**Chapter One**

**Evolution of Industrial Economics**

* 1. **Introduction**

Many of the issues in this area of economics date back to Adam Smith in the eighteenth century. More recently, Cournot in the first half, and Marshall in the 2nd half of the nineteenth century laid foundations that as we shall see, remain appropriate concerns in industrial economics of today.

There have been two major traditional concerns of industrial economics. First, there has been a focus on the functioning of firms, and their performance; the determinants and consequences of different market structures, and the relationship between behavior and performance of firms and the market structure within which firms operate. Second, the role of government plays in influencing the organization of the industry.

In recent years, industrial economics has changed dramatically. Theories have been extended & developed, partly in response to new ideas such as commitment, to new empirical findings and partly to the arrival of new tools such as computer simulations.

* 1. **Major Concepts: Firms, Industries, Industrial Structure and Industrial System**
* **The firm** (enterprises, company or organization) is the basic decision – making entity. It converts inputs (capital, labor, raw material, entrepreneurship) in to marketable outputs.
* **An industry** is the aggregation of units of production, selling goods that are in some sense similar.
* **Industrial structure**: Shows the relative importance of individual industries or groups of related industries with in an economy and the pattern of transactions between these industries. We can describe the pattern of transactions between industries by using an input – output table. This table shows all the values and volume of transactions as between industries, during a time period of one year.
* **Industrial System:** at the level of the firm, the industrial system refers to the set of different stages of the transformation process as well as the nature of the connections between these stages. In the case of a perfectly vertical integrated firm (process of production managed by a single firm), the transformation process includes everything from the extraction of raw materials to the distribution of the final product on a market.

At a wider and medium level, industrial systems involve a number of firms. Various ways in which firms relate to one another – whether sharing technologies, supplying & buying goods or services and finally we can define industrial economics easily as:

* **Industrial Economics:** is the study of the supply side of the economy particularly those markets in which business firms are servers.

**1.3 Approaches to the Study of Industrial Economics**

**1.3.1 The SCP Paradigm-Harvard Tradition**

When we see a brief historical sketch of the subject of Industrial Economics, it lies in case studies of single industries, which frequently draw evidence from US anti-trust investigation. A pioneer of such work, which dates from the late 1930s, was Mason of Harvard University. Professor Joe Bain, a student of Mason, gave the field its modern shape by using inter-industry comparisons (1951 -1956). Bain focused up on the relationship between the hypotheses from which he began was that more concentrated industries should show higher profits than those with a lower concentration; this basic idea was, in due course, systematized and extended to become the principal theme of industrial economics. i.e. basic conditions – structure – conduct – performance (SCP) hypothesis. The idea that the performance of an industry was determined by the conduct of firms, which was in turn determined by structure, itself determined by basic conditions.

**Figure 1.1 the SCP model**

**Basic conditions**

These operate on both demand & supply sides of the market. On the demand side, the basic conditions refer to the size of the market, and its growth as well as its dependence on seasons and the economic cycle. Of critical importance are the elasticity of demand & the availability of substitutes.

On the supply side, basic conditions begin with technical factor such as the technology of production, the perishability (durability) of the products, and its value to weight ratio. Production includes all aspects of supply like distribution, advertising, marketing as well as manufacturing or mining.

Other basic supply – side conditions include legal and social factors such as the regulatory framework (for example, the obligation, if any, to acquire a permit or a qualification before one can commence (begin) trading and the role if any, of trade union) another factor is the availability of vital inputs.

**Market structure**

This has two aspects: internal aspects (the number & size of buyers & sellers) and external aspects (the conditions of entry & exit). At one extreme, stands monopoly, in which one seller, sheltered ( protected ) by many entry barriers More common, however, they are concentrated markets in which large proportions of outputs are in the hands of small numbers of sellers, in which entry barriers are significant so as to isolate the oligopolists from new competitors, and in which buyers are numerous and unorganized. Firms in such circumstances may possess market power. So that such situations are substantial interests to industrial economists.

The role of entry barriers is important in that without them even the most complete monopoly is open to competition from new entrants. Barriers may take a number of forms. Some may involve government's decision to protect its warships from a particular shipyard. The market then has entry barriers; no other firm /producer can compete for orders and the favored firm is a monopolist. Other barriers can be surmounted given sufficient funds and ingenuity, thus effectively limiting the population of those able to enter an industry. For example, economies of scale may demand that a new competitor enter either on a large scale (with heavy outlay) or not all patents, advanced technology and brand images can all be considered barriers to entry.

**Conduct**

It refers to the decisions and policies ofproducers (and, in principle, buyers' attention in practice focuses up on the former). Thus it refers to companys' pricing policies such as any attempts to segment a market by setting premium prices for some groups of customers and offering discounts to others. Generally, market conduct is the pattern of behavior that firms follow in adopting or adjusting to the market in which they operate to achieve the well defined goal /goals. Given the market condition and goals to be achieved, the firm will be acting alone or jointly to decide about the price levels for the products, the type of products and their quantities, product design and quality standards, advertisement etc. Under such situations, the firm has to device the ways for interactions, cross adaptations and coordination among the competing group of sellers in the market. All these are elements of the market conduct.

* For example, take two firm industry, both firms intends to maximize profit. How should they conduct their business for this? – Decisions regarding price and quantity, the main behavioral pattern may be
* They may ignore each other & pursue their objective independently
* They may join together & share their profit
* Competing each other through price cut, product differentiation, distributing the supply line of raw materials of each other
* Bribing ( lobbying ) the government officials
* Product diversification
* Effective advertisement
* Sales campaign
* Favorable credit terms to customers and so on.

**Performance**

This refers to the end records of the firm / industry in terms of the benefits which it generates from its various stakeholders. Most of the time companies are owned by shareholders and the first aspect of performance is evaluated with firms’/ industry’s profitability. In addition the performance of the firm/ industry include high growth rate of the firm / industry. Increase in sales, increase in capital turnover and increase in employment.

Since profits can arise from market power as well as from efficiency, care must be taken not to equate high profits with performance. Analogously, normal profits can not be taken to indicate a competitive & efficient industry since monopoly revenues may be frittered/ going/ away in high costs such as excessively high salaries, discount of price and the like. Therefore, economists are interested in the efficacy of the industry as well as its profitability. Also of interest is its ability to technological progressiveness (in terms of developing new products & of using new technology. A final aspect of performance is an industry’s record in the field of international trade.

**Determinism**

The full model of SCP includes the proposition that the elements are linked in a deterministic way. Thus industry's basic conditions determine its structure, which in turn determines conduct; and conduct determines performance. For example**,** the basic conditions relating to the construction industry are that the technology used is largely simple, that there are few economies of scale and that demand is sensitive to the economic cycle. Entry is thus relatively simple, so that the industry has a large number of small enterprises. Conduct takes the form primarily of price – based competition that is little scope for differentiation of products since they are usually designed by the client: the construction firm simply builds to specification. The performance of the industry thus shows fluctuating profits coupled with a relatively limited rate of investment & technological development compared with other industries. On the contrary, beer production is dominated by three factors. First most beer is made using large – scale continuous – flow processes in which large plants have a cost advantage over small ones that is, there are economies of scale. Second, there are also economies of scale in advertising & marketing beer. Third, there are barriers to entry in to the retailing of beer (in pubs) in that both require licenses. These combine to dictate the structure of the industry: economies of scale mean that companies are large so that the industry is oligopolistic, while licenses compel (force) to integrate forward and own their own pubs so as to ensure sales outlets.

**The Structure-Conduct-Performance relationship can be shown as follows.**

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| --- | --- |
| **Supply**  Raw materials  Technology  Product durability  Value/weight  Business attitude  unionization  regulatory frame work | **Demand**  Price elasticity  Rate of growth  Substitutes  Marketing type and size  Cyclical and seasonal character |

**Market Structure**

Nature of sellers and buyers Vertical integration

Barriers to entry of new firms Diversification

Product differentiation

**Conduct**

Advertising Legal tactics

Research and development Product choice

Pricing behavior Collusion, merger and contracts

Plant investment

**Performance**

Price Product quality

Product efficiency Technical progress

Allocative efficiency Profit

**S-C-P problems and perspective**

The SCP paradigm suffers from several major problems, to which economists have responded with both criticisms and new theoretical departures. A major flaw with SCP is that it is too simplistic, ignoring many of the linkages which can be argued to exist between the elements. A general theme is that conduct is very often not wholly determined by structure; firms have a wide degree of discretion over their conduct and the decisions they make affect the structure of the industry & indeed the basic conditions. Rather than passively responding to outside influences, many firms actively seek to control their environments.

* It is considered as non – theoretical (shallow in theory) and less powerful in predictive ability as compared to traditional perfect competitive model. In fact it is taken as a diversion on the basic Neo – classical price theory.
* Empirical studies based on the SCP approach show that there are conflicting results of the numerous tests carried out on the casual relationship underlying the SCP Paradigm. The assertion that structure is the ultimate determinant of performance is heavily questioned. It is suggested that there are possibilities were conduct and /or performance would influence structure.

**1.3.2 The Chicago School of Thought**

The method of analysis of this school relies on the traditional standard perfect competition model. For thinkers of this school, competition is an ever – present reality. This school is more antipathetic (strong dislike to government intervention). In the SC P paradigm, high concentration was believed to be collusion and enhance high profit implying the need for government intervention. But the Chicago school argues that when concentration is high. Firms tend to be large. Larger firms tend to be more efficient and this greater efficiency leads to higher profit. Thus nullifying (making void) the reason as to how government should intervene. According to this school, government may intervene only if the reason to higher profit is the act of collusion of firms.

**1.3.3 The New Austrian School of Thought**

They believe that competition is essentially a process which cannot be analyzed using conventional static economic models. They argue that profit rather than monopoly power is an integral feature of competitive process, providing signals to entrepreneur for resource reallocation in order to satisfy consumer demand.

* For them, markets are rarely if ever in equilibrium because the underlying conditions of technology and tastes are in constant flux (flexible or changing) and because business people / entrepreneurs are continuously striving to find out what this tastes and technological possibilities are.
* According to this school of thought (New Austrian School of Thought), government intervention is wrong not simply because it may lead to inefficient allocation of resources but because it inhibits the process of experimentation and change.
  + 1. **Institutional Economics**

In this world, institutional arrangement gives the process of exchange arrangement of transactions. These transactions have costs. Transaction costs are the expenses of trading with others above and beyond the price, such as the cost of writing and enforcing contracts. Using formal price theory analysis, the transaction costs approach uses differences in transaction costs to explain why structure, conduct and performance vary across industries. According to the transaction cost school, institutions that lower the costs of transactions are the key to the performance of the economies. These costs include those of information, negotiation, monitoring, coordination and enforcement of contracts. When transaction costs are absent, the initial assignment of property rights does not matter from the point of view of efficiency, for the reason that, property rights can be voluntarily adjusted and exchanged to promote increased production.

In the historical growth process there is a trade-off between economies of scale and specialization, on the one side, and transaction costs on the other. In a small, closed, face-to-face peasant economy, transaction costs are low. However, the production costs are high in those economies because specialization and division of labor are severely limited by the extent defined by the personalized exchange process in the small community. In a large economy as the network of interdependence widens the interpersonal exchange process gives considerable scope for all kinds of opportunistic behavior (cheating, shirking, and moral hazard) and the costs of transacting can be high. In western societies, complex institutional structures have been devised. This reduces the uncertainty of social interaction, and prevents the transactions from being too costly and thus allows the productivity gains of large scale and improved technology to be realized.

Environmental or human factors may affect the cost of transaction to increase or decline. The key environmental factors are uncertainty and the number of firms. Whereas, the key human factors are bounded rationality and opportunism. Bounded rationality is the limited human capacity to anticipate or solve complex problems. Problems arise when uncertainty is combined with bounded rationality, or where the managers of the few firms in an industry behave opportunistically.