CHAPTER V

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This study made an attempt to provide a comprehensive analysis on the impacts of new economic reforms (which was announced in 1991) on important industrial performance indicators like productivity, employment and export performance of Indian manufacturing industries classifying into capital intensive and labour intensive industries. Nowadays, that all developing countries (including India) are going to integrate into world economy and at the same time they want to strengthen their industries by improving their competitiveness. The implications of the study can be highly important for policy makers. The important point that makes the present study different from other similar studies is comprehensive examination of productivity growth and its sources, namely, technical efficiency change and technological progress, determinants of employment and export performance because other related studies focused only on one of the above indicators and none of them compares these indicators between capital intensive and labour intensive during the period 1993-94 to 2003-04. Empirical analysis has been carried out at both selected capital intensive and labour intensive industries as group and individual industry level. Using DEA-based Malmquist Productivity Index (MPI), panel data fixed effect model and panel data Two Stage Least Square (TSLS) techniques, the study explore the difference in industrial performance pertaining to productivity, employment and exports of selected industries respectively. In fact in the present study an attempt has been made to identify the important factors that can improve the competitiveness of Indian industries. With the comprehensive empirical examination, the present study arrived at the following findings and implications.
The quantitative and qualitative survey of theoretical and empirical literature has lent support to the view that there are number of relevant issues regarding the difference in performance of capital intensive and labour intensive industries which are not being yet specified, measured and analysed properly in an integrated manner. There as been a running debate on the role of economic reforms on productivity, employment and export performance and their inter-relationship in manufacturing sector. It is evident that there is no smooth relationship either between economic reforms with productivity, employment and exports or among productivity, employment and exports of manufacturing sector. A review of empirical literature connected to the Indian case has noted the inability of earlier studies in comprehensive analysis of industrial performance indicators. The review also reveals that earlier studies have focused only one of the indicators, namely, productivity growth or employment or exports of manufacturing sector and none of them comprehensively investigated all the three indicators and in fact, not any of them attempted to examine these indicators between capital intensive and labour intensive industries in India.

A simple descriptive analysis over the period has provided some important characteristics of Indian manufacturing sector and its relative performance compared to some leading transition economies of Asia and South America. It has been found that the volume, growth, employment and export contribution of Indian manufacturing to GDP has not changed significantly. The contribution of manufacturing to GDP and its employment in the economy have shown more or less stagnant. The above manufacturing sectors indicators estimated in the study implied that the performance of Indian manufacturing sector in both absolutely and relatively
poor compared to leading developing economies during the study period. It suggests that the role of manufacturing in economic development is underscored in India.

The empirical results revealed that the capital intensive industries have recorded a moderate positive TFP growth by 1.7 per cent per annum and the technical change (shifting of frontier) is the single contributor to the TFP growth, but their counterpart, labour intensive industries have experienced a productivity revert at the rate of -0.9 per cent per annum during the study period, even though technical efficiency has shown an improvement in this sector, but it is offset by high rate of regress in technological change. It is observed that relatively capital intensive industries are seemed to be improving productivity to their counterpart, viz. labour intensive industries. However, the influences of economic reforms are not the same across the industries within each segment. That is in capital intensive group, four industries have revealed productivity improvement while it is regressed in other industry, namely, metal and metal products. While in labour intensive group, TFP growth is positive in one industry, but it has been declined in other four industries. Relatively TFP growth achieved by capital intensive industries during the study period provides some indication that policy-induced factors, such as de-licensing, flow of foreign direct investment and import of superior technology have made some positive impact on the TFP growth, but labour intensive industries were unsuccessful to make use of these benefits. Hence, labour intensive industries should attract foreign direct investment and, import and adopt advanced technology to survive during era of globalization.

Further, large scale production in the industries may be encouraged to take the advantage of the economies of scale, which would lead to greater efficiency in the industries, and thus, compel the production points closer to the frontier. Economies of
scale in the industries coupled with sophisticated technology acquisition would further develop downstream activities in the interconnected industries.

The study has also evaluated the relations between employment and domestic (output, wage and productivity) and international (FDI, exports and imports) factors for selected capital intensive and labour intensive for the period of the transition by applying panel data fixed effect model. Concerning the domestic factors, an interesting finding is that employment does not respond to wages in labour intensive industries, thus jobless growth in manufacturing is taking place irrespective of the wage developments in the majority of the industries, on the other hand in capital intensive segment employment is responsive to wage changes. The response of employment to output is mostly positive in both segment, however the output elasticity of labour demand is low and not significant as group but significant for chemical, and car and multi utility vehicles in capital intensive group, and readymade garments and lather products in labour intensive segment. The persistence downsizing during reform period is responsible for this adverse result. The study revealed that impact of labour productivity on employment differs across capital and labour intensive sectors where it has reduced employment in capital intensive group and employment is not responded to productivity in labour intensive sector.

As regards to the international factors, it can be concluded that overall an impressive speed of integration to the world economic sphere through FDI and international trade has not prevented job losses in the manufacturing industry in general. In capital intensive group the effect of exports on employment has been positive but not significant, but it has positively influenced on labour intensive segment both at group level and individual industry level except for coffee and tea, may be these industries are supposed to have their comparative advantage in terms of
labour cost in the international market based on explanations of traditional trade theory. Concerning to imports, in the both sectors (capital as well as labour intensive) a negative effect on employment is found. This negative effect indicates substitute character of imports rather than being complementary for domestic production and employment generation.

Finally FDI has a significantly positive effect on employment only in the capital intensive group as whole and with in this group it has improved employment in chemicals, drugs and pharmaceuticals, and car and multi utility vehicles, but positive not significant in other two selected industries. On the other hand, FDI has not played any strategic role in employment generation of labour intensive industries both as a group and at individual industry level.

The results suggest that the positive demand effects of integration to the world economy have been offset by rapid increase in labour productivity and international competitive pressures, leading to labour saving growth without generating jobs. These results combined with the flexibility in the institutional structure of the labour market and the wage setting mechanism, show that the source of the problem results from the demand side of the labour market, rather than the supply side.

With regards to the employment level, one of the implications of the study is, in order to improve the employment level in the organised sector efforts are needed to attract FDI in the export-oriented industries. This will also help in improving the skills of the workers in this low-skilled sector. FDI can be encouraged in this sector by reducing the relative cost of production of foreign firms in this sector. Provision of better infrastructure like cheap electricity and better transport & communication can go a long way to reduce cost of production for foreign firms and this may put India into their value-chain of production. However, one of the obstacles in attracting FDI
in the export sector is the rigid labour laws that do not allow employment-wage rate relationship to work in the Indian organised sector. With relaxed labour laws and higher education and training of labour in India, higher FDI is expected to flow into the export sector. Moreover, industrial policy should promote not only greenfield investments and reinvestment of profits but also strong backward linkages with the domestic economy may facilitate job creation via positive spill-over effects.

Further, this study empirically evaluated the role of industry-specific characteristics in effecting export performance at the industry level, based on panel data analysis. In particular, relationship between TFPG, FDI, industrial competitiveness and export performance has been tested explicitly for proposed capital intensive and labour intensive industry groups. The evidence from this study suggests that the determinants of export performance at group’s level (capital and Labour) differently influenced on export performance. FDI and TFPG are significantly influenced export for capital intensive segment but not for labour intensive sector, whereas labour intensity variable significantly impact on labour intensive sector but not influenced on the exports of capital intensive segment. The results point out that the export performance and trade patterns in Indian industries are open to a variety of explanations offered by the traditional factor endowments and new trade theories.

The India’s manufacturing sector have so far realized the comparative advantages of abundant labour resources since they export mainly labour intensive products and perform better in the international market next to china. The finding indicates that it is appropriate for Indian firms to compete in international market based on the comparative advantage of low labour costs at their current stage of development. However, the evidence also suggests that the technological
competitiveness proxied by R&D intensity, as less important role in determining export performance in Indian industry, since an insignificant result for the variable of R&D intensity has been observed in the export model for both capital and labour intensive segments, indicating technological elements embodied in exports are relatively low. The lack of ability to provide varieties of differentiated products and developing new products is the weakness of Indian export sectors.

India does not aggressively promote innovation, which is the key to manufacturing growth in the world markets. There is very low emphasis on promoting innovation, either in education or in business. School curricula focus heavily on classroom teaching and do not promote innovative teaching methods to kindle creative thinking and working and Indian business give relatively low importance to developing capabilities in indigenous innovation and development. Hence the government need to recognise that the market will not invest sufficiently in blue-sky research and therefore assume responsibility for sustaining and enhancing a good quality science and research base. The government also has an important role in fostering innovation, in encouraging research and development collaboration and knowledge sharing thus enabling individual firms to capture knowledge spin-off from each other’s research, and collectively to enjoy the benefits of economies of scale and scope in innovation.

Further, the Indian industries have to estimate their technological bottlenecks and identify what makes their product less competitive and more costly in the world market. Mostly, Indian firms are using low end technology into their production process. A pro-active measure is required to document the needs of the company and then through conferences and symposiums communicate it across the technologist.
Pro-actively identifying and documenting technical requirements is the first step to towards being competitive.

All the evidence that the study has in the present empirical exercise strongly support the hypothesis that economic reforms have positively contributed the growth of productivity of capital intensive industries, while reforms have negatively impact on productivity of labour intensive industries of Indian manufacturing sector during study period. The comparison of the results of employment performance between capital intensive and labour intensive reveals that the employment has declined during the study period supports the hypothesis of globalisation has negative influence on employment creation in Indian manufacturing sector. But the hypothesis of positive relationship between globalization and export performance of capital intensive industries is not accepted, because the evidence of the study reveals that the comparative advantage of Indian industries in the international market is based on factor endowment implied lower labour cost. With the available evidence of the study hypothesis that technology changes have widen the gap between the performance of capital and labour intensive industries is accepted.

To sum up, one can conclude that the both capital intensive and labour intensive industries could develop competitiveness pertaining to productivity and export, and enhance employment generation if they could adopt modern and superior technology, attract FDI and if they give importance to research and development. Efforts are needed to attract FDI in the export-oriented industries. This would also help in improving the skills of the workers in low-skilled sector. FDI can be encouraged by reducing the relative cost of production of foreign firms. Moreover, industrial policy too should promote not only greenfield investments and reinvestment of profits but also strong backward linkages with the domestic economy may facilitate...
job creation via positive spill-over effects. Further, study reasserts that technological
competitiveness of Indian industries should be improved by fostering innovation. All
these efforts might improve competitiveness of Indian manufacturing industries.