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A REVIEW ON THE USE OF INFORMATION COMMUNICATION TECHNOLOGY BY SMALL AND MEDIUM SIZED ENTERPRISES

Dr Pritish Chandra Vaish
Assistant Professor, Department of Applied Economics, Kalicharan PG College, Chowk, Lucknow

ABSTRACT
Despite the significant contribution that information communication technology (ICT) has made to business, prior studies indicated that there is a large number of unsuccessful ICT implementations in small and medium sized enterprises (SMEs). Moreover, literature also indicated that SMEs' utilization of ICT tools is reported to below worldwide, while that is also the case with SMEs.
This research paper was aim to identify the ICT tools used by SMEs, the areas in which they are used, and the benefits companies perceive from such use. Findings of this research study with 153 SMEs suggested that the most popular ICT tool is email, used by 88% of surveyed entities. Emails contain knowledge and information that is not codified in any knowledge repository. The main area of enterprise where employees use new technologies is marketing, as confirmed by 44% of the surveyed entities. About 79% of the companies surveyed recognize that the use of new technologies brings benefits, which translate into an increase in the company's profits. To stimulate the development of SMEs companies, this study found that it is important to support the development of modern ICT tools for economic growth.
Keywords: Information communication technology (ICT) tools, ICT use, ICT benefits

1. INTRODUCTION

Small and medium size enterprises (SMEs) play an important role in economic development by creating employment, while helping to raise the income levels of a majority of the people both in developed and developing countries. These enterprises are the driving force for Gross Domestic Product (GDP) growth. The economic growth of any country is closely linked with SMEs' development. According to Chibelushi (2008), "For many SMEs innovation is not about "blue-sky" research.
The flow of information and the development of information technologies are currently the foundation for the development of competitiveness. ICT tools are the facilitators in acquiring information and changing it into knowledge, which in turn becomes a prerequisite for winning clients and increasing the company's value.
Alam and Noor (2009) noted that the majority of the empirical research related to ICT adoption is based on large companies and that usually SMEs are characterized as lacking knowledge about the possible advantages of ICT. But the use of ICT can improve business competitiveness, with the Internet, providing opportunities for SMEs to compete equally with larger enterprises (Alberto & Fernando, 2007). Furthermore, it has been recognized that not all SMEs have to implement ICT tools in the same level of complexity. It can be stated, that there is no "one-sizefits-all" ICT policy across different industries, as different sectors use ICT differently and will adopt them at a different pace (Kotelnikov, 2007). Therefore, there is a need of holistic examination of ICT adoption by looking at the tools that are used by SMEs and the benefits these tools bring. Moreover, although the literature review highlights the importance of ICT adoption it also finds a major lack of research on ICT adoption amongst SMEs. This paper undertakes to fill this gap in the context of small and medium

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sized enterprises as part of the Statutory Research executed by the Management Institute (KZiF/S/35/16).

This research is particularly relevant to India, where the country faces the challenge of replacing current growth drivers such as low labour costs but the smart use of ICT is an important success factor for the competitiveness of companies, in particular for SMEs (European Commission,2008). The next section provides an overview of Internet based ICT adoption, followed by an explanation of the research methodology and an analysis of the research findings.

2.LITERATURE REVIEW

Internet-Based ICTUs

Currently, economies witness for the first time in the history the impact of technology evolution on the way that businesses operate. As indicated by prior literature:

"First, it has changed the industry structures and altered the degree of competition.

Second, it has created a competitive advantage for the businesses, which have adopted ICTs in their business processes. Third, it has affected business operations. These changes compel SMEs to adopt ICTs in their business processes to cope with these challenges in their business environment."(Ongori, 2008, pp. 13-14)

The next ICT advancement is associated with a personal computer (PC) with basic software. Even without Internet connectivity, SMEs can use PCs for basic word processing, accounting, and other business practices. The use of advanced ICT to improve business processes falls into the category of e- business."

Having access to the Internet, SMEs are able to use more advanced communication tools as pointed out by Tan, Choy, Lin, and Eze (2010) such as: e-mails, file sharing, creating websites, and e-commerce.

However, the SMEs operating in the production sector may adopt more complex Information Technology (IT) tools such as the Enterprise Resource Planning (ERP) or inventory management software. While use of ICT appears to be highly beneficial to companies, Kotelnikov (2007) noted that not all SMEs need to use ICT to the same degree of advancement. Adoption depends on many factors, including the maturity of the SMEs or the presence of regional and foreign markets. In this paper, Internet based ICT adoption is generally referred to as to the use of ICT tools, which consist of computers and software. Particularly, adoption means the decision to use Internet-based ICT to communicate and/or conduct business with stakeholders.

ICT Benefits

Adoption of ICTs could potentially provide many benefits inside and outside business processes or transactions. ICTs' adoption was documented in prior literature to improve information flow and knowledge management in companies, reduce transaction costs, increase the speed and reliability of transactions for both business- to-business (B2B) as well as business-to-consumer(B2C) though the use of e- commerce (Ongori & Migiro,2010).

In addition, ICT tools were found to help improve external communications and quality of services for current or new customers (OECD, 2004). Similar to large businesses in the global market, access to information is a critical factor for the success and survival of SMEs (Rasmussen, 1997). Effective use of ICT enables SMEs to compete with large business by selling their products to international markets (Ramsey, Ibbotson, Bell, & Gray, 2003). Thus, ICTs can be used as a foundation on which to base the business strategy of SMEs (Maguire, Koh, & Magrys, 2007).

3.METHODOLOGY

This section presents results from a subset of data gathered as part of a larger research project into SMEs carried out by the Institute of Management at the War saw School of Economics (Statutory Research of Management Institute, 2016) on a sample of 153 companies. Whilst the larger research project aims to describe the SMEs environment, a subset of the data was analysed (Sołek-Borowska,2017a,b) with a view to identifying the knowledge management systems in use at these

companies. Consequently, the focus of this paper is on the particular ICT tools that the SMEs utilize in their daily operations.
This study tried to describe the SMEs landscape in general. Therefore, the data on ICT systems used by SMEs is analyzed, which complements there search from2016(Statutory Research of Management Institute,2016).

4.RESEARCH FINDINGS AND ANALYSIS

ICT tools used by small and medium sized enterprises

The emergence of new ICTs, from simple e-mail accessible from anywhere via the Internet and Intranet, more sophisticated audio and video conferencing, common electronic boards or groups established in the network have helped businesses significantly overcome the distance and time barrier. Technical infrastructure is meant to be an important facilitator in a knowledge-based economy. Such an infrastructure plays a critical role in the organization's knowledge management system. To create, use, and share new knowledge, the exchange of existing knowledge must be facilitated through the introduction of different technology platforms (SołekBorowska, 2017b).
To create knowledge sharing opportunities, an organization must develop a comprehensive IT infrastructure. Knowledge can be created and transferred in the organization using technical infrastructure. Technology includes tools, systems, platforms and automated solutions that affect the development, use, and distribution of organizational knowledge (Coukous, 2001). These include chat, SharePoint, Skype, electronic boards, team viewer, and Google platform. Technological platforms can help to stimulate the flow of knowledge, but their impact on knowledge sharing must be investigated when taking into account a cultural and organizational context to see how employees are encouraged to develop and share their knowledge (Clarke & Rollo, 2001).

Areas of ICT use

The development of Internet and Internet-based technologies strongly favors small and medium enterprises by providing tools that make it much easier to optimize their operations and, above all, expand their circle of clients. The wealth of services offered over the Internet also makes it particularly beneficial SMEs. According to Brzozowski (2010), these benefits are, among others
– Global auditorium
– Interactivity
– The possibility of adapting to the individual needs of the recipient
– Relatively low communication costs
– Attractive form of communication (animations, music, video sequences, etc.)
– Lack of temporary and spatial restrictions on access
– Relative ease of use (intuitive interface)
– Low level of regulation
– A system of easy connection with documents referenced in the application (hyperlinks) – Standardization of the transmission protocol
– Easy to update
The key advantage of SMEs is the fact that these companies are closer to the 'client,' especially if the relationship is long established. Therefore, they can dispense with intermediaries while achieving service improvements and reducing costs. On the other hand, the client becomes more demanding. They have the right to comment on product features, express her/his opinion, and become an active creator of new products or their improvement by being a 'prosumer.' More than ever before, the client has gained the right to comment on the product and the company on an extremely significant scale. Comments expressed by Internet users can be both positive and negative, while Internet users immediately notice any attempt to "clean up" negative comments. In an increasingly competitive market, the key factors in a company's success change. Traditional elements of competitive advantage such as product quality or price are replaced by the quality of the company-customer relationship.

Benefits of Internet Based ICT Use

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The identification of specific business benefits should be the basis for any decision to use new solutions in the area of new technologies to support business processes in the company. Even if the direct purchase cost of these solutions is small or subsidized by external entities, it should always be justified by the business need. Therefore, an important research area is to answer the question: are SMEs perceive the benefits of using new technologies in accordance with the concept of sustainable development? Generally, among the benefits resulting from changes in the operational model due to the introduction of new ICT solutions that support the implementation of processes between enterprises, it can distinguish, among others, the benefits of process automation. Automation resulting from the application of new ICT tools usually consists in eliminating the work of people in the processes taking place in the enterprise and replacing the paper flow with the flow of data in an electronic form

ICT Systems Utilized by SMEs

The development of contemporary enterprises is inseparably connected with the use of ICTs. Because of the growing complexity of connections within the company and its relationship with the external environment there is a need to implement new and updated information systems supporting Supply Chain Management (SCM) and Customer Relationship Management (CRM). The next stage may be the creation of software integrating, distinctive systems into one system of Strategic Enterprise Management (SEM) (Sadza, 2001). Companies more often decide to implement Knowledge Management System (KMS) when they appreciate the value of information and knowledge. Enterprises often face a dilemma about whether it is better to buy a ready-made solution, or to build a KMS from scratch and adapt it to their own specific needs. The basic problem with ready-made products is that the ontologies and mechanisms coded in them do not always correspond to the organization's needs. KMSs are implemented in order to meet the expectations of the high-level management in relation investment returns or to increase the effectiveness of the company. Unfortunately, these expectations often remain unfulfilled, because the main emphasis is placed on the technological side of the enterprise, forgetting to take into account the strategy of the company and the final buyer (Jashapara, 2014).

5.Limitations, Implications, and Direction of Further Research

This study could be further expanded to include a larger sample for better generalize ability of results. Cross-country comparison might provide interesting insights. Further in- depth research can be carried out on the issues raised in this paper both in or other countries. The findings suggest that ICT adoption is no longer a choice but a must across the different types of SMEs. The SMEs ought to be aware that they need to be innovative not just by offering unique products and services but also through the adoption of the latest technology to complement their market offerings and strengthen their internal operations.

6.CONCLUSION

In summary, it can be concluded that SMEs belong to the group of 'turtles', namely entities where the level of use of new technologies is less than 30%: the leading examples of technologies used here are the computer, Internet access and implementation of MS Office. The 'turtles' typology was developed by Boston Consulting Group(2011),by analysing companies from the SME sector in 2014. The most popular and commonly used instrument is the email, used by 88% of entities. Emails contain knowledge and information that is not codified in any knowledge repository. In second place is still the landline phone - 71% of respondents. This may be due to habit, as there are many platforms with which to contact your partner or contractor, including being able to see them. In third place, respondents indicated Skype - 70%. Skype offers the possibility of making free online calls with few interlocutors for a small fee for calls to landlines in their country and abroad.

This research confirms that compared to large enterprises, SMEs rarely invest in new ICTs because of limited financial resources (Nunes, Annansingh, Eaglestone, & Wakefield, 2006). Many of these companies still rely on traditional methods of storing data in files or folders on a hard disk in a

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computer (Egbu, Hari, & Renukappa, 2005), which is in line with earlier research results. Public knowledge and information stored must be appropriate and truthful to prevent mistakes.

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