Chapter V

A Summing Up

Manufacturing sector in India witnessed major policy changes since mid-1980s. These changes intended to infuse competition and alter the industrial structure focused mainly on the removal of commands and controls and opened the manufacturing activity to for more external competition. It was also anticipated that the changes would bring about a turnaround in terms of performance by enhancing productivity and launch the industrial sector on a higher growth path. In light of these changes this study attempted to analyse the changes in market structure and performance in Indian manufacturing. Changes in market structure were captured by examining the changes in and the extent of competition along with its main hindrance - the entry barriers. Performance was analysed in terms of total factor productivity growth. The analysis encompassing a period of 1973/74 to 1998/99 comprises of a time series analysis at the industry level using data from the Annual Survey of Industries supplemented by an examination of a panel of firms assembled from data published by the Centre For Monitoring Indian Economy (CMIE). The firm level analysis was intended to examine the effect of the recent changes in policy regime. Given the objectives, the study mainly empirical in nature dealt with measurement issues.

Most of the existing studies in the Indian context make use of measures like the ability of firms to hold price over long run average costs, accounting rates of return on assets, Tobin's q and concentration ratios to capture the extent of competition. These studies are plagued by an extent of arbitrariness as they depend heavily on accurate estimates of rates of return on capital, capital costs and replacement cost of capital. While concentration ratios capture the extent of market power it fails to consider the demand aspects of the product. In the present study competition was examined by its dual, the market power. Using a measure of performance, price-cost margin or mark-up, devoid of the above said limitations, we infer that a decline in mark-ups indicate higher levels of competition.
Unlike the best-known studies on Indian industry, which makes use of the divergence between price and average cost assuming average cost equal to marginal cost, this study used the divergence of price from marginal cost to measure competition. An econometric model used to estimate the level of mark-up and to test for a shift in the variable using the methodology put forth by Hall indicated the existence of high levels of mark-up without any significant decline in the post 1991 period. The results suggest that on the whole there is no significant decline in mark-ups in the reform era indicating the existence of hindrances to the competitive process.

Entry barriers are identified as a major hindrance to the competitive process facilitating the existence of high mark-up relying on the micro economic theoretical tenet that the outcome of an "economic natural selection" is likely to be fairly efficient, while considering competitive markets. Entry is the most visible manifestation of this selection process. However, limitations exist in capturing the reactions of the incumbents triggered off by entry using the static models of oligopolistic interactions. The recent developments in industrial organization provide a clue to explain a particular constellation of industry price and quantities observed after entry in a period. In the present study an attempt was made to capture the process of entry and its major barriers in Indian manufacturing industries. The methodology followed is mainly one of 'consilience of induction', a strategy of coordinating or weaving together a wide range of disparate results from many different sources.

The study identified two types of barriers in the Indian context, (a) institutionalised barriers like licenses and other restrictions and (b) strategic barriers erected by the firms using market mechanisms like advertising and economies of scale. Empirical quantification of these barriers using data drawn from the CMIE and two alternate methodologies, of Orr and Geroski, provides evidence of the existence of considerable barriers to entry even after the dilution of most of the institutionalised barriers. The results revealed that ever since the dismantling and dilution of institutional barriers market barriers have become more pronounced.
Explanations of the sources of output growth, often unexplainable by short run variables, have relied to a great extent on the 'measure of our ignorance' to decipher industrial performance. Total factor productivity growth (TFPG), the most plausible route for sustained output growth acquired the label as a measure of our ignorance for two reasons (a) due to the complicated measurement problems and (b) for want of satisfactory explanations. As the enhancement of productivity to fuel industrial growth has received considerable attention in the package of economic reforms we examined total factor productivity growth in Indian manufacturing industries in both prior to and after the onset of economic reforms.

Arriving at estimates of TFPG at the level of aggregate manufacturing poses problems relating to aggregation and obtaining a correct measure of output at constant prices. Both these sets of issues have been debated in the Indian context resulting in contradicting results. At the theoretical level the problem of how to measure TFP growth at the aggregate level has been solved by the contributions of Domar and Hulten. However, in the Indian context studies have used an approach based on aggregate value added, which is seriously flawed. In this study we argue that value added is not the appropriate measure in the Indian context as the assumption of weak separability between intermediate inputs and other primary inputs and time does not hold good. Using gross output as the appropriate measure and Domar aggregation with estimates from the two-digit level of disaggregation, we showed that TFPG declined with the onset of economic reforms questioning the links between open policy regimes and productivity growth.

The essential conclusion drawn from the study is that in Indian industry there exists market power as pointed out by non-declining levels of mark-up indicating the low levels of competition. This is partly due to the increase in market barriers erected by the firms ever since the dismantling of the institutionalised barriers. We also find that the productivity growth in the manufacturing sector declined with the ushering in of economic policy changes. The economic reforms initiated to enhance competition and increase productivity growth does not seem to percolate down to produce any significantly visible positive outcome on the variables examined.