Abstract

Information technology had a great impact in all aspects of life and the global economy is currently undergoing fundamental transformation. Information technology has very real impact in most of industries and in all aspects of economy, while businesses and enterprises continue to undergo considerable changes. Usage of these technologies is revolutionizing the rules of business, resulting in structural transformation of enterprises. Modern businesses are not possible without help of information technology, which is having a significant impact on the operations of Small and Medium sized Enterprises (SME) and it is claimed to be essential for the survival and growth of economies in general.

SME is drawing attention in developed and developing countries as well as in transition countries. It is generally recognized that SME play a key role in the revitalization and development of national economy in many countries. It is encouraging the development of SME and the role that SME sector can play in promoting economic and social development by creating opportunities for employment.

Key words: Information technology, Small and Medium sized Enterprises (SME), Business, Economy.

Introduction

Information technology (IT) provides all enterprises with a lot of opportunities for their business activities. Small and medium enterprises (SMEs) have been considered one of the ‘driving forces’ of modern economies due to their multifaceted contributions in terms of technological innovations, employment generation, export promotion, etc. Of these, the ability of SMEs to innovate assumes
significance because innovation lends competitive edge to firms, industries and ultimately, economies. Therefore, technological innovation has the potential to spur growth of individual enterprises at the micro level and aggregate industries and economies at the macro level.

A well-thought out SME-driven entrepreneurial ecosystem can take the industry and India to its next level of development. These enterprises can also be called as the back bone of the Indian GDP growth. The SME sector is growing at a very rapid pace with GDP growth around 19% in 2010-11 and proving to be beneficial to the Indian economy. All agree upon the importance at Information & communication Technology adoption in SME. The past decade has witnessed stupendous growth in the Indian information technology (IT) sector — a sector that is now considered an important engine of growth in the Indian economy. Indian IT industry has successfully exploited the increased demand for IT services arising from the incidence of the Y2K event, e-commerce, off-shoring activities, and business process outsourcing (BPO) activities, among others. Consequently, there has been remarkable growth in new service lines — particularly in IT-enabled services (ITeS) and research and development (R&D) services. The phenomenal growth of the Indian IT software, IT services, and ITeS-BPO sectors has resulted in an immense multiplier effect on national income and employment generation in the new era. This paper attempts to understand issues such as what factors drive SMEs to innovate, what are the IT solutions for SME, and what are the outcomes of these achievements. Therefore it is highly apparent that usage and adoption of IT in SMEs are very critical for the world. This paper attempts to understand problems and solutions of IT in SME.

**Literature Review**

According to Lee and Baek (2001) although there is no reason to believe IT is any more critical to large corporations than to small businesses, the challenges faced by small businesses are different from those of larger corporations. SMEs have to keep pace with technological changes if they want to keep a competitive edge. Technology is an important factor for the competitiveness of SMEs in several aspects: product and production techniques, management methods, firm organization and staff training. Benefits can take a number of forms, such as efficiency gains, increased management effectiveness and improved business performance. Fink (1998). SMEs are regarded “poor” in human, financial and material resources. IT can be used as a business tool to reduce costs, create stronger links with customers, innovate and facilitate niche marketing Fuller (1996). Estimates of small business use of computers have ranged from below 30% to about 80%, depending on the location, size and nature of the business Palvia and Palvia (1999). While the trend appears to indicate an increased use of IT, this is mainly operational and administrative tasks, rather than for strategic and decision-making purposes Brock (2000). Decision making tends to be short-term and intuitive, focusing on reaction rather than anticipation. IT suitable in such situations needs to be robust and available quickly, preferably as packages Fink (1998). On the other hand, lack of in-house IT expertise and lack of resources have caused SMEs to rely more extensively on outside help. The relative benefits of IT enables new technology to do better than the technology it supersedes, thereby creating greater operational efficiency and management effectiveness Fink (1998). Organizational readiness is a major influence on IT in SMEs. Owners and managers have a dominant role in the organization and also in the IT adoption. Blackburn and McClure (1998). Owners’ and managers’ motivations, values, attitudes and abilities dominate organizational culture. For that reason they need both an awareness of the IT which is shaping the future of the firm and the courage to create changes in organizational culture required to support IT functions Culkin and Smith (2000).
According to Martin and Matlay (2001), the intuitive nature of management and operation styles impact significantly on technology evaluation and implementation. Also owner-manager is described as an important source of information on the process, as is the other key staff participating in technology adoption and implementation. Research suggests that business owners and managers with positive attitude are inclined to be more successful in adopting and implementing new technology Ogbonna and Harris (2005). IT adoption is summarized as using some form of IT to support business operations and decision making. It is commonly argued that the greater the adoption and use of IT, the more likely it is that a firm will embark on international activities Davis and Harveston (2000). It has also been theorized that increased adoption and use of IT is likely to bestow firms with superior performance and competitive advantage over local and international competitors. It has also been found that perceived benefits of internet such as market development, efficiency of sale and promotion, ease of accessibility and cost reduction were significant factors on SMEs willingness to adopt new technologies such as electronic commerce. However, SME adoption of IT has a slow response and limited progression and lack of IT knowledge delays adoption, the development of internal IT skills combined with top management’s knowledge and attitudes towards IT adoption produce the competences required to achieve higher levels of success with IT adoption. Although the diffusion of IT to SMEs is rapidly increasing, there are still doubts about the proper usage and adoption of it in these enterprises. There have been a research Fink (1998) for identifying the factors affecting the usage and adoption of IT in SMEs where these factors can be mainly categorized as IT resources, top management’s commitment and expected benefits of IT. Thus, this longitudinal and exploratory study has been conducted to seek the usage and adoption of IT.

Concept of SME and information access and use in SME

New technologies had a great impact on all aspects of life and the global society and economy is undergoing a fundamental transformation. Society is changing and is becoming “knowledge society” more dependent on new technologies, with a new economy or “knowledge economy”. In such a society, in order to be successful, SME would need high quality information and must always provide superior value, better than competitors, when it comes to quality, price and services. SME are often seen as vital for the growth and innovation of economies and the longterm of economic development of the countries depends on the promotion of SME sector Ramsey (2003). Behind this lies an common recognition that SME play an important and a key role in revitalization and development of national economy in many countries, by providing various goods and services, forming a structure of division of labour and developing regional economies and communities Kaibori (2001). Furthermore, SME are considered key agents of social and economic growth and are increasingly becoming the most vital part of the economy since they play a key role in fostering growth, creating jobs and reducing poverty. Globalization of world economy and technological developments in the two decades of twentieth century have transformed the majority of wealth creating work from physically based to knowledge based and has greatly enhanced the values of information to business organisation by offering new business opportunities. Information and knowledge are replacing capital and energy as the primary wealth creating assets. Information has become a critical resource, a priceless product and basic input to progress and development. Information has become synonymous with power. Therefore, accurate, rapid and relevant information are considered to be essential for SME. SME would need as well as effective information systems to support and to deliver information to the different users. Such information systems would include those technology that support decision making, provide effective interface between users and computer technology and
provide information for the managers on the day-to-day operations of the enterprises. Information is needed for various purposes and serve as an invaluable commodity or product. Information is very important aspect of decision making in all levels of management in enterprises especially in competitive business environment and managers utilize information as a resource to plan, organize, staff administer and control activities in ways that achieve the enterprises objectives. The ability of SME’s to realize their goals depends on how well the organisation acquires, interprets, synthesises, evaluate and understands information and how well its information channales supports organisational process. Information technology is one of the most important factors of any production activity and technological changes can have profound consequences. These technology will continue to enable the growth of global work, where SME operate across national boundaries. Today, new technologies, especially Internet technology are changing the global flows of information, trade and investment and the competitive advantage of industries, services and regions. These changes are requiring from all enterprises, no matter of their size to invest in the adoption of new technology. The ability of SME to survive in an increasingly competitive and global environment is largely influenced upon their capacity to access information as a resource and usage of new technologies. Greater use of these technologies is often associated with improved availability of information, quality of work, effectiveness and efficiency in accomplishing tasks. This trends will develop rapidly over next years and capabilities will steadily increase accompanied by greater easy of use. Information technology will continue to be first importance in the development of the countries, economies and enterprises. Taking in to the consideration the full potential of these technologies, they may also play an important role in the future.

**IT Usage in SME**

- IT has reduced overall work load
- IT implementation requires a lot of time on needs analysis
- The company supports key IT employees for training
- IT in the company is at the very initial stage of adoption
- IT creates/increases chances of unauthorized use of data
- IT systems are used for making long term strategic decisions
- The company encourages all employees to use IT at work
- IT has increased frequency of internal communication
- IT has redefined roles and responsibilities of supervisors
- IT systems output are considered very reliable by users
- IT has helped in expanding business
- IT systems are used for day to day decisions
- IT has modified the way of doing business
• IT systems are considered “friendly” by users
• IT has decreased overall cost of the business
• IT has helped in increasing customer satisfaction
• IT systems are used for automating routine tasks
• IT has helped integrating different functions
• IT implementation requires a lot of time on needs analysis

Implications of IT adoption in SME
While the benefits of using IT are more than obvious, the question was "then why have SMEs traditionally shied away from it?" Some of the key reasons for this were:

• **IT awareness:** There is a huge need to invest in educating the SMEs about the tangible benefits that technology can bring to their business

• **Relevance of IT solutions:** SMEs require typical business and industry-specific core processes and it is critical that the solutions brought to them are tailor-made as per their specific requirements

• **Finances and affordability:** For SMEs to adopt any IT solution for their business growth, it's imperative that cost of these solutions outweigh the value provided to them. The challenge in accessing adequate and timely financing on competitive terms particularly longer tenure loans, which have been exacerbated by the current global financial crisis.

• **Accessibility:** Limited access to larger markets in terms of market linkages, transport, telecommunications, and information exchange undermine the demand for their products.

• **Infrastructure:** With the economy opening up, poor physical infrastructure hurts the productivity and the competitiveness of Indian SMEs vis-a-vis imports.

IT solutions for SMEs
Trends in solution allocations are a good parameter of how technology spending is affected due to changes in priorities and business within organisations.

**Corporate administration:** This feature supports administrative functions for basic business operations, including accounting, payroll, human resources, and general office automation and procurement.

**Manufacturing operations:** This feature supports the core operational area for manufacturers, involving design and production of products. This solution area includes solutions targeted at plant-level business and manufacturing processes, including specific machine and tooling operations.

**Customer interface:** This feature allows manufacturers to target, track, market, and respond to customers. These include providing product and customer support, as well as direct marketing and selling.

**Supply chain:** This feature supports the company’s process for planning, implementing, and controlling
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the flow of goods, services, and information from suppliers to customers, including processes associated with inbound, outbound, internal, and external movements, and the return of products for repair and recall purposes.

Conclusion

Information technology usage in SMEs in India is finding fast usage too. Improvement of information technology infrastructure in SME’s is perceived to be as critical in creating employment and job opportunities. Consequently, their level of information technology usage remained high there are various factors attributed to low adoption of IT such as: the lack of access to credit, inadequate information make informed decision, the lack of expertise, digital illiteracy, high cost of access to information technology infrastructure and high taxation. Without using of information technology today, SME will have serious and fatal consequences in the future and will imply the risk of lagging behind economically with all the implications that this entails. In particular, if we take in consideration that information technology presents a critical factor of development of economy in general and SME’s in particular. This technology should be used by SME’s in India as a powerful tool to obtain competitive advantages, produce high added value products and processes and develop competitive strategies within a business, regionally and internationally, implement programs to promote sustainable regional integration and create conductive environment that would stimulate the SME’s competitiveness in the regional environment. The government should be involved in providing environment to support and help SME’s to better use information technology and increase the countries competitiveness, productivity and growth through investment in Information technology, e-business and new business models.

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