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Innovation and growth of engineering SMEs in Bangalore: Why do only some innovate and only some grow faster?



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ABSTRACT

This paper probes two research questions by ascertaining the factors which distinguish (i) innovative SMEs from those which are not, and (ii) SMEs which experienced a higher sales growth from those which experienced a lower sales growth, with reference to 197 engineering industry SMEs in Bangalore city. The differentiating factors between innovative and non-innovative SMEs brought out that SMEs must have “own resources and capabilities” in the form of internal strength and definite internal strategy if they have to innovate successfully. Younger and smaller firms which are “entrepreneurial” in nature and which are innovative contributed to higher sales growth of SMEs compared to older and larger firms which are “salary-substitute firms” in nature and which are not innovative.

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Introduction

Small and Medium Enterprises (SMEs) are significant contributors to employment generation, economic growth and economic dynamics of both developing and developed economies. One of the most important means through which SMEs are able to make these contributions is their capability to realise innovations (Keizer et al., 2002). Among firms of different sizes, SMEs are generally more flexible, adapt themselves better, close to their customers and are better placed to develop and implement new ideas (Laforet and Tann, 2006; Madrid-Guijarro et al., 2009). These qualities along

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with their simple organisational structure, their low risk and receptivity are in fact essential features facilitating them to be innovative (The World Bank, 2010).

The ability of SMEs to innovate assumes significance because innovation is widely recognised as a key factor in the competitiveness of nations, regions and firms (Madrid-Guijarro et al., 2009; Hong and Jung, 2012). Technological innovation has the potential to spur growth of individual enterprises at the micro level and give a new dimension to industry growth at the macro level. Among firms of different sizes, SMEs including start-ups, across industries and economies have the unrealised innovation potential (Chaminade and Van-Lauridsen, 2006).

Small firms that successfully embrace innovation increase their chances of survival and growth (Cefis and Marsili, 2006). Innovation is of crucial importance for fast growing SMEs (Coad and Rao, 2008). SMEs that carry out product innovations will achieve greater growth rates than those that do not (Sole and Capelleras, 2011).

Considering the above, there are two pertinent issues concerning SME innovation:

- (i) What factors differentiate innovative SMEs from non-innovative SMEs?
- (ii) Does innovation differentiate growth of SMEs?

This paper is an attempt to answer these two questions, in the context of engineering industry SMEs in Bangalore, Karnataka state of India. There is relatively less research conducted in the context of emerging economies like India to throw light on these two issues and therefore the present study assumes significance. Karnataka is one amongst the industrially better developed states in the country (Government of Karnataka, 2009). Further, Bangalore occupies a unique position in India as it is known internationally as India's "high-tech city" (Department of Industries and Commerce website, 2013). Bangalore is considered one of the 46 "global hubs of technological innovation" (UNDP, 2001) and it is one of the globally known technology cities in the world (Rogers et al., 2001). Bangalore has many nationally renowned educational and research institutions and R&D centres of Multinational Corporations (MNCs) (DST, 2010). Bangalore (urban district) accounted for the highest annual registration of SMEs (indicating that start-ups are emerging on a rapid scale here) and therefore highest share of SMEs among all the districts of Karnataka (Directorate of Industries & Commerce website, 2013). Therefore, undertaking a study covering SMEs of Bangalore is justified to throw ample light on the two research issues.

The remaining sections of the paper are organised as follows. Section 'SMEs and technological innovations: definitions of concepts' comprises definitions of concepts, and Section 'Research setting: review of literature' describes the research setting of the paper based on review of literature pertaining to the core theme, and presents the conceptual framework developed on the identified research gaps. The objectives, scope, data sources and methods of analysis are elaborated in Section 'Objectives, scope and method of analysis'. The objectives are analysed and inferences are drawn in Section 'Factors distinguishing innovative and non-innovative SMEs and their growth: results and discussion' and Section 'Inferences and conclusions' presents the conclusions and policy implications.

SMEs and technological innovations: definitions of concepts

SMEs in this paper have been defined in terms of investment in plant and machinery only. Accordingly, SMEs include manufacturing enterprises in the auto components, electronics and machine tool industries having original investment in plant and machinery up to Rs. 100 million as of 2006/07. This is in line with the definition of Micro, Small and Medium Enterprises Development Act, 2006 of Government of India (Ministry of MSMEs website, 2013).

Innovation in this paper refers to only technological innovations. The most widely accepted definition of technological innovation is that of Organization for Economic Cooperation and Development (OECD, 1997). A technological product innovation is the implementation/commercialisation of a product with improved performance characteristics such as to deliver objectively new or improved services to the consumer. A technological process innovation is the implementation/adoption of new or significantly improved production or delivery methods. It may involve changes in equipment, human resources, working methods or a combination of these.

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