The Importance of ICT: Supporting the Business Readiness of Small and Medium Sized Enterprises

Arati Devi
Student, Kurukshetra University, INDIA

Corresponding Author: aratisindhu@gmail.com

ABSTRACT
This study aims to examine the role of ICT in the survival of selected SMEs in India. The study employed descriptive technique to conduct the survey. Using a sample of 100 SMEs, accidental sampling of non-probability technique was used to gather data and information. The study argues that majority of SMEs operators do use at least one ICT tool in supporting their operations within the India. The study revealed that ICT is good and helps business survival in difficult times and become competitive in support of literature reviewed. The study suggested that periodic training in the form of workshops and sensitization programs on the benefits and the use ICT resources in business growth strategies should be organized by National Board for Small-Scale Industries (NBSSI). SME operators can also outsource their ICT delivery systems by engaging ICT consultants in order to avoid the problem of funding relating to the setting up of their own ICT system which usually requires huge initial capital outlay. The primary policy recommendation arising out of this is that applications for SMEs need to be developed using mobile phones.

Keywords--- Small and Medium Scale Enterprises, Information and Communication Technology, Academic Research

I. INTRODUCTION
New technological development puts new demands on companies, or provides new possibilities for developing or improving market activities as well as products. One example of such technological development is the employment of information technology among industrial companies doing business (Deeter-Schmelz, 2002, Pires and Aisbett, 2003). There are many different information technologies, hence also various possibilities for companies to use them as they conduct their exchanges. (Archer and Yuan, 2000, Borders et al., 2001, Egan et al., 2003, Mukhopadhyay and Kekre, 2002, Ovalle and Marquez, 2003, Prasad et al., 2001) Some solutions make it possible for users that are geographically dispersed to share data bases and messages to be copied and delivered instantly to a vast number of receivers (Claycomb et al., 2004, Deeter-Schmelz, 2002, Reunis et al., 2005, Öhrwall Rönnbäck, 2002). Using for example Electronic Data Interchange (EDI) is a way of letting some information flows go entirely via information technology, such as the ordering of products and information on delivery, or for payment (Angeles and Nath, 2000). Having integrated EDI increases efficiency and permits business relationships to save time and reduce costs. (Hill and Scudder, 2002, Laage-Hellman, 1989) The development of information technology in business has occupied the attention of researchers in recent years (Chatfield and Yetton, 2000, Leek et al., 2003, Vlosky and Smith, 1993, Wilson and Vlosky, 1998).

One established view on business in academic research is to study business between companies is to study it as taking place in business relationships of long term orientation. Such business relationships contain elements of business, information and social elements and there are a number of studies imposing the impact of information technology on those different elements (cf. Leek et al., 2003, Pires and Aisbett, 2003, Reunis et al., 2005, Wu et al., 2003). While some proclaim that information technology increases relationship efficiency other researchers state the negative impact of information technology. The impact of information technology on, for example, content of industrial exchange is discussed by a number of researchers. (cf. Burgelman and Doz, 2001, Mukhopadhyay and Kekre, 2002, Osmonbekow et al., 2002, Sharma et al, 2001). Research within this field on how information technology impacts on different relationship dimensions is extensive, but the specific area on how information technology impacts on social interaction of business relationships has received little
attention. Following the demands of contemporary research for new studies, this paper studies the use of information technology in the setting of industrial business relationships and its impact on the social dimension.

As business is conducted between two companies, people from them meet in order to exchange information on everything involving the product and the business. Over time the two parties get to know each other and thus a social dimension develops in the business relationship, through the interaction.

It is suggested in this paper that when information technology is employed in a business relationship, it may change or replace former ways of exchanging information and one aspect of such change could be an effect on the social interaction. Social interaction involves the meeting between people from the two companies doing business and so meetings are of interest for the study of social interaction. The social dimension of business relationships is in itself a vast area for research and so this paper narrows down by studying one specific aspect. The topic is the need for personal meetings in business relationships and how the need changes when the level of use of information technology varies in business relationships. As meetings are part of the information exchange it is plausible the need for them would decrease or increase as information technology is used.

II. THE PRACTICE OF IT

During the period from 2001 – 2004, an on-line survey sponsored by the Cutter Consortium (a technology industry research organization; www.cutter.com) collected data from Chief Information Officers (CIOs), Chief Technology Officers (CTOs), technology managers, Chief Executive Officers (CEOs), Chief Financial Officers (CFOs), technology consultants and vendors about the content of the field, the skill sets necessary to succeed, and the technologies most likely to be applied, neglected or decommissioned (Cutter Consortium, 2004). Over one thousand professionals responded to the survey. The survey data was subsequently presented to – and validated by – the Villanova University CIO Advisory Council, which consists of twenty-five Chief Information Officers from the Philadelphia region. The data suggested that the practice of the field is organizing itself around five layers and two flanks.

Figure 1 presents the business technology layers and flanks that can be used to identify and describe the skills necessary to succeed in the early 21st century. The knowledge and skills areas that follow are derived from the five layers and two flanks and presented in Appendix A.
IV. BUSINESS PROCESS MANAGEMENT ON SMALL- TO MEDIUM SIZED ENTERPRISES

According to BPM (business process management) is a concept of process enterprise management when business processes are treated as the special enterprise resources which are continuously adapting to the constant changes. Herewith, the basic principles of management are the clarity and visibility of business processes which is reached by modeling with the usage of appropriate formal notations, software, simulation, monitoring and analysis, as well as the ability of dynamically restructuring of business process models by participants and by means of software systems. The key reason of the limited usage of most BPM concepts by small and mediumsized businesses is the lack of confidence of entrepreneurs in receiving the benefits of BPM-making, adherence to obsolete management principles, which together with the incompleteness of information due to the limited resources and high risks during the implementation of software supporting business process management, prevents the development of business. For understanding the trends of BPM at small and medium-sized enterprises one needs to identify the distinctive features of SMEs related to their organizational structure, common strategies and to examine the sociological context.

According to, SMEs could be characterized by the following characteristics, which distinguish them from large enterprises:

1. Specialization and individuality. SMEs act on business markets that are not covered by large enterprises. Characterized by a high specialization and individuality many SMEs pursue a segmentation or niche strategy that leads to a certain strength in competition.

2. Proximity to markets. Compared with large enterprises, SMEs are strongly focused on their end-users allowing a high proximity to markets. Instead of focusing on exchangeable products or services for anonymous markets like large enterprises SMEs provide services oriented at the customer's needs.

3. Flexibility. Quickness to react and reorient themselves on business changes is a major characteristic of SMEs. This flexibility in decision making and implementing organizational changes is archived by preferring simplicity and flexibility regarding their processes and organizational structures.

4. Limited resources. SMEs are limited like all companies by tight resources, especially missing IT literacy and financial resources. Missing know-how can be compensated with basis knowledge of many areas due to the fact that employees at SMEs are generally "all-rounders" and are good at multi-tasking.

5. Technical heterogeneity. Smaller firms often lack coherent Information and Communication Technology (ICT) strategy or the related skills. For instance, IT landscapes consist of heterogeneous systems, reaching from Enterprise Resource Planning Systems (ERP) to spreadsheet-based island applications for conducting their every-day business transaction.

At the current moment, a certain amount of BPM practices and approaches are described in the literature. Developed in BPM scheme is universal and can be used as a base and for SMEs as well. An essential prerequisite for the implementation of projects on the introduction or improvement of business process management on any enterprise is process modelling. According to the procedure of the project which is aimed at the reorganization process is shown in Figure 2:

![Figure 2: The procedure of a project aimed at the restructuring of business processes.](image)

V. FRAMEWORK FOR COMPETITIVE ANALYSIS

According to Michael Porter, a firm can survive and succeed in the long run if it successfully develops strategies to confront five competitive forces that shape the structure of competition in its industry. These include:

1. Rivalry of competitors within its industry
2. Threat of new entrants
3. Threat of substitutes
4. Bargaining power of customers
5. Bargaining power of suppliers

Porter advanced the idea that competition in any industry is rooted in its principal economic structure, so that it is more than a superficial game of moves and countermoves among participating firms. This approach is reflected in the framework he proposed to explain; i.e. the dynamics of competition in an industry. A Variety Of Competitive Strategies Can Be Developed To Help A Firm Confront These Competitive Forces.
As IT impacts the products, services, or operations of a business, it may change the relationship between an industry and its suppliers. For example, the use of complex production line systems by the auto industry is forcing robots producers to become much more quality conscious. When industries become much more dependent upon IT, the bargaining power of the IT supplier will become an important force for a firm to consider planning strategy. It also changes the level of sophistication of some industries' suppliers.

IT also affects the buyer bargaining power of industries, such as new products, services, and distribution channels. For example, buyers in the banking industry can now choose products and services from several channels. The buyer industry relationship has been fundamentally changed by Automated teller machine (ATMs), point-of-sale terminals (POSs), and electronic home banking.

Table 1: Variety Of Competitive Strategies

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<th>Variety of Competitive Strategies</th>
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<tr>
<td><strong>Cost Leadership Strategy</strong></td>
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<td>Become a low cost producer of products and services - Find ways to help suppliers or customers reduce their costs - Increase the costs of competitors.</td>
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<tr>
<td><strong>Differentiation Strategy</strong></td>
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<td>Develop ways to differentiate products and services from competitors - Reduce the differentiation advantages of competitors.</td>
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<tr>
<td><strong>Innovation Strategy</strong></td>
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<td>Find new ways of doing business: a) develop new products &amp; services b) enter new markets or marketing segments. c) establish new business alliances d) find new ways of producing products/services e) find new ways of distributing products/services</td>
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<tr>
<td><strong>Growth Strategies</strong></td>
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<td>Significantly expand the company’s capacity to produce goods and services - Expand into global markets - Diversify into new products and services - Integrate into related products and services.</td>
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<tr>
<td><strong>Alliance Strategies</strong></td>
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<td>Establish new business linkages and alliances with customers, suppliers, competitors, consultants and other companies (mergers, acquisitions, joint ventures, forming virtual companies, etc.)</td>
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Finally, IT changes industry structure by affecting the rivalry bases among intra-industry competitors. By introducing a new competitive weapon into various settings, IT sparks outbreaks of firm warfare. For example, recently, ICICI bank has introduced TV banking and i-zone to serve the customers as a new weapon to improve the bank’s position in its competitive environment.

VI. CONCLUSION

The research sought to assess the Role of Information And Communication Technology (ICT) in the Survival of Small and Medium Scale Enterprises (SMEs) : Evidence from Koforidua. From the research conducted, it is clear that there are quite worrying state of affairs in relation to the use of ICT in enhancing business growth strategies of SMEs within the Municipality. Generally, the respondents admitted that ICT can help improve the survival status of SMEs. However, the usage is limited to mobile phone leaving out chunk of the tools and their application or usage.

The role of ICT in improving business survival, delivery services and innovations in SME is ongoing but much needs to be done. ICT provides the bedrock on which SMEs can build their business information systems aimed at improving their business processes, customer relations and efficient delivery of goods and services to satisfy the needs of cherished customers. It is obviously clear from the findings that ICT infrastructure and innovations are insignificantly available in SMEs within the municipality. Reasons such as poor knowledge about ICT, lack of qualified personnel and high cost of software, high cost of hardware and its implementation were mainly cited as the challenge preventing the smooth implementation of ICT resources.

Periodic training in the form of workshops and sensitization programs on the benefits and the use ICT resources in business growth strategies should be organized by National Board for Small-Scale Industries (NBSSI) for SME operators to create more awareness in order to enhance their preparedness to institute ICT programs aimed at improving their business operations. SMEs themselves should invest in educating their staff and management about ICT and its benefits.

REFERENCES