

**THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY ON THE PERFORMANCE OF
SMALL BUSINESSES IN TANZANIA**

A case of Selected Small Businesses in Arusha District Council

Student's name: Anold Eliapenda¹

Supervisor's name: Mishael Abduel²

ABSTRACT

This study assessed the role of information communication technology on the performance of small businesses in Tanzania, using the selected small businesses in Arusha District Council. A total sample of 80 were used with the population consists of Arusha District Council business officials and small businesses. Both probability and non-probability sampling were used in this study. This study employed descriptive research design the data were collected from 80 respondents. Quantitative data were analyzed using descriptive statistics such as mean and standard deviation. Qualitative data were analyzed using content analysis. The respondents of the study believe to a good extent that use of information and communication technology has led to the growth and expansion of small business through provisioning of market opportunities, growth on the volume of sales and international marketing penetration. The study also shows that, the use of information and communication technology has led to better quality of products and services offered by small businesses as well as resulting to improved customer satisfaction. It is recommended that Provided that this study has concluded that the use if ICT has a significant positive impact on the performance of small businesses in Arusha District Council, the researcher suggests the following measures to be taken into consideration to help small business boost their performance through the use of information and communication technology around the area as well as for other local government authorities in Tanzania. It is recommended that, the government of Tanzania should consider mobilizing resources geared at creating awareness on and encouraging use of available information and communication technology tools at the disposal of the business entities to the maximum possible extent in order to enhance their performance. It should also provide incentives and support to encourage the upcoming of business support ventures that develop ICT based solutions for the small business operators such as software applications for business management at the affordable costs. All these will help improve the general understanding of the importance of ICT tools on business operations in the existing business competitive environment as well as ensuring that the adequate and suitable ICT tools are available at any point in time. They should progressively expand the knowledge base of the SMEs owners and operators by organizing more workshops and seminars to expose the business owners and operators on to the grounds of such technology.

Key Words: information communication technology, performance, small businesses

1.0 INTRODUCTION

In Tanzania, the use of ICT in small business still remains a challenge. However, in large companies and financial institutions such as banks, insurance companies and Government Parastatals such as Tanzania Revenue Authority are harvesting greatly from investing in ICT (Davis, 2019). In Tanzania, a number of small and medium enterprises have been increasing rapidly for the past two decades with the majority based in the rural areas. According to the national and small enterprise baseline survey (URT, 2007); about 1.3 million small enterprises were in Kenya employing about 2.4 million people. Their share to GDP was estimated at 18.8% second to agriculture having increased from 13.8 in 1993.

The Economic strategy for wealth and employment creation 2003 – 2007 (URT, 2007), indicates that about 25% of all households engage in some form of small business activity with the majority depending on their business for all household income. In 2012 the SME segment contributed over 80% of the countries employment with majority of new jobs being created in that sector (430,000 out of 503,000 new jobs created in 2019) and contributes about 20% to the country's GDP (URT, 2012). Arusha District Council has a total number of 3,578 businesses. According to the Business License Act No. 25 of 1972 all businesses are supposed to have license. Total number of 2,474 is licensed businesses while 1,104 are not licensed (Arusha District Council Website, 2018). Most of these business people are not using ICT in performing their business, hence it is the intention of this study to assess whether or not if the use of information and communication technology has contributed to the performance of small businesses in the area

Small businesses are playing a crucial role in the economy of every country. Competitive economy today needs the development and support of private sectors particularly small businesses. This requires training, building infrastructure and facilities to transfer knowledge and technology to stimulate creativity and entrepreneurship. ICT promotes changes in organizations, and is a good stimulant to SME development, since it helps in finding the new business models, raise awareness, saves time and promote price transparency (Gago, 2017).

The performance of small business that are using ICT remains unconvincing, the output levels expected from ICT investment in such small business is not directly proportional to better goods and services, expanded market and reduced cost. In developed countries, small businesses contribute up to 60% of the GDP compared to Tanzania where the contribution is 20% (OECD, 2013). This is being attributed to lack of expertise on proper use and management of ICT systems, rigid market that prefers traditional methods of business and existence of middlemen within the supply chain hinders e- business complicating effective usage of ICT. Emphasis on impact of information and communication technology on increase in productivity is an issue of much concern to the government of Tanzania. Small businesses can maximize economic possibilities and benefits if well informed ICT strategy is embraced.

However, many small businesses in developing countries including Tanzania remain unconvinced of the value of ICT and only 28.2% of them are using a computer-based medium such as email, and 76% of small businesses makes no annual investment in ICT. This is a rational trend (Nieler, 2003). Due to this fact, it was the interest of the researcher to find out the role of information and communication technology on the

performance of small businesses in Arusha District Council, and if they know how important is ICT to their businesses. Despite of its importance, most small business in Tanzania are still using old tools, therefore staying competitive is a challenge. The interesting question for this study will be therefore, to what extent do small business in Arusha District Council use ICT to improve their performance and what are the factors that hinders them towards the use ICT.

2.0 LITERATURE REVIEW

Theoretical Literature Review

Innovation and Diffusion Theory

The idea of innovation is about presenting adopters with new means of solving problems and that is encouragement for organization moving towards technology adoption (Rogers, 1995: Runge & Lee, 2002; Thong, 1999). Rogers (1995) proposed a model of the innovation-decision process that emphasizes the role of individual behavior in the technology adoption process. The model relates actions and choices during which an individual evaluate a new innovation and decides whether or not to incorporate it into an ongoing practice. The perceived advantage of adoption and the associated uncertainty are distinctive aspects of innovation decision making process. Small business owner/managers would normally decide whether to adopt an innovation. During the decision process, the owners/managers would gather information from various sources and attempt to determine the innovations' utility. They will assess the proposed innovations' relative advantage, compatibility with existing systems, complexity, trial ability and observability to decide whether or not to adopt the new innovation (Kendall, et al., 2001; Rogers, 1995).

The weakness of this theory is based on the assumption that it is an individual who will evaluate a new innovation and decides whether or not to incorporate it into an ongoing practice.

The Strengths of this theory is that, it originated in communication to explain how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behavior, or product.

Empirical Literature Review

Ollo (2015) state that the use of ICT enables strategic management, communication, collaboration, information access, decision making, data management and knowledge management in organizations. ICT causes fundamental changes in the nature and application of technology in businesses. ICT can provide powerful strategic and tactical tools for organizations, which, if properly applied and used, could bring great advantages in promoting and strengthening their competitiveness (Ramsey, 2015). Rao (2001), state that ICT enables organizations to decrease costs and increase capabilities and thus assist to shape interorganizational coordination. The use of ICT can assist to lower coordination cost and increase outsourcing in organizations. ICT is used to exchange information and it provides a medium for learning.

Ramsey (2003) noted that organizations generally stand to gain from ICT in areas such as reduced transaction costs, information gathering and dissemination, inventory control, and quality control.

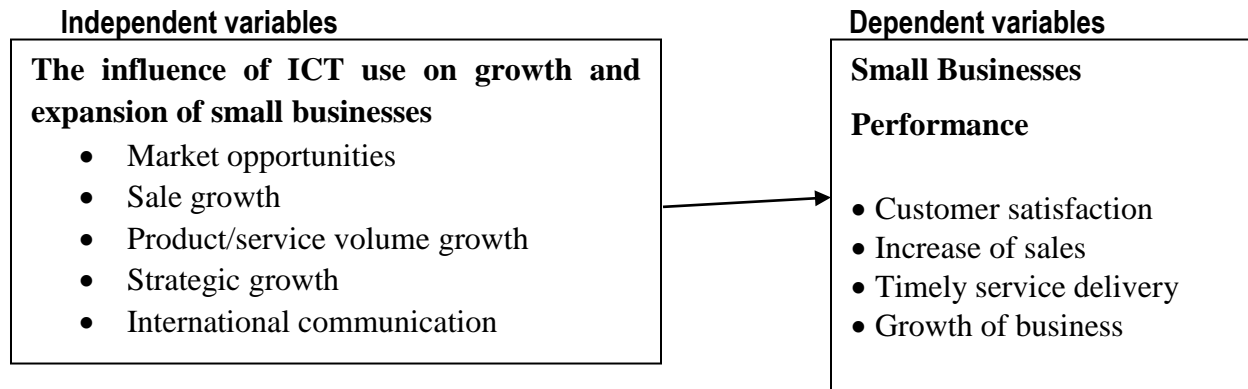
Information and communication technology play a key role in market access and is the main core of any marketing system. Market access in developing countries is a major challenge to small businesses due to market imperfections that can be attributed to lack of market information, lack of linkages between the factors in the supply chain, distortions or absence of input and output markets, high transaction cost and high presence of trade intermediaries. Different strategies exist for improving market access of which the use of ICT is one. Strategies that enhance market access greatly impacts the performance of small enterprises (Shepherd, 2007). Potential benefits of ICT to small business include enhancing efficiency, reducing costs and broadening the market both locally and globally, empowering small business to participate in the knowledge economy by facilitating connectivity; helping to create and deliver products and services on a global scale and providing access to new markets (Ritchie, 2015).

ICT can significantly impact the market –oriented dimensions of products and services (Ritchie & Bridley, 2005). Market –oriented ICT include websites which display the goods, services and information of a firm on the worldwide-web (WWW). It can also integrate the e-commerce functionality, such as offering the ability to place orders. The WWW is a powerful platform for expanding and reaching new markets for small business while the Internet is critical in enhancing a firm's market reach and operational efficiency. ICT offers small businesses flexibility in trading by enabling 24 hours of trading, borderless market space and leverage small business to compete against larger enterprises on the same platform. In addition, ICT facilitates remote access to knowledge, suppliers and a borderless environment, offering small business the ability to deliver products and services on a different platform that is easily accessible. ICT can be used to reduce barriers of entry into different market segments exposing small business to a wider customer base (Schindler, 2017).

Shin (2019) noted that ICT, especially the internet, have a significant impact on the operations of small business by facilitating their access to global markets, enabling them to sell to international customers, and to compete favorably with large corporations. Strategic use of ICT is viewed as near solutions to firm's problems. ICT has the potential to reduce the impacts of distance, reduce transaction costs, be used in information gathering and dissemination, inventory control, and quality control. It enables small business to participate in the regional and international markets which are strategic for competitiveness, growth and further development.

Conceptual Framework

The conceptual framework demonstrates on the relationship between the independent and dependent variable. In this sense, the conceptual framework shall illustrate the relationship between the effectiveness of occupational health and safety as the independent variable and construction project as the dependent variable.



3.0 RESEARCH METHODOLOGY

Research design is “the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedures” by Kothari (2004). Research design explains how chosen method were applied to answer particular research question. This research adopted descriptive research design. Descriptive research method was employed in this study in order to describe, observe, and document occurring phenomenon where, mean and standard deviation were used for looking statistically the significance of the variable construct. For the case of this study data were measured through five-point rickets scale for dependent and independent variables to obtain results and evidence on the determination of the role of information and communication technology on the performance of small businesses in the selected area. The study used a mixed research approach where by both quantitative and qualitative approaches were employed. Quantitative approach is characterized by the collection of information which can be analyzed numerically while qualitative approach is characterized by the collection of narratives from respondents (Bouma-Prediger, 2010). Therefore, the use of mixed approach enabled the researcher to achieve the main objective of this study. The advantage of the mixed research approach is that they complement each other thus the researcher was able to associate the information collected from respondents. In this study, a population consists of Arusha District Council business officials and small businesses with the sample of 80 respondents. random sampling was employed for selection of sample of small business, this is because the population of small businesses in the selected area of study is so large therefore it is suitable to use random sampling in order to get a representative sample, this method also eliminates all elements of biasness when selecting a representative sample. Purposive sampling was used in selecting the business officials that will be included in this study. The researcher w asked all the mentioned business officials to participate in the study for the purpose of giving more insight.

The researcher obtained the information that was available on how no-use of information communication technology affects small businesses performance and vice versa.

Interview was used to collect information from the respondents that questionnaires could otherwise not be able to collect. Interview guides were prepared by the researcher in order to have consistency in asking questions. A pilot study was carried out to determine the validity of the interview guides, where the responses of the subjects were checked against the research objectives. Questionnaires were preferred in this study due to the fact that they enable the researcher to reach the target group with the minimum cost in terms of time and other sources. A researcher believed that, it is through questionnaires that the respondents were able to provide information at their own prudence or discretion. Hence, it helped to avoid any direct influence contrary to other methods like interviews where the researcher may have direct influence in modifying respondent's answers.

The study had two types of data to be analyzed. The data were analyzed using Statistical Package for Social Sciences (SPSS) version 20. Quantitative data were analyzed using descriptive statistics such as mean and standard deviation. Quantitative data were entered and coded on SPSS version 20. Qualitative data were analyzed using content analysis. Data were grouped into themes and analysed into categories accordingly. Direct quotations from respondents were used as justification to their answers. In presentation of findings, the researcher showed if and how the data from descriptive statistics and content analysis relates

4.0 Findings and Presentation

4.1 Data Analysis in Relation to Specific Objectives

The study analyzed descriptive statistics based on the following observed variables:

4.2.1 The influence of ICT use on growth and expansion of small business

The researcher sought to examine the influence of ICT use on growth and expansion of small business. Respondents were to respond by ticking most appropriate option ranging from 1= Strongly Disagree, 2 = Disagree, 3 = Undecided, 4= Agree, 5= Strongly Agree. Scale of mean score interpretation was as follows: Respondents had to respond to five items in the questionnaire under this section. The results of analysis are shown in Table 4.4. Based on the mean values, mean score of 1 to 1.8 represent Strongly Disagree, 1.81 To 2.60 represent disagree, 2.61 To 3.40 represent undecided, 3.41 To 4.20 represent agree and 4.21 To 5.00 represent strongly agree.

Table 4.1: the influence of ICT use on growth and expansion of small business

Statements	N	Mean	Std. Dev	Interpretation
Market opportunities	99	3.54	1.232	Agree
Sale growth	99	3.45	1.395	Agree
Product/service volume growth	99	3.26	1.516	Undecided
Strategic growth	99	2.92	1.192	Undecided
International marketing penetration	99	4.60	4.123	Strongly Agree

Source: Field Data (2021)

The findings in table 4.1 indicate that the respondents believed to a good extent that use of information and communication technology has led to the growth of the business through volume of sales. Table 4.4 presents findings about ICT use has an influence on the growth and expansion of small business. The mean score differed from one item to another. This shows that respondents had different opinion about the influence of ICT use on growth and expansion of small business. Specifically, respondents agreed that ICT has influence on market opportunities and sales growth with the mean value (M=3.54 and S. D= 0.232, M=3.45 and S.D= 0.395). Findings further indicated respondents were undecided about the influence of ICT on product/service volume growth and strategic growth with the mean value (M=3.26 and S. D= 0.516, M=2.92 and S. D= 0.192). Result from the questionnaires revealed that other respondents strongly agree that ICT use has an influence on the growth and expansion of small business through international marketing penetration with the mean value (M=4.60 and S. D= 0.123)

Results from the field indicates that Information and communication technology causes fast accessibility to the market, increases selection power, improves communication, facilitates identification of markets, improves marketing and reduces business transaction costs. From a field, it was discovered that; SMEs that used different forms of ICT rated their effects mostly positive. Mobile phones, especially the smart ones are considered to contribute significantly to regional market expansion by most enterprises followed by fixed phones. ICT has a proven role in enabling SMEs to increase their productivity and access information and markets, but remain unaffordable.

4.2.2 Content Analysis Findings of Interview Data

The study collected qualitative data using interviews. The data were collected from government officers. The data were analyzed using qualitative content analysis.

Does the use of ICT plays a key role in market access?

In the interview, one of respondent said;

The use of ICT led to growth and expansion of the business. The information and communication technology play a key role in market access and is the main core of any marketing system in the 21st century. Market access in Tanzania is a major challenge to small businesses due to market imperfections that can be attributed to lack of market information, lack of linkages between the actors in the supply chain, distortions or absence of input and output markets, high transaction cost and high presence of trade intermediaries. Different strategies exist for improving market access of which the use of ICT is one. Strategies that enhance market access greatly impacts on the performance of small enterprises.

Does the use of ICT broaden market among the small business?

In the interview, one of respondent said;

The potential benefits of ICT to SMEs include enhancing efficiency, reducing costs and broadening the market both locally and globally, empowering SMEs to participate in the knowledge economy by facilitating connectivity; helping to create and deliver products and services on a global scale and providing access to new markets. Information and Communication Technology can enable SMEs to participate in the regional and international markets which are strategic for competitiveness, growth and further development.

Discussion of the findings

Brynjolfsson and Hitt (2000), ICTs can enhance enterprise performance through indirect cost savings such as labour costs and increased labour productivity, and direct cost reduction of firm's input such as information costs. On top of these short-run impacts of ICT adoption in the production process, the use of ICTs in the transaction process can foster input and output market expansion. However, in the long run, ICT may have an even bigger impact as it can completely restructure the production process and transaction methods, increase flexibility and improve outputs. ICT is clearly considered as a key growth area in this century, specifically, in a dynamic business and highly competition environment which requires utilizing advanced ICT to improve efficiency and cost effectiveness, and to present high quality products and services to their customers (Allen and Morton, 2004). UNDP, (2001) claimed that ICT is considered as a tool of marketing and contacting customers and looking for possible customers, as well as presenting ICT services is distinguished as a potential service for customers (Werthner, and Klein, 2005).

Adeosun, (2009) state that the use of ICT enables strategic management, communication, collaboration, information access, decision making, data management and knowledge management in organizations. ICT causes fundamental changes in the nature and application of technology in businesses. ICT can provide powerful strategic and tactical

tools for organizations, which, if properly applied and used, could bring great advantages in promoting and strengthening their competitiveness (Buhalis, 2004). Hengst and Sol (2001), state that ICT enables organizations to decrease costs and increase capabilities and thus assist to shape inter- organizational coordination. The use of ICT can assist to lower coordination cost and increase outsourcing in organizations.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The study concluded that, the respondents believed to a good extent that use of information and communication technology has led to the growth and expansion of the business through the growing volume of sales and marketing opportunities. Majority of the respondents strongly agree that ICT use has an influence on the growth and expansion of small business through international marketing penetration. Information and communication technology cause fast accessibility to the market, increases selection power, improves communication, facilitates identification of markets, improves marketing strategies and reduces business transaction costs. From a field, it was discovered that; SMEs that used different forms of ICT rated their effects mostly positive. Mobile phones, especially the smart ones are considered to contribute significantly to regional market expansion by most enterprises followed by fixed phones. ICT has a proven role in enabling SMEs to increase their productivity and access information and markets. It is recommended the government of Tanzania should consider mobilizing resources geared at creating awareness on and encouraging use of available information and communication technology tools at the disposal of the business entities to the maximum possible extent in order to enhance their performance. It should also provide incentives and support to encourage the upcoming of business support ventures that develop ICT based solutions for the small business operators such as software applications for business management at the affordable costs. All these will help improve the general understanding of the importance of ICT tools on business operations in the existing business competitive environment as well as ensuring that the adequate and suitable ICT tools are available at any point in time. Small business management should also by themselves consider scanning the online repositories to find the latest and the best ICT tools that could be useful in promoting service delivery efficiency and / or proper product mix / choice that suits customer needs before even getting the customized ones locally.

REFERENCES

- Bayo-Moriones, A. (2017). A Firm-Level Analysis of Determinants of Determination of ICT Adoption in Spain. *Technovation*, 352-366.
- Brynjolfsson E. & Hitt L. (2016). Paradox lost? Firm-level Evidence on the Returns to Information Systems Spending. *Management Science*, 541-558.
- Buhalis D. (2014). eAirlines: Strategic and Tactical Use Of ICT In The Airline Industry. *Information and Management*, 805-825.
- Chyau, C. (2017). *Why Should Countries Embed ICT into SME policy?*. APDIP e- Note Available at <http://www.apdip.net/apdipenote/4.pdf>
- Gago D. & Rubalcaba, L. (2017). Innovation And ICT Service Firms: Towards a multidimensional approach for impact assessment. *Journal of Evolutionary Economics*, 25-44.
- Hanna, N. K. (2014). Enabling Enterprise Transformation. *Business and Grassroots Innovation for The Knowledge Economy*. New York: Springer.
- Houghton A. & Winklhofer, H. (2004). The Effect of Website and E-commerce Adoption on the Relationship between SB and Their Export Intermediaries, *International Small Business Journal*, 369-388.
- Joshi A. W. & Sharma, S. (2014). Customer Knowledge Development: Antecedents and Impact On New Product Performance. *Journal of Marketing*, 47-59.
- Mata F. Fuerst L. & Barney, B. (1995). Information Technology and Sustained Competitive Advantage. *A Resource-Based Analysis*, 487-505.
- Matambalya, F. and Wolf, S. (2020). The Role Of ICT For The Performance of SB in East Africa. *ZEF Discussion Papers on Development Policy*, 42.
- Mattii, P. (2012). The New Economy: Facts, Impacts and Policies. *Information Economics and Policy*, 133-144.