9

Impact of Technology on Competitiveness: a Case Study of Indian Small Auto Component Units

T. A. Bhavani

9.1 Introduction

The phenomena of globalisation, liberalisation and rapid technological developments are changing business environments the world over. World economies, especially developing economies, have been shifting since the 1980s away from ‘policy regulation’ towards ‘market orientation’ through liberalisation of state controls on economic activities and also globalising in the sense of moving towards greater integration. Simultaneously, rapid technological developments are drastically changing the methods of doing business. At the base of technological progress is the revolution of information and communication technologies (ICT). The globalisation and liberalisation processes are not only exposing business enterprises to market competition to a greater extent but also intensifying that market competition.¹ Technological developments, on the other hand, are providing opportunities for enterprises to improve their competitive strength in order to deal with the challenges of open markets. Technology plays a significant role in promoting competitiveness and growth both at the macro- and microeconomic levels, much more so in these days of globalisation that is necessitating as well as allowing technological change. It is the competitiveness of microeconomic units like firms that explains most of the variations in macroeconomic growth (Porter and Christensen 1998).

In July 1991 India initiated systemic changes in its economic policies, involving a major shift in the development strategy towards greater integration with the world economy and liberalisation of restrictions on market transactions and private economic activities. Until then, India
had been for almost four decades a closed and heavily regulated market economy that insulated domestic markets. Within this generally insulated environment, small enterprises were further protected from the competition of large-scale enterprises through a set of protection policies, since the former were understood to provide employment and hence a source of income for millions of people. This policy-protected business environment did not provide any incentive for Indian small enterprises to upgrade technologically. Rather, it provided a perverse incentive to remain small. The result was that, after four decades of policy support, Indian small enterprises, in general, remained tiny, using traditional and older vintage technologies, and lacked competitive strength. As the economy moves towards globalisation and liberalisation that limit the scope for policy protection and unleash the dynamic impulses of competition, small enterprises have to sustain themselves by their own competitive strength by successfully facing competition from large enterprises including multinationals. It is possible mainly through the adoption of later vintage technologies. Realising the situation, some small enterprises have upgraded their technologies (Bhavani 2005; also see note 19). Technological upgrading does not, however, improve the competitiveness of enterprises instantly or automatically. Absorption of new technologies requires technological capabilities that can be acquired only through the time-consuming process of learning (Dahlman et al. 1987; Lall 1992). With this background, the study of the impact of technology on the competitive strength of Indian small enterprises that were protected so long and hence did not have any incentive to acquire technological capabilities, assumes significance. This chapter attempts to examine the impact of technology including ICTs on the competitiveness of Indian small auto component enterprises.

The auto components industry has a good number of small-scale enterprises and it is one of the dynamic sectors of the Indian economy. With the entry of multinational corporations in the more liberalised and globalised 1990s, the industry is undergoing rapid transformation both in its structure and product composition. In addition, automobiles are one of the industries that is organised in the form of global commodity chains, forcing auto component enterprises to integrate with these chains. To get into the supply chain and to remain there, auto component enterprises have to be on a par with the other enterprises in the chain, including the multinational companies, in terms of technology and operational efficiency. It is interesting to find out how small enterprises are doing in this situation, which is what prompted us to select the auto component industry.