A Review Paper on Information and Communication Technology and Small Scale Industrial Units of Northern India.

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ABSTRACT

The present paper is based on the objective of impact of ICT on small scale Industrial Units of India. An attempt to discuss the different challenges in the sector and overcoming them to make the Small Scale Industries competitive. SMEs play a central role in the overall growth of the industrial economy of the country. Rather, Small and medium Enterprises in India are known as the backbone of the economy. The reason behind is that these enterprises are employing about 40% of India's workforce and contributing 45% to India's manufacturing output, they play a significant role in generating millions of jobs, especially at the low-skill level. The country's 1.3 million SMEs account for 40% of India's total exports. The current scenario clearly states that the growth of our economy is impossible without the growth and development of these enterprises but these enterprises are far behind the large counterparts in the economy.

1. INTRODUCTION & OVERVIEW

Information Technology (IT) provides an opportunity for businesses to improve their efficiency and effectiveness, and even to gain competitive advantage. The Micro, Small and Medium Enterprise (MSME) sector constitute an important fragment of the Indian economy in terms of its contribution to the country's industrial production, exports, employment and creation of consumerist base (Nanjudappa, D.M.2002). But in India SME's lack competitiveness. Competitiveness describes the ability of Small-Scale Industries (SSIs) to generate income/output and Maintain employment levels in the face of domestic and global competition. Consequently, in the absence of competitiveness, SSIs may face the problem of sickness or closure (Narayana, 2004). India is one of the very few countries to have consistently supported small-scale enterprises in order to promote greater employment and perhaps also a more egalitarian distribution of wealth. This led to the growth of small enterprises in terms of output, employment and exports. Since the time of independence, the small-scale sector in India has been a major contributor to country's Gross Domestic Product (GDP). Phrases such as 'lifeblood of the economy' are used by politicians to describe SMEs' contribution to the economic welfare of society. Small and medium business types are well-known for its strong roots and foundation. Through the experience and aid coming from the financial institutions, the small and medium enterprise can compete in both domestic and international market. Small and Medium Enterprises (SMEs) play a vital role for the growth of Indian economy by contributing 45% of industrial output, 40% of exports, creating 1.3 million jobs every year and produce more than 8000 quality products

for the Indian and international markets. SME's contribution towards GDP in 2012 was around 22% which is expected to increase in 2012. There are approximately 30 million MSME Units in India and 12 million people are expected to join the workforce in the next three years. SMEs are the fountain head of several innovations in manufacturing and service sectors, which plays a major role in the supply chain of corporate and the PSUs. SMEs are now exposed to greater opportunities than ever for expansion and diversification across the sectors. . The sector is viewed as the strategic thrust for the future and one of the greatest agents of growth. The policy based changes; investments into the sector, globalization, and India's growth story have opened up several latent business opportunities in the sector. Small and medium enterprises (SMEs) have been the backbone of the Indian economy. In recent years the MSME sector has consistently registered higher growth rate as compared to the overall growth of the industrial sector. There exists several definitions of the term small and medium enterprises (SMEs), varying from country to country and varying between the sources reporting SME statistics.

Enterprise	**Investment**	
	Manufacturing Sector	**Service Sector**
Micro	**Does not exceed twenty-five lakh rupees**	**Does not exceed ten lakh rupees**
Small	**More than twenty-five lakhs but less than five crore rupees**	**More than ten lakhs but less than two crore rupees**
Medium	**More than five crores but less than ten crore rupees**	**More than two crores but less than five crore rupees**

The main focus is on exploring the opportunities that new technologies present to SMB with the purpose to usage of information technology for competitive advantages in both local and international markets. Firstly, the paper highlighted the concept of SMB and information access and their uses and secondly, described SMB in India and ICT infrastructure. Information technology is having a significant impact in sector of SMB, especially where industries are in decline or when uneployment levels are high. In developing countries, SMB development is drawing attention too and modern trends of businesses and information technology usages are taking place.

Literature Review

Gallouj (2002) classifies literature on service innovation into three main categories: (i) Technological approach, which takes into consideration the introduction and diffusion of new technologies into services, which may have improved their productivity and other performance; (ii) Service-orientated approach, which regards innovation in the manufacturing and service industries as being different, and emphasises the

"peculiarity" of services related to, for example, non-technological innovation; and (iii) Integrative approach, which investigates the boundary between goods and services, and develops a framework to bridge the gap between them. Despite the different views of innovation in the service industries, one key agreement seems to have been reached, i.e. service innovation is deemed to be a crucial factor of competitiveness and growth of services (Hauknes, 1998). The present study, which looks into the question of how ICT and organisational change may jointly contribute to the superior performance of services, follows the technological approach (for example, see Sirilli and Evangelista, 1998; Soete and Miozzo, 1989), while also taking into account the importance of non-technological innovation, as emphasised in the service-orientated approach. Indeed, the heterogeneity of service activities (across industries) may matter in terms of how different services benefit deferentially from innovation. This is why Soete and Miozzo found it necessary to extend Pavitt's (1984) taxonomy of sectoral patterns of technical change by proposing a specific taxonomy for services, which seriously takes into account the heterogeneous characteristics across these industries. Pavitt's taxonomy, which consists of Science-based, Specialised-suppliers, Scale-intensive and Supplied-dominated industries, places all services into one category (namely, Supplier-dominated). Based on trajectories of innovation in services, Soete and Miozzo's taxonomy suggests that only some service industries are supplier-dominated, for example, health, education, public and social services. Two other groups are, in fact, technology-intensive, and these are Scale-intensive physical network industries and Information network industries (for example, wholesale, transport, communication, insurance and financial services), and Science-based and specialised supplier industries (for example, software and business services). micro and SMEs are major providers of new jobs (Audretsch et al., 2002), increasing understanding of the key determinants of their success is essential. It is understood that SMEs in pursuit of organizational goals do not adopt the marketing concept to the same extent as larger firms (Pollard and Jemicz, 2006), and that marketing practice in SMEs is situation specific, and variable, regarding the levels of sophistication and effectiveness (Hill, 2001). "However, it is recognized that small firm owner -managers do engage in marketing, but that the form this marketing takes is not fully understood" (O'Donnell, 2004).

More recent research (Balabanis and Katsikea, 2003) has also reported a positive association between entrepreneurial orientation and export performance, though moderated by contextual variables such as organizational and environmental factors. Studies have shown that entrepreneurial orientation of the owner or manager has also been found to have a positive relationship with performance and competitiveness (Covin and Slevin, 1991; Entrialgo et al., 2001; Hult, Snow and Kandemir, 2003; Ibeh, 2004; Kickul and Gundry, 2002; Marino and Weaver, 2002; Wiklund, 1999). Kazem and van Der Heijden, (2006) have argued that a firm's ownership, regardless of size or structure, is characterized by a particular entrepreneurial orientation, certain decision-making style, and by a set of operational strategies. As with larger companies, SMEs must generate sales to survive, but need to market their products to generate sales (Carson, 1993). SME growth stems from engaging in some form of marketing activity, which will focus on attaining and

retaining competitive advantage by engaging in marketing practice, that addresses market share, market development, product promotion, product pricing, product differentiation and distribution(Carter and Tzokas, 1999).The marketing function in SMEs is hindered by constraints such as poor cash flow, lack of marketing expertise, business size and strategic customer-related problems (Doole et al., 2006).

Objectives of the Study

1. Finding out the factors of ICT which affects manufacturing Units of Small Scale Industries
2. To assess the role participate by the various player in the Small Scale Enterprises

The work done on the research paper is of exploratory nature. It endeavors to explore the problems associated with the 150 Small Scale Industrial Units in the sampling frame and explore the growth prospects of the industry. The secondary data was used as a framework for the research study; the primary data from the industry sources was collected primarily to know the literal nature and the quantum of the various parameters under the research study to authenticate and add-on the secondary data and to check its accuracy and significance. The information was collected through a face to face situation from the sampling frame and through *'non probability judgment sampling'* method and the sectors chosen for the research were handicraft, textiles and the leather industry spanning the states of Himachal Pradesh, Punjab and Haryana because of the known contacts and the ease of the data availability from the Small Scale Industries.

Analysis and Findings:

Effective use of ICT for productive purposes can make tremendous difference in competiveness outcomes. Therefore this individual **SME** competiveness amongst themselves might collectively translate into positive results for the national economies i.e. more job creation, more revenue generation and overall country competitiveness.

According to the literature from Cameroon, there might be several factors that can explain this slow adoption of ICT in the countries manufacturing industry; however the following are just of the few factors leading to these unsuccessful results as far as ICT involvement is concerned in the country.

- Inappropriate telecommunication infrastructures
- Lack of knowledge of the potential of ICT to meet enterprises needs
- Cost of ICT Equipments are to high.

Analysis of previous researches done in the sector and drawing conclusions that it can be rightly said there should be a clear participation of the government. The roles to be participated by different players are discussed below:

Government: The government is the most important entity in the renewal of the Small Scale industry. It should create and develop a business friendly environment enabling Small Scale Industry to start exports or to strengthen the already exporting companies by checking the corruption that hinders the growth of Small Scale Industries. The government should adopt measures to improve SME's access to finance by providing

credits to SMEs directly from state owned banks, liquidity incentives to commercial banks that provide loans to the sector, interest rate subsidies, guarantee programs, etc.

IMF: International Monetary Fund can help in the improvement of the SME finance programmes in the framework of existing inter-regional, regional and sub-regional trade agreements. Funded projects aimed at micro or macro levels in the sector can be highly helpful for the sector.

Private Sector:. Clustering is a very important initiative to group the SMEs according to their specialty and make them compete at the international level. Lessons from the successful clusters and industrial districts like those in China, Italy and can be considered and execute in the sector. One important project which can be undertaken by the established large players in the country to stabilize and promote the SMEs can be the co-branding exercise. Most of the SME products are unbranded and the successful marketing entities in the industry can accommodate related SMEs in their marketing campaigns locally and globally. The concept is made mandatory recently and many organizations are associated with the society in form of education, health, development, etc in India in varying degrees. Initiatives targeted at the sector can be market oriented, employees oriented, society oriented like health awareness, child education etc or environment oriented like green initiatives which can be aimed at making the Indian MSME sector competitive.

Multilateral Financial Institution: There should be coordination between financial and non-financial support institutions so that the SMEs access the medium to long term finance at preferential interest rates and export development investment funds (EDIF) to improve the performance of SMEs at comparative low interest rates. The international community should also enhance SME export credit and long term finance under the new Basel II accord in lieu with the Bank for International Settlements (BIS) for industrial and MSME policies.

Conclusion:

It is encouraging the development of SMB sector as a way to diversify Indian economy. Information technology usage in SMBs in India is finding fast usage too. ICT systems are one of the important organizational resources for the firms of manufacturing industry. Small and Medium Scale Enterprises should seriously invest in Information and communication Technology to improve its manufacturing capacity. The government and private sector can participate central role in supporting to enhance the relationship between the ICT and Small Scale Enterprises, It has to be understood that although they are some challenges related with the implementation of ICT in the manufacturing industry. A small business managed by leaders who understands the benefits of IT adoption will be able to take advantage of the promised benefits of IT adoption, including improved organizational efficiency and effectiveness. Large No of enterprises could not function properly and productively without the accomplishment of ICT which help in manufacture and information management in the new changing environment. The Small Scale Industry

can fight internationally in precise function. Small Scale Industries can also associate themselves with Large Scale Industries or MNC in form of co-branding.

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