CHAPTER - 1
INTRODUCTION

This has been established in the literature of industrial economics that levels of market concentration in an industry has considerable influence on the performance variables of firms in a particular industry (Byeongyong and Weiss, 2005). Firms in the concentrated industry command higher monopoly power, hence, capacity to raise prices and earn super-normal profits (Schoefflers 1974; Alley, 1993). For, market share determines the potential of a firm to exercise market power in the industry particularly to execute collusions, which further strengthens the market concentration, and other joint profit maximization measures. In addition, the number and size distribution of sellers in the industry has a direct effect on the effectiveness of collusions (Stigler, 1964). Therefore, individual firm’s market share is a dominant factor, among others, in explaining changes in firm’s performance.

Others have opinion that superior performance of the firms may be due to higher efficiency, resulting in lower cost of production. Overtime, more efficient firms command larger market share as they enjoy the economies of scale and smaller firms either quit the market or function at the margin, consequently the industry becomes more concentrated (Demsetz 1973, 1974; Allen, Shaik, Myles and Muhammad, 2005). Hence, average profitability of industry becomes higher, overtime, owing to greater profitability of the more efficient firms. Efficient firms’ operate on a lower cost curve or/and are able to sell at higher price due to their superior innovativeness, better managerial skills and successful product differentiations (Scherer and Ross, 1990). However, some empirical studies have also reported negative relationship between market concentration and profitability.
On the other hand, profitability too, has significance regarding changes in market concentration. Higher profitability may help a firm to generate funds for further expansion, consequently, larger market share in subsequent stage of production. However, negative impact of profitability on market concentration is also found in some empirical studies (Miller, 1969; Levy, 1984). Higher profitability in an industry may entice new firms to enter the industry, hence, low concentration.

Growth of firms in size, overtime, let them to be listed in the stock markets; consequently they acquire some market valuation. Market valuation of firms depends on numerous factors that may or may not be under the control of respective firms. Market concentration through performance and expected performance variables affect the firm’s performance in stock market (www.myiris.com). It is expected that higher concentration increases the profitability of the firms which in turn is positively reflected in stock market (Kewai Hou and David T. Robinson, 2000; Fama, 1990, 1995, 2000; Ross Stevens, 1996).

Better performance in stock market enhances the market valuation of firms. Subsequently, it becomes easy for performing firms to mobilize more funds from the market for further expansion. If these funds are invested in same product line in the subsequent rounds of production industry may register higher market concentration.

Present study is devoted to examine the market concentration, its links to the performance of firms in the market and ultimately their relationship with stock market valuation in Indian industrial scene. Indian industry has experienced dramatic progress in stock market so far the number of listed companies and volume of transactions are concerned (www.moneycontrol.com). Some firms are showing wonderful results in the stock market both in terms of value and transactions.
The economic reforms of 1991 are often seen as a turning point in the management of Indian industry. Through much of the 1960s and 1970s, Indian industry was highly regulated and protected. Most formal manufacturing sectors were subject to licensing requirements and capacity controls. Many sectors were reserved for the public sector or for small-scale firms. Controls on imports and tariffs protected Indian industry from foreign competition. In a process that began in the 1980s, but gained prominence after 1991, Indian industry has been progressively deregulated and exposed to domestic and foreign competition. In the regulated phase, the pattern of industrial concentration was a direct outcome of industrial policy. Early regulation was guided by a perceived need to conserve scarce capital in order to prevent unnecessary duplication of investment. In many sectors production licenses were restricted to a handful of firms. Market shares were determined largely, though not entirely, by capacity allocations at the level of individual firms and plants. Sectors subject to such licensing requirements and capacity regulations were, quite often, relatively concentrated. On the other hand, some sectors were reserved for small-scale firms to support higher levels of employment.

In 1991 and afterwards industrial sector has been largely unshackled from the price, capacity production, product line regulations. Apart from other factors, this policy setup is expected to have influenced market concentration in Indian industries. With deregulation, we might expect the pattern of concentration to be determined by the interaction between the technological characteristics of the industry and what we might call the normal competitive processes. Many questions had risen about the above mentioned industrial structure and performance setup like Are Indian private sector industries relatively concentrated? Did these industries experience increased market concentration overtime? Do these industries have supernormal profit? How
they performed in the stock market? Does market concentration further help large firms in acquiring more market share? Do market concentration and profitability have influence over each other? How stock market performance is related to profitability in India? Does concentration have some bearing over stock market performance? What kind of policy changes these industries faced? How did they behave in changed environment?

In attempt to answer these questions, the study has taken traditional market concentration-performance paradigm as its base. The study has gone one step ahead from traditional setup of taking basic performance parameters to add stock market performance indicators to its scope. The analysis is largely cross-sectional and temporal, attempting to highlight the differences between firms of each industry and the industries themselves. In addition, given the changed environment in recent years, foreign competition has also been taken into consideration along with domestic competition.

Though competition policy constitutes a major area for policy makers in developed countries, it is rarely studied in developing countries. Policy makers and economists are more concerned about the growth of their economies in these countries, with much of the political and administrative machinery focusing on attempts to improve growth. Focus of development economics remains on increasing savings and converting them into investment which further can be directed to appropriate sectors. Macro economic factors like aggregate savings, aggregate investment, total output, exports etc. remained in focus. Micro economic factors of development such as productivity of firms, their level of competition, advertising expenditure, R & D expenditure etc. received much less attention. Though, a lot have been spoken about lack of R & D and competitiveness of Indian industry, but hardly
any serious microeconomic level study was conducted in this respect. After the liberalization of Indian economy in early nineties, it has become necessary to analyze market concentration-performance relationship in the changed environment, especially, the kind of influence it got from the changed policy framework.

The study of structure-performance relationship, which has formed the basis of a large volume of literature in industrial economics, has its origin in Bain’s work in 1950’s. His work related industry structure to its performance via conduct of the firm. He tried to find a systematic relationship between structure and performance. Much of the subsequent industrial organization literature was either build on Bain’s work\(^1\) or suggested certain modification to it\(^2\). As a consequence of these critiques, the structure-performance relationship can no longer be seen as one-way relationship rather bi-directional relationship.

The framework of studies taken by Bain and his successors was named as the Traditional Approach. In the traditional approach, a relationship between structure and performance was postulated via conduct. Most early studies concentrated on industries in UK and USA because of easy and extensive availability of data. However, Bain made some effort to include all major geographical areas and in various stages of development in his analysis of industrial structure (Bain, 1966) but little work followed. Variables like concentration ratios, firm size and market share were used as proxies to structure of an industry in the traditional approach. In the traditional approach, the relationship between performance of an industry and its market concentration was found to be positive. Highly concentrated industries are said to be associated with collusion and therefore achieve their only goal i.e. gain maximum profit through joint profit maximization. This argument was criticized on

---

1 Weiss, 1971, 1974; Cowling and Waterson, 1976.
ground that profit maximization can’t be assumed as only objective of all firms\(^3\). Demsetz (1973) has argued that when cost minimization is equally plausible, assumption of profit maximization comes into question.

In this framework, performance includes wide range of variables like profitability, growth, employment provided, technical progressiveness, capacity utilization etc. However, mostly profitability was used as an indicator of performance in this framework. Profit-Net Worth ratio, the rate of return on equity or the price-cost margin are used as measures of profitability.

Another approach adopted in analyzing structure-performance relationship is named the new learning approach. Two possible explanations put forward for the findings of studies of this relationship that profits are generally higher in highly concentrated industries. First, that concentration encourages collusion and therefore joint profit maximization and, second, the firms within these industries are able to minimize costs. Then question arises that why high profits not encourage entry and reduction in market share of large firms and their profits in the long run? Traditional approach has provided ‘barriers to entry’ in the form of the absolute costs and economies of scale advantage of large firms as its possible explanation. However, Demsetz (1973) provided efficiency\(^4\) of large firms as an explanation to high profitability of these firms, which, in turn, becomes an entry barrier for new firms which can’t enter the industry at such a large size. On the other hand, high concentration becomes a cause of high profitability by increasing efficiency of these firms. Thus, it’s a two way relationship in the new learning approach too.

Unlike The Traditional Approach and The New Learning Approach, which adopted cross-sectional study to analyze structure-performance relationship, another

\(^3\) Baumol (1962) and Marris (1964) put forward sales and growth maximizing hypothesis, while Williamson hypothesized satisfying rather than maximizing behaviour on the part of the firm.

\(^4\) He maintained that this efficiency might be caused by superior innovatory or managerial skills.
approach named The New Industrial Organization has shifted back to case study approach. This approach stressed on taking firms as specific entities rather than as homogenous part of the whole industry. It further emphasized to analyze the determinants of industrial structure rather than simply its performance. The simultaneous persistence of high concentration and high profitability is explained in terms of strategic barriers to entry arising from market power. This approach has recognized that price collusion was likely to be most rational firm behavior. But price collusion periodically gives way to price rivalry, which is expected to be temporary if all firms can be assumed to behave rationally.

The theory of contestable markets was put forward by Baumol et al. (1959) which was a complete negation of any systematic relationship between structure and performance of an industry. Baumol et al. showed that potential competition can play the same role in disciplining firms of an industry that actual competition does. Thus, in an industry with easy entry and exit, the firms will try to be as competitive as possible for fear of potential entry. Therefore, high concentration will not result in high profitability as was expected according to traditional SCP approach.

Most of the structure-performance relationship analysis has concentrated in USA, UK and other developed country. This is true in spite of Bain’s efforts to include less developed countries in the sphere of this framework. The main cause for this factor is difference in nature of developed economies and underdeveloped economies. This is true in case of Indian economy too as the economy is different from developed economies on many fronts. Firstly, the ownership system is quite different in developed economies, which is dominated by large MNC’s. The

---

5 Bresnahan (1987), in his study of US car industry has found that most firms in the industry were colluded in 1954 to maximize join profit. But a general decrease in demand for cars in 1955 resulted in price rivalry as each firm saw decrease in its demand as encroachment by rivals in its market share. But this phase was short-lived as industry again entered price collusion in 1956.
ownership and control are in different hands. In India, industrial houses dominate the ownership pattern where final decision making power lays in hands of the family members. Moreover, these industrial houses are engaged in diversified business. Secondly, India has a dominant unorganized sector, inclusion or exclusion of it into a study can significantly affect the results. Edible oil industry, for example is a highly concentrated industry if unorganized sector of the industry is not included, but share of top firms decline drastically after including it. Tobacco industry also represents the similar case. Thirdly, level and pattern of demand in India is different from developed countries. Developed countries are reaching saturation in most of the industrial products and have to depend on replacement demand. Advertisement and R & D are used to cut in the shares of competitors. Whereas, India is still in transition from first and second stage of development. There is high income elasticity of demand for primary goods. The demand for a firm depends on its ability to attract newly entering consumers and capacity to innovate new products and markets. Barriers to entry are less important here. Advertisement remains a source of information and means to entry. R & D has very less importance in India. Only a few firms have the budget for research expenditure. Though, increased international competition is now forcing them to engage in R & D activities but still it’s a far cry. Fourthly, market structure of industry of developed countries does not register considerable change overtime because changes in structure depends on encroaching into rivals’ shares as growth in demand is very little in these countries. In India, on the other hand, change in structure can occur with encroachment and on the basis of growth in demand. So change in structure is more associated with growth of markets in India.

---

6 Tata’s are engaged in steel, autos, oil, finance, insurance, communication etc.
However, some Indian authors, time to time, attempted to analyze structure-performance relationship in Indian industry. First exclusive attempt to measure market concentration in India was made by the Monopolies Inquiry Commission set up in 1964. Rather than industrial concentration, it stressed on aggregate concentration\(^7\) and took it as base of this study. Gupta (1968) is one of the pioneers to conduct a study to examine the relationship between structure and performance in India. However, this study did not found any significant relationship between indicators of concentration and variables used to calculate performance. Walgreen (1971) critically analyzed Gupta’s data with a different methodology and unlike him, produced results which were in line with the results produced by Bain and Mann in their studies with US industry data. Sawhney and Sawhney (1973) included capacity utilization in their model to check cost increase and wastage due to under-utilization in many Indian industries. Concentration was found to have a non-linear impact on profitability and capacity utilization to have a positive and significant influence. Gosh’s study in 1974 was a measurement of concentration and change in it in 22, 2-digit Indian industries. Sandesara (1977) in his study analyzed the variation in size and concentration in firm sector during the period 1951-70 in India. Sidharthan conducted a study in 1981 to find the extent to which aggregate concentration, especially as related to the position of two major industrial houses- Tatas and Birlas, can explain the variation of industrial profits. He concludes that profits fluctuate more in oligopolistic industries, reflecting rivalry rather than collusion in oligopolistic industries. Maharatna (1983) examined the variation of concentration overtime as well as the impact of concentration on industrial growth. The study fails to reveal any association between initial level of concentration and its subsequent change over-

\(^7\) Aggregate concentration is defined as existing when large numbers of concerns engaged in the production or distribution of various commodities are in the controlling hands of one individual or family, connected closely by financial and other business interests.
time. Although, his study suggested that high initial concentration would not exert negative impact on the subsequent rise in concentration in the absence of restrictions and control. Gupta (1985) attempted to explain the nature of relationship between profit-margin industrial structures for a large sample of Indian manufacturing industries. Aggarwal (1992) carried out a study of performance variation across industries. Uma S. Kambhampati (1996) has studied market structure-conduct-performance relationship in Indian industries. He found a positive relationship between market concentration and performance of firms and Suma Athreye and Sandeep Kapur (2004) studied market concentration in India between 1970 to 1999 and found that concentration levels fell in some sectors while in others they rose overtime, overall trend being of rising concentration.

In this background, the present study has attempted to analyze market concentration and performance relationship in Indian industry. As can be concluded from above discussion, in India there are few studies conducted to study concentration-performance relationship exclusively. Affects of deregulation and liberalization on concentration and performance are yet to be studied. Moreover, none of the studies have included stock market valuation as a variable to determine performance of an industry. Looking at above mention situation, present study has large scope and significance in situation at hand.