

Competitiveness and Concentration : Analogy or Chronology? A Study of Indian Manufacturing Sector Post New Economic Policy (1999-2013)

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Abstract

The study analyzed the Indian manufacturing market structure with emphasis on the inherent differences between market concentration and monopoly power in the Indian manufacturing industry. To examine the market concentration, Hirschman Herfindahl and concentration ratio four indices were used. For monopoly power, Mark-up and Lerner's indices were used. This study used two digit and three-digit National Industrial Classification data from Centre for Monitoring Indian Economy, Prowess to determine the trends in market concentration and monopoly power in the manufacturing industry post economic reforms. The analysis showed that the growth rate of CR4 was more than the growth rate of HHI, indicating that the market was becoming increasingly skewed and biased towards big corporations. The study found a rising trend in market concentration but a fluctuating trend of monopoly power. Large firms grew in size every year post economic reforms, but mark-up pricing was cyclical and inconsistent. The policy implications of these findings for future discourse are discussed.

Keywords : Hirschman Herfindahl index, concentration ratio four index, Mark-up, Lerner's index, Centre for Monitoring Indian Economy, National Industrial Classification

JEL Classification : L1, L2, L5, L6

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Liberalization of the economy has opened new avenues and windows of opportunity for the manufacturing sector. Increasingly, the success of manufacturing industries is dependent on innovations, research, and development (UNIDO, 2005). India's global manufacturing share went up from 0.9% in 1993 to 2.0% in 2013. We are discussing initiatives such as Make in India, Manufacture in India. Tags such as 'digital hub' of South Asia are being used for India. Organized firms are indeed moving towards more competitiveness and efficiency (Desai, 1985). To remain competitive, it is imperative to understand the underlying market structures in terms of market power and monopoly power. What market structure prevails implies what is the level of competition and innovation (Nolan, Santos, & Shi, 2012).

Post Liberalization Competition Policies in India

More than three and a half decades of protectionism and import-substitution has left a legacy of high levels of industrial concentration and accumulation of economic wealth among a small number of families and firms (Mishra, 2008). Likewise, it has left a legacy of a lack of culture of competition which is characterized by a weak and underdeveloped competitive framework. Although there have been laws and acts forbidding monopolies and cartels such as the MRTP Act and Industrial Disputes Act, 1956, India does not have a laudable history of

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efficient market competition policies. This is evident from the lack of cases litigated in Indian courts against monopolies and cartels; even in consumer courts, the fast tracking of cases has been subservient.

In its quest for industrialization, the post-independence Indian economy adopted a complex mix of protective policies, industrialization models, and regulatory controls. A strong belief in the socialist mode of industrial development was evident. In general, the empirical evidences show that these policies failed to provide an efficient mechanism for allocating domestic resources in the economy. Domestic firms had, since then, grown accustomed to government sanctioned monopolies and industrial licensing raj together with price controls and government protection. Anti-competitive business practices had been accepted as part of the normal course of doing business in the country. Rather than competing with imports and focusing on efficiency improvements, firms tended to hide from the challenges of market competition by engaging in collusive acts and intensive lobbying for more government protection.

With the demise of the import substitution model and the inception of export promotion policy for economic development, the government has been expeditious in instituting economic policy reforms consistent with the requirements of a competitive market environment. Since 1980s, it has carried out economic reforms through liberalization, privatization, and economic de-regulation; removing unnecessary trade barriers, heavy import duties, and abolition of the licensing system. All of these are aimed at removing barriers to competition and promoting factor mobility and firm growth, securing both high and sustained economic growth.

In the light of the above analysis, the main objective of the study is to examine the trends in market competition, and performance of organized manufacturing sector since the reforms. The study also focuses on differentiating the concentration index from the monopoly power index and seeks to provide a better understanding of the market structure through theory and empirics. A detailed study of concentration in all the eight major manufacturing industries is also done for the period from 1999-2013.

Competition and Concentration : Choice of Market Structure

Competition is perceived to be good for the performance of firms. It is clearly visible from the recent reforms and policy measures taken by the Indian government ; liberalization, privatization of markets, and abolishment of barriers to trade [1]. Although there are enough evidences to prove the importance of competition for productivity and social welfare, there are arguments against competition, as the effect of competition on productivity is ambiguous and limited. A clear cut definition of market competition is difficult to chalk because of the forms which competition may take. There has been a long standing debate on what factors influence market competition and monopoly power. This debate dates back to the first defence of monopoly capitalism by Schumpeter (1942) as explained by Cantwell (2000/2001). Capitalist institutions have promoted innovation during and beyond the twentieth century. Cantwell explained how innovation has been the source of creating technological or social capability. The development of new products and new markets is the outcome of a path-dependent building upon the critical revision of emergent products or methods and search for relevant novelty. This form of competition in a monopolistic or oligopolistic framework has given rise to a new form of competition, which can also be termed as 'competition via concentration'. If there are a finite number of firms, the equilibrium price is below the monopoly price: duopoly appears to be more competitive than atomistic competition (Stiglitz, 1987).

On the other hand, the conventional theory of competition posits that a decline in the number of firms through the conduct of firms, that is, entry-exit barriers, product differentiation, mark-up pricing, asymmetric information, and so forth reduces the level of competition in the market. It is hypothesized that the market would be imperfect and levels of concentration would be higher in markets with a lesser number of firms than in sectors where there are a large number of firms having limited market share to each. Increasing the number of firms

[1] See economic liberalization (Ahluwalia, 1994).

decreases the degree of competitiveness in the market. For example, in Cournot Equilibrium, as the number of firms increase, the perceived elasticity of demand decreases and prices are driven to competitive levels. The effective degree of competitiveness depends upon the search cost for customers, and hence, there can be two effects to judge competitiveness from an increase in the number of firms in the market :

- (i) More firms - decrease in price - customer with low search cost will find it worth the bargain.
- (ii) If the search cost is stable or constant, the effect is ambiguous and tilts towards no benefits to the customer, while the customer loses out on more products and brands.

The most obvious and visible way of competition for the demand of the products is by lowering prices. Soon, as we introduce the concept of prices in the model, we have to understand what price is the most conducive price for a firm to charge in a competitive scenario. The idea of perfect competition gives the answer in the sense that price equals marginal cost. At marginal cost, the firm's pricing is at the equilibrium. However, in real world, prices are set above marginal cost, and abnormal profits are realised by firms, this is done by exercising the degree of monopoly power present in the market. The Price Cost Margin, also called the Lerner's index ($\text{Price-Marginal Cost/Price} = -1/e$), depends upon the substitutability of the product and the availability of information. It explains how much monopoly power can be exercised by firms in deciding prices. This equation explains how the degree of monopoly power exercised by firms is dependent on the availability of substitutes in the market. Product differentiation policies, advertising, and R&D are few such conduct of firms which disallow substitutes to function as substitutes in the market. This perceived price elasticity in a duopoly; oligopoly or monopolistic competition is greater in atomistic competition (Stiglitz, 1987). Also, this market power enjoyed in an imperfect market is directly related to the type of market structure, that is, some market structures will favour the development of permanent market power more than others.

Structure, conduct, and performance of firms are different under different imperfect market scenarios. Imperfect markets are characterized into three main categories : monopoly structure, monopolistic, and oligopolistic structures. Under a monopoly, the firm is in no pressure to retain its market share and hence, competition for market share in terms of price competition or competition for labour is not as rigid as in oligopoly or monopolistic structures. On the contrary, in imperfect markets like that of oligopoly or monopolistic markets, the firms have to continuously innovate and drive away their competitors to stay alive in the market.

In light of the above discussion, it is important to see what market structure prevails currently in Indian manufacturing. Market concentration has been widely studied using different indices, Hirshman Herfindahl index (HHI), concentration ratio four (CR4), concentration ratio eight (CR8), and Rosenbluth index.

HHI is defined as the sum of square of market shares, implying an industry with one firm has HHI equal to 1 ; whereas, a Herfindahl close to zero implies that there a large number of firms in the industry, and all firms have equitable market share. The index is worked out using the micro data of firm's sales value.

$$HHI = \sum_{i=1,2,3,\dots,N} (100 - S_i)^2 \text{ or } HHI = \sum_{i=1,2,3,\dots,N} (\text{Market Share}_i)^2.$$

Concentration ratio 4 is the sum of sales of top four firms as a percentage of the total sales of the total industry.

$$CR4 = \sum_{i=1,2,3,4} S_i / S_t .$$

Here, S_t is the sales of the industry in total for a financial year or a period.

Cr8 is an extension of CR4 index, where $\sum_{i=1,2,3,\dots,8} (100 - S_i / S_t)$.

Rosenbluth index is calculated as $R = 1/2 \sum i S_i - 1$. Here, the symbol i indicates the firm's position or rank.

Mark-up has been generally calculated using the Lerner's price cost index ($P - MC/P = -1/e$) and the Kaleckian Mark-up index, where :

$$\text{Mark-up} = Y_{it} - (L_{it} + R_{it} + E_{it}) / Y_{it}$$

where,

Y_{it} : Production value (total sales),

L_{it} : employees cost,

R_{it} : raw material + spares parts, and

E_{it} : power & fuel and energy cost.

Most cursory survey of the literature on the market structure in India reveals a lack of studies done in the field of market competition and concentration. There have been a few studies on the impact of economic reforms on industrial concentration, one such study is by Singh (2012). His study focused on analyzing the trend of concentration of Indian manufacturing using ASI data for major industry groups and considered gross output as the sales value. The study is limited in the sense that it analyzed only the gross output of industry to arrive at HH index, and did not say anything about the degree of concentration of industries in terms of the top firms, and did not discuss the monopoly power exercised by them. It did not look for the relationship among the indicators of concentration and monopoly power.

A study done by Daugherty, Herd, and Chalaux (2009) showed that indices of market concentration had high values based on standard criteria and had not fallen much overtime, with about as many industries in those industries where market concentration had risen, the first three or four firms typically dominated the market. HHI used was $HHI = \sum i - 1, 2, 3, \dots, N (100 - S_i)^2$. With this and considering the 1800 line of U.S. concentration ratios, it was found that India's share of highly concentrated industries was three times the level of concentration in the U.S. or China and twice that of Germany. But their study did not assess the level of concentration in each of the eight major industries and did not explain clearly the data sources used and what NIC classification or which aggregate level of data was used.

Mishra (2008) studied the market concentration of manufacturing industries in the post liberalization era. He used the time series unit root test to examine the instabilities in market concentration. His analysis found market concentration to be unstable across major industry groups. The study used certain variables determining market concentration: advertising, marketing, R&D, import and export competitiveness. He explained how advertising, marketing, and R&D had a positive impact on market concentration. Imports as well as export competitiveness were found to have a negative impact on market concentration. He used 'Random Effect' model to assess the time path of the impact of explanatory variables on market concentration. The overall impact of variables was positive, with the impact of positive variables being stronger than the impact of negative variables.

There have been a few studies of concentration in the banking industry, but this research is not significant to the proposed area of study, as this study is concerned with the manufacturing industry and not with the services sector.

Mark-up and the PCM give us the value component of profitability as compared to the measures of productivity, which are volume components of profitability (Mishra, 2008). However, the fact that both these components are not independent from variations in productivity makes mark-up an important component in determining the wages being paid to labour and labour employment, which is dependent on the level of productivity of firms. A higher level of PCM, other things remaining the same, signals enhanced market concentration (Mishra, 2008). This implies a positive concentration mark-up relationship. The argument may be one sided as a higher mark-up is also possible by reducing per unit cost of production and widening the gap between sales revenue and cost as a symbol of higher efficiency (McGee, 1958). This implies that there need not

be a positive relationship between mark-up and concentration. In fact, mark-up can accrue due to higher productivity and efficiency rather than concentration and barriers to entry.

Mishra (2008) explained the relationship between mark-up and concentration in the manufacturing industry. This study is important in the sense that it explained how an increase in the level of concentration had an impact on the mark-up earned by firms. A positive relationship between market concentration and the mark-up was derived by the study. The study took into account different factors that influenced mark-up, that is, growth of sales, advertising, marketing, R&D, import and export competitiveness along with concentration. However, there were certain problems in this analysis: the concentration index used was the CR4 index, which is widely used to assess market concentration. This index is a predictor of concentration and the level of market share of four largest firms, but it did not clearly explain the degree of inter-firm inequality in sales of the industry like the HH index does. Also, CR4 does not explain the monopoly power exercised by firms.

Using ASI data from 1975-1985 for major manufacturing industries, Desai (1985) showed that most Indian industries were competitive, with a small number of firms having dominant market shares, but a large number of firms had marginal market shares. The study found that in such a situation, entry of new firms might not alter the extent of concentration, but effective competition would go up.

In the light of the above analysis, the main objective of this study is to:

- (i) Analyze the market structure of Indian manufacturing post-reforms.
- (ii) Examine the trends in market competition, concentration, and mark-up in the organized manufacturing sector since the reforms.
- (iii) Differentiating the concentration index from the monopoly power index theoretically and by means of correlation between the indices.
- (iv) Conduct a detailed study of concentration in all the eight major manufacturing industries for the period from 1999-2013.

Methodology

(1) Choice of Indices : The reason for analyzing HHI and CR4 both is to understand how the trend of concentration is different when all the firms are taken into consideration as compared to only the top four major firms. CR4 index measures the market concentration as the ratio of the sales of top four firms over the total sales of the industry and measures the aggregate market share of the four firms. It is a widely used index of market concentration and is different from HHI as it is less affected by the number of firms in the market.

The problem while using CR4 for overall analysis can be understood as follows: Consider two industries 'A' and 'B', both having a CR4 of 80%. However, the four largest firms in industry 'A' each have a market share of 20%, while in industry 'B', the largest firm has a share of 65%, and the next three firms have a share of 5% each. Even though they have the same CR4, the degree of concentration in these industries is different. Therefore, I have used HHI and CR4 simultaneously for this study. Using HHI and CR4 simultaneously clears out the ambiguity in the degree of concentration and makes the analysis much more detailed.

(2) Number of Firms : The data sources used in this study are from the Centre for Monitoring Indian Economy (CMIE). The study is done for the latest data available from a balance sheet of consistently data reporting firms. The sample consists of eight major manufacturing industries (see Table 1). The number of firms in an industry is an indicator of the level of competitiveness. As we reduce the number of firms in an industry, the concentration increases. Monopoly being single seller, duopoly being two sellers, oligopoly being more than two, but limited

Table 1. Increase in the Total Number of Firms by Industry Group (1960-2013)

Industry	1960-70	1971-80	1981-1990	1991-2000	2000-2012
Food and Agro.	88	164	384	671	122
Chemical and Drugs	123	240	747	613	105
Consumer Goods	25	60	184	194	59
Construction Material	22	59	161	146	35
Machinery	127	159	360	317	89
Metal & Metallurgy	88	192	436	340	116
Textiles	59	154	425	419	93
Transport & Equipment	60	73	220	180	58

number of sellers, monopolistic market being where there are a host of sellers, and hence, more firms imply more competitiveness.

The first impact of abolition of import licensing, reduction in tariff rates, abolition of industrial licensing, liberalization of restrictions on foreign capital, and the impact of these significant changes can be cited by the establishment of firms post-reforms as compared to the pre-reforms era. For this analysis, the year of incorporation data was taken from Prowess, post 1960 till 2013, to see the absolute changes in the number of firms.

The maximum number of new firms entering the manufacturing sector was in the late 1980s, post-liberalization. The Table 1 shows more than 100% increase in the number of new firms during the decade from 1980-1990 across all the industries. Food and agro industry registered more than 200% growth in the number of new firms after liberalization. Consumer goods registered a 300% increase in the number of firms entering the industry in this decade. These figures illustrate barriers to entry and exit prior to liberalization. Globalization and privatisation in the 1990s opened up the domestic market to foreign manufacturing. For example, the emergence of Pepsico, Coca Cola, and so forth had a major impact on the nature of the FMCG industry. The chemical and drugs industry also saw a surge in sales in the late liberalization phase with the inception of around 500 firms in that decade (Chaudhari, 2004). All the other industries saw an increase in the number of new firms during the two decades : from 1980-2000. After 2000, there was a decline in the number of new firms in all the industries, showing signs of barriers to entry and market concentration. Thus, the study of concentration via a number of new firms in the industry is important in order to determine the level of concentration.

(3) Data Sources : Using the CMIE Prowess database of major manufacturing industries from 1999-2013, concentration levels had been worked out: Hirschman Herfindahl index (HHI), four firm concentration index (CR4), and mark-up (price cost margin index) for each year. The reason for choosing this period is the unavailability and inconsistency in data reporting before 1999. For interpretation purposes, HHI was preferred over CR4 as it is more sensitive to variation among all firms of different sizes. CMIE Prowess gives a picture similar to that of a firm's balance sheet. Data for this study is derived from the annual financial statements provided by firms. The data for manufacturing was segregated into eight major industry groups. This analysis used the following variables of the manufacturing firms, that is, (a) sales of individual firms, (b) profit after tax, (c) raw material cost, (d) power and energy cost, and (e) salaries and wages.

The interest of this study is in understanding market structure within and across industry groups. Market structure depends upon certain key variables namely, number of firms, extent of product differentiation, barriers to entry, cost structure, and import competition (Scherer & Ross, 1990). To understand the SCP dynamics of the Indian manufacturing market, the following characteristics of manufacturing market were considered, that is,

(a) size of the market, (b) level of market concentration, and (c) mark-up (PCM) had been worked out. These characteristics highlight the present structure and conduct paradigms in the manufacturing market

The structure of the market was analyzed for eight major industry groups namely, (a) chemical and drugs, (b) food and agro products, (c) textiles, (d) metal and metallurgy, (e) construction materials, (f) transport & equipments, (g) consumer goods, and (h) machinery. The analysis was moved further to 22 three-digit industries.

CMIE data is firm level and is available with NIC (2008) only ; hence, backward concordance had been done for the manufacturing units according to NIC (2004). The data at unit level had first been concorded back to four digits and three digits. Example: for all years, firm level data Emerson Network (NIC code 27202) which is an electrical company had been concorded backwards to NIC 2720 and further to industry group 272, which is precious non-ferrous industry within the machinery industry classification of NIC (2004).

Analysis and Results

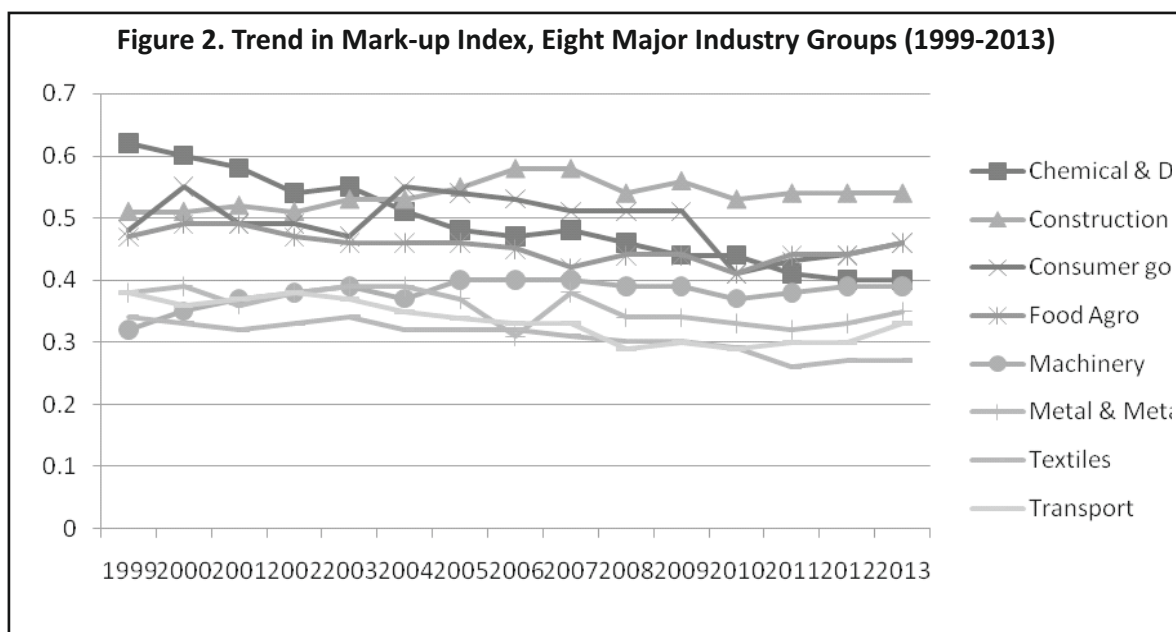
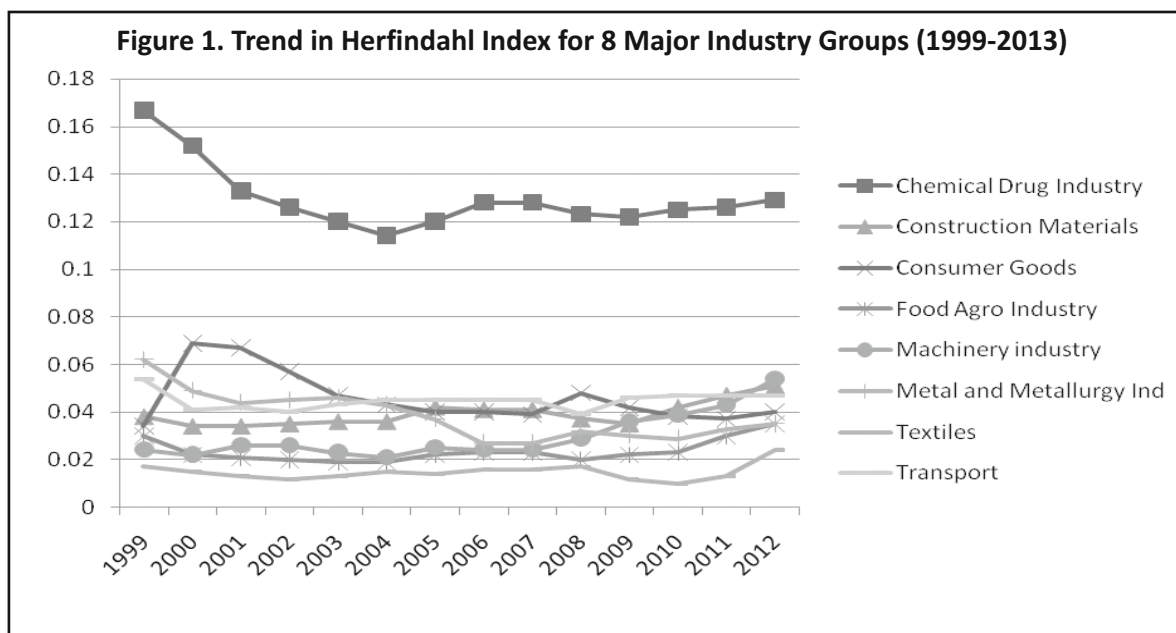
🔗 **Trends in Concentration and Monopoly Power :** As can be inferred from the Table 2, the chemical and drugs industry exhibits the highest level of concentration across all industry groups standing at 13.3% in 2013. Textile industry had the lowest range of concentration from 1.7% in 1999 to 2.5% in 2013. The metal industry showed a decline in the level of concentration from 6% to 4.5%. In consumer goods, the level of concentration increased gradually from 3.4% to 4.5% with high relative fluctuations in between (see Figure 1). The transport and equipment industry remained steady at 5.3%, with fluctuation in between from 4.5% in 2006 to 5.3% in 2013.

To sum it up, there was an increase in the concentration level across all industries except for metal & metallurgy, where it was constant, but the increase seems to be gradual given the rapid variation in the number of firms entering and exiting the market in between. Overall, there exists a marked difference across industries with regards to the level of HHI concentration. An analysis of concentration at more disaggregated levels (three digit industries) shows that CR4, being a more discreet concentration index as compared to the HHI, is rapidly increasing across the time span and across all the industries (see Figure 1, Figure 3, and Figure 4).

The chemical and drugs industry has the highest CR4. In 1999, four firms with highest sales had a combined production of 64% of the total output in the industry. In 2013, the top four firms produced 68% of the total output. We can see that there is a 4% increase in the contribution of the top four firms, which cannot be regarded as a

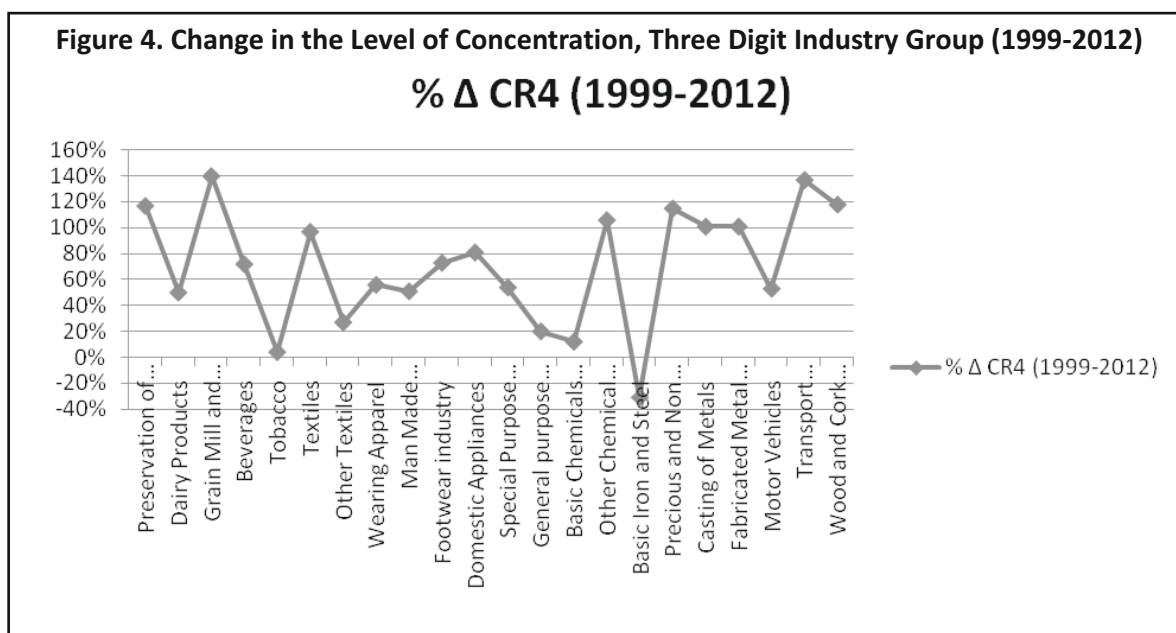
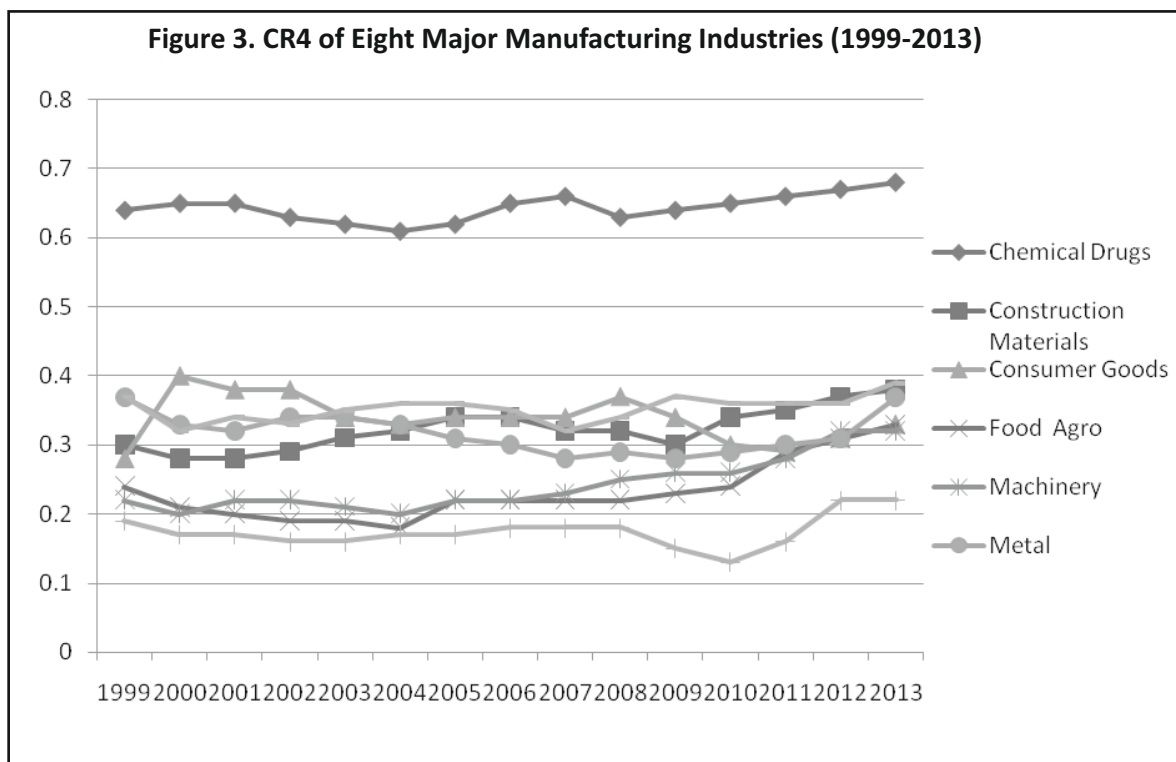
Table 2. Trends in Concentration and Exercise of Monopoly Power

1999	Chemical & Drugs	Construction Materials	Consumer Goods	Food & Agro	Machinery	Metal and Metallurgy	Textiles	Transport
Mark-up	0.62	0.51	0.48	0.47	0.32	0.38	0.34	0.38
Herfindahl	0.167	0.038	0.034	0.03	0.024	0.062	0.017	0.054
CR4	0.64	0.3	0.28	0.24	0.22	0.37	0.19	0.37
2006								
Mark-up	0.47	0.58	0.53	0.45	0.4	0.31	0.32	0.33
Herfindahl	0.128	0.041	0.04	0.023	0.024	0.027	0.016	0.045
CR4	0.65	0.34	0.34	0.22	0.22	0.3	0.18	0.35
2013								
Mark-up	0.42	0.55	0.46	0.46	0.39	0.35	0.27	0.33
Herfindahl	0.133	0.051	0.045	0.035	0.054	0.035	0.025	0.053
CR4	0.68	0.38	0.4	0.33	0.32	0.37	0.22	0.4



gradual increase only. These figures illustrate the decline in competition of the four firms as against the remaining firms in the industry. The same is true for construction materials, where the four firms' concentration ratio increases from 30% in 1999 to 39% in 2013. A higher value of concentration is visible across all industry groups from 1999-2013 except for the metal and metallurgy industry, where it is constant at around 37%. For the consumer goods industry, the increase in CR4 is 12%.

Mark-up index of the eight industries illustrates differing trends. While the highest mark-up in 1999 is in the chemical and drugs manufacturing industry, the lowest is in metal and metallurgy industry. With reference to the year 2013, the construction material industry has the highest mark-up value at 55%, an increase of 4% from 1999-2013 in this industry. Some industries also show an increase in mark-up over the years, while some show a



negative trend over time. The chemical and drugs industry shows the highest decline in the mark-up values over time from 62% in 1999 to 42% in 2013 (see Figure 2 and Figure 5). The machinery industry shows the highest growth of 7% from 32% in 1999 to 39% in 2013. Industries that depict a falling trend in mark-up are chemical and drugs, consumer goods: 2% ; food and agro: 1% ; metals and metallurgy: 3% ; textile : 7% ; and transport industry: 5%. Only two industries show a positive trend namely, construction materials : 4% and machinery : 7%.

Understanding the reasons for falling mark-up in comparison to increasing concentration (HHI index and CR4)

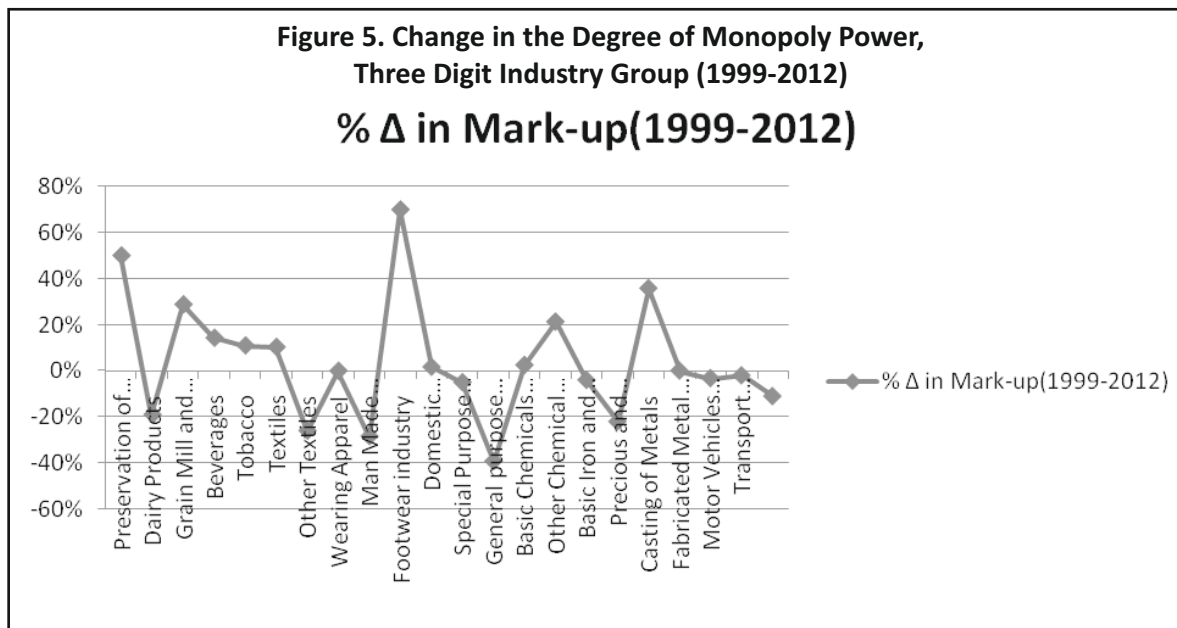


Table 3. Correlation: Mark-up, Herfindahl, and CR4 Period (1999-2013)

Correlation	Mark-up	Herfindahl	CR4
Mark-up	1.000		
Herfindahl	0.293	1.000	
CR4	0.377	0.951	1.000

posits the inherent difference in these indices of market structure. While the HHI index is only dependent upon sales of a firm as compared to the total sales of the industry, mark-up is dependent upon other factors namely, factors of production and their relative prices. Variable cost incurred by the firms also includes the cost of raw materials and necessary components, energy consumption cost, labour cost (labour working on both wages and salaries). If I remove the component of marginal cost from the mark-up index, it resembles the HHI index, which I analyzed earlier, displaying an increasing trend.

The existence of a positive relationship between market concentration and PCM is well documented in many texts on industrial economics (Barthwal, 1984) including the theory of SCP paradigm (Weiss, 1989). The relationship is positive in the sense that market concentration leads to monopoly power, lower substitutability of the monopolist product, and hence, a higher difference between price and marginal cost. A study done by Mishra (2008) explained the relationship between mark-up and market concentration to be both static and dynamic one. Static relationship explains the positive relationship of monopoly power and price over marginal cost ; whereas, the dynamic effect has diverse forces that operate. Lagged profitability becomes an important determinant of profit margin in the current year. Higher profits in the past year induces more profits in the current year. On the other hand, lagged profitability also attracts new firms into the market, which is a threat to the profit margin in the current year. Lagged profitability is also an important determinant of a firm's investment into research and development, which in turn is responsible for creating entry barriers and hence, higher profits and PCM for firms.

Correlation analysis is done for these indicators for 22 manufacturing industries within the major industries group. Available literature suggests that mark-up has a positive as well as a negative relationship with the level of

concentration in theory, a correlation estimate is a good indicator to gauge this relationship. The Table 3 shows that the correlation between mark-up and HH index is 0.29 and mark-up – CR4 is 0.38. This clearly shows that the degree of monopoly power is positively correlated with level of concentration in the market. Given the number of observations involved, the degree of correlation appears weak. The Table 3 shows a strong and positive correlation between Herfindahl and CR4, and hence, a higher level of CR4 would imply a higher level of HHI.

Monopoly power of firms in terms of setting of prices has always been understood as a power that comes from an imperfect or concentrated market, but the above analysis seems to undermine the SCP paradigm (structure of imperfection leading to conduct or pricing strategy and performance in terms of profits). In fact, it brings to light the modern day oligopoly and monopoly market situation wherein, the markets, despite being concentrated are competitive, and firms are not price setters.

Research and Policy Implications

Analysis of concentration indices shows that Indian manufacturing post-reforms is moving towards the path of imperfect competition. It can be concluded that the market is moving towards a more monopolistic/oligopolistic framework [2] from a comparatively competitive situation. This shift from competitive market towards monopolistic market, if seen from the market structure perspective, implies a different SCP paradigm, and hence, there is a need for dynamic competition policies. At the very basic level, the question is whether anything more than the existing competition policies is needed. Couldn't we simply use the prohibition of exclusionary policies (as prescribed) adopted by oligopolies and monopolies and ensure that competitors in the downstream markets are given access to upstream infrastructures? The answer to these questions is not simple, and hence, has to be understood in the light of competition policies specific to sectors in terms of Indian manufacturing.

Conclusion

The most fundamental change made in the move from MRTP Act to the Competition Act, as can be seen evidently, is the creation of the Competition Commission of India (CCI), 2003. After the enunciation of the commission, all the pending cases relating to monopolistic and restrictive trade practices have been taken up under the adjudication of CCI. CCI does not decry or condemn the existence of monopolies or oligopolies in the relevant market ; alternatively, it does not act against concentration in the market, or decrease in the number of sellers in the market. The Act hinges on the 'Effect Theory' rather than the 'Control theory'. It acts to curb the use of monopoly power and status, which hinders actual and potential competition. As discussed in the structure conduct and performance paradigm, the problem of monopoly is not associated with the size of the monopoly, but with the structure it entails and the habits it gets into.

It is understood that the implications of deregulation and economic liberalization on the concentration levels would differ across industries owing to the nature and the relevance of the industries. The need for industry specific competition policy seems to be the need of the hour (Hellwig, 2008). Industry-specific competition policy is quite common in developed countries where we have regulated and unregulated parts of the same industry. Many developing countries, including India, have felt the need to adopt these policies and approaches; one among them is the 'Competition Bill' in this direction.

[2] Monopolistic/Oligopolistic : Metal and metallurgy/chemical and drugs in major groups. In three digit analysis, the same could be electronic equipment/tobacco industries.

Limitations of the Study and Scope for Further Research

There have been arguments contradicting the conclusions derived from the CR4 index. For example, CR4 is criticized for not taking into consideration the size of firms as size of the firms differentiates the output produced as well. This criticism also points to how firms grow in size and scale. According to Schumpeter (1942), an oligopolistic structure is attained by continuous competition and cost-cutting and innovation in terms of factors of production.

Accumulation is the primary objective of monopoly capitalism and the sources of accumulation lie in the structure of monopoly capitalism and the power it derives from the market. If we have a system to correct the structural issues and exercises of monopoly power, then monopoly capitalism in the manufacturing sector would indeed be beneficial from the demand as well as the supply side as suggested by Schumpeter (1942). The objective of the CCI Act is to promote competition and efficiency. The Act hinges on the 'effect theory' rather than the 'control theory'. However, the question remains: What is the base for judging competitive efficiency? Is it based on some pre-conceived notion or laws? Have all parties' consent being taken? What impact does labour exploitation have in determining a competition policy? These questions can be considered by researchers in future research studies in this area.

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