Structure –Conduct-Performance Paradigm

Introduction

The Structure Conduct Performance (SCP) model dates back to the pioneering work of the Harvard economist Edward Mason, in the 1930s. His doctoral student Joseph Bain also contributed in the 1950s in the development of this model. Originally this model was used by the US government in crafting the antitrust policy. The model gained popularity among corporate strategists when Michael Porter used it as an analytic tool for businesses striving to compete within a market. The model's original form depicts the influence of an industry's structure (for example, the growth of demand and barriers to entry) on the conduct of producers (pricing, for example) and the performance of both the industry and the producers. Structure, Conduct and Performance paradigm (SCP) is used as an analytical framework, to make relations amongst market structure, market conduct and market performance. It was developed in 1959 by Joe S. Bain who described the model in his famous book ‘Industrial Organization’.

Structure-Conduct-Performance Model Definition

Smit and Trigeorgis: The structure-conduct-performance (SCP) paradigm asserts that conditions of supply and demand in an industry determine its structure. The competitive conditions that result from this industry structure influence the behavior of companies and in turn dictate the performance of the industry.

The Structure-Conduct-Performance (SCP) paradigm of strategy assumes market structure would determine firm conduct which would determine performance. This is a paradigm that is foundational to industrial organization economics, consistent with the positional view of strategy, as opposed to the resource-based view of strategy.

The theoretical framework that developed out of this effort became known as the structure-conduct-performance model (SCP). **The term structure** in this model refers to industry structure, measured by such factors as the number of competitors in an industry, the heterogeneity of products, and the cost of entry and exit. **Conduct refers to** specific firm actions in an industry, including price taking, product differentiation, tacit collusion, and exploitation of market power. **Performance in the S-C-P model** has two meanings: the performance of individual firms and the performance of the economy as a whole.

The logic that links industry structure to conduct and performance is well known. Attributes of the industry structure within which a firm operates define the range of options and constraints facing a firm. In some industries, firms have very few options and face many constraints. Firms in these industries generate, at best, returns that just cover their cost of capital in the long run, and social welfare (as traditionally defined in economics) is maximized. In this setting, industry structure completely determines both firm conduct and long-run firm performance (normal).

In other less competitive industries, firms face fewer constraints and a greater range of conduct options. Some of these options may enable firms to obtain competitive advantages. Even when firms have more conduct options, industry structure still constrains the range of these options. Also, other attributes of industry structure- including barriers to entry-determine how long firms in an industry will be able to sustain their advantages. Without barriers to entry, any competitive advantages by firms in an industry will be quickly competed away by new entrants. Thus, even in this case, industry structure still has an important effect on firm conduct and firm performance even though firms in these industries can sometimes have competitive advantages.

The Basis of the Model

The Structure-Conduct-Performance model is used to trace the causes of industry performance. It is based on a model of Cause and Effect: Industry financial performance is caused by the competitive conduct of players in the industry; this conduct is in turn caused by the industry structure.

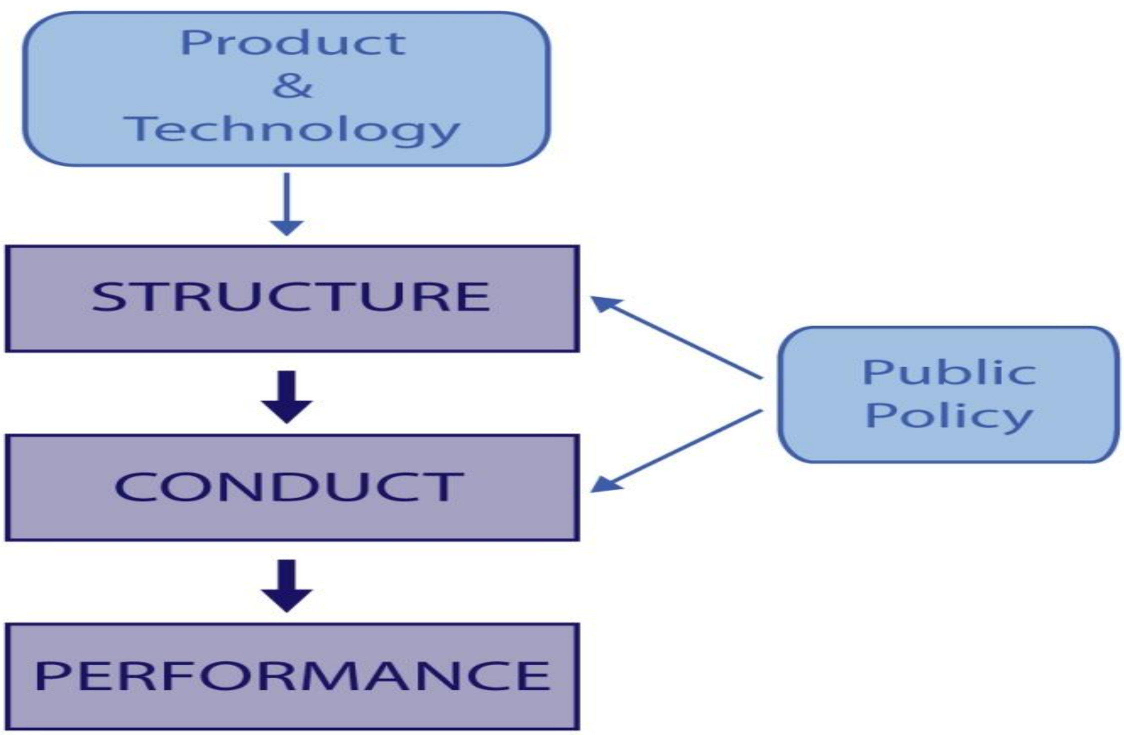
The SCP paradigm is considered a pillar of industrial organization theory, and it has been since its conception a starting point when analyzing markets and industries, not only in economics, but also in the fields of business management and controlling. Following its reasoning, an industry performance, which could be considered as the potential benefits to consumers and society as a whole, are determined by the conduct of the firms within the boundaries of this industry, which in turn depend on the structure of the market.

In the 1980s, McKinsey suggested an extension that added a dynamic element to a static framework. The dynamic version suggests that the relationships among structure, conduct, and performance are not unidirectional; they flow in the opposite direction, too. This approach allows companies to consider the influence of their own conduct on an industry's structure and, ultimately, on their own performance. Many companies use the revised model to "play through" various scenarios that might affect them, to gain an understanding of what's happening in their industries, and to develop their strategies. The seemingly timeless dynamic SCP framework is useful across regions and industries.

The SCP paradigm assumes that the market structure determines the conduct of the business organization. This conduct, in turn, is the determinant of market performance. Examples of market performance include efficiency, profitability and growth. The framework seeks to establish that certain structures of the industry can lead to certain kinds of behaviour which leads to various types of economic performance. The SCP paradigm was developed through evaluation of empirical studies involving American industries.

Theoretical models were not used to support the paradigm. The conclusion that was drawn from empirical studies was that market structure determined the performance of the firm. This is caused by the belief that the laws of competition should not be based on behavioural models but rather on structural remedies. According to J.S. Bain who developed the paradigm in the 1950s, most industries became concentrated than necessary. In concentrated industries, there are high barriers to entry. New firms cannot enter these markets that easily.

Elements of the Paradigm



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- **Structure:** those set of variables that are relatively stable over time and affect the behavior of sellers and/or buyers. The way in which markets fail to follow perfect competition conditions, depends basically in the degree of: supply concentration, demand concentration, product differentiation and market entry bariiers. Also, the structure of the market will always be determined by the nature of the product and the technology available.
- **Conduct:** the way in which buyers and sellers behave, both amongst themselves, and amongst each other. Firms choose their own strategic behaviour, investment in research, in development, advertising levels, collusions etc.
- **Performance:** It is measured by comparing the results of firms along the industry in efficiency terms, and different ratios are used to assess different profitability levels.

Structure

The dynamic behavior of buyers and sellers has an effect on the markets, making it harder to predict and establish fixed market structures. Difficulties arise when trying to explain the paradigm and this is due to data shortage, and the multiple definitions and extension of markets. Actually, the main problem when using this methodology to analyze a market or an industry is the difficulty of defining the limits or boundaries of a given industry.

Structure is defined as the components and characteristics of the various markets and industries in an economy. Structure also involves the different sectors of the economy. In the SCP approach, structure is described as the characteristics and relevance of individual markets operating within the economy. It provides a description of the environment in which organizations operate within a specific market. The said structure can be identified by considering the size and number of buyers and sellers in the market. The structure can also be identified based on product differentiation, market barriers and the extent of integration or diversification of firms.

Market structure is affected by different basic conditions. These basic conditions include technology, business culture, consumer preferences and product durability among other variables. Government intervention affects every component of the paradigm. Government intervention may come in the form of regulations, taxes and subsidies, international trade policies and price controls.

The SCP paradigm is used as a type of checklist for policymakers. They should also understand the function of transaction cost economics. This is a concept that attempts to identify the most efficient institutional and organizational activities that will help reduce transaction costs. Transaction costs economics is also based on the concept of bounded rationality. Economic factors are believed to be purposely rational but limited. Transaction cost economics also recognizes that the internal management of the organization and markets can be alternative forms of allocating resources. These also rely on the facts with corresponding effects if an organization has achieved efficiency. The most efficient firm will be able to either enter the market and engage in specific transactions or take the transactions out of the market and into the organization. These transactions for example, can be the production of goods and services within a vertically integrated firm. To determine whether or not the transaction should be brought into the firm and taken out of the market, organizations should determine the frequency of the transaction. If the transactions are to be conducted frequently, it is best to bring that type of transaction into the organization. The specific transaction might need skilled labour to complete. If, for example, the transaction seldom occurs like the construction of a new plant, the most efficient resource allocation will be to enter the market and contract services for the transaction to be performed. The same concept applies when firms decide on the degree of uncertainty. If the risk is great, vertical integration into an organization will bring the most efficiency. If the product can be easily duplicated, the transaction should be conducted in the market.

Conduct

Conduct in the SCP approach involves all actions and behavior of business organizations regarding the decisions being taken and the reasons behind them. Conduct focuses on how business organizations set prices. Organizations will have to determine whether these prices are in collusion with other firms in the market. Firms should be able to identify whether their activities and operations will improve economic welfare of the society. Firms should also satisfy and meet customer demands within a specific period.

The SCP approach helps organizations analyse whether their processes and products are produced efficiently. Organizations should determine whether the allocation of resources is efficient and effective. The right approach is not to waste resources and produce the right products in just the right quantities. Firms should also look at the other aspects of performance like the relationship between price and cost of product as well as the profits earned.

In the current market, consumer tastes do not change that much. Producers and consumers are said to be perfectly informed. Because of the market conditions, the economic welfare can be maximized using marginal analysis conditions that are expected to be fulfilled. Under marginal conditions, firms are expected to set prices so that they will be equivalent to marginal cost. In a perfectly competitive market firms can maximize their profits by ensuring that price will be equal to marginal cost. This will result in an effective combination of price and output.

Performance

The SCP approach states that performance of the firm should be determined by the conduct of organizations. This conduct is then determined by the characteristics of market structures. The relationships between structure, conduct and performance will then match the models of monopoly, perfect competition, oligopoly and monopolistic competition. This kind of approach provides clear guidelines to firms regarding policymaking decisions.

The performance of the firm can be further improved by taking actions that are designed to influence the current structures of a specific market. In most cases, performance can be predicted by considering structural conditions of the market. Such conditions can provide sufficient information and predict how organizations should behave. Ignoring conduct in all market conditions can lead to misleading predictions in markets operating under oligopoly. However, modern economists no longer believe that structures determine the performance of firms. Still, they accept the idea that market structures are important for firms to not behave competitively.

Measurement of Performance

The traditional SCP paradigm has two main aspects:

(1) The first involves firms obtaining measurements of performance. This can be done by getting a direct measurement rather than just an estimate.

(2) The second aspect involves economists using observations gathered from across industries.

This is done to create a regression of performance measures on various structures to be used in explaining market performance differences between industries. The measures of market performance can determine whether market power operates in an industry. Measurements of direct or indirect profit are indicators of the performance of an industry against competitive benchmarks. Some of these measurements are rate of return and price-cost margin.

To determine how performance is different from structure, industrial economists will need to know the measures of market structure. One common measure of market structure is firm size distribution. This is concerned with the most important issue involving market structure. The relative size and number of firms are indicators of market structure. Organizations will exert more market power when there are few firms in the market. In SCP research, industry concentration is a term used to measure the market shares of firms in the market.

The price theory that drives the SCP paradigm is said to be lacking in explanatory power. There are limitations because it explores how actors interact within a market. The Chicago School paradigm takes a more dynamic approach to economic events. The inefficiency brought by market power is temporary in nature. This inefficiency will soon be eliminated by the entry of more innovative organizations.

How to do analysis?

(1) Structure:

- Industry concentration: from monopoly to perfect competition
- Market share pattern: is there a dominant leader?
- What is the Minimum Efficient Scale?
- Is it vertically integrated? Why?
- Ownership of major companies (if they are listed/family oriented/state-owned)

(2) Conduct:

- Where do the firms compete: prices, service, advertising investment, war for talent or product innovation?

- Is the conduct stable, or is it erratic, linked to the industry cycle?
- Do player try to differentiate, or follow 'me-too' strategy?
- Do competitors try to grow the pie ("good competitors"), or fight to enlarge their share ("bad competitors")?

(3) Highlight in Performance:

- Long term Total Shareholder Returns (TSR)?
- Return on Capital Employed? (ROCE)
- Economic Profit. If you calculate this for the largest companies, your estimate for the industry will be accurate. If you can't get the data for some private companies or divisions, then identify the best comparable company and assume the same profitability.
- Quantify, and average over several years to remove the industry cycle effect.

When is it useful?

The usefulness of this model can be described as follows:

- This model can be used to justify consolidation in the industry. If Structure drives Performance, one way to improve performance is to create a more attractive industry Structure.
- This analysis is similar to the competitive intensity dimension.
- Usefulness of this model is diminished when industry boundaries are blurred and primary threats are coming from outside the industry.

Modern Theory of Industrial Organization

The modern theory of industrial organization is a combination of the SCP and Chicago paradigms into a more comprehensive and successful approach. This is known as the contract-based approach to industrial organization. The SCP paradigm still provides the guidelines but the analysis of conduct is extended from pricing theory to more contract behaviours. In conclusion, the traditional SCP paradigm is still useful for firms as a tool for analysis but other tools or measurements are needed to support the SCP approach. Static economic theories state that profits in the long-run may vary with market structures. These economic theories do not mention anything about the relationship between the market structure and profits during the short-run. Using the SCP paradigm alone may not result in accurate analysis.

Industry Classification and SCP Model

Industries can be described as perfectly competitive, monopolistically competitive, oligopolistic. His classification has close relationship with the SCP model.

(1) Industries are perfectly competitive when there are large numbers of competing firms, products being sold are homogeneous with respect to cost and product attributes, and entry and exit are very low-cost. Examples of such perfectly competitive industries include the spot market for crude oil. As is well known, firms operating in perfectly competitive industries can act only as price takers. A firm is a price taker when it responds to changes in industry supply or demand by adjusting prices rather than attempting to influence the level of supply or demand. Price-taking firms can expect to gain only competitive parity.

(2) Other industries can be described as monopolistically competitive. In these industries, firms carve out market niches within which they act as quasi-monopolists. However, these monopoly positions are always threatened by the competitive actions of other firms in the industry. In monopolistically competitive industries, there are large numbers of competing firms and low-cost entry and exit into and out of the industry. However, unlike the case of perfect competition, products in these industries are not homogeneous with respect to costs or product attributes. Rather, firms in this type of industry are successfully implementing product differentiation strategies-strategies that will be discussed in more detail in Chapter 7. Examples of monopolistically competitive industries include toothpaste, shampoo, golf balls, and automobiles. Firms in such industries have a variety of conduct options and can gain competitive advantages.

(3) Still other industries can be described as oligopolies. Oligopolies are characterized by a small number of competing firms, by heterogeneous products, and by costly entry and exit. Examples of oligopolistic industries include the U.S. automobile and steel industries in the 1950s and the U.S. breakfast cereal market today. Currently, the top four producers of breakfast cereal account for about 90 percent of the breakfast cereal sold in the United States, and the top eight account for almost 100 percent of the breakfast cereal sold in the United States. Firms in such industries also face a variety of conduct options, including tacit collusion, a strategy described in more detail in Chapter 10. Firms in oligopolistic industries can earn significant economic profits.

(4) Finally, a few industries can be described as monopolistic. Monopoly industries consist of only a single firm. Entry into this type of industry is very costly. There are few examples of purely monopolistic industries. However, one industry that comes close to being a monopoly is the personal computer operating systems industry-an industry almost completely dominated by Microsoft. One of the critical conduct options facing firms in this kind of industry is the use of market power to set prices that generate significant economic value.

Implications

The regulatory implications of the SCP paradigm depend on the level of social welfare associated with each of the types of competition. Social welfare is maximized in perfectly competitive industries, it is somewhat lower in monopolistically competitive industries, it is somewhat lower still in oligopolies, and it is very low in monopolies. Thus, the information in Table 3.1 can be used to identify when and how competition in an industry varies from the perfectly competitive ideal. Once identified remedies that increase the level of competitiveness in an industry can be instituted.

Strategy researchers have turned the traditional objectives of the SCP model upside down. Instead of seeking ways to increase the competitiveness of industries, strategy researchers have used the SCP model as a way to describe the attributes of an industry that make it less than perfectly competitive, and thus help firms find ways to obtain competitive advantages.

Criticism

(1) The SCP approach has been subjected to criticism in the recent years. Some critics say that the relationships between structure, conduct and performance are more complicated than originally thought. However, industrial organizations still use the SCP approach for analysis and as a tool in policy formulation. The SCP paradigm remains to be a basic tool used by industrial organizations in market competition analysis.

(2) SCP studies have ignored the issue regarding exogenous measures relating to market structure. Common concentration measures are not considered as exogenous measures.

Another serious issue in relation to this type of measure for market structure is bias. Most concentration measures are said to be biased due to improper descriptions in the market. Since international trade is more significant in other countries than just in US markets, another bias can come from ignoring exports and imports. Domestic concentration measures may not be significant measures of market power in such international industries.

(3) The Chicago School believed in the establishment of anti-trust laws. Economic efficiency should be the exclusive goal. Economic efficiency has two parts namely productive efficiency and allocated efficiency. In some instances, practices that can improve the business organization's productive efficiency can lower the allocated efficiency of the market. The Chicago School also believes that most markets are competitive in nature. Even if some markets have a few sellers, the market remains competitive. Product differentiation is less likely to undermine competition. Product differentiation and high market concentration do not contribute to anti-competitive issues.

Summary

Structure – Conduct – Performance is a framework used for industry situation analysis that provides a complete understanding of current industry structure, players, conduct and their competitive performance over time. The assumption with this framework is that the performance of companies is determined largely by companies' conduct and, ultimately, industry structure. The SCP model is used for gaining an overall understanding of an industry and provides a dynamic view of industry structure.

According to the structure–conduct–performance paradigm, the market environment has a direct, short-term impact on the market structure. The market structure then has a direct influence on the firm's economic conduct, which in turn affects its market performance. Therein, feedback effects occur such that market performance may impact conduct and structure, or conduct may affect the market structure. Additionally, external factors such as legal or political interventions from the state affect the market framework and, by extension, the structure, conduct and performance of the market