The State of Competition in the Indian Manufacturing Sector

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March 2007

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Acknowledgements

This report is the outcome of the work done for the project entitled "The State of Competition in the Manufacturing Sector" sponsored by the Competition Commission of India (CCI) as a part of their Market Studies/ Research Projects. Our initial proposal included the study of one of the industry groups in addition to the aggregate manufacturing sector. The idea was that some of the competition related issues such as relevant market and entry barriers could be studied meaningfully at the individual industry level. The Advisory Committee, CCI, however, advised us to confine only to the aggregate manufacturing sector. We would like to place our sincere gratitude to Competition Commission of India, in particular, Mr. Vinod K. Dhal, Member CCI, Mr. Amitabh Kumar, Director General, Mr. Augustine Peter, Economic Advisor, Mr. G.R. Bhatia, Additional Director General and Mr. Anil Kumar for their constant guidance and support in the initiation and completion of the project.

We thank all the members of the Advisory Committee, Competition Commission of India for their comments on the earlier draft of this report. We would like to record our special thanks to Prof. K.L. Krishna, Prof. Suresh D. Tendulkar and Prof. R. S. Khemani for their comments and suggestions at various stages of the project. The earlier version of this has been presented at a Conference organised by CCI. We would like to thank the conference participants for their comments.

We could not have completed the study without the support of our parent organisation – Institute of Economic Growth (IEG). We place our deep sense of gratitude to Prof. Kanchan Chopra, Director, IEG, who has been a great source of support since the beginning of the project. The support of the administrative, computer and library staff of the Institute is duly acknowledged. We would like to thank Mr. G. Lakshman Rao and Ms. M.J. Varsha for their competent research especially in compiling information from different sources and data processing.

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Executive Summary

Independent India' autarkic, public sector, and basic and heavy industry-oriented development strategy led to public sector domination, discretionary quantitative controls over the markets and private economic activities, and restrictions over imports and foreign investment. These policies stifled the competitive forces – both external and internal. Economic policy reforms of 1991 by liberalising the regulations over the private sector, imports and foreign private investments, and de-reservation of the hitherto reserved areas for public sector, instilled the dynamic forces of competition. These reforms not only exposed the industry to market competition but also intensified competition. In this background, present study focuses on two important aspects of competition in the manufacturing sector – potential and actual competition. These issues are studied in the broader framework of the process of competition (discussed in Section 3.1). Potential competition addresses the still existing policy regulations that restrict competition. In this respect, the study considers general rules and regulations that are still complex and make doing business difficult, and policies relating to trade, foreign direct investment, small industry and labour. The state of actual competition is studied in terms of the level of imports, entry of transnational corporations, supply side and market restructuring. We have examined production restructuring in terms of structural break in the fixed assets and analysed some important aspects of restructuring of the Indian industry i.e., shifts in size distribution, ownership patterns and forms of business organisation across two time points – 1989-90 and 1997-98, mergers and acquisitions, and changes in market structure since the early Nineties. Shifts in size distribution is examined in the case of gross fixed capital and gross plant and machinery variables as these are taken to represent the three basic parameters of manufacturing viz., capacity expansion (potential scale of operation), technological upgradation and product composition. Market structure is analysed in terms of its concentration, composition and performance in general, and changes in the market position and performance of the firms that are actively involved in mergers and acquisitions in particular based on CMIE data for the selected industries. Empirical analysis of the study reveals the following:

- Rules and regulations relating to business are still complex in India deterring entry. India ranks 134 in the Doing Business 2007 Survey of World Bank that covers 175 countries.

- International comparisons indicate that India is still having high tariffs, use non-trade barriers such as anti-dumping measures and stand in the first few in trade restrictiveness especially in restricting imports – one of the important sources of competition.

- Policies regarding foreign direct investment (FDI) – another important source of competition, are still considered discretionary and restrictive. International comparisons in this respect placed India in the category of under performers with low Inward FDI performance and low Inward FDI potential.

- Product reservation for small-scale industrial units and the complex and comprehensive labour legislation restrict competition by deterring entry. All these policies convey that there exist many more regulations that deter entry and thus restrict competition.

- Imports – important source of competition, although growing fast has to go long way to pose a threat of competition as they still constitute negligible part i.e., less than one percent of domestic market. Entry of transnational enterprises is observed in some of the industries, namely, automobiles, electronics, food processing and cement.

- Empirical results show, for majority of the industry groups (64 four-digit industry groups of NIC98), structural break in the fixed capital in the post-reform period. Growth rates of fixed capital are higher in the post-structural break year compared to that of pre-structural break period.

- Analysis of ASI unit level data across the two time points viz., 1989-90 and 1997-98 reveals, as expected, that there has been a shift – (a) from smaller size classes towards larger size classes hiking the mean levels of fixed capital and plant and machinery substantially; (b) from public ownership towards private ownership of means; and (c) from proprietorship and partnership forms to limited companies.

- Post-reform period also experienced spurt in mergers and acquisitions in different industry groups. Most of the mergers and acquisitions in the food processing industry involved transnational enterprises, which opted merger and acquisition route to enter. In contrast, mergers and acquisitions in the drugs and pharmaceutical industry are mostly driven by the domestic companies, which are also aggressively going in for international acquisitions, strategic alliances and joint ventures to have global presence. So is the case with the textile industry. Cement industry too witnessed a series of mergers and acquisitions in the post-reform period dominated initially by domestic companies and later (1999 onwards) by transnational enterprises.

- Automobile industry groups are marked by the entry of transnational corporations mainly through collaborations and green field venture route rather than merger and acquisition route.

- 48 out of the 83 selected products indicate low market concentration with Herfindahl index less than 0.25. Six products, namely, cigarettes, wafers/potato chips etc., jams/sauces etc., iodised salt, medium & heavy commercial vehicles, and fuel injection pumps and nozzles show high concentration with Herfindahl index more than 0.5. There is a rise in concentration ratio in 38 products over time.

- For 41 products, composition of first five players remained the same and market leader remained the same across the two time points (TE92 and TE05) in the case of 47 products. For 45 products, size distribution is skewed.

- Of the six industries considered for market performance, electronics exhibited negative profits, leather experienced smaller profit ratios, transport equipment, and drugs and pharmaceuticals exhibited higher profit ratios and the profit ratios in food processing and textiles industries lie in between in TE06.

- Mergers in nine product markets viz., vegetable oils, cigarettes, drugs and pharmaceuticals, cement, motor cycles, passenger cars, mutil-utility vehicles, light commercial vehicles, and medium & heavy commercial vehicles may need close moniotoring by the Competition Commisssion as the sales turnover of the first or, first and second players together crosses the threshold limit specified in Section 5 (a) of the Competition Act 2002 for the individual enterprises.

Of the active players in mergers & acquisitions in different sectors, only HLL obtained market leadership in icecream, jams/sauces etc., and tea markets. UB group in beer and wine/spirit etc., Ranbaxy in drugs and pharmaceuticals, Raymond and Aditya Nuvo in textiles retained their market leadership in the concerned products. But for the drugs and pharmaceutical companies, other companies show negative or reduced profit ratios.

In the light of the empirical findings of the study, we advocate the simplification of business rules and regulations, further reduction in tariff rates, judicious use of anti-dumping measures, removal of press note 1, 2005, de-reservation of reserved products for the small scale units and total revamp of labour legislation to encourage entry of new firms including foreign firms and imports and thus to promote competition.

1. Introduction

India initiated major policy reforms since 1991 involving a paradigm shift in the development strategy toward a more global integration with the world economy and a wider scope for market forces and private initiatives.

Hitherto autarkic, public sector-dominated, basic and heavy industry-oriented development strategy with centralized investment planning resulted in the indiscriminate expansion of public sector, direct discretionary quantitative controls over large private industry, and severe restrictions on foreign investment, trade especially imports and foreign exchange allocations. These policy measures created entry barriers to the domestic market and hence restricted competition. Restrictions over imports and foreign direct investment (FDI) eliminated the threat of external competition and industrial license restricted the entry of Indian companies.

Lack of competition in a situation of market shortages did not create any incentive for the industry to improve its performance nor does it have freedom to do so. Government took away micro decision-making from producers through industrial licensing. Industrial licensing snatched away the right to make decisions from producers by entrusting the concerned officials to decide the basic aspects of manufacturing such as what to produce (product composition), how much to produce (scale of operation) and how to produce (technology).

This situation prompted Indian industry to try and obtain industrial license in as many areas as possible to pre-empt competitors and earn super normal profits given the persistent market shortages. Consequently, at the time of reforms, Indian industry remained small operating with older technologies and low productivity and hence producing high cost, low quality products in widely diversified areas.[1] The share of industry in gross domestic product (GDP) is only 27 percent and that of manufacturing is 17 percent as of now.

[1]Perceptive observers recognized the adverse consequences of the earlier policies as early as late 1960s. See, for instance, Gadgil (1968, 1973), Bhagawati and Desai (1970) and Bhagawati and Srinivasan (1976).

The policy reforms of 1991 are widespread and systemic in nature especially in the areas of external and industry sectors. In the case of external sector, for instance, reforms cover trade flows – imports and exports, exchange rate and capital inflows including foreign direct investment (FDI). Industrial sector reforms include abolition of comprehensive industrial licensing and restrictive monopoly regulation, significant opening up of activities previously reserved for the public sector and de-reservation of number of products reserved for small scale sector. These policy reforms by removing the regulations over market transactions and large private industry unleashed the dynamic competitive forces. Imports and transnational enterprises (TNEs) brought in external competition. The removal of industrial licensing – the biggest entry barrier in the pre-reform period, intensified the competition from domestic players by allowing new entrants. Simultaneously, these reforms allowed domestic enterprises to make their own decision-making relating to the basic aspects of manufacturing such as product composition, scale of operation, technology and location. In this background, it is important and interesting to know fifteen years down the line where does Indian industry stand in terms of the level of competition. Alternatively, what is the current state of competition in the Indian industry?

State of market competition is usually studied in the broader framework of structure-conduct- performance. Where, structure refers to the market structure, conduct to the behaviour of the firms[2] and performance is mostly considered at micro level. It is, however, a static framework and hence cannot capture the dynamic elements of the competition process (discussed in section 3). The difference between the static and dynamic analyses arises as the majority of the characteristics of the markets and firms can be positive or negative depending on the situation. Static analysis focuses on a given situation and hence cannot capture the dynamic effects of a given character. For instance, patents give short-term monopoly to firms but encourage firms to discover new things that contribute to the social welfare in the long run. Similarly, mergers of two large

[2] Firm is ownership and hence decision-making unit in the production of goods and services. In the report, we use the terms enterprise, firm and company synonymously. One firm can have one or more divisions producing different products and one or more plants/factories to produce the same or different products.

existing firms may improve competitive strength of the firms that is good for firms as well as consumers or, may lead to market dominance and thus give scope for abuse of dominance. In the early stages of industrial development and emerging markets, mergers and acquisitions give the required scale economies and help in improving the competitiveness of firms that is in the long run interest of consumers. But in the case of advanced stage of industrial development and matured markets mergers and acquisitions may lead to market dominance. Structure-conduct-performance may be meaningful in the case of advanced countries where industry developed in more or less open market conditions and markets are matured and stable. These countries too have refined statistical systems to provide detailed firm-level and market data required to study the characteristics specified in structure-conduct-performance. In India, competition process has recently been initiated and markets are emerging and industry is in the early stages of development. Hence, it is appropriate, in our view, to focus on some of the aspects of industrial restructuring that competition process triggered.

Faced with increasing external and internal competition, Indian industry is trying to improve its competitiveness through restructuring. Competitiveness is nothing but the abilities of firms to withstand competition i.e., to maintain or, improve its market position. Improvements in competitiveness comes through the supply side restructuring, which includes changes in production configurations involving new technologies, superior products, efficient scales of operation at the plant/ firm level, and entry, exit, merger and acquisitions at the industry level. This restructuring enables firms to produce rising supplies of superior products at cheaper prices, which are in the interest of consumers – the objective of all the competition policies. The supply side restructuring leads to changes in the market structure as firms that are able to supply quality goods at lower prices improve their market position. Only the other way that firms can improve or maintain their market position is by engaging in anti-competitive practices i.e., anti-competitive agreements and combinations, and abuse of market dominance. As these practices go against the consumer interests, competition policies attempt to regulate them. In this respect, the Indian Competition Act 2002 rightly stresses the behaviour than structure by focussing on ‘abuse’ than ‘market dominance’. However, behaviour

especially illegal practices can be asserted only at the event level through ground level probing. It is difficult to deduce these at the manufacturing sector level with secondary data. The best that can be done at the manufacturing sector level is to have an idea about the level of competition in terms of structural transformation on the supply as well as market side. Consequently, we focus on –

- ***Production restructuring***
- ***Imports and transnational corporations***
- ***Mergers and acquisitions***
- ***Market Structure***
- ***Still existing policy barriers***

These aspects have been studied making use of different sources of information, namely, Annual Survey of Industries (ASI), Centre for Monitoring Indian Economy (CMIE) and Capital line and Internet. Majority of the mergers and acquisitions are traced through the company websites on the Internet.

The study is organised as follows. Next section discusses the concept of competition and its treatment in economic theory, policy and empirical works. In section 3, we present the analytical framework used in the study. Following this framework, we examine the empirical evidence in section 4. In particular, it tries to bring the evidence relating to some of the important competition related issues, namely, potential competition in terms of still existing policy barriers, and the actual state of competition in terms of entry of imports and transnational corporations, and structural transformation of industry as well as markets. The final section recapitulates the important features and findings of the study.

2. Competition in Theory and Practice

2.1 The Concept of Competition in the Economic Theory

There have been two divergent strands of thought regarding the notion of competition in economics. One line of thought considers competition as a *process* of rivalry that may or

may not terminate in an end-state. Another school of thought treats competition as the state of affairs that is the end result of competition among sellers and buyers (Blaug 1997: 241). Early reference to the concept of competition can be seen in Adam Smith who used the term 'competition' as a pattern of business behaviour 'to compete' to characterise the process that was analysed by many Eighteenth Century authors i.e., the process of bringing 'market prices' in line with the 'natural prices' (i.e., cost-covering prices). Thus, the conceptualisation of competition as a state of affairs in the mainstream economics takes end state as the one in which market prices equalled the so-called 'natural prices' (Blaug 1997: 242-3). It was, however, never mentioned explicitly in the Eighteenth Century write-ups the necessary pre-requisites to secure these end-results such as number of rivals and market information. It was Cournot who first introduced the number of sellers facing horizontal demand curve when their numbers been large (p. 243), which was later developed by Edgeworth into modern definition of perfect competition in terms of large number of sellers, homogenous product, perfect factor mobility and knowledge. Robinson and Chamberlin took this line of thought further by developing imperfect competition and monopolistic competition.

Thus, by 1930s, conception of competition as a state of affair settled firmly in the mainstream economics replacing the initial conception of 'competition as a process' and its dynamic behavioural aspects. This structuralist approach, being static in nature, found to be inadequate to analyse intrinsically dynamic competitive phenomena. Instead, this approach started treating the dynamic aspects of competition such as learning and innovation as traits of imperfect competition and used as an evidence of monopoly/ market power! The later attempts to bring back the dynamic characterisation of competition as a 'process' were thwarted by the structuralist approach. Notable among these were Hayek (1936, 46) and Schumpeter (1942). Hayek takes competition as a process of discovery of facts and emphasizes that it is for reputation. He further argues that price and quantity dispersion is the result of imperfect knowledge that sellers possess about the uncertain future. Schumpeter characterised competition as a process of 'creative destruction' and argued that perfect competition is not only impossible but also inferior

(Schumpeter 1942: 106) as it is entrepreneurs and large firms that bring innovation and thus contribute to economic growth.

This is not to say that mainstream economists unquestioningly accepted the conception of competition as an end state of affairs that culminated in equilibrium models. There has been strong criticism, from time to time, against this conceptualisation of competition, its presumptions and its inadequacy to deal with the dynamic aspects of competition. Chicago school (Demsetz and others), for example, showed that there was no obvious causality between small number of market players and lack of competition and no observable tendency to concentrate over long time. This school argued that market forces themselves prevent the dominance of firms. Baumol *et al* (1982)' analysis of contestable markets too challenged the competition models in the mainstream economics. These criticisms, however, could not displace/ reduce the predominance of equilibrium competition models in the mainstream economics given the arguments such as perfect competition being an 'ideal state' serves as a 'bench mark' against which real world situations can be compared. Rather, these criticisms helped in refining the conceptualisation and developing the analysis further. For instance, analysis of contestable markets contributed to the notion of 'potential competition' and led to the introduction of free entry and exit in to the equilibrium models. The most noteworthy example that is relevant for the present study is the development of structure-conduct-performance (SCP) paradigm.

The inadequacy of then existing competition equilibrium models in capturing the real world situations prompted Mason (1939) and Bain (1949) to propose structure-conduct-performance (SCP) paradigm that formed the basis for the later theoretical developments and public policy. Based on empirical regularities observed in many American industries, Mason followed by Bain proposed that it is the observable structural characteristics of a market that determine the behaviour of firms in the market which in turn determines the market performance. Initially, market structure was taken only in terms of number of firms. Conduct i.e., behaviour of firms was taken to be collusion and profits were taken to reflect market performance. The central argument was fewer the firms higher the scope

for these to collude to maximise their profits. As state of competition is taken in terms of market structure characterised as a set of equilibrium models in prices and output, research works in the area either explicitly or, implicitly used SCP framework. Later, market structure and conduct has been elaborated to include other variables.

The concept of market structure has been widened to include size of firms, entry and cost conditions. Number of firms together with their size distribution was taken as a proxy for market concentration. It gives an idea about the extent to which incumbent firms face competition within the market. Whereas, entry conditions determine the extent to which incumbent firms need to fear competition from potential entrants. If it is more difficult or costly for new firms to enter the market, incumbent need to worry less about potential competition. Entry costly means cost advantages that incumbent enjoys over new entrants that may be due to learning or, economies of scale or, high capital requirements.

Early criticism against the SCP approach include – (i) its unidirectional approach where market structure was taken as given and ignores the interrelations among the three elements, namely, market structure, conduct and performance; (ii) that it constitutes loose arguments put together and hence lacks analytical rigour; and (iii) it is the analysis of industry and thus ignores firm-level characteristics. These criticisms along with the theoretical developments in terms of the application of game theory to oligopoly models during 1970s and 1980s led to recast of SCP arguments in formal terms. Game theory provided formal tools for the analysis of strategic interaction that is considered central to the market performance in oligopoly. These developments consider the relation between the structure and conduct as two-way. Firms affect, through their strategic behaviour in terms of investment of resources on research and development, technology and advertisement and so on, the choices available to rivals and thus the market structure which in turn influence the behaviour of firms. In this framework, market structure is mainly captured through sellers' concentration that is measured by concentration ratios, important being Herfindahl index i.e., sum of squares of market shares of existing firms. This is taken as the function of production characteristics such as capital requirements, economies of scale and minimum efficient scale, and behavioural aspects such as

advertisement and R&D expenses. Performance is taken in terms of market power that firms derive and measured through Lerner's index of price-cost margins [(P-C)/P]. As price-cost margins depend on conjectures, market shares, cost of capital specific to firms, modified SCP framework makes firm-level characteristics important for the analysis. The most important limitation of the developed SCP framework is lack of generality as different models based on different assumptions yield different results. Also, its treatment of research and development, technology, product differentiation and advertisement etc. – dynamic activities of markets and firms as entry barriers, was sharply criticised by Brozen (1969). Empirical studies, contrary to the existing theoretical view, supported more the idea that incumbent firm invests on Research and Development, advertisement etc. as a way of responding to entry than a device for precluding entry (Martin 2002: 1-9).

Contestable markets hypothesis that was due to Baumol proposes that potential competition disciplines markets as much as actual competition i.e., incumbent firms aim to be as competitive as possible if the industry is easy to enter and exit. In other words, free entry forces a firm to behave 'competitively'.

In the Nineties, there has been a renewed interest in the process of competition to analyse the complexity of competitive phenomenon and to build convincing arguments for specific topics such as vertical integration, cooperation as these are not per se anti-competitive [See for instance, Jorde and Teece (1990)]. The present study follows the process approach and focuses on some of the dynamic aspects that the process of competition expected to have triggered in the Nineties in the case of Indian industry (elaborated in the next section).

2.2 Competition Policies

2.2.1 Theoretical and Empirical Underpinnings

The static equilibrium models of neoclassical theory of production and market structure provide theoretical underpinnings for SCP paradigm and competition policies. This theory considers four main theoretical market structures: perfect competition, monopolistic competition, oligopoly and monopoly. Perfect competition is characterised

in terms of large number of sellers producing homogeneous product, free entry and exit, and free flow of information. Firms can sell as much as they wish to at the prevailing market prices but cannot change the market prices – a condition that is represented by horizontal demand function. Under these conditions, competitive equilibrium yields consumer surplus, and all firms operate efficiently and earn only normal profits making producer surplus nil. On the other extreme, monopoly is characterised by one seller, entry barriers and no substitutes. Output decisions of a monopolist determine the market price of the product. Equilibrium conditions under monopoly yield higher market prices, lower output and less consumer surplus than under perfect competition and results in deadweight loss. Monopolist operates at inefficient scale yet earns abnormal profits and producer surplus. Hence, monopoly is considered undesirable both from the point of view of efficiency and welfare effects. Since price is higher than marginal cost in monopoly, price-cost margins known as Lerner index is taken as a measure of market power. Monopoly situation also give scope for incumbent monopolist to raise entry barriers in terms of limit pricing, predatory pricing, vertical restraints such as resale price maintenance, tying and bundling. All these practices are generally considered restrictive and hence taken to be discouraged but their welfare implications are not known. Also, these practices are not structural in the sense that they do not flow automatically from a situation but behavioural and hence need to be ascertained empirically. Oligopoly is characterised by few players. Fewness makes players interdependent giving scope for collusion. Manifestations of collusion such as price-fixing again need to be ascertained empirically.

Competition policies seek to increase efficiency and improve consumer choice and welfare through the control of abuse of market power and promotion of competition. Competition policy usually involves three principal areas: monopolies, restrictive practices and mergers. Monopoly part of competition policy addresses the existing monopolies. Restrictive practices component of the policy examines whether a firm or groups of firms involved in restrictive practices of one type or another discussed in the previous paragraph that may be damaging to competition. Merger section of the policy

focuses on the rising concentration of market power due to a given merger and its implications for the public interest.

Competition policy in majority of the developed countries has originated in response to the existing anti-competitive practices. For instance, Sherman Act 1889 of USA, the oldest competition policy in the world came into force owing to then existing trend of large company formation (through trusts and mergers) and their anti-competitive practices. However, in the case of India, it had been the ideology of socialism that was responsible for Monopolies and Restrictive Trade Practices Act (MRTP) 1969 to prevent concentration of economic power for equity reasons.

2.2.2 Competition Policy in India

India followed inward-looking, 'command-and-control' model wherein the domestic industries (mostly public sector with a limited private sector participation) have been fully controlled and protected from both private and foreign competition through private sector regulations, high customs duties, tariff rates and QRs. In other words, public sector acted as a monopoly in most of the spheres. Although the private sector presence was there, it was in a very limited way. Except for the few big and traditional industrial houses, there was not much scope for enhancement of private sector participation as the new entrants had to face rigid rules that did not encourage competition and led to inefficient production process. During this regime, those few private industries have become monopolistic and dominated the market given their size and concentration. This along with the equity objective of the policies has paved the way for the establishment of Monopolies and Restrictive Trade Practices (MRTP) Act in the year 1969. This year is also significant for the nationalization of banks, which are mostly controlled, managed and monopolized by big industrial houses. Prior to this, these banks used to control the production activities by using their discrimination in funding the new industries. It must be noted that these acts were brought in more with an objective to prevent concentration of economic power following socialistic pattern of society and the consequent stress on

equity and less because of the evidences of misuse of market power and restrictive practices.

The MRTP Act has become the first legislation in India that was supposed to prevent concentration of economic power that works as a constraint in enhancing human welfare, control monopolies, prohibit monopolistic, restrictive and unfair trade practices. The Act did not focus on enhancing the fair competition and rather treated the rise in competition as a by-product of its policies in restricting the monopoly practices. Even with its limited objective, the act, with the help of MRTP Commission, could deal largely with the restrictive and unfair trade practices, and its performance in dealing with monopoly practice was rather said to be unsatisfactory. From time to time, this Act was amended to address to the realities of the time. Very common anti-competition practices such as cartel, mergers & acquisitions, and price manipulation were not included in the original Act. It was also felt that this Act could not protect the interests of the consumers in providing better quality products at competitive prices.

With the change of economic and business environments due to globalization and liberalization policies since 1991, protection to domestic industries from the external competition has declined in a phased manner and also with the foreign capital coming into India, the limitations of the MRTP Act has become much more clearer. Following the changing scenario, this Act has been amended in 1991 and removed the size as criterion for the market concentration. It has also relaxed the entry barriers for new enterprises and brought public sector enterprises too under this Act to have a level-playing field for both private and public sector enterprise.

The above changes in the MRTP Act indeed could not help in addressing the issues relating to fair competition in the economy particularly when the rules of the game in economic and trade fields were changing fast followed by sharp increase in the movements of factors across the boundaries. This situation necessitated for a rethinking regarding Act and the need for new competition law that is conducive to the changing environment. This rethinking process has resulted in a new act called Competition Act,

2002. Although the main contents of the new legislation are not notified, this is going to replace the MRTP Act.

2.2.3 Competition Act 2002

The relevance of the replacement of MRTP Act with the new Competition Act may be understood from the statement presented in the Parliament: "In the pursuit of globalization, India has responded by opening up its economy, removing controls and resorting to liberalization. The natural corollary of this is that the Indian market should be geared to face competition from within the country and outside. The Monopolies and Restrictive Trade Practices Act 1969 has become obsolete in certain respects in the light of International Economic Development relating more particularly to competition laws and there is a need to shift our focus from curbing monopolies to promoting competition…. The Competition Bill … seeks to ensure fair competition in India by prohibiting trade practices which cause appreciable adverse effect on competition in markets within India and, for this purpose, provides for the establishment of a quasi-judicial body to be called the Competition Commission of India… which shall also undertake competition advocacy for creating awareness and imparting training on competition issues" (Mittal 2003, as quoted in Chakravarty, 2005).

The new Act focuses on three main issues: 1) anti-competitive agreements that includes both horizontal agreements (namely agreements on prices, quantities, bid rigging and sharing the markets) and vertical agreements (namely tie-in, exclusive supply, exclusive distribution, refusal to deal and resale price maintenance agreements); 2) abuse of dominant position through directly or indirectly imposing unfair or discriminatory restrictions on quantities and prices and restricting market access; 3) regulation of combinations[3] in such a way that it would not cause an appreciable adverse effect on competition within the relevant market. In addition to these three main areas, the competition advocacy in terms of creating awareness among the producers, consumers

[3] Here 'combination' includes mergers & acquisitions and amalgamations of domestic enterprises with domestic or foreign enterprises.

and the law makers the need for competition and the benefits that would be accrued by the society if the competition forces are strengthened.

The implementation of the Competition Act in India has been entrusted with the Competition Commission of India, which is in principle free from any political interference and is an autonomous body. The Competition Act separates the investigative and adjudication responsibilities. The investigation responsibility lays with the Director General, the adjudication of the law lays with the Chairperson of the Commission. The effective implementation of the policy depends on the sagacity of the Chairperson. In addition to this, in India there are other concerns that need to be considered while discussing the efficacy of the policy. In most of the sectors, there are some independent regulators. For example, in telecom, we have Telecom Regulatory Authority of India (TRAI). So is the case with the sectors such as electricity, insurance, pensions etc. Further, there are some economic policies, such as trade, financial, monetary, and fiscal policies that act independently. Hence, to have effective competition policy in India, there is a need for coherence and consistency among these policies and regulatory bodies. Further, given the federal structure of India and wide divergences in economics, social, political, and cultural practices across the states, there is also a need for regulators at the State level.

2.2.4 A comparative perspective

Given the changing economic environment, most countries in the world have felt the need for competition policy to ensure fair play in the market. Although some developing countries have initiated the process of preparing competition policy recently, most of the developed economies had the policy for quite some time. Starting from Sherman Act of 1889 in USA, there were many countries that adopted the competition policy in different forms. Further, these policies have also been amended from time to time to suit the economic scenario of the time. In this context, it is necessary to understand the existing successful competition policies in the world to draw some lessons for India. Hence, we discuss the competition policies of USA, Canada, Australia, United Kingdom, and China.

The name, origin, focus and implementation authority of the competition policies of various countries is presented in Table 1. It may be noted that in all the countries focus of the policy has changed from its origin basically to reflect the changes in the dominant view of the broader economic policy considerations of the respective economies. The origins of the competition policy in Australia, USA, UK and India are basically to prohibit the monopoly practices. But in Canada, it is the practices such as the price fixation that led to the policy initiative. In Socialist China, it was started with the prohibition of unfair competition and to promote competition.

Over the period, the coverage of the competition polices have widened. For example, in Canada, although the initial Combines Investigation Act of 1910 was basically for fixation of price between farmers and firms, it has been broadened in 1986 to cover mergers and abuse of dominant position. Notwithstanding their origins, all the existing competition acts have been converged to address the issue of mergers, the behaviour and process of formation of monopoly and price fixation. Some acts have linked the mergers with the public interest that includes technical progress, employment and fair trade. The Indian Competition Act is at the evolving stage. It aims to ensure fair competition and undertake competition advocacy and create awareness regarding the competition issues. But in the globalised world, ultimately the Indian Act, similar to the other countries' act, has to address the issue of mergers and acquisitions and evolve international standards to ensure fair competition among both domestic and multinational firms in India.

Table-1: Competition policies in some select countries

Countries	Name	Origin	Focus of the present Act	Implementation
Canada	Competition Act 1986	Wheat economy that led to tension between farmers and firms in terms of pricing	Focuses on both civil (mergers) and criminal offences (price-fixing agreements). This include predatory pricing, price discrimination, resale price maintenance, refusal of deal, misleading advertisements, deceptive practices, etc.	Director of Investigation and Research (DIR)
United States	Antitrust (Sherman Act, 1889) (Clayton Act, 1914)	Transformation from cartels to trusts, holding companies and mergers	Initially to restrain both horizontal (cartels) and vertical (Mergers and acquisitions) agreements. Amended to broaden the definition of mergers.	Antitrust Division (Department of Justice) and Bureaus of Competition and Economics (of Federal Trade Commission)
United Kingdom	Competition Act 1998	Cartels until World War II that restricted the competition forces	Initially on restrictive agreements and mergers. Now on complex monopolies.	Office of Fair Trading (OFT) and Competition Commission.
Australia	Competition Policy Reform Act, 1995	Monopolization of inter-state trade that led to disputes	1. Extending coverage to state, territory and local governments, which was not covered earlier 2. Provision of third party access to nationally significant infrastructure 3. Introduction of competitive neutrality 4. Restructuring of public sector monopoly	Australian Competition and Consumer Commission (ACCC) & National Competition Council (NCC)
China	Anti-unfair Competition Law, 1993 & Price Law, 1998 (Draft Anti-monopoly Law)	The presence of regional blockades and departmental barriers after moving to socialist market economy.	Trademark counterfeiting, restrictions on use of related products imposed by public enterprises and other legal monopolies; abuse of administrative power or restraints on free trade among regions by government agencies or their associates; bribery in business transactions; deceptive advertising; obtaining, disclosing or using trade secrets without the consent of the owner; predatory pricing; tied sales; deceptive sales tactics such as prize draws; uttering and disseminating false information; and bid rigging.	State Administration for Industry and Commerce (SAIC) & State Development and Reform Commission (SDRC)
India	MRTP ACT, 1969 Competition Act, 2002	Restrictive and unfair trade practices of big industrial houses	Anti-competitive agreements, abuse of dominance, and regulation of combinations	Competition Commission of India (CCI)

2.3 Competition in the Indian Industry: Empirical Works

Empirical works in the area can broadly be categorised into four groups. (a) Majority of the studies on Indian industry examine the competition-related issues, following the international trend, in the broader framework of structure-conduct-performance (SCP). Accordingly, these studies focus on the changes in market concentration and power in the reform period and/or the impact of reforms especially trade liberalisation on concentration/ market power. (b) Only one study (Pushpangadan and Shanta 2006) considers the dynamic aspects of competition. (c) One of the studies (Kato 2005) examines the impact of competition on competitiveness. Two studies namely, Shiva Ramu (1998) and Roy (1999) deal with the mergers and acquisitions – an important competition-related issue. We review, briefly, some of the recent studies in this section. The salient features of these studies are presented in Table 2.

Goldar and Kato (2006) examines the impact of import liberalisation on price – cost margins in the eight manufacturing industries, namely, chemicals, plastics and rubber, non-metallic mineral products, base metals, non-electrical machinery, electrical machinery, electronics and transport equipment. This study confines to the time period of ten years from 1991-92 to 2001-02 and uses company level data provided by Centre for Monitoring Indian Economy (CMIE) i.e., *Prowess*, and *Market Size and Market Shares*. Their results indicate negative impact of imports on price-cost margins.

Ramaswamy (2006) investigates whether there have been any changes in the market concentration for the selected consumer goods industries in the Nineties i.e., 1993-94 to 2002-03. Market concentration is analysed through the concentration ratios and import penetration ratios. For the purpose of analysis, this study uses *CMIE' Market Size and Market Shares* and observes changing Herfindahl index for many industries considered in the study.

Kato (2005) analyses the impact of product market competition and corporate governance on the level and growth of productivity in the Indian manufacturing sector in the 1990s. The study measures competition as the weighted sum of Herfindahl index, import ratios

and market share of firms. The analysis covers eight industry groups, namely, chemicals, plastics and rubber, non-metallic mineral products, base metals, non-electrical machinery, electrical machinery, electronics and transport equipment for the time period of 1991-2 to 2001-2. CMIE Prowess data have been used. Results do not show any significant relation between Herfindahl index and productivity. However, market shares of firms do influence productivity. Smaller the market share of a firm higher the growth of productivity of the firm.

Goldar and Agarwal (2005) study the effect of trade liberalisation on price-cost margins in 137 three-digit industry groups for the time period of 1980-1 to 1997-8. Annual Survey of Industries (ASI) and CMIE – Prowess data are used. Their analysis shows that trade liberalisation in terms of lowering of tariffs and removal of quantitative restrictions on imports in 1990s has a significant pro-competitive effect in terms of bringing down the price-cost margins particularly in more concentrated industries.

Chaudhuri (2004) analyses the evolution of Indian pharmaceutical industry in terms of concentration ratios, availability of drugs, prices and profitability. Concentration ratios for the year 1996-7 are measured using ORG Retail data on pharmaceutical industry. Market concentration is not high at the level of aggregate industry. However, markets are highly concentrated if one takes disaggregate industry such as streptomycins and chloraphenicols.

Gokarn and Vaidya (2004) examines the market shares and concentration ratios in the automotive components industry for the period 1991-92 to 1996-97 using CMIE data on Market Size and Market Shares. This study concludes that most of the auto component markets reveal high concentration ratios along with the stable market shares of the firms.

Table 2: Empirical works on Competition in the Indian Industry: Overview

Study	Objective	Coverage		Data Used	Empirical Measures	Findings
		Industries	Period			
Kambhampati (1996)	Examines Structure-Conduct-Performance (SCP)	3-digit industries	1970-85	Annual Survey of Industries (ASI); RBI panel data	Herfindahl index	• declining concentration • economies of scale and demand determine concentration • concentrated industries enjoy higher profits
Chand and Sen (1998)	Study Relation between trade exposure and market power	30 three-digit industry groups	1973-88	ASI – production UN data base – trade	4-firm concentration ratios; price-cost margin (PCM)	Trade exposure had a dampening effect on PCM
NCAER (2001)	Analysis of market power		1980-97	RBI panel data	Price-cost margins	• mixed results • profit margins are higher in 1990s compared to 1980s.
Ramaswamy (2001)	Study of impact of reforms on the structure of industry	Consumer durable industry	1989-90 to 1997-98			• declining concentration • declining real prices • expanding product range
Balakrishanan et al (2002)	Impact of trade policy reform on market power	Indian industry	1988-89 to 1997-98	CMIE Prowess	Price-cost margins	Inconclusive evidence
Chaudhuri (2004)	Analysis of concentration, prices and profitability	Pharmaceutical industry	1996-97	ORG retail data		*concentration is not high at aggregate industry level *high concentration at disaggregate level
Gokarn and Vaidya (2004)	Examines market shares and concentration ratios	Auto component industry	1991-92 to 1996-97	CMIE: Market Size and Shares		High concentration ratio with stable market shares
Joseph (2004)	Study of market structure & behaviour	Electronics Industry	1991-97	CMIE Prowess, Market Size and Shares	Concentration ratios; advertisement expenses; technology imports; R&D expenses	Rising concentration ratios
Pandey (2004)	Probes the impact of trade liberalisation on market power	Indian industry	1980-81 to 1988-89	ASI and DGCIS data	Import penetration ratios and price-cost margins	Results are mixed
Goldar and Aggarwal (2005)	Study of effect of trade liberalisation on price-cost margins	137 three-digit industries	1980-81 to 1997-98	ASI and CMIE Prowess	Tariff reductions + removal of QRs in 1990s	Decline in price-cost margins in concentrated industries
Kato (2005)	Study of impact of product market concentration on productivity	8 manufacturing industries	1991-92 to 2001-02	CMIE Prowess	Herfindahl index (HI) Total factor productivity (TFP)	*no significant relation between HI and TFP *market shares are inversely related with growth of productivity
Goldar and Kato (2006)	Examines the impact of import liberalisation on price-cost margins	8 manufacturing industries	1991-92 to 2001-02	CMIE Prowess and Market Size and Shares		Negative impact of imports on price-cost margins
Ramaswamy (2006)	Studies the changes in concentration ratios	Select consumer goods	1994-94 to 2002-03	CMIE Market Size and Shares	Herfindahl index (HI)	HI changing in many industries
Pushpangadan and Shanta (2006)	Studies mobility of firms across scale in post-reform period	Manufacturing industries	1988-89 to 2000-01	CMIE Prowess	Dynamic index of competition Ijiri and Simon index	Mixed results

Joseph (2004) investigates the market structure and behaviour of firms in various segments of electronics industry for the period 1991-97 using CMIE Prowess, and Market Size and Shares. Market structure is proxied by four-firm concentration ratio and conduct of the firms in terms of product differentiation, advertisement expenses, technology imports and in-house R&D. The study observes rising concentration ratios in this industry in the period under consideration.

Pandey (2004) studies the impact of trade liberalisation on the price-cost margins among other things, using data from Annual Survey of Industries (ASI) and Directorate General of Commercial Intelligence and Statistics (DGCIS) for the years 1980-81, 1988-89 and 1996-97. Empirical evidence relating to both import penetration and price-cost margins is mixed.

Balakrishnan et al (2002) probes into whether the radical shift in trade policy in 1991 resulted in a reduction in market power taken in terms of price-cost margins. Based on CMIE prowess data for the time period of 1988-89 to 1997-98, results indicate inconclusive evidence.

NCAER (2001) examines the evidence for market power in Indian industries during 1980-1997 in terms of price-cost margins. For the purpose of analysis, RBI panel data for public limited companies are used. Analysis shows mixed results across industry groups. Consumer goods industries with limited number of companies showing rising mark-ups. Profit margins, on an average, higher during 1990s compared to that of the 1980s.

Ramaswamy (2001) studies the impact of reforms on the structure of consumer durable industries for the time period of 1989-90 to 1997-98. Results indicate that the market structure changed towards declining concentration in the reform period. The move towards competitive conditions also has resulted in the decline of the real prices of consumer durables relative to manufactured goods and brought in product variety.

Chand and Sen (1998) examine the relationship between trade exposure and domestic market power over sixteen years from 1973-88. Trade exposure is considered both in quantity and price competition. Market concentration is proxied by four-firm concentration ratio (CR4) and the domestic market power by price-cost margins. Their analysis is based on 30 three-digit industry groups for which production related data is obtained from Annual Survey of Industries (ASI) and trade related data from UN database. Their empirical analysis shows that trade exposure has had a dampening effect on domestic price behaviour.

Kambhampati (1996) probes into the structure, conduct and performance of the Indian industry for the period 1970-85 using both aggregate (three-digit) industry groups and firm-level data. Aggregate analysis used ASI data and firm-level analysis is based on RBI panel data on public limited companies. This study observes declining concentration ratios over time in most of the Indian industries. Economies of scale and demand growth turn out to be important determinants of market concentration. In the concentrated industries, mobility is lower and leadership stability is more, and these industries enjoyed higher profit margins.

Only one of the studies i.e., Pushpangadan and Shanta (2006), to the best of our knowledge, considers competition as a process and focuses on its dynamic aspects. To be specific, they devise an improved turnover index and apply it to examine the mobility of firms across the scale in the post-reform period. In other words, the study focuses on the changes, if any, in size distribution of industries and their inter- and intra-class mobility, tests the relationship between the dynamic index of competition and the direction of mobility of firms among manufacturing industries. The study covers the time period from 1988-89 to 2000-01and uses CMIE Prowess data. About 43 percent of the industries studied are characterised by low mobility and barriers to mobility in varying degrees. Ijiri and Simon index – measure based on the relative ranks of firms at two different points, used to approximate the change in competition in the study, indicate mixed results. The rank correlation of change in competition or average shifting among industries over the

period does not show any shift in their relative positions implying that some rigidity exist in the expansion of competitive forces in the manufacturing sector.

Simultaneously, there have been studies on the related but different aspect, namely, mergers and acquisitions. We provide short reviews of two important studies on this issue in the case of Indian industry. Shiva Ramu (1998) explores various issues involved in merger and acquisition activities, motivation for mergers, relative size of the companies involved and their ownership such as multinational or family business and process of integration. Roy (1999) studies the rising mergers and takeovers since 1989-90, their motivation and characteristics.

The present study like Pushpangadan and Shanta (2006) focuses on the dynamic aspects of competition namely, changing scales of operation, ownership patterns and forms of business organisations, mergers and acquisitions, and changing market structure.

3. The Analytical Framework

3.1 The Process of Competition and Competitiveness

We follow, for the purpose of analysis, the view that '*competition*' is a process not a state of affairs. We take it as a *continuous process* in which firms compete with each other.

Firm is an economic organisation engaged in the production of certain goods and services for a specified market.[4] Firm competes with the other firms in the industry[5] for the specified market. The level and nature of competition depends on business environment. Markets and industry together with the other macroeconomic institutions such as government policies, factor markets, infrastructure and other services (e.g., law enforcement agencies and consultancy organisations) form the *business environment* for the firm.

[4] Markets are specified usually in terms of a combination of region (exports vs. domestic market or, a specified region in the domestic market say, Northern India), target group (children, youth, women or, a specified industry) and income (high, medium and low income groups).
[5] Industry is taken here to consist of all firms producing similar and/or substitutable products.

The business environment, under normal conditions, varies continuously as all its elements keep changing. Markets change as incomes, tastes and preferences vary over time causing shifts in the demand for the specified products. For example, recent shift in preferences towards motorbikes brought down the demand for scooters vis-à-vis motorbikes in the two-wheeler industry. The number and nature of firms in the industry change and influence the supply structures and costs. For instance, entry of transnational enterprises changed the production and cost structures, and expanded the product and price range in the Indian passenger car industry 1990s onwards.[6] Similarly, factor markets and policies change over time further influencing the demand and supply structures and thus prices of goods and services and thereby profitability and commercial viability of firms. Firms producing more desirable/ superior products efficiently succeed i.e., get selected[7] by the environment in the sense that these firms not only survive but also expand. Variations in the business environment, however, keep shifting the parameters of selection of successful firms. For example, Indian firms expanded through indiscriminate diversification in the regulated regime. But reforms are forcing them to focus on 'core' areas to survive and expand. Firms have to strive continuously to succeed i.e., to maintain and improve its commercial viability in the face of changing environment.

The *level of competition* depends on the business environment i.e., markets, industry policies, service agencies etc. Nature of market affects the level of competition in the sense that open markets and demanding customers intensify competition. Number and nature (size, ownership, etc.) of firms in the industry influence the competition. More the number of firms higher the level of competition and the presence of transnational enterprises intensifies competition compared to domestic firms. Ease of entry and exit of the firms into industry too influences competition positively. So are the easy availability

[6] Also see *Business Standard*, 4 December 2006 (p.14) that reports: "60 Two-wheeler Models may be launched in next one year (i.e. 2007)". Parenthesis added.

[7] The concept of selection is one of the basic principles underlying evolutionary economics. Selection mechanism operates at two levels. First comes the *ex ante* selection of products and technologies for the development or, adoption by the firms depending on their cognitive structures, vision and competencies. Later, ex post selection occurs in the market that selects the firms that chose well their products or, technologies and eliminates or, forces reforms on the other firms. See Saviotti and Metcalfe 1991; Saviotti 1996; Dosi and Nelson 1994; Nelson and Winter 1977; and Dosi and Orsenigo 1988.

of information and credit, which depend on the development of capital markets and service agencies.

The *Competitiveness* or *competitive strength* is the ability of firms to withstand competition in the sense of maintaining and/or improving their position in the market. This is taken as firm's performance in terms of sales, market shares or profits in comparison with the other firms of the industry.[8] The competitive strength depends partly on the business environment and partly on the internal characteristics of firms. As regards the business environment, macroeconomic stability is the pre-requisite for the competitive strength of firms/ industries. Markets influence competitiveness through the level of competition and industry by setting up benchmark performance and spill over effects. Infrastructure facilities such as electricity, roads and ports positively influence the competitive strength. So is the development of factor markets and service agencies. For instance, development of capital market enables firms to have easy access to cheaper capital and thus improves their competitiveness. Similarly, development of consultancy agencies improves the competitiveness of firms through easy availability of information and expertise. As regards the internal characteristics of firms, it is the technology, product composition, scale of operation, managerial skills and workforce that determine the firms' competitive strength. Technology, product composition and scale are the basic and interrelated production parameters. Technology influences the quality of product and the efficiency in resource utilisation resulting in cost reductions. Product composition and scale of operation determine the economies of scope and scale respectively. These three parameters - technology, product composition and scale of operation together determine the ability of firms, at the base level, to supply increasing quantities of quality goods at cheaper prices and thus give scope to rise their sales. However, it is the firms' capabilities that determine the extent new technologies, economies of scale and scope are exploited which further depends on the attitudes and abilities of the management and workforce.

The level of competition and competitive strength of the firms reinforce each other. The higher the degree of competition higher will be the pressures on firms to improve their

[8] Lall (2001:4).

competitiveness. The more the competitive firms in the industry more intense will be the competition. It is the level of competition that motivates firms to improve their competitiveness to survive i.e., to maintain and improve its commercial viability through different strategies. Strategies can be long term such as restructuring of firms in terms of technology or, entering into new areas on the production side or, short term such as price changes, repositioning the existing products in the market, strengthening customer care services and expanding into new geographical areas. Firms that select appropriate technologies, products and scale improve their competitive strength and thus maintain or, improve their market position. It creates competitive pressures on the other firms to follow suit. Firms that could not follow suit will be forced out of the market. New firms that perceive business opportunities enter the area. This process goes on.

Thus, the process of competition prompts firms to seek and exploit opportunities for gain involving shift of resources to more efficient firms and growing sectors. This results in the efficient resource utilisation and hence high growth and high-income jobs in a sustainable way. This process enables firms to provide adequate supplies of wide range of quality products at cheaper prices thereby widening the choice of consumers leading to improvement in living standards i.e., development.

Independent India's development strategy and the policies thereof limited the level of competition and competitiveness of firms by controlling most of the elements of business environment till the policy reforms of the 1991.

3.2 The Indian Context[9]

India had, at the time of independence, limited but functioning markets and private capitalists in modern industry, which remained well entrenched due to constitutional sanctity accorded to private ownership of property and means of production in a democratic framework. However, the potential positive contribution of markets and private industry was never recognised by the political leadership eager to usher in the socialist pattern of society. The stronghold of the ideologies of economic nationalism and

[9] This part is largely drawn from Tendulkar and Bhavani (2007).

socialism that were based on deep-rooted suspicion of markets and private capitalists, and a faith in a benevolent state axiomatically acting always in 'public interest' produced India's *autarkic, public sector-dominated and basic and heavy industry-oriented centrally planned industrialisation strategy*. This strategy led to an institutional matrix that consisted of – (a) public sector expansion; (b) discretionary quantitative controls over the markets and private economic activities; and (c) stringent controls over imports and foreign exchange allocations.

In the name of socialism, there had been indiscriminate expansion of the public sector to serve multiple and often mutually conflicting objectives such as employment creation, generation of surplus for investment, and provision of goods and services at subsidized rates. The public sector enterprises (PSEs) operated not only as monopolies given that many areas of strategic importance were reserved for public sector, but also without any commercial norms under soft budget constraint. The result was that public sector that constituted a significant part of Indian industry did not face any competition.

In order to bring markets and private economic activities in line with social priorities and goals such as prevention of diversion of scarce resources into non-priority areas and monopolies, avoidance of over production and discouragement of establishment of uneconomic units, large scale private industry was regulated closely with numerous legislative measures such as Industry (Development and Regulation) Act 1951 (IDRA), Monopolies and Restrictive Trade Practices Act 1969 (MRTP), and Foreign Exchange Regulation Act 1973 (FERA) and other policy measures.

For large scale private industry, permission was required under IDRA for starting a unit, expansion of capacity, widening the product composition, location etc. In addition to IDRA clearances, there were numerous other regulations such as controls over capital issues, technology and capital goods imports and prices that a prospective private investor had to undergo. Large business houses were subjected to further regulations under MRTP and transnational enterprises under FERA. All these regulations were

operated on case-by-case examination leaving plenty of discretion in the hands of politicians and bureaucracy.

All the above mentioned regulations, on the one hand, took away the firms' right to basic microeconomic decision making relating to what to produce (product composition), how to produce (technology), how much to produce (scale of operation), where and at what price to sell and so on. On the other hand, regulations created entry barriers to market and hence extremely limited competition. Private industry preferred in the given situation, either to be in the unregulated small manufacturing sector[10] and/or to engage in directly unproductive rent-seeking activities. The former involved fragmentation of capacity into multiple units and excessive diversification without regard to efficient scale of operation and core competencies. Discretionary controls encouraged private industry to engage in rent-seeking activities such as procurement of industrial licenses not for production but to pre-empt competition from others as it earned them supernormal profits at low volumes given the market shortages.

In effect, direct discretionary controls over large private industry virtually abolished market competition and thus did not provide any incentive to improve its competitiveness. Nor did the regulations give freedom to private industry to improve its competitiveness. Rather regulations encouraged private industry to go for uneconomic small capacities and diversify indiscriminately. Lack of competition did not create competitive firms, which further reinforced lack of competition creating a *vicious circle of non-competition and incompetence*.

Third element of independent India's institutional matrix, namely, stringent controls over foreign exchange allocation and imports, and over valued foreign exchange rate restricted both imports and exports. These together with the FERA regulations over foreign direct investment eliminated external competition.

[10] Goyal et al. (1984) brought out numerous examples of the presence of large industrial houses including transnational enterprises in the small scale sector.

Thus, the post-independent India's development strategy and policies thereof created, by stifling the dynamic competitive forces, an industry that was, in international comparison, small in size, technologically lagging behind and highly diversified that operated in closed and segmented markets in the face of market shortages, producing high cost and low quality products.

In effect, pervasive regulations over private industry inhibited the Indian industry to grow till the Nineties. Under normal conditions, most of the industries evolve in three stages: preliminary stage in which numerous small units dominate the industry; Intermediate stage characterized by churning out to consolidation in an attempt to acquire competitiveness; and final stage where industry will have relatively smaller number of large firms that are internationally competitive (Gulati et al 2006). Indian industry till the policy reforms remained in the first stage. We believe that reforms pushed the industry into the second stage.

3.3 Current State of Competition: Research Issues

The economic policy reforms of the 1990s involving a major shift in the development strategy toward global integration of the Indian economy and liberalisation of regulations over market and private economic activities instilled dynamic competitive forces in the economy. Policy reforms such as virtual abolition of industrial license, abolition of restrictions on monopoly houses, significant opening up of activities hitherto reserved for the public sector intensified competition by reducing the policy-induced entry barriers. The removal of quantitative restrictions over imports and reduction in import tariffs coupled with the cautious liberalisation of foreign investment regulations brought in external competition intensifying domestic market competition further. In other words, reforms not only exposed Indian industry to market competition but also intensified competition.

This initiated the *virtuous process of competition*. In order to deal with the situation, industry started moving towards improving its competitiveness using both short-term and long-term strategies. As a part of long-term strategy, industry started production

restructuring to grow into international scales of operation, to be on the technology frontier and to acquire core competencies. This is expected to take the form of establishment of new units, merger and acquisitions, capacity expansion, adoption of new technologies and introduction of new and superior products. Short-term strategies may include aggressive advertisements, strengthening distribution channels and customer care services and expansion of geographical market. All these strategies are expected to transform the market structure too.

At this stage, two issues become important and need examination. One is the extent of competition that policy reforms would have resulted, and the second one is the still existing policy barriers to the market. The process of competition involves issues such as imports and foreign direct investment, production and the consequent market restructuring. Accordingly, we focus on the following aspects.

- Production restructuring in terms of capacity expansion
- Ownership patterns and forms of business organisation
- Mergers and acquisitions
- Presence of imports and transnational Enterprises
- Market structure i.e., concentration and composition
- Policy based constraints on competition

The next section deals with the empirical examination of these issues not in any specified framework such as SCP frame but as a part of the process of competition.

4. Empirical Analysis

As mentioned in the previous section, we take competition as a process that motivates firms to improve their competitiveness, which further reinforces the levels of competition. Firms raise their competitiveness through a combination of long-term strategies such as restructuring in terms of technology, scale of operation and product composition and short-term strategies such as innovative marketing. This process of competition goes on, if there is no interference – policy or otherwise, resulting into higher

levels of development of the economies. The economic policy reforms of 1991 initiated this virtuous process of competition that was suppressed till then through policy regulations. In this background, this section focuses on two important questions related to competition. Are there any more policy regulations that still restrict competition? And to what extent policy reforms resulted in competition? The first one is addressed under potential competition and the second one is studied in terms of entry of imports and transnational enterprises – two direct measures of competition[11], and the consequences of competition, i.e., reorganisation of domestic industry and market.

4.1 Potential Competition

Economic policy reforms of 1991 are no doubt systemic and wide-ranging and have triggered the dynamic forces of competition. Yet, there remain many more policy regulations that stifle competition. These regulatory policies will be the main focus of this section.

Potential competition refers to the level of competition that could have been there had there not been any kind of entry barriers. These entry barriers can be policy induced such as government regulations or, natural such as underdevelopment of infrastructure in some areas that may give local firms monopoly status. In the Indian context, it was the policy regulations that controlled most of the economic parameters including infrastructure till the 1991 economic reforms. Hence, we focus in this section, still existing policy regulations that are acting as entry barriers to the domestic market in India. Important in this respect are general rules and regulations that involve numerous formalities and complex procedures, restrictions over cross-border trade and foreign direct investment, small industry policies and labour laws.

4.1.1 Doing Business in India

Indian rules and regulations in general are considered still complex involving more time and higher costs, and thus deter business. This is what 'Doing Business' survey of the World Bank shows. The 'Doing Business' survey, which has been undertaken by the

[11] Entry and exit of domestic firms into different areas of production, another direct measure of competition could not be studied due to non-availability of data.

World Bank since 2004 on annual basis, covers different rules and regulations that apply to various aspects of business, namely, starting a business, dealing with licenses, employing workers, registering properties, getting credit, protection to investors, paying taxes, trading across borders, enforcing contracts and closing a business in 175 countries.[12]

India ranks 134 in the World Bank' 'Doing Business 2007' survey[13] that covers 175 countries for the reference year 2006. Excepting Indonesia (135), India stands far behind the other important emerging market economies such as China (93), Brazil (121), Russia (96), Mexico (43), Thailand (18), Philippines (126) and Malaysia (25) in the ease of doing business aggregate ranks. The other South Asian economies, i.e., Bangladesh (88), Nepal (100), Pakistan (74) and Sri Lanka (89) are also much ahead of India in making 'doing business' easy in their economies (Table 3).[14] We present in Box 1 some illustrations comparing India and China.

The survey reveals that doing business in India is relatively difficult due to time and costs involved in enforcing contracts, higher tax payments, time taken to deal with licenses, export and import requirements and in closing a business. For instance, India stands third from the bottom (173) in enforcing contracts and placed in the last forty countries in respect of dealing with licenses (155), tax payments (158), trading across borders (139) and closing a business (133). In particular, the survey shows that India takes ten years in closing a business with a recovery rate of 13 pence per dollar. Enforcing a contract takes around four years and costs 36 percent of the debt to be recovered in India. Formalities in clearing a shipment of export takes 27 days while that of imports takes 41 days in India as per the survey. As regards taxes, business in India has to make 59 payments that together mop up 81 percent of its profits. It takes Indian business 270 days to obtain a

[12] Number of countries included in the survey was 145 in the 2004 survey that has been increased every year to have 175 countries in the 2007 survey. So is the case with the number of topics included in the survey.
[13] Results of this survey are available in the website www.doingbusiness.org.
[14] Figures in parentheses are ease of doing business ranks for the respective countries.

Table 3: Doing Business Rankings 2007: South Asian, Emerging Market and Indian Economies											
Country	EDB Rank	SB Rank	DL Rank	EW Rank	RP Rank	GC Rank	PI Rank	PT Rank	TAB Rank	EC Rank	CB Rank
India	134	88	155	112	110	65	33	158	139	173	133
Other Emerging Market Economies											
China	93	128	153	78	21	101	83	168	38	63	75
Brazil	121	115	139	99	124	83	60	151	53	120	135
Russia	96	33	163	87	44	159	60	98	143	25	81
Mexico	43	61	30	108	79	65	33	126	86	87	25
Indonesia	135	161	131	140	120	83	60	133	60	145	136
Thailand	18	28	3	46	18	33	33	57	103	44	38
Malaysia	25	71	137	38	66	3	4	49	46	81	51
Philippines	126	108	113	118	98	101	151	106	63	59	147
Other South Asian Economies											
Bangladesh	88	68	67	75	167	48	15	72	134	174	93
Nepal	100	49	127	150	25	101	60	88	136	105	95
Pakistan	74	54	89	126	68	65	19	140	98	163	46
Sri Lanka	89	44	71	98	125	101	60	157	99	90	59

Source: *Doing Business 2007*, World Bank, Washington D.C. downloaded from website: www.doingbusiness.org

Notes: EDB = Ease of doing business; SB = Staring a business; DL = Dealing with licenses; EW = Employing workers; RP = Registration of properties; GC = Getting credit; PI = Protection to investors; PT = Payment of taxes; TAB = Trading across borders; EC = Enforcing contracts; CB = Closing a business.

Table 4: Doing Business In India in 2006						
Starting a business						
Procedures (number)		Duration (days)		Cost (% GNI per capita)		Minimum Capital (% GNI per capita)
11		35		73.7		0.0
Dealing with licenses						
Procedures (number)		Time (days)		Cost (% of income per capita)		
20		270		606.0		
Employing workers						
Difficulty of hiring index (0-100)	Rigidity of hours index (0-100)	Difficulty of firing index (0-100)	Rigidity of employment index (0-100)	Hiring cost (% salary)	Firing costs (weeks of wages)	
33	20	70	41	16.8	55.9	
Registering Property						
Procedures (number)		Time (days)		Cost (% property value)		
6		62		7.8		
Getting Credit						
Legal rights index (0-10)		Credit information index (0-6)		Public registry coverage (per 1000 adults)		Private bureau coverage (per 1000 adults)
5		3		0.0		6.1
Protection to Investors						
Extent of disclosure index (0-10)		Extent of director liability index (0-10)		Ease of shareholder suits index (0-10)		Strength of investor protection index (0-10)
7		4		7		6.0
Payment of Taxes						
Payments (number)		Time (hours)		Total tax rate (% of profit)		
59		264		81.1		
Trading Across Borders						
Documents for export (number)	Time for export (days)	Cost to export (US$ per container)	Documents for import (number)	Time for import (days)	Cost to import (US$ per container)	
10	27	864	15	41	1,244	
Enforcing Contracts						
Procedures (number)		Time (days)		Cost (% of debt)		
56		1,420		35.7		
Closing Business						
Time (years)		Cost (% of estate)		Recovery rate (cents on dollar)		
10.0		9.0		13.0		

Source: www.doingbusiness.org; Interested readers may get the details of the parameters mentioned in the table in the website.

Box 1: Obstacles in Doing Business in India: A Comparison with China

Indian industry still has to go through numerous formalities and cumbersome procedures to do their business that consume lot of their time and costs them dearly. Here, we provide few illustrations in comparison with China – another large and emerging market in the world.

Illustration 1: *Registering a property* in India involves six steps/ procedures, namely, a search has to be taken in the Office of Sub-Registrar of Assurance to verify whether there is any encumbrance; Preparation and execution of agreement and memorandum at the Stamp duty office; Preparation of final sale deed by purchaser or his advocate; Get the final sale deed stamped, executed and registered in the presence of two witnesses; Submit documents with the Office of Sub-Registrar of Assurance within whose jurisdiction the property is located; Applying to Municipality for mutation of the title of the property, which together take 62 days and costs US $2,809.76. The same in China involves three procedures, takes 32 days and costs US$2,698.24.

Illustration 2: It takes 68 days to obtain an *electrical connection* in India and the losses due to electrical outages come to around 8% of sales in India. Whereas, in China it takes only 10 days to obtain an electrical connection and the losses due to electrical outages are only one percent of the sales.

Illustration 3: *Enforcing a contract* in India involves 56 procedures that takes almost four years (1,420 days). Of which, filing period is 20 days, judgement takes 1,095days and enforcement takes another 305 days. The whole process costs almost 36 percent of the debt. In China, enforcement contract involves 31 procedures that take less than a year (292 days) and costs around 27 percent of the debt.

Illustration 4: *import of a standardised cargo of goods* in India involves four steps – documents preparation, customs clearance and technical control, ports and terminal handling and inland transportation and handling. This requires 15 documents preparation of which takes 21 days. All the four procedures together take 41 days to complete and cost US$1,244. In China, import of a cargo involves all the four procedures mentioned above. However, completion of all the four procedures takes almost half of the time taken in India (i.e. 22 days) and cost one-third of the India's costs (i.e. US$375).

Illustration 5: *Closing a business* in India takes 10 years, costs 9 percent of the value of the estate and claimants recover 13 cents on the dollar. Same thing takes only two and half years in China. Although closing a business in China costs 2.5 times more than that in India (i.e. 22% of the estate), claimants recover 31.5 cents on the dollar.

Source: www.doingbusiness.org; www.enterprisesurveys.org

license that costs 606 percent of per capita income of the country. The survey rates difficulty in firing workers for Indian business as 70 in the scale of 100 points[15] (Table 4). Given that the correlation coefficient between starting a business on the one side and ease of closing a business (0.54), ease of enforcing contracts (0.55), ease of licensing (0.49) and ease of trading (0.49) on the other side is positive and reasonable in magnitude[16], still complex rules and regulations of India deter entry and thus have adverse consequences on the level of competition.

The complex rules and regulations that still exist are also responsible for the continuing inspector raj, which is acting as a deterrent on doing business. A FICCI survey of firms across 91 industries indicates that there could be as many as 91 inspectors for the purpose of regulating various aspects of business and 20 of these have the powers to send the owner to jail for a period up to 7 years.[17]

4.1.2 Trade Policies

There has been a significant and progressive liberalisation of trade policies since 1991. Starting with the removal of quantitative restrictions (QRs) on most of the capital and intermediate goods and a drastic reduction in tariff rates in 1991, there has been a reduction over time in the average level and dispersion of nominal tariff rates. Simple average of the total (basic + other) nominal tariff rates on all commodities declined to less than one-third of its initial level of 128.0 percent in 1991-92 to 39.2 percent in 1996-97 while the standard deviation of nominal rates declined from 41.0 percent to 18.7 percent over the same period. There was, however, some reversal in the later years in terms of a rise in the average level of tariffs. QRs on consumer goods were removed in

[15] This score should not be taken as an indicator of that labour legislation in India is not all that bad. The survey mainly covers limited companies in the private sector, who have found various legal and extra-legal ways of getting around the legislative regulations, which Tendulkar 2004 refers as *informalisation of labour market flexibility in the face of formal legislative rigidity*. But as long as formal labour legislation is rigid (discussed later in the section), it discourages new entrants especially transnational enterprises.

[16] Figures in parentheses are correlation coefficients that are taken from Table A.3, p.93, *Doing Business2006*, World Bank, Washington, D.C.

[17] FICCI (2005: 23)

three big instalments between 1999 and 2001 owing to pressures from the World Trade Organisation (WTO).[18]

Despite significant reductions in both tariff and non-tariff barriers (NTBs) since 1991, international comparisons reveal that India is still having higher tariffs, use NTBs and stand in the first few ranks in trade restrictiveness.

Table 5 presents simple average applied tariff rates for India, and other South Asian and emerging market economies for the period 2001-05. This table shows that excepting in 2005 where Bangladesh average applied tariff rate is marginally higher than that of India, India's average tariff rate is the highest in comparison with the other South Asian and emerging market economies. India's average tariff rate is also higher than that of the average of 142 developing countries and that of 56 low-income countries (Table 5).

Table 5: Simple Average Applied Tariff Rates (%) in India, South Asian and Emerging Market Economies: 2001-05

Country	2001	2002	2003	2004	2005
India	30.9	28.3	--	28.3	16.0
Other Emerging Market Economies					
China	15.2	12.3	10.5	9.6	9.0
Brazil	14.8	14.6	14.2	13.2	12.2
Russia	10.7	10.3	--	--	10.0
Mexico	18.1	15.5	18.4	10.2	8.5
Indonesia	6.1	6.6	6.3	6.6	6.5
Thailand	14.4	--	13.5	--	9.9
Malaysia	7.5	7.5	7.4	--	7.5
Philippines	6.9	5.3	4.5	5.5	5.4
Other South Asian Economies					
Bangladesh	19.3	19.9	18.8	16.4	16.8
Nepal	14.7	14.6	14.8	14.8	14.7
Pakistan	20.2	17.2	16.8	16.2	14.3
Sri Lanka	8.9	8.9	8.7	9.9	10.8
Developing Countries (142)	13.1	12.8	11.9	11.1	10.9
Low Income Countries (56)	14.7	14.6	13.5	12.8	13.1

Source: www.worldbank.org/topics/trade/dataandstatistics.

As regards the non-tariff barriers, India tops the list of countries that use antidumping measures – one of the important non-tariff barriers. With 302 antidumping measures imposed between 1995 and 2004, India stands much ahead of United States of America that has 219 antidumping measures during the same period. Table 6 provides the number

[18] Tendulkar and Bhavani (2007).

of antidumping measures used by 19 countries that together account for 91.5 percent of the total antidumping measures initiated by different countries in the world during 1995-2005.

India ranks 13 in the trade restrictiveness in the international comparison of 91 countries by the World Bank. Further, India shows the lowest rank implying the highest degree of restrictiveness in terms of level of protection among the South Asian and other important

Table 6: International Use of Antidumping

Country	No. of Antidumping Investigations, 1995-2004	No. of Antidumping Measures Imposed, 1995-2004
Argentina	192	139
Australia	172	54
Brazil	116	62
Canada	133	80
Colombia	23	11
China (since 2001)	99	52
European Union	303	193
India	400	302
Indonesia	60	23
Japan	3	3
Mexico	79	69
New Zealand	47	14
Peru	55	34
South Africa	173	113
South Korea	77	43
Taiwan (since 2000)	8	2
Turkey	89	77
United States	354	219
Venezuela	31	25
Sub-total	2414	1515
% Share of Sub-total	91.2	91.5
Grand Total	2646	1656

Bown, Chad P. (2006). Global Antidumping Database, Version 2.1. www.brandeis.edu/~cbown/global_ad/

emerging market economies (Table 7). If one considers trade restrictiveness only with respect to manufacturing imports, India's rank goes up to 15 and 17 implying manufactured imports vis-à-vis all imports are less restricted. Overall trade restrictiveness index (OTRI) measures trade restrictiveness of trade policies of a country on its import bundles in terms of levels of protection that these policies have created. It is taken as the weighted average of the applied level of protection. Where, weights are import shares and applied level of protection is the sum of tariff and ad valerom equivalent (AVE) of non-

tariff barriers (NTBs) such as quantity and price controls, technical regulations, antidumping duties, subsidies, etc.[19]

Table 7: Overall Trade Restrictiveness Index 2006 Ranks: India, South Asian and Emerging Market Economies

Country	OTRI_ALL	OTRI_TAR	OTRI_ALL_MF	OTRI_TAR_MF
India	13	13	15	17
Other Emerging Market Economies				
China	53	57	46	57
Brazil	14	32	14	30
Russia	22	50	18	44
Mexico	11	22	11	27
Indonesia	67	61	74	58
Thailand	68	51	69	49
Malaysia	16	71	13	63
Philippines	21	86	23	84
Other South Asian Economies				
Bangladesh	26	14	22	10
Nepal	55	23	43	19
Pakistan	38	28	36	26
Sri Lanka	76	49	75	53

Source: www.worldbank.org/topics/trade/dataandstatistics. These indices are prepared for Global Monitoring Report 2006.

Notes: OTRI_ALL = Overall trade restrictiveness index that captures the impact of both NTBs and tariffs on total imports of a given country; OTRI_TAR = Overall trade restrictiveness index that captures the impact of tariffs on total imports of a given country; OTRI_ALL_MF = Overall trade restrictiveness index that captures the impact of both NTBs and tariffs on manufactured imports of a given country; OTRI_TAR_MF = Overall trade restrictiveness index that captures the impact of both NTBs and tariffs on manufactured imports of a given country.

4.1.3 Foreign Direct Investment Policy

Foreign private investment policy has been liberalised considerably since 1991 that resulted in rising inflows of both foreign portfolio investment (FPI) and foreign direct investment (FDI). However, volatile and capital gains-seeking FPI inflows are more than that of more stable and risk-sharing FDI for most of the years in the post-1991 reform period (Table 8). And the dominant share of the FDI inflows came through the discretionary route of Secretariat for Industrial Assistance (SIA)/ Foreign Investment Promotion Board (FIPB) approvals than the RBI automatic route owing to general and/or sectoral regulations. Although over time, the share of FDI coming through the RBI automatic route started dominating (Table 8), discretionary nature of the policy against FDI still persists through Press Note 18 (1998 series) modified into Press Notes 1 and 3 (2005 series).

[19] For the detailed methodology see Kee, Nicita and Olarreaga (2005).

Table 8: Foreign Investment Inflows by Different Categories (1992-93 to 2005-06)
(In Million US dollars)

	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
A. Direct Investment	**315**	**586**	**1314**	**2144**	**2821**	**3557**	**2462**	**2155**	**2339**	**3904**	**2574**	**2197**	**3250**	**5540**
a. RBI automatic Route	42	89	171	169	135	202	179	171	454	767	739	**534**	**1258**	**2233**
b. SIA/FIPB route	222	280	701	1249	1922	2754	1821	1410	1456	2221	919	**928**	**1062**	**1126**
c. NRI(40% and 100%)	51	217	442	715	639	241	62	84	67	35	_	-	-	-
d. Acquisition of Shares	-	-	-	11	125	360	400	490	362	881	916	**735**	**930**	**2181**
B. Portfolio Investment	**244**	**3567**	**3824**	**2748**	**3312**	**1828**	**-61**	**3026**	**2760**	**2021**	**979**	**11377**	**9315**	**12492**
a. FII's	1	1665	1503	2009	1926	979	-390	2135	1847	1505	377	**10918**	**8686**	**9926**
b.GDRs/ADRs	240	1520	2082	683	1366	645	270	768	831	477	600	**459**	**613**	**2552**
c. Offshore Funds and Others	3	382	239	56	20	204	59	123	82	39	2	-	16	14
Total A+B	**559**	**4153**	**5138**	**4892**	**6133**	**5385**	**2401**	**5181**	**5099**	**5925**	**3553**	**13574**	**12565**	**18032**
Share of SIA/FIPB in FDI (%)	70.5	47.8	53.3	58.3	68.1	77.4	74	65.4	62.2	56.9	35.7	42.24	32.68	20.32
Share of FDI in Total of A+B (%)	56.4	14.1	25.6	43.8	46	66.1	102.5	41.6	45.9	65.9	72.4	16.18	25.87	30.72
C. Other Investment Flows	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	**1629**	**2036**	**1960**	**2093**	**1875**	**1931**
a. Re-Invested Earnings	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1350	1646	1498	1460	1508	1676
b. Other capital	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	279	390	462	633	367	255
Total A+B+C	**559**	**4153**	**5138**	**4892**	**6133**	**5385**	**2401**	**5181**	**6728**	**7961**	**5513**	**15667**	**14440**	**19963**

Notes: (1) Acquisition of Shares in Direct Investment relates to the acquisition of shares of Indian companies by non-residents under section 29 of FERA and section 5 of Foreign Exchange Management Act
(2) FII portfolio investment represents fresh inflow/outflow of funds by FIIs.
(3) GDRs/ADRs figures represent GDR amounts raised abroad by the Indian corporate.
(4) The table excludes equity capital of unincorporated bodies given in RBI, Annual Report, table 6-9, 2002-03, (pg. 111) for the years 2000-01 ($ 61 million), 2001-02 ($191 million) and 2002-03 ($ 126 million). These figures are not available for the earlier years. Table 6.9 in RBI also mentions that the coverage of FDI has been widened since 2000-01 to approach the international best practices. The additional items covered are given under C in the above table. A definitionally consistent time series from 1992-93 to 2002-03 is given by total A+B in the table.
(5) Abbreviations: SIA: Secretariat for Industrial Approval; FIPB: Foreign Investment Promotion Board; GDR: Global Depository Receipts, ADR: American Depository Receipts
Source: *Economic Survey2002-03* p.119; *RBI Annual Report 2002-03*, p.111; *RBI Annual Report 2005-06*, Table 1.75, p.96 (downloaded from www.rbi.org.in).

Under Press Note 18 (1998), foreign investors already in joint venture were required to – (i) get government permission for establishing wholly owned subsidiary in the same or allied fields *even in areas listed under the automatic route*; (ii) provide detailed circumstances of the necessity of such new venture; and (iii) prove that such a new venture would not jeopardize the interests of the Indian joint venture partner. The sanction in practice was made conditional on obtaining a no objection certificate from the existing Indian partner, which provided a convenient instrument for blocking the FDI in competing areas. The importance of this press note stems from the fact that bulk of the FDI under discretionary SIA/FIPB route during the post-reform investment boom (1995-6 to 1997-8) came mostly through joint ventures. Over time, foreign investors were dissatisfied with the joint ventures and wanted to establish wholly owned subsidiaries in activities in direct competition with those of the domestic joint venture partner. This led to Press Note 18 (1998) that restricted the FDI inflows. Owing to the pressures from the foreign investors, Press Note 18 (1998) was replaced by Press Note 1 and 3 (2005 series) in which only rigour of the Press Note 18 has been diluted in the sense that exemption from mandatory prior approval can be granted for new venture in the 'allied' or 'same'

field in case the Indian venture is sick or defunct and the onus of proving that interests of Indian partners are not in 'jeopardy' has been put equally on both the foreign and the Indian partners.[20] Box 2 presents the recent example of Guardian industries.

Box 2: Press Note 1, 2005 – Entry Barrier to FDI?

Press Note 1, 2005 which replaced Press Note 18, 1998 requires foreign companies that have an existing joint venture with an Indian firm, to get government approval for setting up a fully-owned subsidiary in the same or allied field even these fields are listed under RBI automatic route. This kept FDI policy discretionary and is acting as a deterrent on FDI. We provide here the recent case of Guardian industries.

Guardian Industries of USA is one of the partners of Gujarat Guardian Ltd. (GGL). GGL is a joint venture with Guardian Industries (50%), Modi Rubber Ltd. (21%), Gujarat state (9%) and others in the area of float glass and mirrors making. Guardian Industries wanted to have 100% subsidiary of its own and applied for the same to Foreign Investment Promotion Board (FIPB). Modi Rubber – the domestic private partner argued strongly against it saying that it would jeopardise the interests of existing joint venture and hence FIPB should reject the proposal. Guardian, on the other hand, argued that it does not harm the joint venture. Both the parties lobbied hard. Finally, Guardian got the approval with the intervention of US Government representatives. Earlier, it was the Press Note 18, 1998 that got better deals for the Indian partners in Hero-Honda, TVS-Suzuki, Yokogawa – Bluestar, etc. favourable deals.

Press Note 1 not only acts as deterrent on FDI but also, being discretionary, made FDI depend on relative lobbying power of foreign vs. domestic firms and thus does not allow an objective and consistent stand on FDI. This takes us to the basic question whether there is any need for Press Note 1. Can't the Indian Companies deal with this problem through contracts?

Sources: economictimes.indiatimes.com; timesofindia.indiatimes.com; www.business-standard.com; www.indlaw.com; www.businessline.in .

Apart from the foreign direct investment policy that directly influences foreign direct investment inflows, other policies and business environment such as labour market rigidities and infrastructure bottlenecks also have adverse impact on the foreign direct investment inflows into the country. This is evident in the fact that FDI flows to India

[20] Tendulkar and Bhavani (2007).

constitute only 3.7 percent of the total FDI flows to emerging market and developing economies.[21] And FDI flows accounted for only 3.4 percent of the gross fixed capital formation and FDI stock as 5.9 percent of the gross domestic product of the country in the year 2004.[22] No wonder World Investment Report refers India as under performer by placing it in the category of low Inward FDI performance and low Inward FDI potential as against China's placement in the category of front-runner i.e., high Inward FDI performance and high Inward FDI potential. Table 9 indicates the placement of India, other South Asian and Emerging Market economies in different categories based on Inward FDI performance and potential and Table 10 provides the Inward FDI performance and potential index rankings of the concerned countries. Inward FDI performance index gives the FDI inflows to a country relative to its economic size and inward FDI potential index is based on economic and structural variables of the country.[23] Except Indonesia, all other emerging market economies show better performance than India in both Inward FDI performance and potential. India, however, shows better inward FDI performance and potential in comparison with the other South Asian economies.

Table 9: Matrix of Inward FDI Performance and Potential 2004
South Asian, Emerging Market and Indian Economies

	High FDI Performance	Low FDI performance
High FDI Potential	Front-runners China, Malaysia	Below Potential Brazil, Mexico, Philippines, Russia, Thailand
Low FDI Potential	Above Potential ------	Under-Performers Bangladesh, India, Indonesia, Nepal, Pakistan, Sri Lanka

Source: *World Investment Report 2006*, www.unctad.org/wir

[21] *RBI Annual Report 2005-06*, Box 1.20, p.97 downloaded from www.rbi.org.in.
[22] *World Investment Report 2005*, Annex Table B.3, pp.313-324.
[23] Inward FDI performance index is calculated as the ratio of a country' share in global FDI flows to its share in global GDP. Inward FDI potential index is the unweighted average of scores (in the range of 0-1) on the following: GDP per capita, the rate of growth of GDP, the share of exports in GDP, telecom infrastructure (the average of telephone lines per 1,000 inhabitants and mobile phones per 1,000 inhabitants), commercial energy use per capita, the share of R&D expenditures in gross national income, the share of tertiary students in the population, country risk, exports of natural resources as a percentage of the world total, imports of parts and components of electronics and automobiles as a percentage of the world total, exports in services as a percentage of the world total, and inward FDI stock as a percentage of the world total. *World Investment Report 2005*, footnote 38, p.37. For methodology for building the index see World Investment Report 2002, pp.34-2. For the scores of the different variables see www.unctad.org/wir).

Table 10: Inward FDI Performance and Potential Index Rankings for South Asian, Emerging Market and Indian Economies					
Country	Inward FDI Performance Index Rank			Inward FDI Potential Index Rank	
	2003	2004	2005	2003	2004
India	109	112	119	81	82
China	43	45	55	35	33
Brazil	56	72	82	70	71
Russia	97	87	87	27	25
Mexico	62	77	75	52	53
Indonesia	139	133	112	90	92
Thailand	90	107	96	56	59
Malaysia	82	64	62	32	32
Philippines	110	103	115	60	61
Bangladesh	121	119	116	113	117
Nepal	135	136	135	135	137
Pakistan	115	109	102	126	128
Sri Lanka	100	96	106	115	111

Source: *World Investment Report 2006*, United Nations Conference on Trade and Development (UNCTAD), New York, downloaded from website: www.unctad.org/wir.
Notes: Rankings are based on the index for 141 economies.

Foreign direct investment being one of the important sources of competition as well as competitiveness in terms of setting up of benchmarks and having spill over effects and given the fact that India is one of the under-performers in the international comparisons of foreign direct investment inflows and potential, it deserves special attention of the policy makers.

4.1.4 Product Reservation for Small Scale Enterprises: A Policy-Set Entry Barrier

While investment at the upper-end was liberalised by freeing it from the mandatory government sanctions of various kinds under Industries (Development and Regulation) Act (IDRA) 1951, entry of large industry into certain products reserved for exclusive production in the small scale enterprises is still prohibited.

Independent India's plans and policies accorded high priority to small-scale industries. Accordingly, small-scale enterprises, defined by the ceiling level on original value of plant and machinery that has been rising over time, have been beneficiaries of a variety of promotional and protective measures. One of the important protective measures that have been in practice is product reservation. Starting with 47 items in 1967, 800+ items were reserved, in the due course of time, for the exclusive production in the small-scale

enterprises and no large-scale enterprise is allowed to produce these reserved items. Thus, the policy of product reservation for small enterprises remained as an entry barrier.

Although a number of products (538) have been de-reserved since 1997 keeping in mind the changing business environments, there remained a large number (326[24], see Table 11) of reserved products. Irony is some of these products have been placed in the open general license (OGL) list that allows free imports of these products but the domestic large-scale enterprises are barred to produce. In these days of globalisation protection to any type of enterprises is neither feasible nor possible. Small industry policy should focus more on promotional measures and withdraw all the protective policy measures especially reservation of products.

Table 11: Number of Reserved Products As of May 2006

Industry Group	Number of Reserved Items
Food & Allied Industries	9
Wood & Wood Products	9
Paper Products	19
Plastic Products	53
Chemical & Chemical Products	41
Glass & Ceramics	27
Mechanical Engg. Excl. transport equipment	61
Electrical Machines etc. incl. Electronic Appliance	18
Transport Equipment	48
Sports Goods	7
Stationery Items	13
Others	21
Total	326

Source: www.smallindustryindia.com

[24] There remain only 116 reserved products after the government decision to de-reserve 210 products in the first week of March. Information given by Mr. Ajay Dua, Secretary, DIPP in a seminar on "The State of Competition in the Indian Economy" in which this report was presented.

4.1.5 Labour Legislation in India[25]

Independent India sought to put in place complex and comprehensive regulations to - strengthen the hands of the weak trade unions, improve wage outcome and provide or enhance job security or better off working conditions. There are about 50 labour related statutes by the Central Government alone dealing with various aspects of labour such as minimum wages, accident benefits, death of workers, maternity, equal remuneration, conditions of employment including dismissal and disciplinary action, industrial disputes etc. Labour being the subject on the concurrent list of the distribution of powers specified in the Indian constitution, there are several additional state statutes covering different segments of labour. The labour laws are implemented by both the Centre and State governments that has added to the complexities in respect of labour legislation. While dealing with the common issues in different contexts of employment conditions without reference to an internally consistent framework, India's labour laws introduced uncertainty and ambiguity about key legal concepts and definitions thus creating scope for conflicting interpretations. In the event, litigations abound and disputes take long time to settle.

The most pervasive as well as possibly the most contentious pieces of legislation have been the Industrial Disputes Act (IDA) 1947 particularly Chapter V-B that was added in 1976 and Contract Labour (Regulation and Abolition) Act (CLRA) 1970. Section 10 of CLRA gives wide-ranging powers to the "appropriate" government "to prohibit employment of contract labour in any process, operation or other work in any establishment". Till 1976, IDA did not require permission of government to lay off, retrenchment and closure subject to the payment of prescribed compensation to the workers under the Act. Chapter V-B was added during the Emergency in 1976. Under Chapter V-B, industrial establishments not less than 300 workers have to seek prior permission from the appropriate government to affect lay off, retrenchment or closure. Box 3 provides comparison of Indian and Chinese law in this respect. The above provisions in the two legislations restricted the freedom of employers to vary employment in response to changes in market conditions for output. In the early 1980s,

[25] This section is largely drawn from Tendulkar and Bhavani (2007, section 8.4).

Box 3: Laying Off Workers: A Comparison of India and China

Chapter V-B, 25M of Industrial Disputes Act (IDA) 1947 that deals with the prohibition of lay-off states that "No workman (other than a badli workman or a casual workman) whose name is borne on the musters rolls of an industrial establishment to which this chapter applies shall be laid off by his employer except with the prior permission of the appropriate Government or such authority as may be specified by that Government by notification in the official Gazette – obtained on an application made in this behalf unless such lay-off is due to shortage of power or natural calamity". This section applies to industrial establishment in which not less than 200 workmen were employed on an average per working day for the preceding 12 months.

The Chinese law necessitates companies to notify to the appropriate authority but does not ask for approval. Sections 25, 26 and 27 of Chinese Labour Law of 1995 allows termination of employees for disciplinary reasons without compensation; allows termination of employees with 30 days notice and compensation when worker is sick and unable to work, when worker is unqualified to perform the work, when conditions changed and there is union deadlock, and retrenchment due to sickness and economic viability. All these situations can be treated as 'industrial dispute' under IDA 1947 and labour courts can order reinstatement, making firing of workers extremely difficult in India.

Source: *India's Labour Market* downloaded from www.teamlease.com

Chapter V-B was made more restrictive by making it applicable to industrial establishments employing 100 or more workers. This accentuated the labour market inflexibility in the organised segment. But for some changes in some of these laws by few states, these provisions remain on the statue books till today and have generated perverse incentives for costly and lengthy adjudications, lockouts and discouraged plant-level collective bargaining. By creating disincentive to start an industrial establishment, these labour regulations act as entry barrier. There is an urgent need for total revamp of labour laws in India so as to promote competition.

4.2. State of Competition

4.2.1Imports and Transnational enterprises

Two important sources of external competition are import of goods and transnational corporations into the domestic market. Policy reforms of 1991 by virtually abolishing

hitherto quantitative restrictions (QRs) on imports and reducing the tariff rates allowed imports into the country. One also finds hesitant liberalisation of foreign direct investment as a part of reforms. Whether the reforms resulted into import flows and entry by transnational enterprises, if so, at what magnitude determines the actual degree of competition. Import penetration ratios measured as the share of imports in the domestic market[26], give an idea about the degree of competition generated through imports. Table 12 presents import-penetration ratios for 60 three-digit industry groups.[27]

Table 12 indicates that imports still constitute less than one percent of the domestic market for all the products considered. It could be due to still existing non-tariff barriers (NTBs) and high tariff rates in India relative to other countries, which has been discussed in the Section 4.1.2 and in various other studies.[28] For all the industry groups, excepting 18 industry groups, import penetration levels increased during 1996-2000 compared to that of 1986-1990.

One observes the active competition from the entry of transnational corporations in certain industry groups such as automobiles especially passenger car segment, electronics, cement, and food processing although overall foreign direct investment is still at insignificant levels owing to various reasons mentioned in the Section 4.1.3.

4.2.2 Production Restructuring

Given that the Indian industry was small, technologically lagging and widely diversified in international comparisons at the time of reforms, policy reforms are expected to, by instilling competitive forces, bring in production reconfigurations involving new technologies, superior products, efficient scales of operation and better forms of business organisation. One would also expect a rise in private ownership with the liberalisation of restrictions over private industry and opening up the areas reserved for the public sector with the reforms. We examine the evidence for some of these aspects in this section.

[26]Domestic market is calculated as the domestic production plus imports minus exports. Domestic production for the purpose is taken as the gross output of the factory segment given by Annual Survey of Industries.

[27] As per NIC1987 classification.

[28] See for example Das (2003).

Table 12: Import Penetration Ratios (%) for the Selected Three-digit Industry Groups

NIC87[1] code	Industry	1986-1990	1996-2000
230	Cotton ginning, bailing & cleaning	0.035	0.001
235	Cotton spinning in mills	0	0.003
262	Threads, cordage, ropes etc.	0.007	-0.053
290	Tanning & Curing of leather	0.027	0.096
300	Organic & inorganic chemicals	0.234	0.469
301	Fertilizer and Pesticides	0.087	0.089
302+306	Synthetic rubber and manmade fibre	0.057	0.156
303	Paints, Varnishes etc	0.084	0.084
308	Explosives etc	0.008	0.004
309	Chemical products nec	0.171	0.198
310	Tyres and tubes	0.003	0.008
312	Rubber products nec	0.194	0.191
313	Plastic products nec	0.034	0.037
314	Refined petroleum products	0.262	0.455
318	Coke oven products	0.299	0.618
319	Other coal tar products	0.13	0.492
330	Iron and steel in P/SF form	0.112	0.149
331	Iron and steel in SF form	0.301	0.154
332	Ferro alloys	0.494	0.386
333	Copper manufacturing	0.46	0.408
335	Aluminium manufacturing	0.088	0.103
336	Zinc manufacturing	0.271	0.224
338+339	Metal scraps and non ferrous	0.456	0.344
340	Fab structural metal products	0.011	0.009
341	Fab structural metal nec	0.01	0.03
343+349	Hand-tools, weights etc	0.027	0.052
	Sectoral average	0.13	**0.18**
	Capital goods sector		
350	Agri machinery, equipments and parts	0.006	0.008
351	Construction/mining machinery	0.364	0.421
352	Prime movers and boilers	0.083	0.126
353	Food and textile machinery	0.112	0.27
354	Other machinery	0.353	0.344
356	General purpose machinery	0.096	0.14
357	Machine-tools and accessories	0.284	0.404
359	Special purpose machinery	0.459	0.532
360	Electrical industrial machinery	0.038	0.061
361	Wires & Cables	0.052	0.073
362	Cells & Batteries	0.093	0.058
365+366	Radio & TV	0.102	0.202
368	Electric valves and tubes	0.635	0.438
369	X-ray machinery	0.17	0.301
370	Ships and boats	0.344	0.351
371	Locomotives and parts	0.119	0.161
372	Wagons and coaches	0.014	0.069
377	Aircraft and related products	0.412	0.55
	Sectoral average	**0.12**	**0.19**
	Consumer goods sector		
236	Printing of cotton textiles	0.025	0.048
260	Knitted or crocheted textiles	0.019	0.031
265	Textile garments and accessories	0.001	0.566
268	Water-proof textiles	0.017	0.291
269	Textile products nec	0.223	0.26
291	Leather footwear	0.001	0
304	Drugs and medicines	0.064	0.017
305	Perfumes, cosmetics and lotions	0.071	0.034
311	Rubber and plastic footwear	0.036	0.179
342	Furniture and fixtures	0.042	0.183
346	Metal kitchen ware	0.001	0.003
355	Refrigerators and air conditioners	0.105	0.064
363+364	Lamps and domestic appliances	0.015	0.035
373+374	Motor vehicle, cars and products	0.032	0.054
375	Motor cycles, scooters and related products	0.016	0.027
376	Bicycles, cycle-rickshaws and parts	0.047	0.031
	Sectoral average	**0.04**	**0.1**

1. National Industrial Classification 1987; source: Das Deb Kusum (2003). *Quantifying Trade Barriers: Has Protection Declined Substantially in Indian Manufacturing?* Working Paper No. 105, Indian Council for Research on International Economic Relations (ICRIER), New Delhi, July, Table 6, p.33.

Whether there has been any production restructuring in the enterprises is examined in terms of structural break in the gross fixed capital. Fixed capital assets, by including all

kinds of assets such as plant and machinery, land and buildings, transport equipment, represent capacity (potential scale of operation), technology and product composition (the latter two to the extent they are embodied in the plant and machinery). We have identified structural break year for 75 four-digit industry groups as per National Industrial Classification 1998 (NIC98) applying Perron Test (see Appendix A for details) for Annual Survey of Industries (ASI) data (see Appendix A for data and variables) for the period 1980-2003.[29] Next, we have calculated trend rates of growth[30] of gross fixed capital for the periods before and after the structural break year. Table 13 presents structural break year and growth rates for the fixed assets in different industry groups.

Table 13 shows that for majority industry groups structural break year falls in the post-1991 reform period implying that policy reforms led to restructuring of the industry. Only for 11 industry groups, structural break occurs during the period 1987 to 1990. It is quite possible that for these industry groups major policy breakthrough must have come during the hesitant liberalisation of domestic investment in the later Eighties. Growth rates of fixed capital reveal that for most of the industry groups, growth rates after restructuring are much higher than that before the break year. Only 12 industry groups experienced a fall in their growth rates in the post-structural break period, of which, Printing of books and saw milling and planning of wood had a substantial fall. These results imply that reforms paved way for the industry to restructure and to grow.

Shift in the Size Distribution

Next, we go a step further to investigate whether there has been any shift in the size distribution of fixed capital, and plant and machinery – important component of fixed capital, based on factory level data.[31] ASI factory level data are available for 95 three-

[29] NIC98 classified 127 four-digit industry groups, which are reduced to 107 after clubbing some of these industry groups for comparability with the National Industrial Classification 1987 (NIC87) and 1970 (NIC70). Of these, meaningful data are available only for 75 industry groups. Note that four-digit industry classification of NIC98 is equivalent to three-digit industry classification of NIC87 and NIC70.

[30] Trend rate of growth is measured through the equation $\ln Y = a + bT$, where Y = gross fixed capital and T = time variable.

[31] Both the variables are taken after the adjustments for the price changes. See data and variables in the Appendix A.

Table 13: Structural Break and Trend Rates of Growth of Gross Fixed Investment 1980-2003					
s.no.	Industry Name	Ind.Code – NIC98	Gross Fixed Investment		
			Structural Break Year (BY)	Growth before BY	Growth after BY
1	Meat and meat products	1511	1993	3.11	50.25
2.	Fish and fish products	1512	1994	2.52	30.08
3.	Fruits and Vegetables	1513	1993	14.47	31.15
4.	Vegetable and animal oils	1514	1994	9.34	8.19
5.	Dairy Products	1520	1997	8.08	41.47
6.	Grain mill products	1531	1998	12.49	24.42
7.	Starches and starch products	1532	1992	7.29	96.78
8.	Animal feed	1533	2001	20.39	28.16
9.	Bakery products	1541	1995	15.17	14.40
10	Refining of sugar	1542	1994	6.28	13.03
11	Mfr. Of cocoa, chocolate etc.	1543	1995	26.82	93.28
12	Macaroni, noodles etc.	1544	1987	2.58	13.37
13	Distilling, rectifying etc spirits	1551	1996	13.55	17.54
14	Mfr. Wines	1552	1991	10.51	22.27
15.	Malt liquors and malt	1553	1994	15.11	25.11
16	Soft drinks mineral water etc	1554	1989	18.09	27.95
17	Tobacco products	1600	1988	9.73	12.43
18.	Prep. & spinning of textile fibre	1711	1991	8.84	15.38
19	Finishing of textiles	1712	1997	13.48	46.99
20.	Made-up textile articles	1721	1998	15.34	58.70
21	Carpets, rugs etc	1722	1994	3.22	31.43
22	Cordage, rope, twine etc	1723	1991	11.11	25.91
23	Other textiles NEC	1729	1998	50.71	71.42
24	Knitted & crocheted fabric etc	1730	1994	13.65	37.37
25	Wearing apparel except fur	1810	1993	14.38	31.80
26	Luggage, handbags etc.	1912	1989	26.02	36.89
27	Footwear	1920	1989	14.86	51.25
28	Saw milling & planning of wood	2010	1992	22.33	7.59
29	Veneer sheets, plywood etc	2021	1994	8.81	19.21
30	Builders' carpentry	2022	1995	16.31	137.35
31	Wooden containers	2023	1991	3.16	23.99
32	Other products of wood	2029	1987	34.30	34.46
33	Pulp, paper & paper board	2101	1992	13.62	20.77
34	Other articles of paper	2109	1992	45.02	38.41
35	Corrugated paper etc	2102	1991	8.47	29.40
36	Publishing of books	2211	2000	9.46	-50.28
37	Publishing of newspaper	2212	1992	14.44	20.67
38	Printing	2221	1991	12.56	30.10
39	Service activities related to printing	2222	1996	1.93	56.77
40	Coke oven products	2310	1995	11.21	7.86
41	Refined petroleum products	2326	1989	20.96	22.36
42	Basic chemicals except fertilizer	2411	1993	15.57	13.42
43	Fertilizers and nitrogen compounds	2412	1993	3.91	3.21
44	Plastics in primary form & synthetic rubber	2413	1991	10.35	87.67
45	Paints, varnishes etc.	2422	1993	5.38	17.00
46	Pharmaceuticals	2423	1990	8.06	34.12
47	Soap and detergents	2424	1997	10.56	12.37
48	Other chemical products NEC	2429	1996	12.40	20.96
49	Rubber tyres and tubes	2511	1992	9.52	20.60
50	Other rubber products	2519	1995	9.84	19.97
51	Plastic products	2520	1991	20.51	25.68
52	Glass and glass products	2610	1994	12.51	24.07
53	Non-structural non-refractory ceramic wear	2691	1999	10.97	113.64
54	Refractory ceramic products	2692	1992	16.37	11.31
55	Cement, lime and plaster	2694	1998	24.52	21.28
56	Concrete, cement and plaster	2695	1997	8.52	76.38
57	Cutting, dressing etc of stones	2696	1990	23.52	25.53
58	Other non-metallic mineral products	2699	1991	4.66	9.70
59	Basic iron and steel	2710	1991	5.71	14.66

60	Structural metal products	2811	1990	4.18	21.94
61	Tanks, reservoirs etc	2812	1992	6.79	19.08
62	Steam generators	2813	1994	7.31	7.75
63	Treatment and coating of metals	2892	1993	64.53	63.53
64	Cutlery, hand tools etc	2893	1989	4.67	10.26
65	Other fabricated metal products NEC	2899	1999	20.82	67.03
66	Pumps, compressors etc	2912	1992	10.05	61.18
67	Other general purpose machinery	2919	1993	4.95	16.89
68	Agricultural machinery	2921	1995	4.16	20.95
69	Machine tools	2922	1992	3.77	3.00
70	Machinery for mining	2924	1997	9.65	22.98
71	Machinery for food, beverages etc	2925	1991	13.80	16.40
72	Domestic appliances NEC	2930	1992	8.89	18.77
73	Electric motors	3110	1992	7.58	18.35
74	Insulated wire and cable	3130	1990	10.90	15.10
75	Cells, batteries etc.	3140	1991	11.08	15.80

Source: CSO: *Annual Survey of Industries*

digit industry groups for two time points i.e., 1989-90 and 1997-98.[32] We have defined size class intervals of the given variable, in a given industry, based on its values in the initial year i.e., 1989-90. Size distribution of factories i.e., percentage of units falling in each group is given at the end in the Appendix B along with their descriptive statistics.

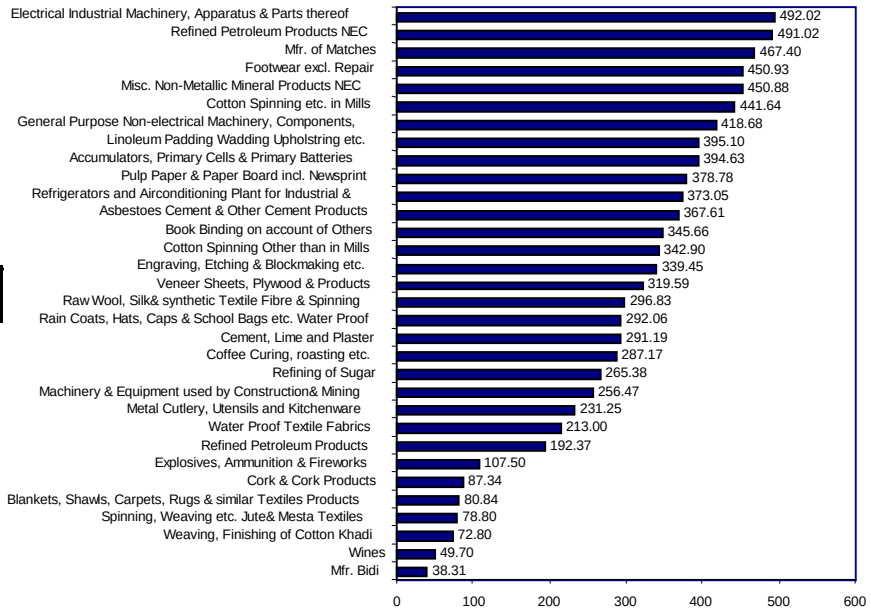
Mean values of both plant and machinery, and fixed capital, presented in Appendix B, show a definite rise from the year 1989-90 to 1997-98 in all the industry groups. Rise in the mean value of plant and machinery is much higher than that of fixed capital. Figures 1 to 3 provide the growth rates of mean values of plant and machinery for the industry groups over the two specified time points. One-third of industry groups (32) experienced a growth rate that goes up to 500% in the mean values of their plant and machinery (Figure 1). For another third of industry groups (32), growth rates of the mean value of plant and machinery fall in the range of 500 – 1000% (Figure 2). The final third of the industry groups show growth rate of more than 1000% in the mean values of their plant and machinery (Figure3).

[32] ASI factory level data are available for most of the years starting from 1989-90 on CD for purchase. We have selected the year 1989-90 to represent pre-reform period and 1997-98 to maintain consistency of industrial classification (both 1989-90 and 1997-98 follow NIC87). In fact, 1997-98 is the last year to follow NIC87) and also because 1997-98 was the end-year of the investment boom that occurred immediately after 1991 reforms. In any case, we do not have data readily for the later years and given the time it takes to procure and edit the data to make it usable, we have confined to 1997-98 as the later time point.

Smaller size classes in terms of value of plant and machinery still dominate the tobacco products such as bidi, and spinning, weaving and finishing other than in mills. The majority of the industry groups experience a rightward shift in their size distribution of plant and machinery. The large size class(es) dominate in the year 1997-98 as against the dominance of small and/or middle size classes or, more or less equal dominance of all the size classes in the year 1989-90 (Appendix B).

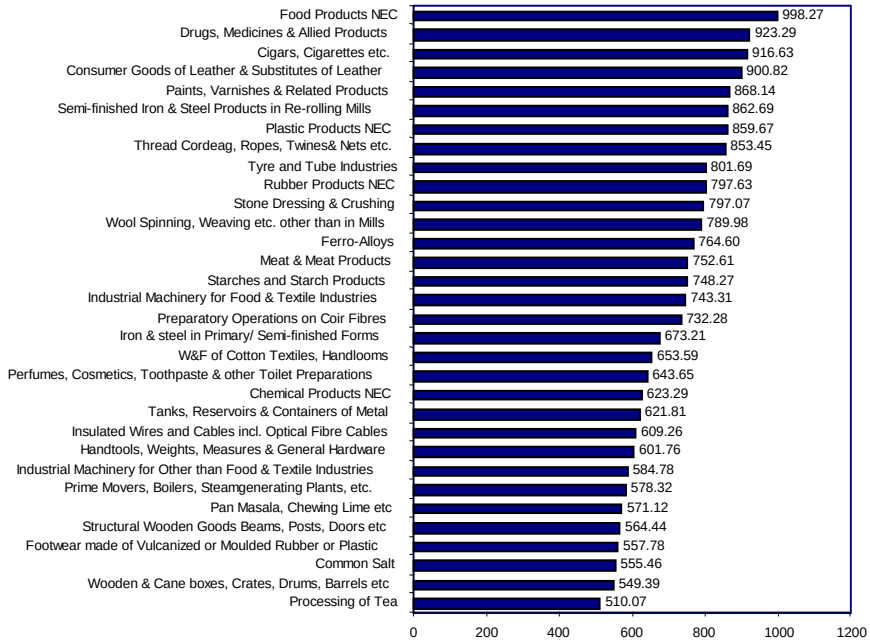
As regards fixed capital, it shows growth at the mean level, across two time points considered in the study, in all the industry groups excepting Jute and mesta textiles. The mean values of fixed capital experienced a growth rate up to 300% in 34 industry groups (Figure 4). In another 32 industry groups, mean value of fixed capital grew by 300 – 700% (Figure 5). In the remaining 32 industry groups, growth rate of the mean value of fixed capital was much higher with more than 700% (Figure 6). Again, one observes a clear shift towards larger size classes of fixed capital in the industry groups when one moves over to 1997-98 from 1989-90. For majority of the industry groups, larger size class dominates in the year 1997-98 as against the dominance of small or small and medium size dominance in 1989-90. In sum, there has been a rightward shift towards larger units hiking the mean levels of fixed investment and plant and machinery, which we believe is due to restructuring.

Figure 1: Growth rate of Plant and Machinery (Mean values for 1989 and 1997): <500%



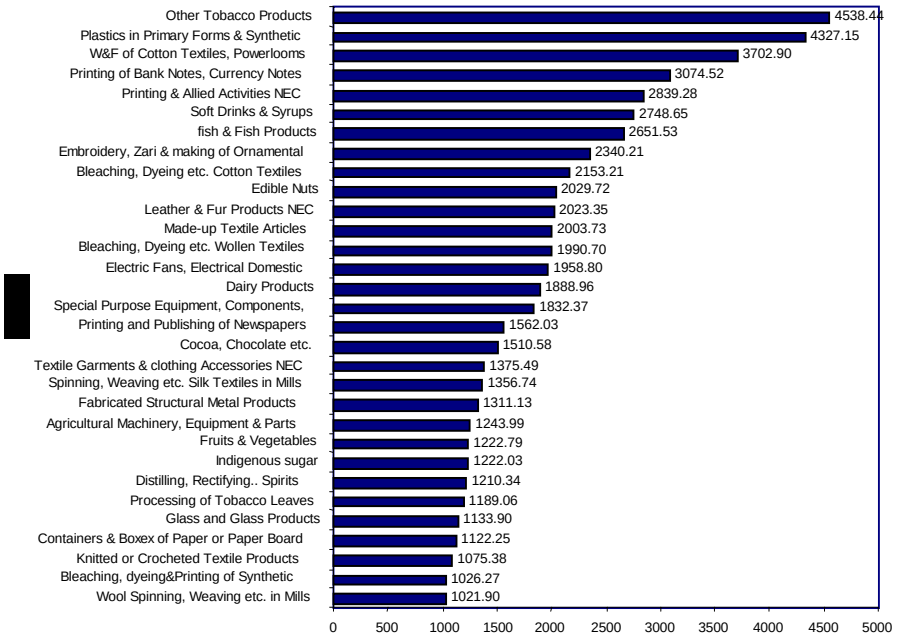
Source: Annual Survey of Industries

Figure 2: Growth rate of Plant and Machinery (Mean values for1989 and 1997): 500-1000%



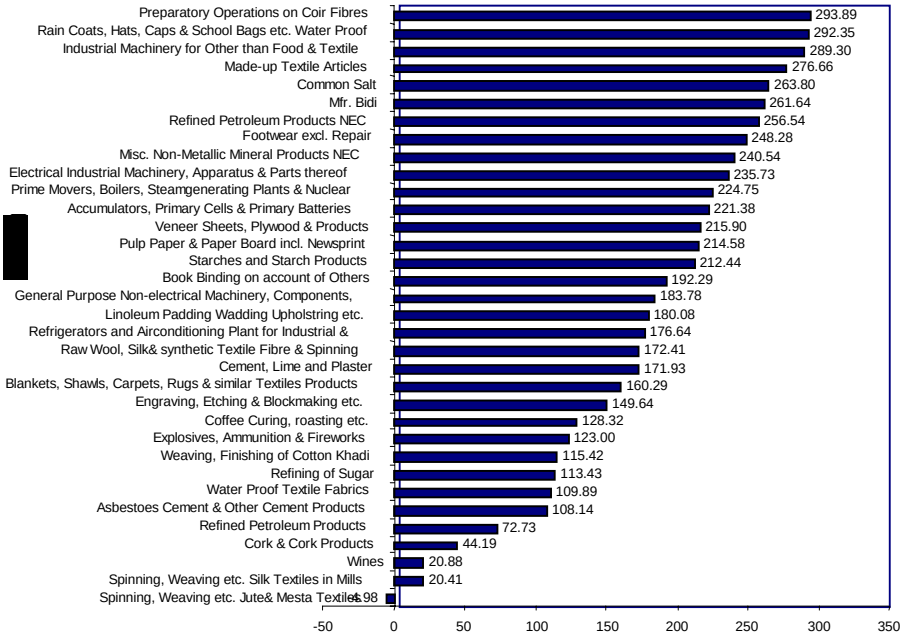
Source: Annual Survey of Industries

Figure 3: Growth rate of Plant and Machinery (Mean values for1989 and 1997): >1000%



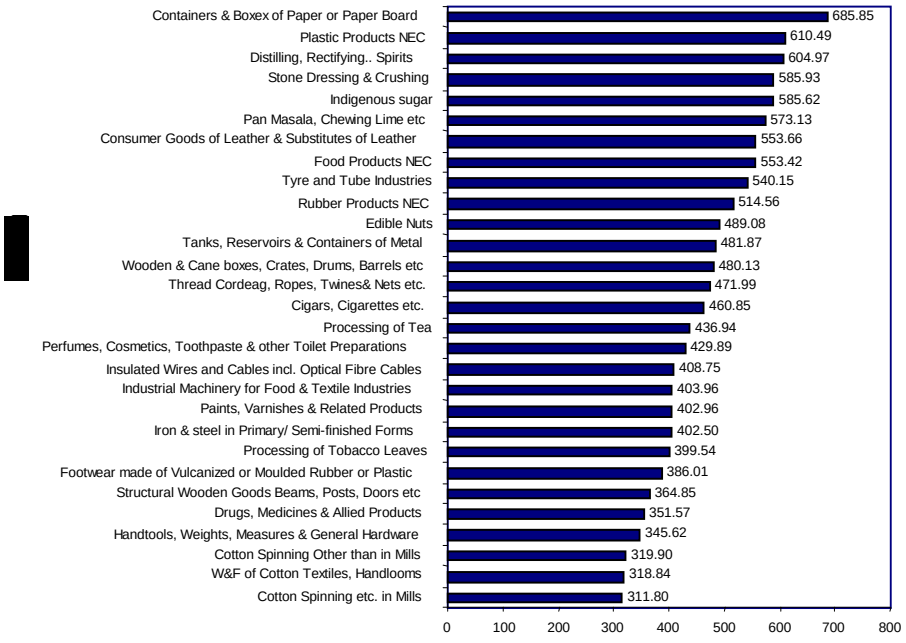
Source: Annual Survey of Industries

Figure 4: Growth rate of Fixed Capital (Mean Values for1989 and 1997): <300%



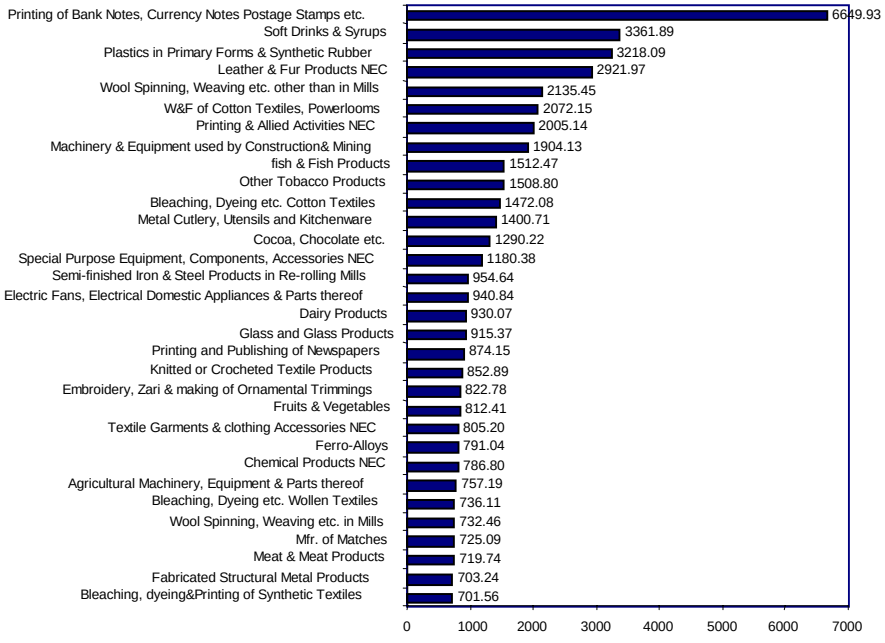
Source: Annual Survey of Industries

Figure 5: Growth rate of Fixed Capital (Mean Values for1989 and 1997): 300-700%



Source: Annual Survey of Industries

Figure 6: Growth rate of Fixed Capital (Mean values for 1989 and 1997): >700%



Source: Annual Survey of Industries

Changes in Ownership and Form of Business Organisation

ASI factory level data provide information about ownership in six categories, namely, wholly central government, wholly state or local government, central and state government joint ownership, joint sector public that has paid-up capital of public sector more than 50%, joint sector private with more than 50% paid-up share capital of private enterprises, and wholly private sector units. For the purpose of analysis, we consider the first four groups as public sector and last two groups as private sector.

A comparison of ownership information across the two selected years, viz., 1989-90 and 1997-98 reveals that majority of the industry groups initially dominated by public sector units. But in the later year, it is the private sector units that were in dominant position. Printing of bank notes, currency notes, postage stamps etc. industry had predominantly public sector units in the year 1989-90 and continues to be dominated by the same although percentage share of private units has gone up in the year 1997-98. This is expected given the nature of the product.

Ten industry groups: meat and meat products; fish and fish products; indigenous sugar, bora, khandasari and gur etc; salt; cocoa, chocolate and sugar confectionary; tea; coffee; edible nuts; and food products n.e.c. are dominated by wholly private units in both the time points.

In the case of seven industry groups, viz., starch and starch products; weaving, finishing of cotton khadi; weaving and finishing of cotton textiles handlooms; wool spinning, weaving and finishing; spinning, weaving and processing of silk textiles; refined petroleum products; and fabricated structural metal products, dominance of central/state or local government units along with the joint sector public units in the 1989 was replaced by wholly private sector units. In the remaining industry groups, predominance of joint sector public units in 1989-90 gave way to wholly private units by the year 1997-98 (see Appendix C).

It is interesting to note that in the dairy and dairy products industry, number of units owned wholly by state or central government have increased raising their percentage share more in the later year. So is the case with the fruits and vegetables, and refined sugar.

Rise in private ownership of means of production makes the form of business organisation important as it determines enterprises' access to capital market and thus their capacity to raise finance – pre-requisite for their growth and restructuring. Of the three prevalent forms, single proprietorship and partnership are characterised by *unlimited liability* and *limited life*.[33] In contrast, limited companies have *unlimited life* and its shareholders *limited liability*. One shareholder' death or selling away of the shares does not affect the legal existence of the company. Limited liability makes it possible for enterprises to access finances from a potentially large number of limited liability shareholders.[34] In the event of globalisation and liberalisation, we expect limited companies to dominate the industry groups.

Majority of the industry groups had the dominance of three forms of business organisation namely, proprietorship, partnership and limited company in 1989-90 and continued to have the same even in the year 1997-98 with a decline in the percentage share of proprietorship and an increase in the percentage share of limited companies.

Six industry groups viz., namely, meat and meat products; processing and blending of tea; coffee curing, roasting, grinding etc., manufacture of wines, soft drinks and syrups, spinning, weaving and finishing of jute and mesta textiles are dominated by limited companies in both the years. One finds significant presence of public sector units i.e, public sector enterprises incorporated under special act and departmental enterprises even in the year 1997-98 in about 13 industry groups (see Appendix C).

[33] The liability of proprietor or partners is unlimited in the sense that it extends beyond the business assets and also covers privately owned and business unrelated property, which can be attached for paying the debtors in the case of bankruptcy. Similarly, if proprietor or one of the partners dies business is automatically dissolved. If the business is to be continued a new entity must be formed.
[34] Bhavani and Tendulkar, 2000.

In sum, there has been a shift towards private ownership and limited company form of business organisation. Private ownership is expected to intensify competition and limited company form helps them to improve competitiveness by raising their access to finances.

4.2.3 Mergers and Acquisitions

Reorganisation of the industry involves entry and exit, apart from restructuring of enterprises. Enterprises enter into an area of production by starting a green field venture or through acquisitions (later merger) of all or certain assets of an existing company and exit an area of production through closing down or selling the company. Depending on their objective, firms make decisions about the entry or exit and the route through which they enter. Companies may like to exit from their non-core areas to focus more on areas of their core competency (e.g., Raymond exited from steel and cement industry by selling their companies to focus on their core area – textiles) or to enter into complementary areas (E.g., JK Industries producing car radial tyres acquired Vikrant tyres producing bus radials) or, totally new areas as a part of future expansion (E.g., ITC entering into food processing).

For the incumbents as well as new entrants, mergers and acquisitions provide swift access to manufacturing facilities, products and markets as green field ventures takes time (E.g. to set up a 2Mtpa new cement plant a company takes anywhere between 18 to 24 months). Incumbents may also prefer mergers and acquisitions to consolidate their positions through – economies of scale in distribution and advertising or, increased market controls or, acquisition of new product or new plant capacity or, greater degree of vertical integration or, synergy and growth or, a combination of all or some of these.[35]

Policy reforms on the one side provided incentives, by opening markets, for enterprises to consolidate their position. On the other hand, reforms widened the scope for industrial restructuring through mergers and acquisitions by removing restrictions under Capital Issues Controls Act, Monopolies and Restrictive Trade Practices (MRTP) Act and

[35] Shiva Ramu (1998).

Companies Act. The new foreign direct investment policy and removal of Foreign Exchange Regulation Act (FERA) regulations facilitated acquisitions by multinationals.[36]

Information about entry and exit into a given industry is not available. So, we have confined to mergers and acquisitions. But for the recent years, where one can obtain detailed information including quantitative data (such as asset value of the companies involved) about each and every deal, there is no single data source that gives qualitative information (if not quantitative data) about mergers and acquisitions since the early Nineties. However, we have tried to obtain as much information as possible searching different sources for the selected industries.

We have selected six industries, namely, food processing, textiles, drugs and pharmaceuticals, automobiles and automotive components, cement and industrial machinery. The industries are selected in order to cover all the use-based categories i.e., consumer non-durables, consumer durables, intermediate goods, basic goods and capital goods, and their importance in mergers and acquisitions and/or in other economic parameters such as employment. Since quantitative data for mergers and acquisitions are not available, we confined to, based on qualitative information available, the analysis of the nature and motivation of companies involved and its implications for the industry if any.

Food processing is one of the industry groups that have experienced numerous mergers and acquisitions in the Nineties. The most important feature of food processing industry is that most of the mergers and acquisitions involved transnational enterprises. Transnational corporations used mergers and acquisitions as a means of entry into that area. At least 38 new transnational corporations entered into different segments of food processing industry in the post-reform period. The transnationals already operating in India such as Hindustan Lever Limited (HLL) and Britannia Industries Limited (BIL) expanded into new areas of food processing. For example, HLL went into new areas such as biscuits, jams/ketchups and mushrooms, and BIL entered into dairy products in the

[36] Kumar (1998, 2000).

1990s. Transnationals entered primarily into the production of value added products including branded segments of primary products, namely, rice and wheat flour (see Table Appendix D1). Table D1 in the appendix provides a snapshot of the restructuring of Indian food processing industry. It seems individual companies especially transnationals are trying out different options – entry, exit and expansions indicating that churning out is going on. Box 4 and 5 provide summary information on the restructuring of two big corporations in the Indian food processing industry – HLL (transnational corporation) and United Breweries (Indian company).

In contrast to food processing industry, mergers and acquisitions in the drugs and pharmaceutical industry are mostly driven by the domestic companies with a motivation to enter into new therapeutic and geographic areas and thus grow. Important feature is domestic companies' urge to have international presence. Indian drugs and pharmaceutical companies are going for international joint venture, strategic alliance and acquisitions to have presence in the other important countries as well as to have access to patented/ government agency (such as United States Food and Drugs Authority, USFDA) approved drugs. Important drivers are: Nicholas Piramal, Ranbaxy Laboratories, Matrix Laboratories[37], Ipca Laboratories, Dr. Reddy Laboratories, SOL Pharmaceuticals, Sun Pharmaceuticals, Cadila group and Cipla Laboratories. Appendix Table D2 presents domestic mergers and acquisitions in drugs and pharmaceutical industry. Appendix Table D3 provides international ventures, alliances and acquisitions by the Indian drugs and pharmaceutical companies.

Mergers and acquisitions in the Indian textile industry are too dominated by the domestic companies some of these have gone for international acquisitions. The main motivation behind these merger and acquisitions has been the expansion of manufacturing capacity and branded apparel segment. Table D4 in the Appendix D exhibits the mergers and acquisitions by the Indian textile companies.

[37] Matrix Labs are later acquired by Mylan , US company.

Box 4: Hindustan Lever Limited (HLL)

- March 1993: Brooke Bond India Ltd (BBIL), an associate company of HLL acquired Instant Coffee from Kothari General Foods.
- June 1993: Brooke Bond India Ltd. merged Doom Dooma India (Tea Plantations)
- June 1993: Brooke Bond India Ltd. merged Tea Estates India (Tea Plantation),TN
- July 1993: Merger of Brooke Bond India & Lipton India to form Brooke Bond Lipton India Ltd (BBLIL).
- June 1993: BBLIL acquired Kissan Products and Dipy brands (Jams/ Ketchups /Squashes) from UB Group. Kissan Brand was the market leader at the time of acquisition.
- July 1993: BBLIL acquired 'Dollops' ice cream from Cadbury.
- May 1994: BBLIL acquired Merryweather Food Products (ice cream).
- Dec 1994: BBLIL acquired 100% brand name & distribution assets of Kwality (ice cream) from Kwality Dairy (India) Ltd. Kwality had a major market share at the time of acquisition.
- April 1995: BBLIL acquired 100% brand name & distribution assets of Milkfood's range of Ice creams (a subsidiary of Jagatjit Industries). Milkfood had a major market share at the time of acquisition.
- Jan 1996: Merger of BBLIL and HLL. India's biggest merger in Foods and Beverages.
- 1997: HLL had joint venture with Gist Brocades BV, Netherlands to form Lever Gist Brocades for marketing of Gold Seal Fermipan Instant Yeast for Bakery Industry.
- Jan 1998: HLL acquired manufacturing rights of Kwality Ice-cream. With this HLL acquired Kwality Frozen Foods from Kwality Dairy India Ltd.
- Sept 1999: HLL sold its dairy business to Nutricia India Pvt Ltd. And exited from dairy business. Nutricia India is a subsidiary of Nutricia International BV, USA.
- Nov 1999: HLL acquires Rossell Industries Ltd (Tea Plantations).
- Jan 2000: HLL acquired 76% stake in Modern Food Industries Ltd (MFIL). MFIL has a wider product portfolio (Bread, biscuits, butter, ghee, malted milk foods, infant milk foods, wheat flour). MFIL is the 1st Public Sector Unit to get disinvested by the Govt. of India. MFIL was the market leader in bread at the time of acquisition.
- 2000: HLL forms joint venture with Godrej Agrovet (Animal feeds).
- 2000: HLL forms joint venture with ICI group of UK (Flavors/fragrances). ICI group is a global leader in flavors and fragrances.
- April 2001: HLL acquired International Bestfoods Ltd (IBL) (corn products).IBL has become HLL subsidiary.
- 2001: HLL acquired the remaining 24% shares in Modern Food Industries Ltd (MFIL).
- 2001: HLL exited from JV with Godrej Agrovet (Animal feeds).
- Jan 2003: HLL acquired Marine product business of Amalgam group of Companies (Marine business).
- 2003: HLL sold edible oils & fats business to Bunge Agribusiness India Pvt. Ltd. (Indian private company) and exited from vanaspati, refined oil, and bakery fats.
- 2004: HLL shifted its mushroom business to KICM (Madras) Ltd., as a part of internal restructuring. KICM (Madras) Ltd is a subsidiary of HLL.
- 2005: HLL transferred company's tea plantations, Doom Dooma in Assam &Tea Estates Div in TN to wholly owned subsidiaries (Internal restructuring).
- Jan 2006: HLL divests from Doom Dooma Tea Co. Doom Dooma Tea Co was HLL subsidiary.
- May 2005: HLL sold its share from Rossell Industries to M.K. Shah Exports Ltd.
- May 2006: HLL divests from JV with ICI group (Flavors & fragrances).

Box 5: United Breweries Group

- 1993: Consolidated Distilleries (distilleries) merged with Mc Dowell Co Ltd. Both are UB subsidiaries (Internal restructuring).
- 1993: Carew Phipson Ltd (Liquor) merged with Mc Dowell Ltd. Both are UB subsidiaries (Internal restructuring).
- 1993: Punjab Breweries Ltd (Beer) merged with UB Ltd. Both are UB Group companies (Internal restructuring).
- 1993: Indo-Lowenbrau Breweries Ltd (beer) merged with UB Ltd. (Internal restructuring).
- 1993: Palghat Breweries Ltd (beer) merged with UB Ltd. (Internal restructuring).
- 1993: Premier Breweries ltd (beer) merged with UB Ltd. (Internal restructuring).
- 1993: High Range Breweries Ltd (beer) merged with UB Ltd. (Internal restructuring).
- 1993: Kalyani Breweries Ltd (beer) merged with UB Ltd. (Internal Restructuring).
- 1993: Kesarwal Beverages ltd (beer) merged with UB Ltd. (Internal Restructuring).
- 1993: UB Group acquired Karnataka Breweries & Distilleries Ltd.
- 1993: Herbertsons Ltd of UB Group Ltd. acquired BDA Ltd. (Liquor), from Shaw Wallace Group.
- 2000: UB Group acquired Associated Breweries & Distilleries Ltd.
- 2000: UB Group acquired Mangalore Breweries& Distilleries Ltd.
- 2001: Millennium AlcoBev Ltd (MABL) was formed as joint venture of UB group, Scottish & NewCastle (UK) (Malt based beer). MABL was formed in order to focus on the regional brands. Subsequently the UB Group has transferred distribution & marketing rights of its regional brands to MABL.
- 2001-02: UB Group acquired GMR Vasavi Ltd.
- 2001-02: UB group acquired MP Breweries.
- 2001-02: MABL acquired Millennium Beer Industries Ltd. (formerly Known as Inertia Industries Ltd., beer).
- 2001-02: UB Group acquired some more share of Associated Breweries & Distilleries Ltd.
- 2001-02: UB Group acquired Mangalore Breweries & Distilleries Ltd., (Beer).
- 2002: MABL acquired 100% shareholding of Empee Breweries Ltd., (Beer).
- 2003-04? Formed United Breweries Spirits Division (UBSD) with McDowell & Co and Herbertsons Ltd.
- 2005: McDowell & Co acquired 54.5% stake in Shaw Wallace (spirits division).
- 2005: UB Ltd acquired the remaining shares in Associated Breweries (beer).
- 2005: Amalgamation of Millennium AlcoBev Ltd & Mc Dowell & Co.(Beer)
- March 2005: UB Group acquired remaining 49.06% (now UB group holds 92.21% of shares) shares of Herbertsons ltd.
- July 2005: United Spirits Ltd merged with McDowell & Co. (internal restructuring).
- July 2005: Herbertsons Ltd. merged with McDowell & Co. (internal restructuring).
- July 2005: Triumph Distillers & Vinters Ltd merged with McDowell & Co. (internal restructuring).
- July 2005: McDowell International Brands Ltd merged with McDowell & Co. (internal restructuring).
- July 2005: United Distillers Ltd merged with McDowell & Co. (internal restructuring).
- 2005: Consolidation of McDowell& co, Herbertsons, Shaw Wallace& Co, Triumph Distillers & Vinters (TDV) to form United spirits.

Cement industry too witnessed a series of merger and acquisition activities in the post-reform period dominated initially by Indian companies and later by transnational corporations. Important domestic players have been Associated Cement Companies Ltd. (ACC) Indian Cements Ltd., Grasim Industries, Gujarat Ambuja Ltd. However, 1999 onwards one after the other transnational corporations is entering the domestic market by acquiring the domestic companies. Entry of transnational companies such as La farge, Holcim, Italcementi and Hiedelberg are worth watching. La farge, cement major of France entered into the domestic market by acquiring the cement plants of TISCO and Raymond. Holcim, which is the second largest cement company in the world, entered the domestic market by acquiring stakes in ACC and Gujarat Ambuja. Italcementi entered through acquiring a stake in Zauri Cement, and Hiedelberg acquired a controlling stake in Mysore Cements. Appendix Table D5 lists the mergers and acquisitions in the cement industry.

Entry of most of the international auto majors into the domestic vehicle industry not only intensified competition in this industry but also created heavy pressures on the component industry to produce high quality new products (for the new models of vehicles that the competition brought in), to improve the quality of existing products and to reduce costs. This along with the entry of international component manufacturers into the domestic market prompted Indian auto component manufacturers to go in for technical and/or financial collaborations with the international component manufacturers. Automotive Component Manufacturers Association (ACMA) regularly provides the foreign collaborations in the auto component industry in its *Facts and Figures*. As far as our search goes, we have found few mergers and acquisitions in the domestic industry. Some of the Indian auto component manufacturers such as Amtek and Kalyani Group companies are aggressively getting into global markets through acquisitions and joint ventures. Industrial machinery is another area in which our search did not yield much of mergers and acquisitions.

In sum, our empirical analysis indicates that policy reforms have resulted, as expected, in instilling competition in the Indian industry by bringing transnational enterprises and imports in a limited way and led to restructuring of the industry. Restructuring can be seen in shifts in size distribution towards larger size classes, private ownership and increasing proportion of limited companies, and a spurt in merger and acquisition activities.

4.2.4 Market Structure

We examine in this section whether the supply side restructuring of the industry discussed in the previous section, has led to any structural transformation on the market side. Transformation of market structure is analysed in terms of market concentration, composition and performance in general, and changes in the market position and performance of the firms that are actively involved in mergers and acquisitions in particular. Market concentration is measured by the Herfindahl index, one of the most commonly used indicators of concentration. Market composition is captured through the changes in market leadership, first five players, and the distribution of first five players in terms of the extent to which first and/ or second player are ahead of other players in terms of sales. Later, we have examined the impact of mergers and acquisitions on the market composition and performance in terms of the changes in the market position and profitability of the identified players in mergers and acquisitions in the selected industries. We have focussed on market concentration, market leader, extent of dominance by the leader, and relative position of other important players as Competition Act 2002 include these in the specified list of factors that should be taken into account while inquiring into anti-competitive agreements and combinations, and abuse of dominance in its Sections 19 and 20. The empirical analysis is based on the data available from Centre for Monitoring Indian Economy (CMIE): *Industry – Market Size & Shares*[38] for the time period of 14 years – from 1992 to 2005, for 83 products pertaining to seven industry groups, namely, food processing, textiles, leather, cement, drugs and pharmaceuticals, electrical and electronic goods, and transport equipment. Profitability ratios are calculated based on the *CMIE Prowess data* for the companies. For the purpose

[38] Database is discussed in the Appendix A.

of analysis of changes, we have taken three-year average values of parameters such as concentration ratio, sales and profitability of major players, given the volatility of these parameters, for the initial and the last three years of the selected period i.e., 1992-94 and 2003-05[39] and made comparisons across these two time points. The first time point is the triennium ending with 1994 (hereafter referred as TE94) and the triennium ending with 2005/06 (hereafter referred asTE05/ TE06) is taken as the later time point.

Market Concentration

Hefindahl index, which is taken as the sum of squares of market shares of all the firms serving the market, attains maximum value 1[40] when there is only one player. As the number of players/ firms in the market increases, Herfindahl index declines and approaches zero.

Of the 83 selected products, 48 products indicate low market concentration with Herfindahl index being less than 0.25.[41] Six products, namely, cigarette (0.678), wafers/ potato chips etc. (0.593), jams/sauces etc. (0.524), iodised salt (0.602), medium and heavy commercial vehicles (0.562), and fuel vehicle injection pumps and nozzles (0.691) show higher market concentration.[42] Of these, cigarettes, wafers/ potato chips etc., jams/ sauces etc., and medium & heavy commercial vehicles have shown rise in their market concentration ratio over time (Table 14). Few players have dominated Cigarette manufacturing since the beginning. Strong public campaigning against the product due its adverse health effects and consequent regulations might not have encouraged new players and whatever be the growth of market might have been captured by the leader firm i.e., ITC Ltd. As regards the products such as wafers/ potato chips etc., and jams/sauces etc., unorganised and unbranded segments that had many small and local players dominated market in the pre-reform period. With the entry of transnational corporations such as Frito-lay (Pepsi co), HLL and Proctor & Gamble, market for branded products is

[39] For the profitability ratios the latest available year being 2006, last triennium is 2004-2006.
[40] It is when one takes shares in per unit terms. If one takes shares in per cent terms maximum value of index is 10000.
[41]These figures refer to TE05. We have taken 0.25 arbitrarily. Anti-trust laws of USA take 0.18 as a threshold limit beyond which they consider concentration as high. Developing economies with the emerging markets are expected to have higher concentration.
[42] Figures in parentheses are Herfindahl indices for TE05.

emerging in the post-reform period. Since organised and branded segments are in the inception, concentration may be higher. Medium and heavy commercial vehicles market has been having only two players, namely, Tata Motors and Ashok Leyland since the beginning. Higher capital requirements with the relatively smaller market might not have given incentive for the entry by other companies.

Of the 83 products considered for the analysis, 38 products show rise in Herfindahl index across the two time points, i.e., TE94 and TE05 (Table 14).

Market Composition

For 41 products, composition of the first five players remained the same in the sense that three or more players are the same across the two time points considered for the purpose. Market leader has remained the same across the two time points in the case of 47 products (Table 14). For 45 products, size distribution is skewed in the sense that first or, first and second players are having two or more times the sales turnover of the other players.

Not only the leaders remained the same but also increased their sales making the distribution more skewed in 12 products. These products are: drugs and pharmaceuticals (Ranbaxy), television receivers (Videocon international), medical equipment (Siemens), infant milkfood (Nestle India), malted milk food (Glaxosmithkline Consumer Healthcare), iodised salt (Tata Chemicals), cigarettes (ITC Ltd.), medium & heavy commercial vehicles (Tata Motors), Gaskets (Talbros Automotive Components), Carburettors (Ucal Fuel System).

Table 14 : Market Structure for 83 Selected Products

Sl. No	***Product***	***HI[1]***		***TE94 and TE05[2]***	
		TE94	***TE05***	***No. of common cos.***	***Leader***
1	Cement	0.048	0.052	Two	Different
2	Asbestos cement & products	0.181	0.144	Three	Same
3	Abrasives	0.209	0.240	Three	Same
4	Refractories	0.048	0.052	Three	Same

Chemicals					
5	Drugs & pharmaceuticals	0.010	0.023	Three	Same
Electronics					
6	Audio Equipment	0.341	0.426	Two	Different
7	Television receivers (incl. TV spares & kits)	0.070	0.101	Four	Same
8	Television picture tubes	0.222	0.248	Four	Different
9	Medical equipments	0.007	0.007	Three	Same
10	Process control equipment	0.039	0.079	Three	Same
11	Computers and its peripheral of all types	0.094	0.103	Two	Same
12	Transmission equipment	0.334	0.003	Three	Same
13	Private automatic branch exchange	0.143	0.362	One	Same
14	Telephone instruments	0.385	0.328	One	Different
15	Capacitor	0.034	0.026	Two	Same
16	Printed circuit boards	0.019	0.050	One	Different
17	Watches & clocks (incl.parts)	0.343	0.323	Three	Different
Food & Beverages					
18	Milk powder and condensed milk	0.027	0.017	One	Different
19	Infant milk foods	0.346	0.423	Four	Same
20	Malted milk foods	0.540	0.428	Three	Same
21	Butter, ghee and other fats from milk	0.172	0.107	Two	Same
22	Icecreams	0.035	0.114	One	Different
23	Flour milling products	0.003	0.002	One	Different
24	Biscuits	0.039	0.202	Two	Same
25	Bread	0.519	0.369	Two	Same
26	Break-fast cereals	0.244	0.488	One	Different
27	Wafers, Potato chips, etc.	0.470	0.593	Three	Different
28	Fruit juices/pulp/concentrates	0.284	0.124	One	Different
29	Sauces/ketchups/jams	0.388	0.524	Two	Different
30	Rice	0.144	0.119	One	Different
31	Sugar	0.002	0.007	Two	Different
32	Confectionery	0.064	0.162	Three	Same
33	Vanaspati	0.036	0.047	One	Same
34	Vegetable oils	0.002	0.012	Two	Same
35	Soya products (incl. oil cakes and meals)	0.032	0.111	three	Same
36	Animal feeds (incl. aqua feed)	0.015	0.035	Three	Same
37	Poultry	0.508	0.074	Four	Different
38	Tea	0.048	0.069	One	Different
39	Coffee	0.022	0.015	Two	Same
40	Mushrooms	0.352	0.384	One	Different
41	Guar gum	0.792	0.249	One	Different
42	Starch	0.058	0.126	One	Same
43	Iodised salt	0.653	0.602	One	Same
44	Salt	0.001	0.001	Three	Different
45	Yeast	0.820	0.163	One	Same

46	Industrial alcohols	0.067	0.066	Two	Different
47	Wines, spirits & liquors	0.086	0.084	Two	Different
48	Beer	0.105	0.172	Three	Different
49	Cigarettes	0.483	0.678	Four	Same
50	Chewing tobacco (pan masala)	0.123	0.114	One	Different
Leather					
51	Leather apparel & clothing accessories	0.030	0.026	Two	Same
52	Footwear	0.532	0.120	Three	Same
Textiles					
53	Cotton & blended yarn	0.001	0.002	Three	Different
54	Apparels	0.056	0.031	One	Different
55	Woollen & blended yarn	0.151	0.133	One	Different
56	Woollen fabrics	0.655	0.491	Three	Same
57	Jute goods	0.018	0.021	Three	Different
Transport Equipment					
58	Medium and heavy commercial vehicles	0.529	0.562	Two	Same
59	Light commercial vehicles	0.322	0.302	Four	Same
60	Passenger cars	0.517	0.265	Three	Same
61	Multi-utility vehicles	0.920	0.306	Two	Same
62	Motorcycles	0.255	0.323	Three	Same
63	Mopeds	0.251	0.429	Three	Same
64	Scooters	0.418	0.308	Four	Same
65	Three wheelers	0.820	0.424	Two	Same
66	Bicycles	0.313	0.277	Four	Different
67	Pistons	0.246	0.170	Three	Different
68	Piston rings	0.229	0.158	Five	Same
69	Gaskets	0.135	0.077	Two	Same
70	Automotive valves	0.361	0.227	Three	Different
71	Carburettors	0.249	0.479	Two	Same
72	Radiators	0.099	0.174	One	Different
73	Fuel injection pumps, nozzles, nozzle holders	0.891	0.614	Four	Same
74	Crankshafts	0.111	0.388	Three	Same
75	Starter motors	0.442	0.253	Three	Same
76	Clutch assemblies, plates and discs	0.178	0.130	Three	Different
77	Steering gear	0.244	0.197	Three	Different
78	Automotive gears incl.crown wheel	0.279	0.168	Three	Same
79	Axle shafts	0.064	0.164	Three	Same
80	Leaf springs	0.158	0.224	Three	Same
81	Shock absorbers	0.294	0.231	Three	Different
82	Brake assemble	0.434	0.431	Two	Same
83	Brake linings	0.236	0.266	Four	Different

Source: CMIE: *Industry- Market Size and Shares*, various issues;
1. HI = Herfindahl Index; 2. TE94 refers to Triennium ending with 1994; TE05 refers to triennium ending with 2005.

Market Performance

We have examined the market performance of the six selected industry groups, namely, food processing, textiles, electronics, drugs and pharmaceuticals, and transport equipment. Market performance is considered in terms of profitability, which is further taken as profit after tax as a percentage of sales and of assets for the two time points i.e., TE94 and TE06. These ratios are presented in Table 15. Profits are negative for the electronic industry making both the profits as a percentage of sales and of assets negative for the TE06. Profits are positive but substantially declined in the TE06 from TE94 bringing down both the profit ratios in the later time point in the leather industry. Although profits of textile industry show substantial rise over time, profit ratios exhibit marginal improvements over time. Profits after tax increased substantially in the food processing, drugs and pharmaceuticals, and transport equipment over time. In terms of ratios, food processing industry revealed higher profit ratios in the initial time point i.e., TE94 with a marginal rise over time. Transport equipment started with smaller profit ratios but improved them over time ending up with higher ratios in the TE06. Whereas drugs and pharmaceuticals initially had higher profit ratios, which have been improved further over time. In sum, electronics and leather industries fall on the one hand with declining profit ratios over time, and transport equipment and drugs and pharmaceuticals with higher and rising profit ratios stand on the other end, and textiles and food processing lie in between.

Threshold Sales Turnover for M&As

The Competition Act 2002, Section 5 specifies threshold limits for combinations i.e., amalgamations, mergers and acquisitions in terms of the value of assets and turnover, beyond which the Act takes that combinations are likely to cause an appreciably adverse effects on competition in the relevant market in India and hence needs scrutiny by the Competition Commission of India. The specified threshold level is asset value of Rs.1000 crore for an enterprise and Rs.4000 crore for a group or, sales turnover of Rs.3000 crore for an enterprise and Rs.12000 crore for a group. We attempt to bring out the products in which mergers and acquisitions may attract the scrutiny by the Competition Commission

of India based on the latest sales turnover of the first five players in the 83 selected products.

Nine out of 83 selected products may be needed close monitoring by the Commission as the sales turnover of the first players or, first and second players together crosses the threshold turnover limit for the individual enterprises. These nine products are: vegetable oils, cigarettes, drugs and pharmaceuticals, cement, motor cycles, passenger cars, multi-utility vehicles, light commercial vehicles, and medium and heavy commercial vehicles. In the vegetable oils, Ruchi Soya Industries – the market leader had a turnover of Rs.2574.46 crore followed by Adani Wilmar with a turnover of Rs. 1524.72 crore in the TE05. ITC Ltd., the market leader in the cigarettes far exceeded the threshold limit with a sales turnover of Rs.9325.60 in the TE05. In the drugs and pharmaceuticals, sales turnover of Ranbaxy – the market leader was Rs.3713.36 crore followed by Cipla with Rs.1939.65 crore in the TE05. Cement industry has Ultratech followed by Grasim industries and ACC with the sales turnover nearing threshold limits i.e., Rs.2912.61, Rs.2816.46 and Rs.2809.51 crores respectively in the TE05. It must be noted that both Ultratech and Grasim industries are Aditya Birla Group companies. Vehicle industry is another area where sales turnover of the market leaders for majority of products exceeds the threshold limits. For instance, Hero Honda Motors – the market leader in the motorbikes market had a sales turnover of Rs.6216.89 crore and the second player, Bajaj Auto had a sales turnover worth Rs.3403.47 crores in the TE05. Major players in the passenger car market, namely, Maruti Udyog Ltd. (Rs.10009.07crore), Hyudai Motor India (Rs.5405.9 crore) and Tata Motors (Rs.2996.00)[43] had a sales turnover in the TE05 that is equal or more than the threshold limits specified in the Competition Act for combinations. In the case of multi-utility vehicles, Mahendra and Mahendra had sales turnover of Rs.2537.33 crore followed by Tata Motors with Rs.1378.10 in the TE05. Light commercial vehicles market dominated by Tata Motors with sales turnover of Rs.2601.67 crore followed by Mahendra and Mahendra with sales turnover of Rs. 1377.79 in the TE05. Finally, medium and heavy commercial vehicles market has only two players i.e., Tata Motors and Ashok Leyland with Rs.7443.33 crore and Rs.3365.81

[43] Figures in the parentheses are their sales turnover in the TE05.

crore worth turnover respectively in the TE05. Competition Commission may like to monitor all these nine product markets not only for mergers and acquisitions but also for any kind of strategic alliances among the companies.

Impact of Mergers and Acquisitions on the Market Position and Performance

The Competition Act 2002, Section 20(4), which specifies the factors that shall be given due regard for the purpose of determining whether a combination has appreciably adverse impact on competition, includes the level of combination, market share, degree of countervailing power in the market. Following the Act, we have examined the changes in the market position and performance of the active players involved in mergers and acquisitions that have been identified in the earlier section 4.2.3.

Hindustan Lever Ltd. (HLL) and United Breweries (UB) are the active merger and acquisition players in the food processing industry. The areas in which HLL had many merger and acquisitions are icecreams, jams/sauces/etc., and tea. In all the three areas, although HLL was not present in the initial time point i.e., TE94[44], it has become market leader in all the three areas by TE05. Although, mergers and acquisitions enabled HLL to attain market leadership, these combinations have been far below the threshold limits given in section 5 (a) of the Competition Act as the sales turnover of HLL in the area of ice creams was Rs.95.13 crore, of Jams/sauces/etc. was Rs.166.97 crores and of Rs.1396.70 crores in tea in the TE05. Regarding the performance, HLL food business is in losses as per the newspaper reports.[45]

United Breweries, another important player in the mergers and acquisitions in the food processing, retained its market leadership in the areas of beer, wines & spirits. UB' sales turnover of beer was Rs.478.17 crore and Mcdowell Co. (UB group company) turnover of wine and spirits was Rs.1509.60 crores in TE05. UB' exhibits negative profits in the later triennium (Table 16).

[44] In tea, Brook Bond, HLL' associate company (i.e., another Unilever' subsidiary) was present, which later merged with HLL.

[45] See for example, the news item "HLL may offer VRS to Bangalore Employees" that states '… the performance of the food business has been an area of concern for HLL in the last few years.' *Business Standard*, Thursday, 3 August 2006, p.3. We could not obtain profits of food business of HLL separately.

Table 15 : Profit Ratios for the Selected Industry Groups for TE94 and TE06

	1992-94			2004-06			% growth for the two periods		
Industry	PAT (Rs. Crore)	%PAT/Sales	%PAT/Assets	PAT (Rs. Crore)	%PAT/Sales	%PAT/Assets	PAT	%PAT/Sales	%PAT/Assets
Drugs & pharmaceuticals	345.42	4.59	5.57	3910.44	11.08	8.40	1032.09	141.27	50.92
Electronics	294.49	3.45	2.93	-152.04	-0.69	-0.55	-151.63	-119.88	-118.78
Food & beverages	874.52	4.17	5.49	3943.57	4.72	5.88	350.94	13.25	7.17
Leather products	34.79	3.85	5.11	20.62	1.88	1.89	-40.72	-51.13	-62.96
Textiles	264.97	1.26	0.98	1225.02	2.28	1.75	362.32	80.26	77.57
Transport equipment	276.92	1.40	1.37	7774.11	6.64	7.59	2707.38	374.68	454.81

Source: CMIE: Prowess; PAT = Profits after tax.

Table 16 : Profit Ratios for the Selected Companies for TE94 and TE06

	1992-94			2004-06			Growth Rate (%)		
Company Name	PAT (Rs. Crore)	%PAT/Sales	%PAT/Assets	PAT (Rs. Crore)	%PAT/Sales	%PAT/Assets	PAT	%PAT/Sales	%PAT/Assets
Aditya Birla Nuvo Ltd.	59.77	7.89	5.71	143.98	6.69	5.21	140.90	-15.21	-8.84
Arvind Products Ltd.	0.02	0.08	0.18	-5.89	-1.47	-1.16	-29550.00	-1971.64	-750.98
Ashima Ltd.	3.63	9.41	6.90	-79.74	-17.02	-15.03	-2294.68	-280.75	-317.81
Bombay Dyeing & Mfg. Co. Ltd.	43.67	8.00	6.85	47.13	4.36	4.72	7.92	-45.55	-31.08
C L C Global Ltd. [Merged]				3.05	2.22	4.30			
Celebrity Fashions Ltd.				6.78	5.03	4.72			
Dr. Reddy'S Laboratories Ltd.	18.67	13.17	21.96	186.59	9.39	5.98	899.25	-28.69	-72.77
Gangotri Textiles Ltd.	0.87	18.83	13.16	4.25	2.48	2.72	388.12	-86.84	-79.35
Glofame Cotspin Inds. Ltd. [Merged]				6.18	3.42	2.57			
Hindustan Lever Ltd.	137.82	5.26	11.33	1302.72	11.25	18.42	845.23	113.65	62.55
Ipca Laboratories Ltd.	7.75	6.40	6.99	74.65	10.26	11.36	862.81	60.46	62.63
Matrix Laboratories Ltd.	1.00	7.51	15.15	145.75	21.58	16.13	14475.33	187.51	6.48
Nicholas Piramal India Ltd.	11.54	11.37	7.35	175.98	12.44	13.77	1424.93	9.36	87.47
Ranbaxy Drugs & Chemicals Co.				0.11	84.62	1.77			
Raymond Ltd.	37.90	5.72	5.81	112.14	9.30	5.47	195.89	62.55	-5.92
S O L Pharmaceuticals Ltd.	4.77	4.84	5.80				-100.00		
Sun Pharmaceutical Inds. Ltd.	7.44	13.82	17.00	336.12	29.60	13.01	4417.70	114.17	-23.47
Sun Pharmaceuticals Exports Ltd.[Merged]									
Torrent Pharmaceuticals Ltd.	11.68	6.95	5.50	60.97	10.42	9.80	422.03	50.03	78.30
United Breweries (Holdings) Ltd.	13.18	7.49	4.24	-130.15	-85.68	-8.45	-887.76	-1243.82	-99.11
Zydus Pharmaceuticals Ltd.				0.26	0.15	1.45			

Source and notes as mentioned in Table 15.

In the area of textiles, Aditya Birla Nuvo remained in the first five players in the cotton and blended yarn market and attained market leadership in Apparels, and Raymond retained its market leadership in woollen fabrics. Other enterprises involved in mergers and acquisitions, namely, Arvind Products, Ashima Syntex, Bombay Dyeing, CLC Ltd., Indian Rayon, Welspun, Celebrity Fashions and Gangotri textiles did not figure in the first five players in the textile product markets that we have considered for the analysis, i.e., cotton & blended yarn, cotton fabrics, apparels, woollen & blended yarn and woollen fabrics.

Aditya Birla Nuvo had apparels turnover worth Rs.412.26 crore and cotton & blended yarn sales worth of Rs.329.29 crore, and Raymond had a turnover of woollen fabrics worth Rs.725.60 crores – much below the threshold limits specified in the act. Regarding the performance, textile companies irrespective of their market position exhibited negative or, small profits in the TE05 and thus a decline in the profit ratios over time (Table 16).

In the case of drugs and pharmaceuticals, Ranbaxy retained its market leadership and Dr.Reddy's Laboratories made it to the first five players in the market. The remaining companies that are engaged merger and acquisitions, namely, Nicholas Piramal, SOL Pharmaceuticals, Ipca, Matrix, Cadila, Sun Pharmaceuticals and Torrent, are yet to make it to the first five in the market.

Ranbaxy's sales turnover was Rs.3713.3 crore, which is above the threshold limit specified in the act whereas turnover of Dr.Reddy's was Rs.1748.20 for the TE05. Ranbaxy exhibits higher profit after tax as a ratio of sales turnover but very low ratio of profits to assets. In the case of Dr.Reddy's, both the profit ratios show a decline over time (Table 16).

5. Summary Findings and Advocacy Measures

This section recapitulates important findings of the study and advocates measures needed to promote competition based on these findings. In the background of the economic

reforms of 1991 that instilled competitive forces in the Indian industry, present study focuses on two important aspects of competition – potential and actual competition. These issues are studied in the broader framework of the process of competition (discussed in Section 3.1). Potential competition addresses the still existing policy regulations that deter competition in terms of their restrictiveness. In this respect, the study considers general rules and regulations that are still complex and make doing business difficult, and policies relating to trade, foreign direct investment, small industry and labour. The degree of actual competition is studied through the level of imports, entry of transnational corporations, supply side and market restructuring. We have examined production restructuring in terms of structural break in the fixed assets and analysed some important aspects of restructuring of the Indian industry i.e., shifts in size distribution, ownership patterns and forms of business organisation across two time points – 1989-90 and 1997-98, mergers and acquisitions, and changes in market structure since the early Nineties. Shifts in size distribution is examined in the case of gross fixed capital and gross plant and machinery variables as these are taken to represent the three basic parameters of manufacturing viz., capacity expansion (potential scale of operation), technological upgradation and product composition. Market structure is analysed in terms of its concentration, composition and performance in general, and changes in the market position and performance of the firms that are actively involved in mergers and acquisitions in particular based on CMIE data for the selected industries. Empirical analysis of the study reveals the following:

- Rules and regulations relating to business are still complex in India deterring entry. India ranks 134 in the Doing Business 2007 Survey of World Bank that covers 175 countries.

- International comparisons indicate that India is still having high tariffs, use non-trade barriers such as anti-dumping measures and stand in the first few in trade restrictiveness especially in restricting imports – one of the important sources of competition.

- Policies regarding foreign direct investment (FDI) – another important source of competition, are still discretionary and restrictive. International comparisons in this respect placed India in the category of under performers with low Inward FDI performance and low Inward FDI potential.

- Product reservation for small scale industrial units and the complex and comprehensive labour legislation restrict competition by deterring entry. All together these convey that there exist yet many regulations that deter entry and thus restrict competition and, hence, there is a scope for furthering competition for the betterment.

- Imports – an important source of competition, although growing fast have to go long way to pose threat of competition as they still constitute negligible part i.e., less than one percent of domestic market. Entry of transnational enterprises is observed only in few industries, namely, automobiles, electronics, food processing and cement.

- Econometric tests show structural break in the fixed capital in the post-reform period for majority of the industry groups (64 four-digit industry groups of NIC98). Growth rates of fixed capital are higher in the post-structural break year compared to that of pre-structural break period.

- Analysis of ASI unit level data at the two time points viz., 1989-90 and 1997-98 reveals, as expected, that there has been a shift – (a) from smaller size classes towards larger size classes hiking the mean levels of fixed capital and plant and machinery substantially; (b) from public ownership towards private ownership of means; and (c) from proprietorship and partnership forms to limited companies.

- Post-reform period also experienced spurt in mergers and acquisitions in different industry groups. Most of the mergers and acquisitions in the food processing industry involved transnational enterprises, which opted merger and acquisition

route to enter an area of production. In contrast, mergers and acquisitions in the drugs and pharmaceutical industry are mostly driven by the domestic companies, which are also aggressively going in for international acquisitions, strategic alliances and joint ventures to have global presence. So is the case with the textile industry. Cement industry too witnessed a series of mergers and acquisitions in the post-reform period dominated initially by domestic companies and later (1999 onwards) by transnational enterprises.

- Automobile industry groups are marked by the entry of transnational corporations mainly through collaborations and the green field venture route rather than the merger and acquisition route.

- 48 out of the 83 selected products indicate low market concentration with Herfindahl index less than 0.25. Six products, namely, cigarettes, wafers/potato chips etc., jams/sauces etc., iodised salt, medium & heavy commercial vehicles, and fuel injection pumps and nozzles show high concentration with Herfindahl index more than 0.5. There is a rise in concentration ratio in 38 products over time.

- For 41 products, composition of the group of first five players remained the same and market leader remained the same across the two time points (TE92 and TE05) in the case of 47 products. For 45 products, size distribution is skewed.

- Of the six industries considered for market performance, electronics and leather experienced smaller profit ratios, transport equipment, and drugs and pharmaceuticals exhibited higher profit ratios and the profit ratios in food processing and textiles industries lie in between.

- Mergers in nine product markets viz., vegetable oils, cigarettes, drugs and pharmaceuticals, cement, motor cycles, passenger cars, multi-utility vehicles, light commercial vehicles, and medium & heavy commercial vehicles may need

close monitoring by the Competition Commission as the sales turnover of the first or, first and second players together crosses the threshold limit specified in Section 5 (a) of the Competition Act 2002 for the individual enterprises.

- Of the active players in mergers & acquisitions in different sectors, only HLL obtained market leadership in ice-cream, jams/sauces etc., and tea markets. UB group in beer and wine/spirit etc., Ranbaxy in drugs and pharmaceuticals, Raymond and Aditya Nuvo in textiles retained their market leadership in the concerned products. But for Ranbaxy, all others show reduced or negative profit ratios in the TE06.

In sum, empirical analysis of the study suggests that there remain many policy regulations acting as barriers to competition. Empirical evidence also indicates that policy reforms that have been undertaken in the Nineties did succeed in triggering dynamic forces of competition that is reflected in the industry restructuring toward larger scales of operation and consolidation through capacity building and mergers and acquisitions. Market structure, however, did not seem to change much.

Advocacy

In the light of the empirical findings of the study, the following policy measures are necessary to promote competition.

1. Simplification of business rules and regulations is essential is further competition as the existing rules, being complex and time consuming, discouraging entry and thus restricting competition. Simple rules reduce transaction costs, time delays and scope for inspector raj and thus encourage entry.
2. Indian tariffs are still higher relative to most of the countries and need to be brought down. Anti-dumping measures should be used judiciously, if imports – important source of external competition, are to be increased.
3. Foreign direct investment (FDI) policies especially Press Note 1, 2005, being discretionary and restrictive, limiting FDI inflows – another source of external competition. The Press Note 1 is not serving any meaningful purpose except to

protect domestic industry from the foreign companies' competition and hence can be scrapped.

4. The remaining products reserved for exclusive production in the small manufacturing sector should be de-reserved so as to allow large-scale units to produce the same.
5. Labour legislation needs total revamp to make it simple, and to provide more flexibility in the use of labour and less scope for litigations. Simple labour legislation promotes competition by encouraging entry of new firms including multinational corporations.
6. Competition Commission of India need to monitor product markets with high concentration ratios such as cigarettes, wafers/potato chips etc., jams/sauces etc., iodised salt, medium and heavy commercial vehicles and fuel injection pumps and nozzles.
7. Having single threshold limits in terms of sales and assets may not help the Competition Commission of India much in regulating anti-competitive combinations as both sales and assets vary widely across products. Rather, the Commission should develop a mechanism through which mergers and acquisitions information is routinely passed on from the Registrar of Companies where reporting of M&As is mandatory. This information can be analysed against the relevant product market size by the Commission.
8. It is not competition *per se* but the right degree of competition that is more important as too much of competition may kill many players which is not good in the long run interest of consumers. As the right degree of competition depends on the interaction of supply and demand, the Commission may like to know the domestic market size and international benchmark scales for different products.

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