



EMPOWERING SMALL AND MEDIUM ENTERPRISES (SMEs) WITH INFORMATION COMMUNICATION TECHNOLOGIES (ICTs): GLOBAL PERSPECTIVE

Dr. Henry Ongori¹

¹Coordinator, Postgraduate School Management, Mount Kenya University, Lodwar Campus, Lodwar, Kenya.

ABSTRACT

SMES contribution to both developing and developed economies cannot be underestimated specifically in breeding of entrepreneurs and job creation opportunities. Although its contribution is well felt across spheres of these economies but most of SMEs have not adopted ICTs in their business processes. ICTs adoption in SMEs as suggested by previous scholars enables SMEs to access to international and global markets to market their products. Therefore, the purpose of the study is to investigate how SMEs could be empowered with ICTs so that they will increase their profitability. In addition, ICTs adoption in SMEs assists SMEs in new product development, market research and quick access of information. The major findings indicate that ICTs adoption empowers SMEs in new product development, Innovation and quick accessibility of information. The conceptual framework proposed would assist SMEs owners/managers and other stakeholders to identify, understand and appreciate the importance of ICTs adoption in SMEs.

KEYWORDS: Adoption, Empowerment, Global. Information and Communication Technologies, international, Small and Medium Enterprises.

INTRODUCTION

SMEs play great role in eradication of poverty and in wealth creation. However, SMEs which have adopted ICTs in their business processes are in a position to benefit in terms of accessibility to local and global markets to market their products. There are some barriers to ICTs adoption by SMEs. For instance, SMEs owner/Managers are not aware about the benefits of ICTs adoption. SMEs use many ICTs tools in their business such as personal computers, internet, faxes, photocopier machines, and many others. Previous studies (Tiemo, 2012; Consoli, 2012; Mokaya, 2012; Modimogale and Kroeze, 2011; Ongori, 2009) consents that SMEs which have adopted ICTs in their

business processes are in the position to be innovative, increase their productivity, gather market intelligence information and access to international and global markets and increase their profit margins

Therefore, the purpose of this study is to investigate how SMEs can be empowered by adoption of ICTs in their business process to increase their profitability.

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Definitions of ICTs and SMEs:-

Information and Communication Technologies (ICTs) refers to all computer assisted devices that help to facilitate the dissemination and retrieval of information

around the world (Tiemo, 2012). Cuevas-Vargas, Enriquez, Adame and Servin, (2015) defines ICTs as Technologies dedicated to the storage, processing and communicating of information. Furthermore, ICTs are defined as the array of primarily digital technologies designed to collect, organize, store, process and communicate information within and external to an organisation (Modimogale and Kroeze, 2011). ICTs are a complex and heterogeneous set of application and services used to produce, distribute, process and transform information (Odewoye and Akanbi, 2012). According to Taylor, (2015) defines ICTs as a wide range of software, hardware, telecommunications and Information Communication Technologies applications and devices. Njau, Waiganjo and Kamau, (2015) defines ICTs as technologies used to generate, process, store and disseminate information. Nduati, Ombui and Kagiri (2015) define ICTs as a range of technologies for gathering, storing, processing, analyzing and transmitting information. ICTs can be defined as a wide range of software, hardware, telecommunication and information management technologies, applications and devices and are used to create, produce, analyse, process, package, distribution, receive, retrieve, store and transform information (Tiemo, 2012; Barba-Sanchez, Martinez-Ruiz and Jimenez-Zario, 2007). Kushwaha, (2011) has defined ICTs as tools that help people use to share, distribute and gather information and to communicate with one another, one on one or in groups, through using computers and interconnected networks.

The definition of SMEs varies from one country to another. Usually SMEs are defined in terms of number of employees, sales turnover, capital employed or the size of the organisation. However, most scholars are in

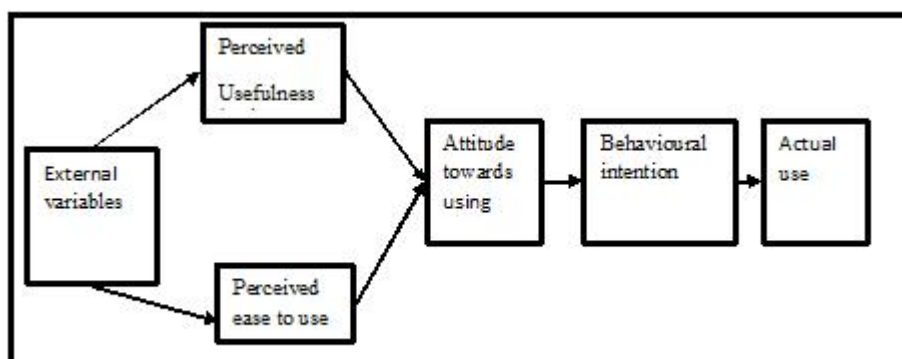
consensus that there is no universally accepted definition of SMEs. According to Nduati *et al.*, (2015) defines SMEs as those businesses with head count of fewer than 50-250 employees. In Nigeria, SMEs are defined as business organisations employing more than two hundred employees whose capital is less than two million Naira (Tiemo, 2012).

Theories of ICTs adoption in SMEs:-

There are various theories and models in the literature that have informed studies on ICTs adoption by SMEs such as the Diffusion of Innovation Theory (Rogers, 1995), Technology Acceptance Model (Davis *et al.*, (1989) and The Organisational Theory (Avgerou and Conford, 1999). But in this study the Technology Acceptance model and organisation theory were used because they sheds light on how ICTs adoption takes place in SMEs and elaborates the benefits of ICTs adoption in business.

The Technology Acceptance model (TAM) is an information systems theory that explains how users come to accept and use technology in organisations as indicated in figure 1. The Technology Acceptance Model explains new innovation acceptance and diagnoses problems in advance before the users have own experiences. This model suggests that when a user is presented with new technology, a number of factors influence their decision regarding how and when they will use it. For example, on one hand, perceived usefulness (PU) is defined by Davis (1989) as the degree to which the user believes that using a particular system would enhance his or her job performance. On the other hand, perceived ease of use (PEOU) is also defined by Davis (1989) as the degree to which a person believes that using a particular system would be free from effort (Davis, 1989).

Figure 1 Technology Acceptance Model



Source: Davis, Bagozzi and Warsaw, (1989)

This theory is relevant to this study because the theory gives an overview of the benefits of ICTs adoption in SMEs. The theory also sheds light on the challenges and benefits of adoption of ICTs in business. Thus, lack of acceptance by the user is a significant impediment in the process of SMEs adoption of ICTs. Therefore, SMEs owners /manager should be ready to ICTs adoption their business processes. Bagozi argued that TAM will be a deterministic model in the sense that an individual's act was assumed to be totally determined by his intention to act but assumed that individual intentions could be subjected to evaluation and reflection, which might affect the person to reformulate his intention and even to take a different course of action. Hence, TAM model will not be suitable for explaining and predicting the new technology use in business (Gilbert, Balestrini and Littleboy, 2004).

The organisational theory is designed to understand the nature of the organisations. Organisations would evaluate their overall performance by putting in place the right structures. This theory helps one to understand how processes such as change and decision making can be managed in organisations. Further, the theory states that the success of any innovation systems in an organisation depends highly on the effectiveness of management within an organisation (Avgerou and Conford, 1998). The theory explains that any change which takes place in an organisation must be supported by the management. Therefore, the process of ICTs adoption in SMEs needs the support of management because management provides the necessary resources and good environment to ensure that change is successfully implemented in organisation.

EMPOWERING SMEs WITH ICTs

Previous studies (Nduati *et al.*, 2015; Njau *et al.*, 2015; Mokaya, 2012; Consoli, 2012.; Ongori and Migiro, 2010; Ongori, 2009; Sevrani and Bahiti, 2008) posit that ICTs adoption by SMEs leads to reduction in operational costs, broadens the market base either locally or globally, creation of employment opportunities, generation of revenue and enhances SMEs competitiveness. ICTs enables SMEs in creating new opportunities by designing and delivery of digital goods, allowing firms also to increase the margins and revenue by accessing foreign markets directly (Al-Esmail and Ashrafi, 2012). ICTs adoption in SMEs enables SMEs in creating customer base and in the long run increase sales and their profitability. Basically ICTs tools adoption by SMEs assist SMEs in many ways. First, they give more visibility to the business enterprises (corporate image). Secondly, ICTs tool enables SMEs to access to more and accurate information. Thirdly, ICTs

allows SMEs to overcome traditional barriers of trade and finally, ICTs facilitates the financial transactions of SMEs (Manochechri *et al.*, 2012). Thus, ICTs tools such as internet assist SMEs to access to international and global market. This enables SMEs to sell their products and increase their profits margins in this era of competition.

ICTs adoption in SMEs enables SMEs to re-engineer internal processes especially in personnel training and suppliers- customers interaction becomes easier (Consoli, 2012). The role of ICTs in SMEs cannot be underestimated especially in improving performance, accelerating growth expansion of the business and development of new products. ICTs adoption in SMEs assists SMEs in production, dissemination and enhancing economic growth, job creation and welfare of SMEs. ICTs adoption by SMEs helps SMEs to increase their efficiency in terms of increased market base, expanded product range, customized products and better response to customer demands or needs. This process paints a positive image of SMEs in terms of improving profitability. SMEs which have not adopted ICTs in their business processes are not in a position to reduce their operational costs and manage of inventory effectively and efficiently.

The adoption of ICTs in SMEs especially the internet enables SMEs to improve in operational efficiency, competitiveness and profitability (Suriyapperuma, Yajid, Khatibi and Premanarathne, 2015). Internet adoption as one of the ICTs tool enables SMEs to access to international and global market and facilitates SMEs to access to local and international opportunities. In the long run it increases the profitability of SMEs in the business environment. ICTs adoption by SMEs assists SMEs to cut costs and improve efficiency, provides better customer service (Ladokun, Osunwole and Olaoye, 2013). This enables SMEs to increase their customers base because the customers who are satisfied with their products or service will market the products of SMEs and will lead to increase of profit margin of SMEs.

According to Ladokun *et al.* (2014) ICTs adoption by SMEs assist SMEs in developing capabilities for managing information which is very critical for strategic planning and making important decision which affects the operation of SMEs. In addition ICTs adoption makes SMEs to enjoy advantages of reduced costs, develop capacity for information gathering and dissemination of international scale and gain access to rapid flow of information. ICTs adoption enables SMEs to decrease costs, increase organisational capabilities and also assist in inter-organisational coordination. Access to global markets and customers enables SMEs to explore offshore markets and

achieve economies of scale, increase performance and accelerates growth of SMEs (Dan, 2014).

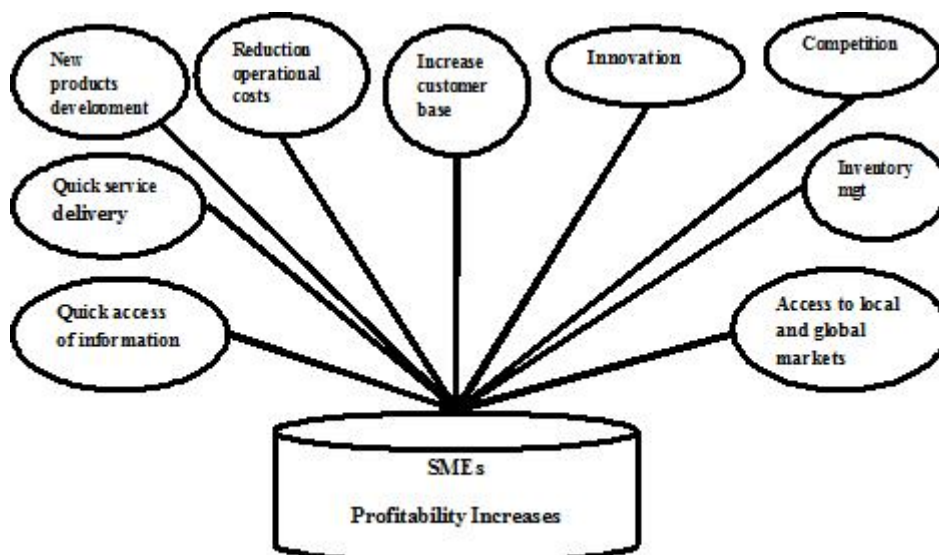
SMEs which have adopted ICTs in their business processes are in a position to increase competition, resulting to lower prices of the products, improve the channels of distribution and finally improve the internal processes of SMEs. Adoption of advanced ICTs tool by SMES enables SMEs to manage the supply chain management of inventory effectively and increase sales through its efficient management and quick service deliveries to their customers (Sevrani and Bahiti, 2008). SMEs are considered as seed belt for entrepreneurial development and as a major source of innovation and growth in an economy (Akomen-Bonsu and Sampong, 2015). SMEs contributes a lot in terms of job creation opportunities because most its activities are labour intensive (Gilaninia, Mousavian, Omidvari, Bakrshallpour, Eftekhari and Sieghalani, 2012) and therefore, ICTs adoption in their business processes is very critical for their survival, growth and sustainability.

ICTs adoption by SMEs inspires SMEs owner/managers to improve information sharing, decision making, coordination of all activities, product quality, responsiveness and distribution (Odewoye and Akanbi, 2012). Furthermore, ICTs adoption by SMEs leads to

expansion of customer base, raise productivity, controlling cost, working remotely, fast and accurate decision making and facilitates collaborates with other businesses(Kushwaha, 2011). ICTs adoption by SMEs improves in new product development or services, improves operational processes and guide management in decision making process because of quick accessibility of information. In addition, ICTs adoption by SMEs ensures that SMEs access to global market and reduce transaction costs, facilitates access to potential customers and suppliers, productivity improvements, customization of products and services and information exchange and management (Dan, 2014). All these would have a long run effect in the improvement of profitability of SMEs which is critical for its sustainability, growth and development.

The conceptual framework depicted in figure 2 consists of critical constructs in empowering SMEs with ICTs. Thus SME can be empowered with ICTs adoption in their business processes and these will results to reduction of operational costs, encourages innovation, increase competition, led to new product development, increase of customer base, quick access of information and finally proper management of inventory will prevail. The end result of the empowerment process will lead to increase of profitability of SMEs.

Figure 2 Conceptual framework



The methodology adopted in this study is critical review of documents related to Information and communication technologies and SMEs.

RECOMMENDATIONS

There following recommendations have been developed from critical review of literature of ICTs adoption by SMEs. SMEs need to be supported by all means

possible to adopt ICTs in their business processes in the sense that SMEs contribution in both developing and developed countries cannot be overlooked more especially in creation of job opportunities. The following recommendations should be taken into consideration so the degree of ICTs adoption in SMEs can be enhanced.

- ✓ The government should ensure that owner/managers understand the importance of ICTs adoption in their business process. In this way SMEs will stand a better chance to reap the benefits of ICTs adoption.
- ✓ Although, ICTs adoption in SMEs is not panacea to all SMEs challenges, SMEs owner/managers must know that ICTs adoption is critical for their survival, growth and development. Therefore, the government should continue assisting SMEs to adopt ICTs in their business processes to tap the benefits of ICTs adoption.
- ✓ ICTs tools manufactured to be used by SMEs should take into account the latest technology and they should be tailored to the needs of SMEs.
- ✓ SMEs owners/managers play a great role in ICTs adoption by SMEs. Therefore, SMEs owners/managers must put in place structures and resources to support any change they are introducing in an organisation especially ICTs adoption by SMEs. Thus, the organisation theory supports this idea in the sense that any innovation and change which takes place in an organisation must be supported by management.

CONCLUSION AND IMPLICATION OF THE STUDY

SMEs need to be assisted by all means to adopt ICTs in their business process. SMEs which have adopted ICTs in their business process are in a better position to reap more benefits, increase customer base and leads to quick access of information to assist SMEs owners/managers to make informed decisions. This study will assist policy makers and other stakeholders to come up with various ways to assist SMEs to adopt ICTs in their business. Future researchers should assess the challenges and role of government support SMEs in ICTs adoption.

The limitation of the study is that it was based on secondary data and therefore, need for primary data to validate the findings of this study.

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