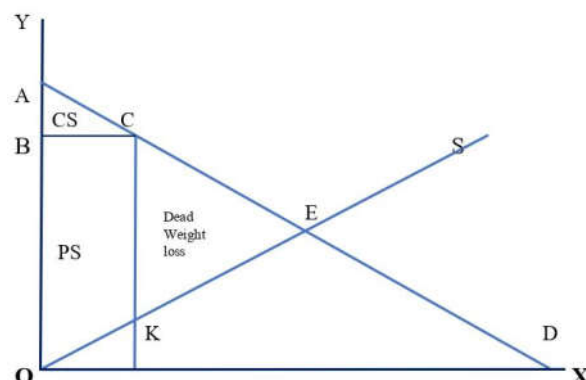
Monopoly power affects consumers welfare. It creates dead weight loss for the consumers. The monopolist with high monopoly power can charge a high price by controlling output. It creates a mismatch between demand and supply.

Figure 3.2: Consumers' surplus



In figure 3.2 in case of competition, the price is equal to AR and MR. Consumers get the benefit of a comparatively lower price. As indicated in Diagram 3.2 APE is consumers' Surplus and OPE is producers' surplus. The equilibrium price OP brings demand and supply to equilibrium at point E. But when there is monopoly power in the market equilibrium situation is different.

Figure 3.3: Deadweight loss



But as denoted in figure 3.3 CEK is dead weight loss. It reduces consumers' surplus. Thus, consumers' welfare is affected due to deadweight loss arising from monopoly power.

2. Market Failure:

Market failure is a situation where there is a defective allocation of resources. The existence of Monopoly power leads to market failure. The monopolist with higher monopoly power will be in the position to set prices higher. This limits the output. Such limited output takes away consumers' surplus. Output less than the demand in the market creates inefficiency which leads to market failure. This reduces aggregate welfare.

3. Price Discrimination:

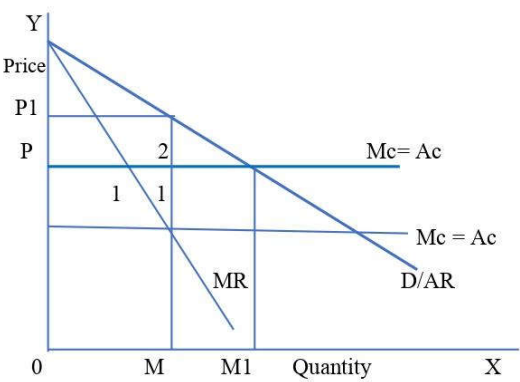
Monopoly power leads to price discrimination. Not only the monopolist is in the position to charge a higher price, but he can reduce consumers surplus of different consumers by charging different prices to different consumers according to their capacity to pay. The Monopolist with a high degree of monopoly power is in the position to extract entire consumers' surplus.

Although monopoly power is harmful to society some economists have taken the opposite view.

4. Monopoly and Reduction In Cost:

The economists like Williamson and Demsetz argued that monopolists may reduce the cost of production. Lower costs reduce deadweight loss but lead to higher profits and economic growth. This is explained in the following diagram.

Figure 3.4: Reduction of cost



In the diagram, P_0 is the price charged under perfect competition. And P_1 is a price charged under monopoly. At P_1 price $MC=AC$ is cost. But the cost at monopoly price that is P_1 is lower than the cost at competitive price P_0 . Thus, although the monopoly price is higher and output is less (OM) than the output produced in perfect competition (OM_1), the cost is equally low and the production under monopoly is more cost-effective. The area denoted by triangle 2 is allocative loss (deadweight loss). But the

area denoted by 1 is productive gain. The advantage is greater than the loss. Therefore, there will be an overall improvement in society's welfare.

Although it is difficult to understand the effect of monopoly power on the welfare of society, in general, it is believed that monopoly power creates harmful effects on society. But if the monopoly power is used to increase the welfare of the society by reducing the cost of production it may create improvement in the welfare of the society.

3.6 QUESTIONS

1. What is a market? Explain the concept of market structure and briefly explain the forms of markets.
2. Explain the concepts of Plant, Firm and Industry.
3. Discuss the determinants of market structure.
4. Explain market structure, conduct, performance approach.
5. Discuss Marshall Lerner's index of monopoly power.
6. Explain the factors determining monopoly power.
7. Explain the sources of monopoly power.
8. Write a note on effects of monopoly power.



MARKET STRUCTURE II

Unit Structure :

- 4.0 Objectives
- 4.1 Industrial Combinations
- 4.3 Mergers
- 4.4 Product Differentiation
- 4.5 Contestable Markets
- 4.6 Economies of Scale
- 4.7 Economies of Scope
- 4.8 Introduction: Industrial location
- 4.9 Factors Affecting Industrial Location
- 4.10 Weber's Theory of Industrial Location
- 4.11 Sargent Florence's Theory of Industrial Location
- 4.12 Questions

4.0 OBJECTIVES

- To understand various industrial combinations and their causes in market structure
- To understand the concept of Mergers
- To study the concept of Amalgamations
- To study various concepts like Product differentiation, Contestable market, Economies of scale and Economies of scope
- To understand the meaning of industrial location
- To study the factors affecting industrial location
- To study Weber's and Sargent Florence's Theories of industrial location

4.1 INDUSTRIAL COMBINATIONS

Industrial combinations involve the joining of two or more businesses to achieve specific goals, such as increased market share, efficiency, or diversification. These combinations can take various forms, such as mergers, acquisitions, joint ventures, and strategic alliances.

- a. Mergers:** This is when two companies agree to combine their operations and form a new entity. There are different types of mergers, such as horizontal (between competitors), vertical (between companies

in the same supply chain), and conglomerate (between companies in unrelated businesses).

- b. Acquisitions:** In an acquisition, one company buys another company outright. This can be done through the purchase of assets or by buying the majority of the company's shares.
- c. Joint Ventures:** This is a partnership where two or more companies come together to undertake a specific project or business activity. Each company retains its individual legal status but shares resources and risks.
- d. Strategic Alliances:** These are agreements between companies to cooperate in specific areas while remaining independent. They may share resources, knowledge, or capabilities to achieve mutual benefits.

Causes

Industrial combinations occur for a variety of reasons. Companies pursue these combinations to achieve strategic objectives, improve operational efficiency, and enhance competitive positioning. Following are some common causes of industrial combinations:

- i) Economies of Scale:** Combining companies can reduce per-unit costs through larger production volumes, bulk purchasing, and shared resources. Streamlining operations and consolidating facilities can lead to more efficient processes and reduced overhead costs.
- ii) Market Power:** Merging with or acquiring another company can increase a company's market share and competitive influence. Larger companies can have more control over pricing, potentially leading to higher profit margins.
- iii) Diversification:** Combining with companies that offer different products can reduce risk by diversifying the product portfolio. Expanding into new geographic markets can spread risk and increase revenue sources.
- iv) Synergy:** Cross-selling products and services to each company's customer base can increase sales. Eliminating redundant functions and combining similar operations can lead to significant cost savings.
- v) Access to New Technologies and Capabilities:** Acquiring companies with advanced technologies or strong R&D capabilities can enhance innovation and product development. Mergers and acquisitions can bring in skilled employees and management expertise.
- vi) Competitive Pressure:** In highly competitive industries, companies may merge to survive and thrive by consolidating resources and market positions. Companies may merge to fend off competition or prevent being acquired by a rival.

- vii) Financial Considerations:** Some combinations can offer tax advantages, such as using tax losses of one company to offset profits of another. Combining companies can lead to better financial metrics, such as higher earnings per share (EPS) and stronger balance sheets.
- viii) Regulatory and Market Conditions:** Changes in regulations can drive companies to merge to comply more effectively or take advantage of new opportunities. Economic downturns or favorable market conditions can prompt companies to pursue combinations as a strategic response.
- ix) Globalization:** Companies may combine to expand their presence in global markets and take advantage of international growth opportunities. Mergers and acquisitions can help companies leverage cross-border synergies in production, marketing, and distribution.

Few examples of Specific Industrial Combinations are:

- a) Facebook and Instagram (2012):** Facebook acquired Instagram to expand its social media portfolio, increase its market share in social media, and eliminate a potential competitor, benefiting from Instagram's user base and growth potential.
- b) Reliance Industries and Future Group:** In 2020, Reliance Retail, a subsidiary of Reliance Industries, announced the acquisition of the retail, wholesale, logistics, and warehousing businesses of the Future Group. This combination aimed to strengthen Reliance's retail presence across India.
- c) ONGC and HPCL:** In 2018, Oil and Natural Gas Corporation (ONGC) acquired a majority stake in Hindustan Petroleum Corporation Limited (HPCL). This move aimed to create an integrated oil and gas company, leveraging synergies between ONGC's upstream capabilities and HPCL's downstream network.
- d) Flipkart and Myntra:** In 2014, Flipkart, one of India's largest e-commerce platforms, acquired Myntra, an online fashion retailer. This acquisition helped Flipkart diversify its product offerings and strengthen its position in the fashion e-commerce segment.

Industrial combinations are strategic moves driven by various factors aimed at creating stronger, more competitive entities capable of achieving long-term success in a dynamic market environment.

4.2 MERGERS

Traditionally believed the objective of the firms is profit maximization. Firms adopt several strategies to maximize profits. A merger can be one of the strategies to get the highest profits or to earn a greater market share. A merger is a process through which two or more companies mutually form a single venture. In other words, a merger unites two or more companies into one new company. Through mergers, there is the integration of

companies' resources, markets, manpower, capabilities, costs, revenues, etc. Generally, firms of equal size and with similar objectives create a new entity through a merger. There are different types of mergers and different reasons why companies decide to merge.

Following are the intentions for mergers:

1. Large-Scale Production:

As the scale of production is increased, costs can be minimized. Large companies can get the benefit of a cost-saving competitive advantage which small companies generally can not get. After a merger, two companies can increase the scale of production and can get the benefit of economies of scale.

2. Market Share:

One of the common motives to merge is to acquire the highest share of the market. The integration of resources, manpower, technology, etc. enable the merged company to acquire the largest share of the market.

3. Acquisition of assets:

A merger is also driven by a wish to obtain some assets that cannot be obtained using other methods. It is quite common that some companies arrange mergers to gain access to unique assets or to assets that usually take a long time to develop internally. For example, access to new technologies is a frequent objective in many mergers.

4. Value Creation:

One of the objectives of the merger is to generate additional revenue or value. Activities like market expansion, product diversification, research, and development after the merger will help the unit to bring better value addition through better revenue generation.

5. Diversification:

Mergers are often undertaken for diversification purposes. A company can diversify its business through mergers. It may enter a new market and may provide new services to that market. Sometimes managers of companies follow merges to diversify risks regarding the company's operations. It is thought that mergers would diversify markets and thereby may diversify risks.

6. Taxation:

Companies follow merger practices to get taxation benefits. For a company with large taxable income if merges with a company with tax losses, the total tax liability of the consolidated company will be much lower than the tax liability of the independent company. Thus, a merger can also be looked at as a strategy to get other advantages along with taxation benefits.

7. Incentives for managers:

Mergers are also followed to pursue the personal interests and goals of the top management of a company. A consolidated unit after a merger ensures

more power and prestige. The consolidated company after the merger becomes much larger than the single unit. Managers are motivated to form a big company after merging two units into one company. It is called empire building. It happens when the top managers favor the size of a company over its performance.

4.3.1 Types of Mergers:

Mergers take different forms. The form of a merger depends upon the objectives of the companies that merge. After the merger, the firms may have enhanced monopoly power or might have enhanced their knowledge and expertise. The firms apply it to get further benefits from their knowledge and expertise. This expertise may relate to the nature of the range of products, gained through research and development, gained in one geographical market that can then be applied in other geographical markets. Such powers the firms apply in their process through choosing a type of merges. The following are different types of merges.

1. Horizontal Integration:

Horizontal merger strategy is adopted by the firm to strengthen its position in the company. The horizontal extension means how much of a given product a firm produces and how many different products it offers. When the objective of the firms is to expand the market for their products or enter a new market, a horizontal integration strategy is followed. Horizontal mergers allow the firms to explore new markets through new products. Generally, two strategies are followed under horizontal mergers.

- 1) The firm increases its marketing exposure through subsidiary firms or the sales of its products in different market segments.
- 2) The company establishes several branches in different parts of the city or country where similar products are offered.

Horizontal Integration is useful for firms to establish themselves in different markets. By offering products or services in different markets through horizontal mergers, the firm strengthens its position in the industry. Mergers with another company that produces and sells the same product or service. The Horizontal Integration strategy may create a monopoly. The consolidated company after the merger can capture the market, reduce competition, and achieve high profits.

The Horizontal Integration strategy is highly effective when:

- The firm competes in a growing industry
- The firm has sufficient financial resources to handle mergers and acquisitions
- Monopoly power emerging out of merger is allowed
- Competitors lack some capabilities, competencies, skills, or resources that the company already possesses.

1. Expansion and Growth:

This is one of the objectives of undertaking the activity of a merger. If the firm can operate at its full capacity, a merger enables the firm to operate at its full capacity. Sometimes it is less expensive to merge with the other firm than to expand internally. In this situation mergers will provide a wider customer base; the other firm may have distribution systems that can be used to expand the business through marketing. If the firm merges with another firm that operates in different regions, it can expand its operations to new markets. The firms can diversify their products, and services and can get long-term opportunities for your business. Thus, mergers can help the expansion and growth of the business.

2. Reduces competition in the sector:

Horizontal integration can reduce competition. It helps in the case of competitive products and for products for which substitutes are available in the market. If competition is reduced firms can concentrate on satisfying the needs of the consumers. Reduced competition can result in higher profits. It also makes firms more powerful concerning suppliers and distributors.

3. Complements the Existing Products:

The horizontal Integration helps the firms to widen the market as well as product portfolio. The firms can sell more products along with the existing ones. It may complement the existing products. The firms also can reduce the reliance on only one product.

4. Economies of scale and Scope:

The economy of scale describes the situation in which cost advantages are gained by the company due to the heavy production of goods. Companies can achieve economies of scale by increasing their production and lowering costs. This happens because the cost is distributed among many goods.

The economy of scope describes the situations in which the long-run average and marginal cost reduction of a company happens due to the production of complementary goods and services. It is the efficiency formed by variety, not due to the volume of the products.

5. Increased Revenue and Reduction in Costs:

Mergers help firms reduce costs. For example, firms in the same segment or location can combine resources to reduce costs, duplicate facilities can be avoided. Firms can operate at a cost lower than their competitors. Prices of the final products can be lowered which will drive the competitors out of the market if they cannot compete in a pricing war. Reducing the costs can increase the profit margin and increase the revenue earned.

But a firm must take care because Horizontal integration may impact a company's product line by affecting its profits adversely. Following are some drawbacks of horizontal integration.

1. Diseconomies of Scale:

If the business if merger and vertical integration grow too large and if there are clashes in top management there is a risk of diseconomies of scale. It may lead to increase costs in production.

2. Affects Flexibility:

After the merger, the consolidated firm has additional manpower and more processes, but it requires more accountability. The consolidated firm must have coordination and transparency in its all departments.

3. Investigations from authorities:

Horizontal integration may create a monopoly and the firms may follow anti-competitive practices. Such monopolies may attract investigations from competition authorities of the region. The firm must prove every time how it is not limiting the competition in the market.

4. Strict Supervision by the managers:

As per the theory, horizontal integration results in a synergy in which the capabilities and resources between merging firms are expected to complement each other. Horizontal integration also creates a monopoly. If there is a lack of synergy, the top management expects too much from the workers and it leads to strict supervision and control over the process which may lead to unrest among the workers.

As there are some drawbacks of horizontal integration, the firms should take into consideration that the benefits from horizontal integration exceed the losses. Also, the firm should include complementary products or develop by-products. This will help the firms to get benefits from existing products and maintain existing sales. Also, it will help the firms to get expected profits.

5. Vertical Integration:

Vertical integration, means the stages of the production process in the firm. For example, obtaining inputs, processing the inputs, transforming them into a final product, marketing them, etc. One of the most important decisions that a firm must make is how to obtain its inputs. Whether to produce them within the organization or to purchase them? When the decision is taken to produce it within the organization it is vertical integration. Vertical integration is a strategy that allows a firm to restructure its operations by taking direct ownership of various stages of its production process rather than relying on external contractors or suppliers. The degree of vertical integration in each industry results from the aggregation of these micro-decisions at each stage of the production process. The merger is used as a strategy for vertical integration. In other words, firms a firm supplying raw materials is selected for a merger then there will be vertical integration as the consolidated firm will produce its raw material.

Much of the literature on vertical integration applies the agency theory or transactions costs framework and thus focuses on sources of efficiency

gains. But sometimes vertical integration is a reaction to imperfect competition or it can be a source of imperfections.

The extent of vertical integration is often measured by the ratio of net output (value added) by a firm to its gross output (sales). Net output is measured as the sum of the wages, salaries, and profits of a firm, gross output is equal to net output plus material inputs purchased from other firms. If a firm begins to produce some inputs that it had previously bought for other firms, then its degree of vertical integration would rise as its net output rises and its purchase of material inputs from elsewhere declines. Firms follow vertical mergers to get greater control over their supply and make their organization more competitive.

Degrees in Vertical Integration:

1. Full Vertical Integration:

When the firm obtains all the assets, resources, and expertise needed to reproduce the upstream or downstream of the supply chain within the production unit of the firm itself then it is full vertical integration. The firms make use of vertical integration to achieve their goals. Sometimes full vertical integration is used as a substitute for the merger. Instead of going for the merger, the firms adopt vertical integration.

2. Quasi Vertical Integration:

When the firm has ownership of specialized tools upstream or downstream of the supply chain, then it is quasi-Vertical integration. For example, if the firm has obtained some stake in the form of equity investment to get the benefits of increasing ownership interest.

3. Long-term Contracts:

A mild form of vertical integration is long-term contracts. The firms keep some components of purchasing are held constant. The purpose is to reduce inconsistencies in product delivery, The costs are held constant to a certain extent.

4. Spot Contracts:

When the firms need inputs or raw materials immediately, the firms go for spot contracts. Raw material procurement is made on the spot, so it is called a spot contract.

Types of Vertical Contracts:

1. Forward Vertical Integration:

When the firm merges with the firm with a forward supply chain, it is called forward integration. The forward supply chain is- Producers of raw materials – Manufacturers – Retail Distributors. If a firm is a manufacturing unit, and if it merges with the distributor then it is forward vertical integration.

Forward Vertical integration is also known as upstream integration. Retailers have greater purchasing power. Or the firms at the end of the supply chain have the money to purchase companies behind them. Therefore, forward vertical integration is not common.

2. Backward Vertical Integration:

Backward vertical integration is where a firm merges with another firm at a stage before it is in the supply chain. In other words, it incorporates one of its suppliers. For example, it is called backward vertical integration because the firm is behind in the supply chain. So, in a basic supply chain

of raw material producer, manufacturer, and distribution – the distributor could merge with the raw material supplier or the manufacturer. This type of vertical integration is quite common. This is because the distributors at the end of the supply chain have the purchasing power to integrate with the suppliers.

3. Balanced Integration:

Balanced integration is a combination of both backward and forward integration. For example, balanced integration happens when a company merges with a company before it in the supply chain, as well as a company that is after it in the supply chain. The balanced integration consists of transactions toward backward as well as towards forwarding direction in the supply chain.

Advantages of Vertical Integration:

Vertical integration enables firms more control over the supply chain. There are other benefits or advantages of vertical integration. They are mentioned as under.

1. Availability of information:

Vertical integration allows the firms to have greater control over the production process. There is a free flow of information among supply chain members. Such a free flow of information helps to reduce the time required to pass the information from one member of the supply chain to the other. As a result, there is greater flexibility in modifying the process according to the changes in demand, which improves the elasticity of supply.

2. Reduction in Costs:

Through vertical integration, firms can reduce input costs. When the firms either integrate through the production of raw materials or distribution, it can reduce cost by reducing the members in the chain and thereby reducing their margins. Also, the firm can adopt advanced technology in the production process which may further help to reduce costs.

3. Specialization:

Through vertical integration organizations invest within the organization. It can utilize the skills of the people within the organization. It also can specialize in the skill set that is required for the process. Based on specialization, the firm can differentiate itself from others.

4. Quality Control:

As through vertical integration, the firms can have control over the production process, and can also have control over the quality of the

product. If there is backward integration the firms can have control over the quality of raw material used. In the case of forwarding integration, the distribution can be improved, and the firm thus can set the standard for the quality of the product.

5. Lower Consumer Prices:

At each stage of the supply chain, the supplier gets some level of profit. After vertical integration, the new firm earns a profit at two points of the supply chain. Therefore, the new firm can charge lower prices.

6. Geographic Expansion:

Vertical integration helps the firms to open new centers

Disadvantages of Vertical Integration:

Following are the disadvantages of vertical integration.

1. Higher Cost:

If the firms undertake backward vertical integration and produce raw material, they may produce it with higher costs than the other suppliers at least in the initial stages of the production. This is because the people within the firm may not have the expertise required for products which may lead to managerial complexity. A clear result of this is an increase in costs and a reduction in core competency.

2. Disadvantages Due to New Technology:

If the new technology is developing very quickly the vertically integrated firm needs to adopt the new technology. The firm needs to invest in new technology. The adoption of new technology can be costly. It can add to the cost of production. This can neutralize the advantages of vertical integration.

3. Lower Profits:

Vertical integration may not be always profitable. The firm may require huge investments and expertise. The firms may not compete with other suppliers or distributors who are already established in the market.

4. Reduces Flexibility:

The established firms in the market have more flexibility than vertically integrated firms. Vertically integrated firms have few choices with the supply chains. But independent suppliers or distributors specialize in the production or distribution of a specific product therefore they can have better flexibility.

5. Conglomerate Integration:

A conglomerate merger or integration is an integration between two firms with unrelated businesses. The two firms are in totally different sectors or different geographical areas. Such mergers are helpful for firms to extend their functions to a different geographical area or to expand their range of products.

Types of conglomerate mergers:

There are two types of conglomerate mergers. Pure Conglomerate Merger-when two firms with nothing in common merge then it is a conglomerate merger. Sometimes the objective of firms is to expand business or to increase product range if such companies merge, then it is called a mixed conglomerate merger.

Advantages of Conglomerate Mergers:

1. Business Diversification:

Firms with conglomerate mergers can diversify their business. The firm gets the advantage of diversification, and it can overcome risks related to weak markets. The firm can overcome the unfavorable effect of a decline in one business segment by keeping its good performance in another diversified segment.

2. Expanded Customer Base:

A firm with a conglomerate merger can cross-sell its products to the other company. It gets a completely new set of customers that it otherwise could not find. This broadens the customer base and helps to get better profit.

3. Economies of Scale:

The costs like costs of research and development, and costs of advertisements can be reduced if the two firms merge. The costs are spread out to different business units.

4. Utilization of Resources:

Conglomerate merger helps the firms to utilize unused resources like capital and manpower. Excess capital can be utilized in different areas of business. It can also use its unutilized expert manpower in different businesses.

Disadvantages:

Although a conglomerate merger has advantages it has its disadvantages too. following are the disadvantages of conglomerate mergers.

1. corporate governance:

It is quite possible that the diversification of business changes the focus. this may divert the resources away from core operations. Such diversion of resources may result in poor performance.

2. No previous Experience:

In a conglomerate merger firms merging do not have any kind of experience to work with each other. This may result in this management in an organization.

3. Governance Issue:

When different companies with different sets up merge with each other, it is very challenging to develop a new corporate culture. Such kind of differences may create a problem for the smooth functioning of the company.

Amalgamation is a type of industrial combination where two or more companies merge to form a new entity. This new entity absorbs the assets and liabilities of the amalgamating companies. Amalgamations are often used to streamline operations, achieve economies of scale, and increase market presence.

i) Features of Amalgamations:

- i) Creation of a New Entity:** Amalgamation results in the creation of an entirely new company. The original companies cease to exist, and their assets and liabilities are transferred to the new entity.
- ii) Unified Management:** The management and operations of the amalgamated companies are unified under the new entity, which often leads to more efficient decision-making and resource allocation.
- iii) Shareholder Approval:** Amalgamations typically require the approval of the shareholders of the amalgamating companies. This is usually done through voting during special meetings.
- iv) Regulatory Approval:** Depending on the jurisdiction, amalgamations may require approval from regulatory bodies to ensure compliance with antitrust laws and to protect the interests of shareholders and the public.
- v) Accounting Treatment:** The accounting treatment of amalgamations can vary. There are two primary methods:
 - a) Pooling of Interests Method:** The assets, liabilities, and equity of the amalgamating companies are combined at their book values.
 - b) Purchase Method:** The assets and liabilities are recorded at their fair market values, and any excess of purchase consideration over the net assets is recognized as goodwill.

Benefits of Amalgamations

- i) Economies of Scale:** By combining operations, the new entity can achieve cost savings through more efficient use of resources, bulk purchasing, and streamlined processes.
- ii) Market Expansion:** Amalgamations can help companies expand their market reach, enter new geographic regions, and increase their customer base.
- iii) Increased Financial Strength:** The combined financial resources of the amalgamating companies can improve the new entity's ability to invest in growth opportunities, research and development, and innovation.

- iv) **Risk Diversification:** Especially in conglomerate amalgamations, the new entity can diversify its risk by operating in different industries or markets.

Examples of Amalgamations

1. **Glaxo Wellcome and SmithKline Beecham:** The amalgamation of these two pharmaceutical giants in 2000 created GlaxoSmithKline, one of the world's leading healthcare companies.
2. **Bank of Baroda, Vijaya Bank, and Dena Bank:** In 2019, the Indian government approved the amalgamation of Vijaya Bank and Dena Bank with Bank of Baroda. This amalgamation aimed to create a stronger and more competitive entity in the banking sector with a larger customer base and enhanced operational efficiencies.
3. **State Bank of India and Associate Banks:** In 2017, the State Bank of India (SBI) merged with its five associate banks (State Bank of Bikaner & Jaipur, State Bank of Hyderabad, State Bank of Mysore, State Bank of Patiala, and State Bank of Travancore) and the Bharatiya Mahila Bank. This amalgamation aimed to create a unified banking behemoth with improved economies of scale and a more extensive reach.
4. **Larsen & Toubro Infotech and Mindtree:** In 2019, Larsen & Toubro (L&T) acquired a controlling stake in Mindtree, which led to the amalgamation of the two IT service companies. This move aimed to enhance L&T Infotech's capabilities and market position in the IT services sector.
5. **HDFC Ltd. and HDFC Bank:** HDFC Ltd., a leading housing finance company, announced its amalgamation with HDFC Bank, one of India's largest private sector banks, in 2022. The amalgamation aimed to create a larger, more diversified financial services entity with enhanced product offerings and distribution capabilities.

In this way Amalgamations can offer significant strategic advantages, but they require careful planning, execution, and management to realize their full potential.

4.4 PRODUCT DIFFERENTIATION

Product differentiation or variation is a facet of non-price competition in monopolistic markets. The other aspect of non-price competition is 'selling cost'. Both product differentiation and selling cost helps the monopolistic firm to alter the shape and position of its demand curve so that higher revenue is generated from the sales of the products produced by the firm. In this section, we are dealing only the product variation or differentiation aspect of non-price competition. Product variation is attempted by changing the attributes of the product so that the product becomes more attractive to the consumers. Product differentiation may be superficial or substantive. Superficial product differentiation may assume

forms like change in color, fragrance, packaging and delivery of the product. When product differentiation is substantive, it may lead to both quantitative and qualitative changes in the product thereby offering more utilities for the same price. Thus each monopolistic firm produces an assortment of products for its own customers. The monopolist is able to charge different prices for each brand of the same product.

Product differentiation can be explained as any change that alters the quantitative and qualitative characteristics of a product or the conditions under which the product/s are sold. The attributes of the product or the service offered to the consumers may assume changes in quality, brand name, packaging, service up-gradation, higher warranty periods etc. Product differentiation causes changes in the position and shape of the demand as well as the cost curves. While the cost of production goes up, successful product differentiation will make the demand curve less elastic in terms of its shape and will be placed at a higher level on the right reflecting a higher demand for the same product also now at a higher price. The monopolistic firm attempts to maximize his profits in the following manner:

1. Determines the cost and revenue curves for the products.
2. Determines the maximum profits.
3. Determines the profit maximizing price and output combination.

Profit maximizing product differentiation may go in two directions. Changes in the attributes of the products will alter the position of the demand curve and increase the profits. Changes in the technology involved in production may bring about changes in the quality of the products will lower the cost of production and thereby increase the profits. Changes in total profits made by the monopolistic firm, post product differentiation is shown in Figure 3.3.

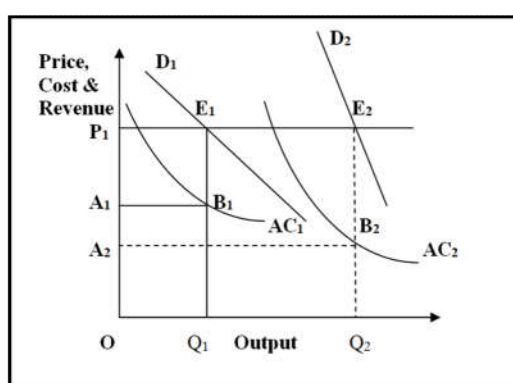


Figure 4.1: Product Differentiation & Profit Maximization.

In figure 4.1, D_1 is the demand curve or the average revenue curve before introduction of product differentiation. The average cost being Q_1B_1 , the firm makes supernormal profits equal to E_1B_1 per unit of output with total profits shown by the area $P_1E_1B_1A_1$. When the firm introduces product variation and technological improvements, there is a shift in the demand curve to the right. Notice that the new demand curve D_2 has a steeper

slope and is to the right of the original demand curve. The firm now produces a much larger output equal to Q_2 and the total profits made by the firm are larger than before i.e., $P_1E_2B_2A_2$. While the total cost of producing Q_2 level of output has gone up, the average cost has come down and hence the per-unit profit has also gone up.

4.5 CONTESTABLE MARKETS

The theory of contestable markets was put forward by **William Baumol** in his work 'Contestable Markets and the Theory of Industrial Structure' published in the year 1982. The fundamental dictum of the theory is that in a contestable market, firms fix their prices or align their prices to the average cost so that there is no possibility left for new firms to make super-normal profits and hence they would be adequately dissuaded from making an entry into the contestable market. A contestable market is characterized by very low entry and exit barriers and also low or zero sunk costs. Sunk costs cannot be recovered by the firm if it decides to exit from the industry much early in the day. In a contestable market, newly entering firms are equally placed as much as the existing firms. There is neither competitive disadvantage to the new firms nor a competitive advantage to the existing firms. Resources are equally accessible and there are no significant advantages of learning by doing.

Under these conditions, a firm under a contestable market will not be free to determine its own price which is above the average cost. If it does that, new firms will enter the market and skim away the super-normal profits. These new firms are known as 'hit and run' firms and they can remain so because of the absence of sunk costs.

4.5.1 The Price and Output Equilibrium of a Monopoly Firm in a Contestable Market:

The price and output equilibrium of a Monopoly firm in a contestable market is shown in figure 4.2. The fundamental argument is that if the firm charges a monopoly price, it will come under attack by 'hit and run' firms and a part of the monopoly profits will be skimmed away by these firms. In order to prevent the entry of 'hit and run' firms, the monopoly firm in our example must charge a competitive price is equal to the average cost. A competitive price will dissuade 'hit and run' firms from making an entry into the market.

In a contestable market, even a monopoly firm would have to charge price P_2 which is the competitive price to keep the away the competitors at bay. The monopoly firm, however, is not able to achieve economic efficiency which is the sum of efficiency in production and efficiency in allocation. Production efficiency is achieved when least cost maximum output is produced which is not the situation in our example. Allocation efficiency is achieved when price is equal to marginal cost which is also not the case in our example.

Let us assume an airline firm having monopoly operating on the Mumbai to Delhi air-route, fixes a monopoly price and enjoys monopoly profits. Enticed by the cream, another airline firm having surplus aircrafts can enter the Mumbai to Delhi to air transport market, skim the cream and run away without incurring any sunk costs. Other examples of contestable markets are Internet Service Providers, Software Developers or the software industry as a whole, electricity distribution companies or discoms, Gas suppliers etc. Contestability of the market limits the ability of the monopoly firm to use its market power and charge a price which is higher than the competitive price. If the entry costs and sunk costs are low, the monopoly firm will not be able to charge a monopoly price. The price fixed by the monopolist will be based on the degree of contestability. If the market is perfectly contestable, the monopoly price will be equal to average cost because anything above the average cost will invite the 'hit and run' firms. If the market is not perfectly contestable, the actual market price will be set between the monopoly and the competitive price because contestability cannot take away the complete market power of a monopoly firm which is quick and nimble footed and pricing is not the only strategy used by monopoly firms to eliminate or reduce competition. Further, real life markets are not perfectly contestable.

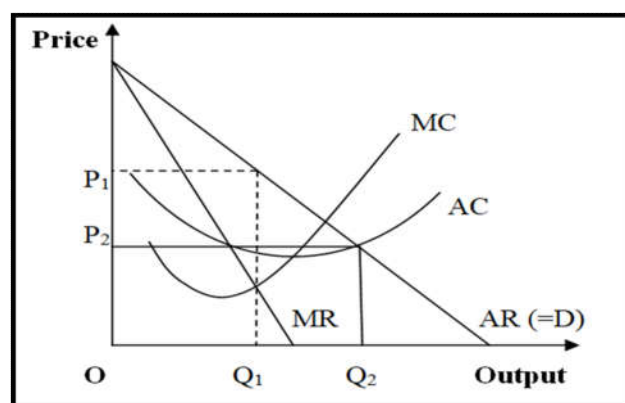


Figure 4.2 – Price and output equilibrium of a contestable Monopoly Firm.

4.6 ECONOMIES OF SCALE

When the firm expands the scale of output in the long run, the average cost of production falls. The cause of the fall in the average cost is attributed to economies of scale. Changes in returns to scale are caused by cost reducing and cost increasing factors. The cost reducing factors are known as economies of scale and the cost increasing factors are known as diseconomies of scale. These factors are internal as well as external to the firm. In the long run when the firm expands its scale of production, some internal factors indigenous to the firm starts operating so that the cost of production falls. These factors are called internal economies of scale and the advantages of these factors are exclusively enjoyed by the firm in which they arise. Similarly, when a given industry expands i.e., when the number of firms operating in an industry in a specific location expands, all

the constituent firms begin to enjoy certain advantages due to certain factors operating in the industry. These factors, external to the firm, are called external economies of scale. While there are internal and external economies of scale, there are also internal and external diseconomies of scale. These diseconomies both internal and external to the firm are responsible for the rise in the cost of production and the operation of returns to scale. Increasing returns are caused by the fact that economies of scale outnumber the diseconomies. Constant returns are obtained due to the equality of economies and diseconomies of scale and negative returns are obtained because diseconomies of scale outnumber the economies of scale.

a) Internal Economies:

When a firm expands its scale of output, it enjoys certain advantages which are exclusive to her and not available to others. Such advantages or internal economies arising due to expansion in the scale of output impart competitive edge to the firm over others. From the managerial point of view it is important to identify these economies and take advantage to improve the operational efficiency of the firm. These internal economies are as follows:

1. Labour Economies:

When a firm expands its scale of output, there is a need to increase the quantum of various inputs. Important amongst these, is the expansion of labour employment. Job analysis, job description, job specifications and person specifications helps the firm to put the right person at the right place and at the right time. This exercise leads to division of labour which in turn leads to specialization and increases the efficiency of the work force working in a firm. Specialized employees develop more efficient tools and techniques and increase the speed of work. Increased productivity on account of division of labour results improved production function and lower cost of production.

Adam Smith in his widely known work 'An Inquiry into the Nature and Causes of the Wealth of Nations' (1776) describes his visit to the Pin Factory and explains the concept of division of labor or specialization. He says that pin manufacturing was specialized and divided into a number of different processes leading to large scale production and lower average cost. You can imagine the total output of pins if it were manufactured by a single Smith who on his own would be performing all the operations or processes that so many workers did it separately in the Pin Factory example quoted by Adam Smith.

2. Technological Economies:

More efficient and advanced technologies can only be used if the scale of production is large enough to optimize them. Technological economies are obtained when modern machines and scientific technical processes are adopted and used in producing on a large scale. The cost of operating large and advanced machines is less than that of operating small and dated

machines. Further, when a firm expands, it can link all the stages of output by setting up composite production processes and reap advantages of cost reduction. For instance, a composite textile mill can set-up plants for spinning, weaving, bleaching, dyeing, printing, pressing and packaging the fabric. Technological economies are also obtained when a large firm is able to use its waste to produce by-products in other industries. For instance, the use of sugarcane pulp obtained from a sugar factory can be used as a raw material in paper manufacturing.

3. Managerial Economies:

When more and more people are employed in the course of expansion, managerial specialization can also be undertaken and specialist managerial staff can be placed to perform various managerial functions. For instance, human power requirements planning, placement, compensation and separation can be handled by a specialist personnel manager. The activities of training and development can be looked after by a human resource development manager. Other key result areas of an organization such as production, purchase, finance, marketing etc. can be handled by respective specialists. Expertise obtained from the specialized experience of various functional heads of management can bring about reduction in the cost of production, increased sales and higher profits.

4. Marketing Economies:

When various material inputs are obtained on a large scale and sold on a large scale, economies of marketing are realized. In the first instance, a large firm will have its own specialized marketing department which will be capable of exploring new sources of supply, obtain the raw materials and other inputs at lower rates and also expand the size of the market through marketing research. When purchases are made on a large scale, the firm can obtain advantages such as preferential treatment, cheap transport, preferential credit, timely delivery and good relations with the dealers. Similarly, on the selling side, the firm can obtain economies in advertising and sales promotion and economies in large scale distribution through wholesalers.

5. Economies of Vertical Integration:

Vertical integration refers to the control of the different stages of a product as it moves from raw materials to production and to final distribution. Vertical integration imparts certitude to production planning and facilitates cost control.

6. Financial Economies:

A big firm has a relatively easy access to the capital market, be it be for raising debt or ownership capital and the response to the firm is quick and adequate. While debt-capital can be raised on easier terms, ownership capital can be sold at a premium, thus generating savings or profits. Further, when financial resources are raised on a big scale, the cost of mobilizing resources is also low.

7. Risk-Bearing Economies:

A big firm can easily divide and spread its risks through diversification. While concentrating on core competencies a firm can diversify its operations along products and markets and substantially reduce its risk and thereby survive under all circumstances. All major companies like the Indian Tobacco Company, Hindustan Lever and industrial houses in India are diversified in their business operations. Diversification of output helps to offset losses made in certain lines of business by profits gained in other. Market diversification not only helps to remain in business but also continually expand the scale of operations.

b) External Economies of Scale:

External economies are external to the firm i.e. their point of origin is outside the firm and hence such economies are available to all the firms operating in a given industry so also other firms and industries located in a given geographical region. To put it very briefly, external economies arise due to growing industrialization which may be specialized or diversified. The following external economies can be enjoyed by a firm if it is located in a highly industrialized region:

1. Economies of Concentration:

Skilled, trained and technically competent labour force suitable for various industries, better transport and communication services, banking and financial services, better infrastructure, easily accessible repair and maintenance services leading to low downtime, uninterrupted power supply etc. are some of the benefits of concentration. Further industry specific research and development work can be undertaken on a co-operative basis and the benefits of such research can be enjoyed by all constituent member firms of a given industry. Easy and cheap access to all the facilities emanating out of concentration reduces the operational costs of a firm.

2. Economies of Information and Market Intelligence:

Industry specific information and information related to various aspects of business is easily accessible in heavily industrialized regions and cities. The communication media consisting of the electronic as well as the print media is well developed and all information pertaining to trade and industry is available. Further, firms can also employ intelligence agencies to obtain vital business information so that they can stay ahead of their competitors. Timely information helps the firm to make appropriate and timely business decisions and also act on the decisions taken. This may also reduce anxiety and increase the productive efficiency of the firm.

3. Economies of Specialization:

Firm level specialization will help increase the productive efficiency of the firm. The various stages of the value chain can be disintegrated and each stage of the value chain can be handled by the subsidiary firms or other

firms. An important advantage of specialization or disintegration is that each production facility in the value chain can maximize the economies of scale and reduce the cost of production.

c) Diseconomies of Scale:

When a firm expands beyond its optimum size it begins to lose the advantages it made during the course of expansion. The disadvantages of supra-optimal expansion are known as diseconomies of scale. Operationally speaking, the firm would be operating under increasing cost conditions when proportionate change in output is less than proportionate change in input. What is true of the firm is also true of the industry. When the industry expands i.e., when the number of firms in the industry are more than what is required according to market or demand conditions, there will be not only competition for factor inputs but also competition in the market. Both on account of price and non-price competition, the firm may experience loss of market share and profits in the long run. In a given region or city, it is not so that only a given industry expands but a number of industries are set-up which in turn also expands, thereby, resulting in over-crowding and congestion. Both over-crowding and congestion results in transport and communication bottlenecks and reduces the efficiency of the work force. In addition, the firm may have a large work force with a high degree of specialization. Control and co-ordination of various activities both in man-management and material management becomes difficult leading to greater possibilities of inappropriate decisions. Wrong decisions and want of control and co-ordination translates into costs to the firm. Notwithstanding the existence of diseconomies of scale, the profitability and survival of the firm does not entirely depend upon its size but a host of other factors such as the nature of the market in which the firm operates and the products produced by the firm. For instance, a monopoly firm, in-spite of being inefficient, can always transfer the burden of higher costs on to the consumers.

4.7 ECONOMIES OF SCOPE

Economies of scope can be explained in terms of cost advantages achieved by a multi-product firm on account of its size. Economies of scope are associated with large scale distribution, advertising and purchasing and lower cost of borrowing money. In the modern times, a large number of firms produce a range of products. Such firms are also known as multi-product firms. These firms use factor inputs that contribute simultaneously to the production of two or more goods. A vegetable farm produces a variety of vegetables, fruits and flowers, an oil well produces crude oil and natural gas, an automobile plant produces cars, trucks and buses and commercial banks use the same assets to provide a number of financial services. Whenever it is cost effective for a single firm to produce more than one product than for separate firms to produce an equal quantity of output of the same products, economies of scope are said to exist.

A more top of the recall example that can be given for explaining economies of scope is that of McDonalds who can produce both

hamburgers and French fries at a lower average cost than what it would cost for two separate firms to produce the same goods. This is because McDonalds' hamburgers and French fries share the use of food storage, preparation facilities, labor etc. during production. Proctor & Gamble produces numerous products ranging from razors to toothpaste and Unilever also produce a variety of products such as bathing and washing soaps, detergent powders, shampoos, ice-cream, hair oil, hair dyes etc. These companies can afford to hire expensive graphic designers and marketing experts who will use their skills across the product lines. Because the costs are spread out, the average total cost of production for each product is lower. Economies of scope are conceptually similar to economies of scale. While economies of scale refer to efficiencies related to supply-side changes such as increasing or decreasing the scale of production of a single product type, economies of scope refer to efficiencies related to demand-side changes such as increasing or decreasing the scope of marketing and distribution of different types of products. Economies of scope are one of the main reasons for such marketing strategies as product bundling, product lining and family branding.

Family branding is a marketing strategy that involves selling several related products under one brand name. It is contrasted with individual branding in which each product in a portfolio is given a unique identity and brand name. Economies of scope also arise in family branding as several products can efficiently be promoted with a single advertisement or campaign. Family branding facilitates new product introductions by providing a 'foot-in-the-door' in potential customers' evoked set. When considering purchasing a new type of product, potential customers tend to evoke in their minds a product with a familiar brand name. Being a part of this evoked set can lead to trial purchase, product acceptance and other advantages. Family branding imposes on the brand owner a greater burden to maintain consistent quality and brand equity. If the quality of one product in the brand family is compromised, it could reduce sales of all the others. For this reason, family branding is generally limited to product lines that consist of products of similar quality.

Product bundling is a marketing strategy that involves offering several products for sale as one combined product. This strategy is very common in the software business (for example: bundle a word processor, a spreadsheet, and a database into a single office suite), in the cable television industry (for example, basic cable in India and in the US generally offers many channels at one price), and in the fast food industry in which multiple items are combined into a complete meal. A bundle of products is sometimes referred to as a package deal. The strategy is most successful when there are economies of scale in production, there are economies of scope in distribution, marginal costs of bundling are low, production set-up costs are high, customer acquisition costs are high and consumers appreciate the resulting simplification of the purchase decision and benefit from the joint performance of the combined product. As the number of products promoted is increased and broader media used, more people can be reached with each rupee spent. These efficiencies do not last

for-ever. Eventually, additional advertising expenditure on new products will start to be less effective and when this happens, one can say that the diseconomies of scope have set in. A sales team is selling several products can sell it more efficiently than when they are selling only one product. The cost of their travel time is distributed over a greater revenue base and hence cost efficiency improves. There can also be synergies between products such that offering a complete range of products gives the consumer a more desirable product offering than a single product would.

Economies of scope can also operate through distribution efficiencies. It can be more efficient to ship a range of products to any given location than to ship a single type of product to that location. Further economies of scope occur when there are cost-savings arising from by-products in the production process. An example would be the benefits of heating from energy production having a positive effect on agricultural yields. A company which sells many product lines, sells the same product in many countries, or sells many product lines in many countries will benefit from reduced risk levels as a result of its economies of scope. If one of its product lines falls out of fashion or one country has an economic slowdown, the company will, most likely, be able to continue trading. In oligopoly and monopolistic markets, product bundling can be seen as an unfair use of market power because it limits the choices available to the consumer. In these cases, it is typically called product tying.

4.8 INTRODUCTION: INDUSTRIAL LOCATION

Before setting up a production facility, the manufacturer needs to take three inter-related decisions simultaneously pertaining to the scale of operations, the technique of production and the location. A separate branch of economics coinciding with geography, known as 'Industrial Location Analysis' deal with the problem of location or spatial decision making. This Unit deals with two of the important theories of industrial location. A manufacturer needs to consider many important factors such as technical, economic and institutional factors before deciding the location.

4.9 FACTORS AFFECTING INDUSTRIAL LOCATION

A factory is a technical unit whose function is to produce goods and services with the help of men and machines. The raw materials and other inputs are seldom available at one place and hence these inputs need to be procured from various other places thereby incurring transportation and procurement costs. The output of the factory is sold in all possible places which involve transportation and selling costs. The location of the factory therefore becomes an important decision. The owner will make the most economical decision in deciding the location of the factory. The total cost of manufacturing and distribution may change as much as ten per cent by virtue of the choice of location. Entrepreneurs set up their firms in places where the cost of production is minimized due to economies of location.

Several technical, economic and institutional factors determine the location of a factory. These factors are given below.

A. Technical Factors:

Technical factors are the physical factors which are generally geographical in nature and are related to soil, raw materials, human resources, climate etc. The important technical factors are:

1. Availability of land:

The price and availability of land is an important technical factor that goes in to the decision on the location of the firm. Manufacturing firms, for instance, cannot be located in cities where the land prices are sky high. One reason why manufacturing has moved out of the city of Mumbai is the very high land prices. An entrepreneur wanting to set up a manufacturing firm will therefore find smaller cities and towns more attractive in terms of cost.

2. Nature and quality of raw materials from land and semi-finished or intermediate products from existing industries:

Proximity to the source of raw materials, semi-finished and intermediate products is an important consideration. Raw material cost constitutes the major cost of production. The idea of locating a firm around the source of raw material will be sound in case of firms requiring localized gross or weight losing material. For instance, agro and forest based industries are in proximity to the sources of raw material. Sugar industry, iron and steel industry etc. are located in close proximity to the source of raw material.

3. Geographic situation of the factory site in relation to the transport facilities such as air, rail, road and water:

Transport cost is incurred to transport raw materials from the source of supply to the factory and to transport finished goods to the market. Industry is therefore located in places where transport and communication facilities are established. For instance, transport cost was an important factor in determining the Vishakhapatnam Steel Plant. Availability of public utility services, cheap sites along with amenities also influences the location of industry. For instance, the development of industrial estates in India was aimed to attract industries and bring about industrial development.

4. Quality and quantity of human resources and energy resources:

Human and energy resources are extremely important in setting up a firm. When more and more similar firms are set up, they together constitute an industry. Human resources and energy resources become an important factor based on their cost ratio to the total cost of production. If the ratio labor cost is high, the firm will be set up in a place where skilled labor force is abundantly available. For instance, the Information Technology industry is localized in Mumbai, Pune, Bangalore, Hyderabad and Madras. The Carpet Industry is localized in eastern Uttar Pradesh due to the

abundant availability of skilled weavers there. Water, wind, coal, gas, oil and electricity are the main sources of energy. For instance, energy cost is an important determinant in deciding the location of a cement manufacturing firm because power and fuel constitute about forty per cent of the cost of production of cement.

5. Availability of drinking water and water for industrial use:

Industries which require water are located near the places where water is abundantly available. Thermal power plants, fertilizer, chemicals, sugar, paper, textiles etc. are the industries which require great amount of water.

6. Waste disposal facilities and climate:

Common Treatment, Storage and Disposal Facilities are developed for the disposal of land disposable hazardous waste in 10 States, namely Gujarat, Maharashtra, Uttar Pradesh, Andhra Pradesh, Himachal Pradesh, Madhya Pradesh, Punjab, Rajasthan, Tamil Nadu, and West Bengal. There are more 36000 hazardous waste generating firms in India. The waste disposal facilities are inadequate in India. Hence, waste generating industries will be localized in areas where disposal facilities are adequately available. Gujarat and Maharashtra generate more than 50 per cent of the hazardous waste in India. Hence, the waste disposal facilities and the waste generating industries are also concentrated in Gujarat and Maharashtra. Climate influences the ability to work. Construction, demolition and renovation, furniture manufacturing, laboratories, leather manufacturing, pesticide, photo processing, printing, textile manufacturing etc are some of the waste generating industries. In hot and humid climate, the ability to work is less as compared to cool climate. Industries across the board may be established in regions with relatively better climatic conditions.

B. Economic and Infrastructure Related Factors:

- 1. Local markets:** Firms producing perishable goods which cannot be transported across the country and firms producing heavy goods are located in close proximity to the markets. The goods produced by the firms are mainly for the local markets. Firms located near the markets can reduce their operating costs.
- 2. Situation concerning export markets:** Export oriented firms would be set up around places where transport and communication facilities are good. Nearness to sea and airports will be an important factor in determining the location of export oriented industries.
- 3. Cost of land and building:** Cost of land and building assumes important in case of manufacturing industries. In highly industrialized or urbanized cities, the cost of land is very high. Manufacturing industries will therefore be located in semi-urban cities and towns where the cost of land is relatively less. Construction cost will also be relatively less in such places.

4. **Cost of infrastructural facilities:** Cost of infrastructural facilities such as transport charges, power tariffs, water rates etc is high in smaller towns and cities whereas it is low in big cities. Service industries will be set up in highly urbanized towns.
5. **Salary and wage structure in relation to skills:** Supply of skilled and trained human resources is vital to the setting up of firms and industries. Salary and wage structure is steeply graded in big cities whereas it is flatly graded in smaller cities and towns. Further, the availability of skilled and trained manpower is also an important consideration.
6. **Local cost of living:** The salary and wage structure from a given place is determined by the cost of living. In big metro cities, the cost of living is high and hence the salary and wages are also high. Cost of living determines the labor cost of the industry. If the cost of living is high, labor cost as a percentage of the total cost will also be high.
7. **Taxes and subsidies:** Export oriented zones and special economic zones are bestowed with numerous facilities. The government may impose reduced rate of taxes or give tax holidays to firms set up in special economic zones. The government may also give subsidies to the firms involved in export of goods.
8. **Cost and availability of finance:** The markets have become global and hence cost of finance becomes less important issue because large firms can access global financial markets and access cheap funds. However, for smaller firms, particularly small and medium enterprises, cost of finance is an important consideration.
9. **Structure of existing industries:** The structure of the market is determined by the degree of competition. Lesser the competition, greater will be the number of entry barriers and lesser will be the number of firms operating in the market. New firms will be willing to enter competitive markets than oligopolistic or monopoly markets.
10. **Industrial relations and trade union activities around the proposed location:** Militant and obstructionist trade unionism will always deter firms from being set up. Over the years since the implementation of the new economic policy in India, militant trade unionism is on the wane and hence there has been rapid growth in the economy. However, in regions where the trade union activity is very strong, less industrial development takes place because firms shy away from such places. Kerala and West Bengal in spite of good economic development are not able to attract industries and bring about rapid industrial development because the trade union activity is highly organized and obstructionist whereas Gujarat and Maharashtra are industrially developed due to industrial harmony.
11. **Demographic factors such as age and sex composition of local population, literacy, professional skills etc.:** The age and sex composition of the local population is important in answering the question as to what type of industry to be set up. The nature of

consumer goods both perishable and non-durable goods to be produced will be determined by the age and sex composition of the local population. Literacy, professional skills and training will determine the supply of human resources from a given location.

- 12. Local medical facilities:** If public health facilities are available, the medical cost of firms on their labor force will be less. Adequate availability of public health facilities will be an important factor in determining the location of industry.
- 13. Housing facilities:** If housing is cheap, the firm will be able to attract labor from across the country. If housing facilities are expensive, the firm would have to depend upon local labor force.
- 14. Cultural facilities such as schools, clubs and other recreation centers:** Highly educated and professional labor force will be looking at availability of cultural facilities in their location. Schools, clubs and good recreation facilities will determine the choice of professional labor force. Thus, if a firm is looking for extra-ordinary talent, it must either have in house recreation facilities or the place must have these facilities.

C. Other Factors:

1. Government policies pertaining to location of new plants:

Government may impose environmental regulations on the location of new and even existing firms. For instance, polluting and hazardous industries will be allowed to be set up only outside the city limits. Polluting industries may not be allowed without the clearances from the environmental and pollution control boards. Government may also provide incentives for setting up firms in the backward regions of the country to bring about balanced industrial development.

2. Personal factors:

Henry Ford set up his automobile factory in Detroit because it was his home town. The setting up of Railway Coach Factory at Kapurthala and the construction of oil refinery at Bhatinda in Punjab was due to personal decision of the politician involved. Similarly, the setting up of a Steel Plant at Salem in Tamil Nadu was yet another political decision. Thus, firms may be set up in each location due to the whims and fancies of the decision makers; be they be entrepreneurs or politicians.

Modern governments follow the policy of rapid industrialization and hence provide several facilities to entrepreneurs in order to attract investment in their respective States. The entrepreneur needs to evaluate the comparative facilities provided by various governments and weigh them in tandem with the technical and economic factors before arriving at a rational decision. Sometimes, personal factor may also determine industrial location. For instance, an entrepreneur may take an emotional decision in setting up a production facility in the place of his birth or liking without considering any other important factor into consideration.

Automobile factories of Ford at Detroit and of Morris at Oxford were set up due to the personal choices made by the respective owners.

In some industries, firms are located near sources of major raw materials such as iron and steel and pulp and paper while in other industries, they are located near markets. The choice of location will also be determined by the scale of operation and the technique of production. There are several theoretical and applied approaches for location analysis based on the factors determining industrial location. They are partial in nature because it is difficult to consider all the factors and hence only a few major factors are considered with the rest assumed to be constant. To understand the correct relevance of the various location determining factors and the inter-relationship among them, let us study two important theories of industrial location. One is by Alfred Weber and the other is by Sargent Florence.

4.10 WEBER'S THEORY OF INDUSTRIAL LOCATION

Alfred Weber, a German economist, has developed a location theory to explain the location of manufacturing industry. Before Weber, another German economist Launhardt has given a principle of industrial location based on minimum transport cost. Weber followed Launhardt's principle and presented a new theory which is used in location decision making to this day. Alfred Weber considered the general factors of location relevant to all industries. These factors were divided into two groups: regional factors and agglomerating factors. The regional factors were those influencing inter-regional location of industries and the agglomerating factors were those influencing intra-regional location. He found three general factors which vary regionally. These were raw material cost, transport cost and labor cost. The changes in raw material cost were included in transport cost. Weber tried to explain industrial location based on transport cost and then examined the effects of changes in labor cost and agglomerative factors in it. In his theory, Weber made the following assumptions:

1. The locations of raw materials including fuel are fixed.
2. The situation and size of consuming centers are given, and
3. There are several fixed labor supply centers and that labor is immobile and unlimited in supply at fixed wage rate.

Weber also assumed implicitly that the institutional factors like taxation, interest, insurance etc. as insignificant location factors. The economic culture and political system are uniform and stable across the locations. Weber therefore assumed perfect competition for his theory of location. Weber proposed that manufacturing unit tends to locate at a place where transport cost is the least. Weber used the location triangle of Launhardt to find the place of minimum transport cost. He assumed a simple spatial situation in which there is only one consumption center (C) and two fixed supply centers (M_1 & M_2) for two most important raw materials (see Fig. 4.3). The least cost point will be located within the triangle $CM_1 M_2$ which is point 'P'. The three corner points of the triangle will be pulling

the location point P toward themselves. The position of the point will depend on the balance of the pulls. The actual point of location will be determined by the greatest pull exercised by any one of the corners. The force exerted by each corner on production point is in the form of ton-mile weight to be moved from that point (M_1 & M_2) and to the point (C). Let x and y be the requirements of materials M_1 & M_2 , in tons per ton of output and let one unit of output be transported from point P to C. The distances of the corner points from the production point (P) are unknown. Let them be a, b and c between P and M_1 , M_2 and C points respectively. The total ton-miles of transport per unit output would then $ax + by + c$. This is to be minimized to find the position of point P or the location of production.

An industry may be material oriented or market oriented from location. Weber used material index for identifying such nature of the industry. The material index (MI) is defined as the ratio of localized material to weight of finished product ($MI = \text{Weight of the localized material} / \text{weight of finished product}$). Industries having a high MI ($MI > 1$) are attracted towards the sources of raw materials such as iron and steel industry whereas those having a low MI ($MI < 1$) are located at the place of consumption.

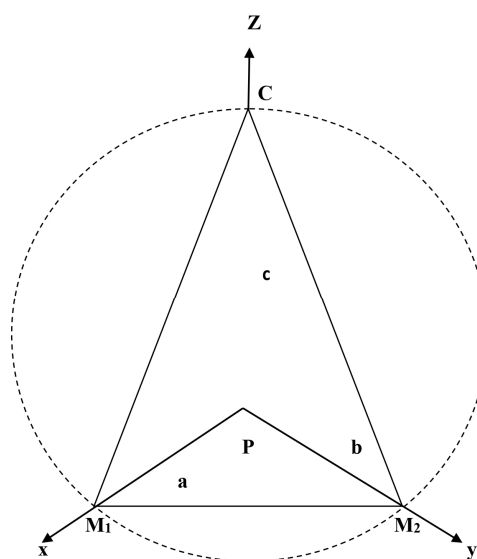


Fig 4.3 The location triangle

According to Weber, an industry will choose a cheap labor site if the labor cost saving is greater than the increment in transport cost at this site above the minimum possible transport cost. In order to explain the effect of labor cost on the least transport cost location of a plant, Weber used the 'Isodapanes'. An isodapane is the locus of the points having equal additional transport cost around the least transport cost location. There will be several isodapanes forming rings around the location for different levels of incremental transport cost as shown in Fig 4.4. Let P_1 be the least transport cost location and L_1 be a cheap labor site. Further, let us assume that there will be a saving of labor cost by Rs.4 if plant is located at L_1 instead of P_1 . Now the question is: Should the location be shifted

from P_1 to L_1 ? The isodapanes around P_1 are drawn for incremental transport cost of Re. 1 to 5. Point L_1 lies with the isodapane of Rs.4. It implies that it is economical to shift the location from P_1 to L_1 . If labor source making a saving of Rs.4 in cost of production lies outside the isodapane of Rs.4, such as shown by L_2 , it would mean a loss in shifting the location from the least transport cost location P_1 to the labor center L_2 . Let d_1 and d_2 be the total ton miles of transport services per ton of product at P_1 and L_1 sites respectively and w_1 and w_2 be the hourly wage rates at these two sites respectively. h is the number of man hours required to produce one ton of product and t is the cost of transportation per ton mile. The cost of production and transport at site P_1 would be $(td_1 + w_1h)$ and at site L_1 it would be $(td_2 + w_2h)$. The cheap labor site (L_1) would be chosen if $(td_1 + w_1h) > (td_2 + w_2h)$ or $(w_1 - w_2)h > t(d_2 - d_1)$ i.e. saving in labor cost exceeds the increment in transportation cost. For every level of saving in labor cost, there will be a critical isodapane within which the cheap labor cost site must lie for economic viability from location point of view.

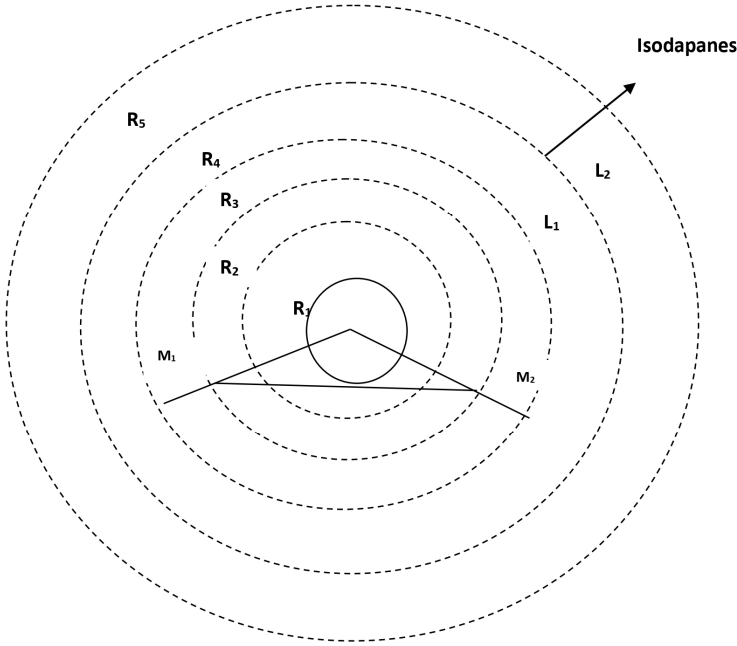


Fig 4.4 Isodapanes and Equilibrium location with cheap source of labour

In order to measure the importance of labor as a location factor, Weber used the average cost of labor per unit weight of product as an index. Greater the labor cost index, more will be the industry's susceptibility to move from the least transport cost site. Weber suggested to use the industry's coefficient of labor as the labor cost index which is defined as the labor cost per ton of location weight i.e. Location weight = Weight of material and product/ weight of product = Material Index + 1. A high coefficient of labor means a strong attraction to the cheap labor location.

Agglomeration:

Agglomeration means concentration of production for a commodity at one place. There will be two types of effects because of agglomeration: economies of scale within a plant and economies from the association of several plants (internal and external economies of scale). The deglomerative forces such as high cost of land, high rent, pollution etc begin to operate after a certain stage of localization of industries. Weber ignored these forces except for high rent which he related to the size of a city. The basic approach followed by Weber in finding the effect of agglomeration on location is similar to the one used for cheap source of labor. A plant will tend to be located in an agglomeration if saving of production cost at this location offset the increase in transport cost because of a shift from the least transport cost location. This means, the agglomeration lies within the critical isodapane of the firm. There will be several firms in the agglomeration. All of them will be having net benefits because of excess agglomerative economies over the additional transport cost. The extent of agglomeration depends on the economies available, the spacing of isodapanes and the density of the firms.

Conclusion:

Weber's study of industrial location is pioneering in nature. **Israd** has used Weber's analysis as the basic framework for his location theory and empirical work. However, Weber's theory is criticized on grounds of assumption of perfect competition. In the case of spatial analysis, the assumption of perfect competition is not correct. Distance provides firms with monopoly advantages in proximate area and therefore location specialization becomes one of the aspects of production differentiation and monopolistic competition. The assumption of profit maximization would be appropriate for such situation and not the least transport cost for industrial location. The assumption of spatial uniformity of demand conditions is the other weak point of Weber's theory. Demand for a product varies with its price and location of its production. The least transport cost location approach is not correct when spatial variability of demand conditions is considered. Further, the assumption that scale of production has no effect on costs is not correct. Optimum location for a plant depends upon the production level. Further, if we allow substitution among inputs then the optimum location cannot be defined merely in terms of least transport cost. The agglomeration analysis as given by Weber is also incomplete. Immobile and unlimited supply of labor as assumed by Weber has been a source of criticism. However, Weber's theory is an important contribution to understand industrial location. It is an abstract theory, applicable at a general level and not under specific situations of industries.

4.11 SARGENT FLORENCE'S THEORY OF INDUSTRIAL LOCATION

Sargent Florence introduced two new concepts in the theory of industrial location. They are the location factor and the coefficient of localization.

Location Factor:

The location factor is the index of concentration of an industry in a particular place. It is arrived at by taking the percentage of all workers in a particular industry found in a certain region and dividing it by the proportion in that particular region of the total industrial workers in the country. The region chosen would be the political division of a country. The degree of dissimilarity between the geographical distribution of the industry and the population of the country gives the index of concentration of an industry. If an industry is evenly distributed over the whole country, the location factor for each region would be unity because the proportion of the total industrial workers of the region would be equal to the proportion of workers in a particular industry. If the industry is unevenly distributed, the local factor will be either above or below unity. If the location factor is greater than one, the region would be having a higher share of the industry than what is legitimately due to it and if the location factor is less than one, the region is not having an adequate share of the industry.

The location factor can be calculated with the following formula:

Workers engaged in a particular Industry as a percentage
of industrial workers engaged in a given area

$$\text{Location Factor} = \frac{\text{Total number of industrial workers engaged in a given area as a percentage of total industrial workers in the country}}$$

Illustration:

Let us assume that the population of industrial workers in a country is 1000. Number of workers engaged in each area is 400 and the workers engaged in a particular industry, say textiles is 200. The location factor index will be as follows:

$$\text{Location Factor} = \frac{200 \times 100}{400} \div \frac{400 \times 100}{1000} = \frac{50}{40} = 1.25$$

Since the location factor is greater than one, it can be concluded that the industry is centralized in the given area.

Coefficient of Localization:

It shows the propensity of an industry to concentrate. The coefficient of localization can be found out for an industry from the census of production by the following formula:

$$\text{Coefficient of Localization} = \frac{\% \text{ of Industrial Workers in the Area} - \% \text{ of Workers in a Particular Industry}}{100}$$

Illustration:

Let us suppose the percentage of industrial workers in the given area is 60 and workers engaged in a particular industry are 30 percent. The coefficient of localization will be as follows:

$$\text{Coefficient of Localization} = \frac{60 - 30}{100} \div \frac{30}{100} = 0.3$$

Since the coefficient of localization is less than unity, industries have a tendency of decentralization in the given area. Complete coincidence region by region of the particular industry with all industries gives a coefficient of zero. It means industries are evenly distributed in all the areas. In case of extreme differentiation i.e. when workers in the particular industry are concentrated in one region, gives a coefficient of one. Based on coefficients, it becomes possible to divide the industries into three categories, namely: high concentration, medium concentration and low concentration. The coefficient of localization helps in classifying industries according to their dispersion or concentration.

Critical Assessment:

Sargent Florence's theory of industrial location is criticized on the following grounds:

1. The indices given by Florence reveal the existing distribution of industries in a particular country. They do not explain the reasons for concentration. The theory does not answer the question of optimum distribution of industries across regions. The theory therefore is not useful in determining the policy of industrial location.
2. The coefficient of localization is based on the pattern of distribution found in each country. Based on the coefficient, it cannot be concluded if the industry tends to concentrate.

Despite the limitations of the theory, it is of great significance for studying location dynamics in any country. The study of coefficient of location helps in deciding the types of industries that may be dispersed under a scheme of regional development. Industries with a medium coefficient of localization can be diversified over a wide area according to factor endowment in each region.

4.12 QUESTIONS

1. Explain the concept of contestable markets. Show how the monopolist is forced to keep the price closer to average cost in a contestable market.
2. What is product differentiation? Explain how product differentiation causes increase in monopoly profits under monopolistic competition.
3. Explain the concept of Economies of Scale and describe the internal economies of scale.
4. Explain the external economies of scale.
5. Explain the concepts of Economies and Diseconomies of Scale.
6. Write a note on Economics of Scope.

Industrial Economics

7. Explain the factors determining industrial location.
8. Explain Alfred Weber's theory of industrial location.
9. Explain Sargent Florence's theory of industrial location.
10. Compare and contrast Weber's and Florence's theories of industrial location.

