CHAPTER III

REVIEW OF LITERATURE

A good deal of work has been done to measure the nature and extent of industrial concentration in India as well as other countries. Various empirical studies have also been done on various aspects of industrial concentration such as mergers and acquisitions, horizontal and vertical integration, diversification etc. Important empirical studies are reviewed here to get a broad idea of work done in this direction and to have knowledge about different empirical results about Industrial concentration. The studies differ from each other on account of objectives and time period taken.

Bain (1951) in his study tested the hypothesis that the average profit rate of firms in oligopolistic industries of a high concentration, would tend to be significantly larger than that of firms in less concentrated oligopolies, although subject to a considerable dispersion of the profit rates of individual firms and industries. To study this relationship, he regressed the after tax return on equity of the leading firms on 8 firm concentration ratios in 42 four digit US manufacturing industries covering the period 1936-40 and the hypothesis was accepted. The association of concentration to profits was such that there was a rough dichotomy of industries in to those with more and less than 70% of value product controlled by 8 firms. Association of concentration to other potential determinants measured was not found, nor was other such determinants significantly related to profit rates. Absolute size of firm also did not appear to be significantly related to profit rates.

Stigler (1951) theorized that there would be an inverse relationship between market size and the extent of vertical integration. He interpreted Smith’s theorem in terms of the relationship between market size and vertical integration and focused on industries with free entry and competitive behaviour. He argued that in infant industries, firms would be vertical integrated, because the level of production at any one stage is too small to support specialized firms and intermediate markets. However, as the demand grows, firms would spin off stages subject to increasing return and purchase the required quantities from new specialized suppliers. The process would reverse itself as the demand declines. It was concluded that vertical
disintegration is the typical development in growing industries, vertical integration in declining industries.

Friedland (1957) conducted a study of 50 largest industrial firms to test two hypotheses, i.e., the causes of growth of the largest firms and their turnover rates for the period 1906 to 1928 and 1928 to 1950. It was found that 76% of the change in size of the largest firms was due to changes in industry’s demand for the period 1906-1928 and 64% for the period 1928-1950 due to the same reason. Another characteristic about the relationship of industry’s demand and growth of large firms indicated by the study was that under perfect competition, the increase in demand would result in an increase in number of firms until all the firms operate at minimum of the average cost function. If conditions of constant cost existed, despite new firm’s entry, existing firms would grow with increase in industry’s demand. With decreasing cost new firms would be discouraged and existing firms would become larger.

Collins and Preston (1961) applied different measures to explain changes over time within the size structure of 100 largest industrial firms of U.S. economy from 1909 to 1958. Change in size structure of largest firms might be due to the change in the shape of the size structure of the firm, change in the identity of the firms as new firms replacing others as the largest firms and change in the size ordering of the firms with respect to each other. The study found that relative size distribution of the 100 largest firms did not change significantly since 1909 but there was a considerable change in the identity of the firms comprising this group. The relative size distribution of the 100 largest industries had remained remarkably stable over the entire period and surviving giant firms exhibited a greater stability of size portion in the last two periods than the first two. During 1909-1919 the largest 40 firms grew faster than the other 60 firms which remained on the list of largest 100 firms. It was observed that changes in relative size might arise both from differential rates in growth of individual firms and from the effect of amalgamation. No amalgamations between firms, which were among 100 largest, occurred during the period 1929-1935. The long run trends in the size structure of the industrial giants during this period were a decline in the frequency of change in relative size positions among the giants and a slight tendency in the giant firms to become more equal in size.
Collins and Preston (1966) analysed the relationship between average industry price-cost margin and degree of concentration and found this relationship positive and continuous. Increase in concentration above a certain level was associated with successively larger increases in price-cost margins. The entire structural variables like concentration, capital/output ratio, geographical dispersion of manufacturing facilities etc., included in the analysis, done in this study statistically explain 80% of the variation in price-cost margin among the 32 food manufacturing industries and concentration alone accounted for nearly 50% of the variation.

Hazari (1966) measured the share of four largest, thirteen largest and twenty groups in the share capital, net fixed assets, net capital stock and gross capital stock of public companies (excluding government companies) in the private sector for the year 1951 and 1958. The share of largest groups in each of the three cases, on each of the criteria used i.e. share capital, fixed capital and capital stocks, increased in 1958 showing the increase in concentration from 1951 to 1958.

Mann (1966) examined the relationship between seller concentrations, barrier to entry and profit rates for 1950-60 for a sample of 30 industries, 8 in a very high barrier class, 9 in the substantial barrier class and 13 in the moderate to low barrier class. The industries with very high barrier to entry were characterised by high economies of scale and build up product differentiation advantages to established firms which necessitated very large scale promotion outlay by new entrants, control on scarce raw materials by established firms and entrants had to raise a very large amount of capital. Industries with substantial barriers were characterised by one or a combination of entry barriers. Industries with moderate or low barrier could be entered quite easily. Highly concentrated industries were having a concentration ratio of above 70% for the top 8 firms. There was a considerable difference in the average profit rates of industries with above 70% concentration ratio and below 70% concentration ratio. There was also a distinct difference between the average profit rates of the very high barrier groups and the other two groups. Industries with a very high barrier to entry had a distinctly higher average return than highly concentrated industries in other categories.

Datta (1969) studied the concentration on the basis of share of big business houses in the total assets of all the non-banking and non-government companies for the
years 1964, 1966 and 1968. The share in the total assets of all the non-banking and non-government companies of the twenty largest houses and of the four top houses increased from 32 to 37 percent and from 17 to 19 percent respectively during 1964-68. The share of largest 75 business houses in total assets of all the non-banking and non-government companies increased from 47 percent to 54 percent in the same time period.

Goyal (1970) examined the concentration of economic power on the basis of total paid up capital of all the companies including private and government sector companies for the period 1958-1966. He found that the level of concentration declined during the study period. The share of private corporate sector in the total paid up capital declined whereas that of government companies and also of the foreign companies increased. He concluded that on the basis of changes in the share of corporate private sector paid up capital, there was a reduction in the degree of concentration in the private hands.

Utton (1971) showed that UK manufacturing industry experienced an upward movement in concentration. The regression analysis suggested that for some industries a large part of the explanation for the increase in concentration was the tendency for larger firms to grow at a faster rate than smaller firms. Further estimates indicated that an important part of the concentration changes was due to mergers. The major drawback of above study is that little has been done to examine the trend of industrial concentration. Hence in this study an attempt has been made to determine weather there is any change in concentration in major industries of India or not.

Chaudhuri (1972) examined the effectiveness of industrial licensing policy to prevent the concentration of economic power in India. Prior to this policy, the big business houses were getting not only most of the industrial licenses but also getting undue advantages from licensing authorities. The study found that the failure of the licensing policy was because of discretionary powers of the authority in the absence of any set principles or guidelines in the matter of judging applications for the grant of industrial licenses. The study also analysed the modifications in the licensing policy of 1970 over the previous policy and found that it must be supplemented with some more regulatory apparatus as it was insufficient to control the increasing concentration of economic power.
Gupta (1972) analyzed the cross-sectional data of 100 manufacturing industries for the year 1958 taken from Large Industrial Establishment in India, Labour Bureau, and Govt. of India. He found that a substantial proportion of monopoly in various industries was due to economies of large scale production. That means to achieve and maintain maximum efficiency some degree of monopoly had to be tolerated. The special advantages enjoyed by big firm, belonging to big business houses, created large size differences amongst plants, which also enhanced the monopoly power to great extent. Multi-plant operations by large firms also increased their monopoly power significantly. In many industries the limited size of the industry was also responsible for their existing monopoly power. To control this monopoly power, Gupta suggested that firstly, the govt. should demolish the financial and other types of control of one firm over the other firms and plants and make every visible plant an industrial unit. Secondly, it should ensure an equitable distribution of all types of business facilities and encourage new businessmen.

Rhoades and Cleaver (1973) repeated the Collins and Preston study with 1967 U.S. data of 352 industries and found a positive and significant relationship between profits and concentration only when concentration was high. They examined the relationship between price cost margin and different ranges of four firm concentration ratio below 50% and found no clear association between concentration ratio and price cost margins. However, the relationship was found positive for the concentration range from 50 to 80%. Beyond this limit, again there was no association between them.

Sawhney and Sawhney (1973) showed that the degree of capital utilization plays an important role in the determination of price-cost margin among the industries. The concentration profit hypothesis also supported it with the help of data available on Indian manufacturing industries. A non-linear formulation of this hypothesis gives better results than a linear one. The effect of capital/output ratio on price-cost margins, averaged over 6 years’ period, appears to be statistically insignificant, though not conclusive.

Khalilzadeh (1974) examined the influence of major market structure elements like concentration ratio, capital/output ratio, product differentiation and exports on price cost margin in U.K. in 900 manufacturing companies and the impact on these
relationships of foreign trade and direct foreign investment. Concentration ratio had no significant effect on price cost margin where as the capital/output ratio had a strong effect. The export variable was positively related to price cost margins. Product differentiation variable, positive and statistically significant indicated higher price cost margins by 2.97 % in industries whose output was relatively differentiated. It was found that foreign firms, particularly American firms, operating in U.K. were more profitable than U.K. firms in the same industry.

Ghosh (1975) attempted for the first time to examine the changes in the pattern of industrial concentration in India for two decade period (1948-1968). The most important findings of this study was that there was a decrease in concentration ratios in the fast growing engineering and chemical industries, increase in 4 and 8 firm concentration ratios. Increase in concentration was more in the traditional Indian industries like cotton, jute and vegetable oils. Examined in terms of change in relative concentration, the Gini-coefficient increased in all industries. Using the Herfindahl Index, concentration at the top had decreased significantly in most industries along with relative concentration. Finally, the study revealed that the concentration in major Indian industries declined significantly with the growth of the industries in last two decades. But the growth of Indian industries would have been much faster and concentration would have declined more sharply if industrial licensing policy had not been implemented during 1952-65.

Dalton and Penn (1976) examined whether or not there was a level of concentration which separated groups of industries earning significantly different rates of profit and how they were related within the separated groups. For a sample of 97 firms, concentration for each firm was computed by taking the 1954 four firm concentration ratio in each of the firm’s product classes and multiplying it by the firm’s shipment in that product class and then summing over all of the firm’s product classes and dividing by the company’s total value of shipment. The measure of firm’s profit was the rate of return on equity, as measured by the ratio of net income after taxes to owner’s equity averaged over the period 1949-54. It was found that there was a threshold level of concentration. On the average profit rates in the group with concentration exceeding 45% for the top four firms and 60% for the top eight firms were greater than profit rates for those with concentration less than 45% and 60%
respectively. The changes in concentration were not having a significant impact on profit rates within concentration groups and the coefficient for the market share variable was positive and significant in each of concentration group. Advertising was significant only in the high concentration group which indicated higher entry barrier with high concentration.

Lindsey (1979) analyzed the extent of concentration on the manufacturing sector of the Philippine economy. He ranked the firms according to size of total assets and estimated that the 60 largest manufacturing firms accounted for nearly 57% of the total assets of the 500 largest firms in 1970 and 45% of the total sales of 500 largest firms. But in case of profits, 20 of the 60 firms reported negative profits. Considering only the firms making positive profits, the 60 largest manufacturing firms accounted for 63% of the total profits of the 500 largest firms. In both 1961 and 1970, the largest five firms controlled a larger percentage of the total assets than the smallest 30. The size distribution within the ranks of the 60 largest firms varied little over the decade of 1960’s.

Aaronovitch and Malcolm (1981) showed that there is no evidence that industrial concentration influenced price flexibility. The main purpose of this study was to investigate the proposition that the rate of price changes was related to industrial concentration. The important results of their thesis are, firstly, the relationship between price changes and concentration were quadratic rather than linear and the turning point of relationship in both periods in which that relationship was statistically significant occurred near to a value of the Herfindahl index of 0.25 which was some what larger than the highest observed value. Secondly, cost changes played a limited role. Thirdly, the output changes generally had no significant impact on the price changes.

An anonymous study (1981) analyzed the impact of the liberalization of the licensing policy of the govt. to regularize the illegally installed capacity of the larger companies in India. The govt. stated that the liberalization was to make the efficient utilization of community’s scarce capital resources and better utilization of capacity which would lead to larger industrial output and economic development. Govt. regularized the illegally installed capacity even in those industries which were otherwise reserved for small scale industries. It was suggested that these changes
would give a strong fillip to the pre-emption of capacity in various industries by large industrial units and units related to large business houses. It would increase their control not only on the concerned industry but on the industry as a whole. It would discourage fresh investment and new units in the concerned market. It would also lead to oligopolistic output restrictions and price manipulations. All these changes could have a strong impact on structure of industry and would lead to more industrial concentration.

Lamm (1981) examined the relationship between food prices and concentration. It found that the growth in 3 firm concentration caused food prices to rise with second largest firm’s share having the greatest impact. However, growth in the fourth largest firm’s share had an off-setting effect. From a policy perspective, this was suggested that attention might be focused on food retailing markets where the second largest firm was expanding rapidly, where significant growth in the fourth largest firm share could be viewed with a little alarm. The most important finding of this study was the identification of a positive relationship between food prices and market concentration. A high degree of seller’s concentration was one cause of the differences in inter-city food prices.

Apte and Vaidyanathan (1982) investigated the causes of variations in the performance of twenty nine three digit manufacturing industries in India using a sample of over seven hundred firms. They tested the conventional structure performance relationship augmented by factors specific to the Indian context like licensing controls, price controls, input shortages and presence of public enterprises. They found that concentration had significant impact on the profitability as more concentrated firms showed higher profitability and presence of controls also had significant impact on the profitability. Large presence of public sector had significant adverse impact on profits. The entry barrier variables like scale of economies and capital-output ratio did not explained the inter-industry variations in the performance of the industries.

Clarke, et al (1984) showed that there was no evidence, both for whole sample as well as sub-sample of industry that for UK the differences between smaller and large firm profitability tends to be larger in high concentration industries. This study confirmed that without any collusion a positive profitability concentration relationship
might still be expected while there were also evidences of market power effects; these clearly varied between industries and in some cases were not pronounced. This means both efficiency and market power effects were at work. This study also suggested that if there was neither product homogeneity nor constant cost, there was no certainty that large firms would achieve higher profit rates in industries without collusions.

Gupta (1985) attempted to explain the nature of relationship between profit margin and the industrial market structure for a large sample of Indian manufacturing industries. Profit margin is a good indicator of the allocative efficiency of market mechanism in the industrial sector of the economy. The four major market structure variables included in study were concentration ratio, size ratio, scale of economies, entry barrier and capital equipment. The first three were found to be important determinants of profit margin. On the whole, all the selected variables explain approximately half of the variation in profit margin, extending support to the hypothesis of the structure performance relationship. Hence, monopoly power was found to have exerted a significant upward influence of profit margin in industrial market.

Oza (1985) on the basis of classification of corporate groups using Industrial Licensing Policy Inquiry Committee (ILPIC) and MRTP Act criteria, formulated a comparable series on concentration with two, four, ten and twenty largest groups for selected years from 1951-1979. On the basis of ILPIC criteria, the shares of two, four, ten and twenty largest groups in total assets were lower in 1979 than in 1951. But on the basis of MRTP Act criteria, the shares of two, four and ten largest groups were the same or increased slightly in 1979 relative to 1958. However, the increase for twenty largest groups was larger.

Chou (1986) based on the experience of Taiwan, suggested that state-ownership had a positive effect on industrial concentration. This could be due to state-owned firms being large-scale and having low export intensity due to their domestic orientation. He also suggested that privatization policies that involve managers of state-owned firms divesting assets, selling stock and consequently reducing state ownership in the economy will be successful in reducing industry concentration. This will lead to a more competitive business environment as long as managers of state-owned firms are not creating new firms as repositories for the liabilities of state firms.
Domovitz, et al (1986) by using a longitudinal data base found that there has been a substantial narrowing of the spread between the price-cost margins of concentrated and unconcentrated industries. Including measures of macro-economic fluctuations into standard price-cost margin regressions, they found significant differences in cyclical behaviour across market structure. They also explored a possible explanation, unionization for differences in cyclical behaviour. Finally, they investigated the degree to which their results were affected by the potential simultaneity of concentration, advertising and the price-cost margin.

Sleuwaegen and Dehandschutter (1986) analysed some of the relationship between the Hirschman-Herfindahl Index and the k-firm Concentration Ratio within the context of empirical models dealing with price-cost margins and concentration. The paper showed that in addition to the theoretical relevance of choosing between the Hirschman-Herfindahl Index and the Concentration Ratio, both measures may provide empirically very different information to assess industry performance. It was shown that the correspondence between the two measures can be represented by a horn-shaped figure. With the Hirschman-Herfindahl Index as the superior measure it was shown for a sample of US industries how the neglect of the horn-relationship between Herfindahl Index and the Concentration Ratio might bias the results towards the identification of a critical concentration ratio in the relationship between profitability and concentration.

Sinha and Sethuraman (1988) tested the relationship between profit rate and market structure for the period 1975-77, 1980-82 and the grouped time period, making use of data for 15 manufacturing industries. They found that the level of concentration, industry growth rate and capacity utilization had a positive and significant relationship with profit rate and noted that the fixed capital requirement had a negative and significant relationship with profit rate. They also found that the share of public sector did not have a negative relationship with profit rate.

Dhawan and Saxena (1990) measured industrial concentration for 20 industries of U.P. in 1982. They found that electricity, gas and steam, textile and manufacturing of transport equipment industries were highly concentrated. The study used the criterion of number of workers as a measure of industrial concentration. Numbers of factories in each industry were not high which was also a reason behind
high concentration. Concentration varied directly with the average size of the factory. The larger the size, fewer the number of factories and hence larger the share of the total industrial output. Concentration varied inversely with employment in that industry. The study suggested that U.P. govt. should have focused its controlling measures more on the highly concentrated industries.

Nagarajan and Barthwal (1990) examined the relationship between profitability and structure by using a sample of 38 pharmaceutical firms in India for the period 1972-1980. Two measures of profitability i.e. ratio of net profits to total sales revenue and the ratio of net profit to total assets have been used, to find the determinants of profitability. The analysis showed that under the condition of price controls the most significant determinant of profitability of firms in this industry was vertical integration. Size and advertising intensity did not appear to be major determinants. This was perhaps due to the inability of the firms to translate their market power into prices, because of controls. The coefficient of growth rate of sales was positive and significant, suggesting that factors on the demand side of a firm had greater impact on profitability than on the supply side.

Doi (1991) in his paper reported some new evidence on aggregate concentration of exports in Japanese manufacturing industry. Exports in Japanese manufacturing industry were highly concentrated in a few big firms. This study also showed that aggregate export concentration was much higher than aggregate firm concentration.

Bajpai (1992) measured the degree of concentration of capital in Indian factory sector and elasticity of employment with respect to the capital invested in different size of the factory for the period 1979-80 to 1984-85. He found that the share of larger factories had increased in terms of their number as well as capital investment. But employment elasticity of the capital of the larger factories had been found very marginal. In case of tiny industries, same was found to be very significant and it was due to the fact that the proportionate change in capital decreased faster than the proportionate change in employment. Bajpai recommended the restructure of factory sector of India so that the increase in capital investment also lead to increased employment.
Cheung and Ellis (1993) analysed the role of financial ratios in predicting takeover in Hong Kong from 1986 to 1988 for a specified groups of firms and found that there was a difference in the ratios of acquired and non-acquired firms. The dichotomous classification test showed that individual financial ratios were not able to identify the takeover targets, but some ratios like net current assets/total assets and total liabilities/total assets, with a classification of 70%, had more predictive power. A multivariate discriminate analysis was applied to the two groups of firms for each of the 4 years. Financial information of one year prior to the takeover was found to be the best predictor of takeover, with a classification rate of 68%. Thus, it was suggested that it can be a useful aid for screening of target companies.

Baldwin (1994) examined the relationship between concentration and mobility statistics in Canada’s manufacturing industry during 1970s. The mobility statistics are direct measures of the intensity of competition and concentration. It is generally assumed that both are closely related, since concentrated industries are frequently depicted as having formidable barrier to both entry and internal mobility. This paper examined the validity of this assumption. It was concluded that concentration and mobility indices revealed different aspects of the competitive process. In order to pinpoint those industries where competition problems arise, both mobility and concentration indices need to be used together. Hence, concentration and mobility are compliments rather than substitutes.

Slay (1995) opined that there was a negative relationship between state-ownership and industry concentration in Poland & Hungary and completely eliminating state-ownership of firms lead to higher industry concentration. The state could provide competition to privately-owned firms, which the private sector is unable to provide by itself. There was also evidence of a U-shaped relationship between foreign ownership (as measured by foreign-owned firm’s share of industry output) and industry concentration. There was an optimal foreign ownership that minimized industry concentration. The evidence was consistent with the view that FDI lead to increased competition for domestic firms because MNEs were able to overcome barriers to entry with superior technology and proprietary assets, and that FDI lead to a reduction in industry concentration because it forced inefficient firms out of business.
Junius (1996) opined that the concentration of economic activities varied considerably in the course of development and setup an economic geography model to show the endogenous forces that determine the degree of concentration in the course of economic development. Economic development increases the size of the industrial sector in terms of employment relative to the size of the agriculture sector. The relative strength of centrifugal forces such as home market effects and access to intermediate suppliers, and centripetal forces, such as demand pull of dispersed suppliers and congestion effects, depends on the initial industry distribution, transportation costs and the level of economic development. These parameters lead to an inverted U-curve pattern of industry concentration, which is first increasing and then decreasing with the per capita GDP. The study also showed that the curve is more pronounced in newly industrializing economies than in industrialized economies.

Kambhampati (1996) made an extensive empirical study of the relationship of structure-conduct-performance of Indian industries with the 42 Indian industries from 1974 to 1985. She applied both the conventional tests based on structure-conduct-performance paradigm and with tests based on the dynamic, new institutional perspective. She concluded her study that industrial policy in India has supported the increase in efficiency of the Indian industries but has failed in controlling the market power of larger firms. She suggested that as market power and efficiency coexisted in Indian industries, so the Indian government should adopt such a system which should not discourage the concentration of industries but regulate it. The regulated concentrated industries with the government’s support can help in increasing the efficiency of the Indian industries.

Nath, et al (1999) attempted to study the degree of structural changes for the factory sector, using data from Annual Survey of Industries over the 8 years from 1990-91 to 1997-98 for all the states and UTs, to search the effects of the policy of liberalisation. They used the measure of Coefficient of Industrial Concentration (CIC). They found that Maharashtra had the maximum diversification of industries followed by Tamil Nadu and Himachal Pradesh, over the period and Manipur had minimum, where as, 18 states/ UTs maintained the same status. North-Eastern states except Assam, Andhra Pradesh and Dadra & Nagar Haveli achieved good progress in
diversifying their industrial units after the liberalisation. In the country, most of the industries were found to be state specific with highest concentration of jute and textile in Eastern Region where as some industries like sugar and pharmaceuticals were found to be very common in various states. It was also found that the workers were geographically concentrated on the specific industries over the years, which suggested that the out-migration of workers over industry region barrier was less.

Ray, et al (1999) from the analysis of the pattern of distribution of major industries in factory sector over the geographical regions and over the states within each region, based on ASI 95-96 data, revealed that the colonial pattern of concentration of industries in a few states changed to some extent over the years due to various industrial policy measures, though not substantially. The area that had been untouched to industrial development in the country has been industrialized. The North-East states, J&K and Andaman & Nicobar Island started contributing to the industrial output. However, the industrial development was still concentrated in Western region and especially in four states namely Maharashtra, Gujarat, West Bengal and Tamil Nadu, followed by Northern, Southern and Eastern region. But if the process of liberalisation and industrialization along with the infrastructure development in the backward areas continues, the existing regional disparities as to the industrial development can be narrowed down, although not completely abridged.

Beena (2000) attempted to analyse the significance of M&As in Indian corporate sector in early 1990s. There was a dominance of M&A between firms belonging to same business groups or houses with similar product lines. So it contributed to increase in product or asset concentration measured on a firm-wise basis, it could not have contributed to an increase in concentration measured in terms of relative shares of business groups. There were signs that mergers between unrelated firms, though numerically less significant, had been gaining ground, especially in case of foreign-owned firms. The participation of foreign controlled firms in M&A process increased significantly since 1992-93, but mergers contributed significantly to asset-growth of only one fifth of the sample firms studied. Most of these firms mobilized large share of their resources through capital market to finance their expansions. Therefore, study suggested that the merger wave in the early 1990s
was more a means of internal restructuring rather than an instrument of further product market or asset share.

Bhoi (2000) analysed the trend in the first M&A wave of India in late 90s. Initially govt. agencies and FIs arranged these M&A in a regulated regime. But exposure to domestic and international competition made it imperative for Indian industries to resort to M&A for their survival. Hence post liberalization-era has seen a strong M&A wave. Cross-border M&A have emerged as an important mode of FDI the world over. However, India’s share in cross-border M&A has remained low because firstly, India’s degree of openness is perceived low by overseas investors, secondly, progress of capital account convertibility is gradual, thirdly, infrastructure bottlenecks are still a major problem and lastly, second generation reforms are still under way. As the M&A wave is likely to continue so a regulatory framework is required to be modulated to prevent the likely effects related to the M&A.

Pavasker (2001) evaluated the impact of mergers on corporate performance of 36 cases of mergers between 1992 to 1995. The most of the firms underwent restructuring through these mergers. Financial synergy and once-and-for-all type of growth were the key factors in these mergers. Results of studies on mergers in advanced countries depicted that the acquiring firms had performance above the industrial average and acquired firms were below the industrial average in terms of size and profitability. But the firms taken in this study were smaller than average industry and most of the mergers were between subsidiaries suggesting that it was more of a restructuring than merger. But this restructuring did not improve the profitability of the firm in post merger period rather it had a negative effect. So competitive process was not impeded with merger. In terms of policy implications, this paper is a contribution to the empirical research on corporate strategy rather than a guide to specific policies. In spite of very less anti-trust policies existing after 1991 to avoid possibilities of monopolies through M&A, the study rather suggested that the mergers did not give any rise to monopolistic tendencies.

Balakrishnan, et al (2002) studied the impact of trade liberalization on the market power and scale efficiency in Indian Industries and found a less than widespread and non-uniform impact of trade reforms on Indian industries. They found increasing trend in price- marginal cost ratio in Indian industries because of two
reasons. Firstly, they visualized decrease in domestic firms due to rationalization industry’s structure leading to improvement in scale efficiency. Secondly, they visualized trade liberalization setting off increased rivalry leading to fewer firms in the post-reform period and increase in price-marginal cost ratio.

Bhattacharya (2002) opined that industrial concentration is the most widely studied area among various elements of market structure in the industrial organization literature. He attempted to analyze the determinants of changes in industry concentration over time in Malaysia. Using a partial adjustment model, a cross-sectional analysis was carried out against a sample of manufacturing industries for a period of 1986 to 1996. Domestic factors in influencing competition e.g. capital intensity, advertising intensity and market size were found to be significant in most cases to explain the level of concentration. Considering variable rate of adjustment of concentration, an increase in labour productivity of large firms and high entry rates were found to be significant for faster adjustment towards equilibrium level. Compared with other developed countries, the annual rate of structural adjustment was found to be slow in Malaysian manufacturing.

Parameswaran (2002) analyzed the performance of the manufacturing firms in some selected industries in terms of their technical efficiency against the background of the industrial and trade policy reforms introduced in India since 1991 using a stochastic frontier production function and an associated inefficiency model to measure time varying firm specific technical efficiency. The results showed that all the industries considered registered a higher rate of technical progress in the post reform period along with a decline in the level of technical efficiency. The effect of change in the policy environment on technical efficiency varied among industries. The study also found that firms’ involvement in the international trade through export and import of raw materials and technology had a positive effect on technical efficiency.

Driffield, et al (2003) tried to find that whether the efficiency of firms in India improved since its liberalization in 1991 and analyzed the determinants of firm-level efficiency in six manufacturing sectors in India while focusing on the effects of liberalization and domestic competition. They found that there was an increase in overall efficiency in the post-reform period in India in five out of the six sectors. They
also found that while imports did not seem to improve efficiency, liberalization did increase efficiency in four of the sectors.

Amess and Roberts (2004) analyzed the determinants of the level and changes in Polish industrial concentration in the early post-transition era on the basis of panel of 144 Polish manufacturing industries over the period 1989-1993. The results suggested that both state and foreign ownership had a significant impact on industrial concentration and this relationship was U-shaped. Minimum efficient scale was found to be the only other factor to have impact on industrial concentration.

Beena (2004) found that the absence of anti-trust regulations in India in the 1990s helped the foreign and Indian firms to expand their product market share through M&A. It's one of the main motive was to increase the equity size, which could be further used for modernization. The export intensity and R&D intensity showed the mixed trend; hence no substantial conclusion can be drawn there from. The study could not find any significant evidence of efficiency related factors primarily influencing M&A in the Indian corporate sector. It was rather growth of the firms in terms of asset size, market share and the strengthening of the controlling bloc as a defensive measure to ward off the takeovers that had been noticed. It was suggested that the behaviour of the acquiring firms alerted to frame a workable competitive policy and corporate governance regime to address the possible anti-trust implications of overseas mergers for India and to deal with M&A among Indian enterprises, keeping in view the need to develop productive capacities and generate employment in the country.

Ferreira, et al (2004) used panel data set for Brazilian manufacturing industries for the period 1988-94 and found that even in an environment in which a major trade regime shift was introduced; more concentrated industries had been able to obtain more policy advantages in the form of protection that lead to a reduction in international competition. An increase in industrial concentration by 20% leads to an increase in protection by 5-7%.

Harrison, et al (2004) attempted to measure the industrial concentration in the food processing industry in Canada for the period 1991-2001 on the basis of
concentration ratios and Herfindahl Index. They found that in general, the trade adjustment showed a reduction in industry concentration in all sectors examined. The spread between the two concentration measures varied according to size of relative imports and exports. They advised that the results should be used with caution because of the various problems encountered with the data and the process of deriving the concentration measures.

Athreye, et al (2006) studied industrial concentration in Indian manufacturing sectors over the period 1970 to 1999. They opined that as the Indian industry was highly regulated till the mid-1980s, the market structure in most manufacturing sectors was largely shaped by government policy. Deregulation after 1985 allowed greater scope for competitive processes, so that concentration levels were then more likely to be determined by industry characteristics rather than government policy. They found that concentration levels were indeed more significantly related to industry characteristics after deregulation. However, even after controlling for these characteristics, there was considerable heterogeneity in the patterns of concentration in individual industries.

Amess (2007) empirically examined variations and changes in industry concentration and their determinants in the UK over the period 1993-1997 for a sample of 99 industries. The study used the actual measures of industry concentration provided by National Statistics employed both static and dynamic panel data models to the sample. The study indicated that average industrial concentration increased during the 1990s but at lower average levels compared to the 1980s. It found that industry-specific effects played a significant role in explaining both the level and change in concentration. Technological factors and mergers were found to have a positive effect on concentration.

He, et al (2008) examined industrial distribution in China during 1980-2003 and found that while Chinese industries have been increasingly concentrated geographically, significant temporal and sectoral variations in concentration were seen. Least protected industries became increasingly concentrated and most globalized industries were clustered in the coastal region. The analysis indicated that globalization and internal scale economies contributed to geographical concentration, while protectionism hindered industrial specialization. While industries were more
likely to locate on the basis of comparative advantages, external scale economies had not fostered any industrial concentration.

Alfaro, et al (2009) analyzed the transformation of India's economic structure following the implementation of economic reforms by using firm-level data. The study focused on publicly-listed and unlisted firms from across a wide spectrum of manufacturing and services industries and ownership structures such as state-owned firms, business groups, private and foreign firms. They analyzed the peculiar characteristics shown by industry before and after liberalization and investigated how industrial concentration, the number, and size of firms of the ownership type evolved between 1988 and 2005. They found great dynamism displayed by foreign and private firms as reflected in the growth in their numbers, assets, sales and profits. Yet, closer scrutiny revealed no dramatic transformation in the wake of liberalization. The economy was still dominated by the incumbents (state-owned firms) and to a lesser extent, traditional private firms (firms incorporated before 1985). Sectors dominated by state-owned and traditional private firms before 1988-1990, with assets, sales and profits representing shares higher than 50%, generally remained so in 2005. Rates of return also remained stable over time and showed low dispersion across sectors and across ownership groups within sectors.

Chiu (2010) explored the link between industry concentration and the risk of a firm's cash flows, offering the first empirical evidence of the risky cash flow implications of industry market structure. He found that on average, highly concentrated industries experienced lower volatility of cash flows while the volatility of cash flows for competitive industries was higher. The findings were also consistent with the view that innovation and distress risk, which have been more pronounced in competitive industries, were prized sources of risk in the context of cash-flow-at-risk. Firms in high barriers to entry industries earned lower average returns (associated with lower risk) since the average distress risk was lower in these industries. They also found that firms in the most competitive industries have cash-flow-at-risk that was nearly three times higher than those of the firms in the most concentrated industries.