THE USE OF ICT BY SMMEs IN A DIGITAL ECONOMY: A CASE STUDY IN BUFFALO CITY METROPOLITAN IN SOUTH AFRICA

Agyei Fosu* Walter Sisulu University, East London, South Africa afosu@wsu.ac.za
* Corresponding author

ABSTRACT

Aim/Purpose The goal of this study is to advance understanding of ICT utilization by SMMEs by checking access, ability (in terms of technological skills) and usage of ICT among some SMMEs entrepreneurs operating their businesses in an underdeveloped area to enhance their business activities in order to utilizes the digital opportunities 21st century digital economies present.

Background In today’s world, no nation or region is untouched by the forces of globalization and digital economy. One of the key pioneering forces of globalization is the advances of ICT like internet, social networks, etc. In the sphere of business, this pioneering force has also altered the way businesses and organizations communicate and interact with customers and society. Such alternation presents obvious opportunities for wealth creation and growth for businesses and organizations that are well equipped to take advantages of them. However, for those that are less-equipped, particularly SMMEs, globalization can easily lead to foreclosures and marginalization. It is a common knowledge that SMMEs entrepreneurs mostly rely on ICT gadgets like mobile phone, Laptops, Tablets to conduct their business activities as many of them do not have enough capital to set up offices with necessary equipment. Therefore, using various ICT functions/programs on these ICT devices to enhance their business activities are critical to their businesses in the 21st century digital economies.

Methodology Purposive sampling has been used to approach fifty-four SMMEs entrepreneurs operating their businesses in underdeveloped areas locally called Townships in Buffalo City Metropolitan. Microsoft excel was used in the descriptive statistics.

Contribution This research will add to the growing knowledge ICT usage in SMMEs in the 21st century digital economies.

Findings The results indicate that the participating SMMEs entrepreneurs need to be educated, trained and supported in the use of the ICT applicable to enhance their business activities in order for them to take advantages of 21st century digital economies.


**INTRODUCTION**

The shift from an industrial to digital economies keeps increasing the competitive level in businesses through rapid technological changes. This evolution started with the introduction of the computer and internet in the late 20th century (Piazza 2007; Marius 2012). The world and way of doing business changed drastically due to the increased infiltration of internet and information and communication technologies (ICTs) with its gadgets in society. According to Salehan et al (2013), advances in ICT brought about a technological revolution, which changed not only the manner in which individuals and organizations conduct business but also everyday items like phone, cars, homes are been changed to be smarter. Organizations and businesses across the globe have taken advantage of advances in ICT by investing large capital in ICT in order to remain competitive, and increase efficiency and cost effectiveness. Governments all over the world in terms of facilitating developments are investing billions in ICT to convert urban and rural areas into smart hubs, connecting people to Wi-Fi networks. These networks not only provide up to date information on government programs but also for individuals and small businesses to take advantage of (Tusubira et al, 2004). Thus, such investment for grow by government will not achieve the desire results if beneficiaries are not taking advantage of such investments. Across Africa, M-Agriculture, Mobile Money and many other ICT programs are just a few examples of how entrepreneurs, particularly small and medium-sized enterprises (SMEs), across the continent are successfully using ICT to connect with customers and grow their businesses (IOL Business Report, February 2013). The South Africa government recognizes the role of ICT and SMMEs in South Africa economy and as a result has established agencies –State Information Technology Agency (SITA) and Small Enterprise Development Agency (SEDA) to look after these two sectors. SMMEs employers account for 14% total employment in South Africa and contributes 42% to the GDP of South Africa economy (SEDA Report, January 201). This study intends to investigate SMMEs entrepreneurs operating their businesses in underdeveloped areas in South Africa access to ICT and determine whether they are using ICT to enhance their business activities.

**BACKGROUND AND PROBLEM STATEMENT**

Nguyen & Waring (2013) points out that SMMEs are the first step towards development in any economy towards industrialization. Despite this acknowledgement, SMMEs across the globe and in South Africa in particular, the failure rate among SMMEs considers higher in the world (Baumeister

---

**Recommendations for Practitioners**

The agencies tasked with looking after SMMEs in South Africa needs to consider the lacked of utilization of ICTs by SMMEs entrepreneurs operating their businesses in underdeveloped areas as one of the barrier to growing of their businesses and take necessary steps to address it.

**Recommendation for Researchers**

Since age and gender have been proven key-moderating variables in many technology acceptance models (Venkatesh et al., 2003). There is a need to explore in depth whether the factors of gender and age also act as barriers.

**Impact on Society**

The research will assist stakeholders, policy makers and agencies tasked with looking after SMMEs to identify the barriers hindering SMMEs to grow and address them accordingly.

**Future Research**

More work needs to be done to check whether gender, age of the SMMEs entrepreneurs have some effects on their attitude towards the integration of ICT into their business activities.

**Keywords**

Information and Communications Technology, Small Medium and Micro-sized Enterprises, 21st century digital economies
Fosu 2002; Vallabh & Radder 2012; Cameron & Miller 2008). Among the various factors attributed to SMMEs failure rate, communicating with customers have been identified as one of the major factors. The ability to communicate with customers and deal with people is essential in any entrepreneurial business. Advances in ICT, the driving force behind the 21st century digital economies, have changed globally the way businesses reach out to both their existing and prospective customers (Salehan et al., 2013). Which also suggest that no business can grow in the 21st century digital economies without some integration of ICT into the day-to-day operation of that business. According to Buhalis (2003), SMMEs are not utilizing ICT in their business to its full potential. This gave interest to the researcher to conduct this study to check the skills and usage of ICT in business activities of some selected SMMEs entrepreneurs operating their businesses in underdeveloped regions to contribute to the existing body of knowledge with regard to the topic in question. Buffalo city is a coastal city situated in Eastern Cape Province of South Africa. The province is mainly rural and an area of widespread and deep poverty where illiteracy, unemployment and poor access to basic and social services continue to be endemic. Furthermore, the province is characterized by (Westaway, 2012) a large rural population with agriculture based rural economy, a high proportion of young people faced with high levels of unemployment and a great need for sustainable socio-economic development.

In Eastern Cape, SMMEs entrepreneurs can take advantage of ICT to grow their businesses, which can provide a significant economic boost to the province. Access to Smartphone and internet for instance will allow farmers, tour operators make videos to advertise, transfer money, call dealers to order supplies and negotiate prices with traders, all without having to leave their farms or area. While accessibility of mobile phone services is rapidly improving in the province, but some of these entrepreneurs may not be using features like internet, social networks on their mobile phones and other ICT devices to enhance their business activities. A study to check some of these SMMEs entrepreneurs operating their businesses at underdeveloped areas locally called Townships in Buffalo City Metropolitan access to ICT gadgets (Smartphones, Laptops, Personal Computer (PC), and Tablets), ability to use and using functions/programs like internet, social media, etc. on their ICT gadgets to enhance their businesses is conducted.

**Research Objectives**

The goal of the study is to check the use of ICT among some SMMEs entrepreneurs operating in underdeveloped areas to enhance their business activities in order to utilize the opportunities 21st century digital economies present. Below are specific objectives that were developed to guide the study in order to achieve the main goal:

- Determine type of ICT devices they have access to
- Determine which functions/programs on their ICT devices they are able to use confidently
- Determine which of these functions/programs can benefit their business activities
- Determine whether they are actually using these programs to enhance their business activities
- Determine reasons if they are not using these programs

**Research Questions**

Research questions in a study form the bases of the hypothesis and enable the achievement of the study objectives. The following research questions guided the study:

1. What is background of the respondents (in terms of age and gender)? What is the location of the business of participants?
2. Which of the following ICT device do participants have access to? (e.g. Mobile phone, Laptop, PC and Tablets)
3. Does their ICT device have the following functions/programs on it? (e.g. internet, social media, MS office package)
4. Are they able to use these functions/programs? State which ones
5. Which of these functions/programs do they think can enhance your business activity?
6. How do they think the functions/programs they have stated in question five can help enhance their business activities?
7. Are they using these functions/programs mentioned in question 6 to enhance their business activities? If no, state why?

The research moved from the premise that in the 21st century digital economies, firms and SMMEs owners uses ICTs and ICTs devices to form closer ties with suppliers, customers and society.

**LITERATURE REVIEW**

Past studies estimated that at least 30% of SMMEs fail during the first year of operation (Brink & Berndt, 2010). Several factors have been attributed to this failure rate by many researchers but the most frequently cited reason for the failure is perceived to be a direct consequence of SMMEs owners’ managerial competence (Ateljevic, 2007). In the specific context of small businesses, McCarton-Quinn & Carson (2003) highlights the following variables as the main components that constitutes managerial competence: - a body of knowledge or of skills/abilities, personal qualities or characteristics, set of awareness, attitudes or outlooks and motivations or drives. Nguyen & Waring (2013) emphasizes that skills, characteristics, attitudes and values of a business owner all have a significant impact on the success of the business. Chilinya & Roberts-Lomberts (2012) in their work found out that the level of education as well as skills of the business owner have a direct impact on the financial performance of the business. Based on the preceding points raised by the researchers, SMMEs entrepreneurs need to realize that acquiring skills that are necessary to operation of their businesses and using these skills in day-to-day operation of their businesses is essential if they want to increase their organizational efficiency and profitability. The current study explored whether SMMEs owners are using ICT in their day-to-day business activities to harness the opportunities the 21st century digital economies presents.

The explosive growth of ICTs and their entry into the global marketplace have provided opportunities for businesses in any region to tap into the global marketplace. This digital opportunities provided by ICTs have been seen by many as a gateway for SMMEs to overcome the struggle to access bigger markets and as a result various studies have been conducted on ICT use in SMMEs by a number of researchers in different parts of the globe. Shiels et al (2003) conducted a case study on 24 SMMEs in Northern Ireland. Their study found that the type, adoption and use of ICTs by SMMEs in business operations to some extent are influenced by the aim or goals of a firm and industry sector. The findings by the study of Frempong (2007) on 280 SMMEs in Ghana revealed that the extent and type of ICTs used by SMMEs in Ghana are linked to the formality of the enterprise. The studies by Adera et al (2014) in East and Southern Africa found that the use of telephony, especially mobile phones, are popular among SMMEs and it have positive effects on the performance of the SMMEs. A low level of ICTs utilization by SMMEs in Namibia was highlighted in the study of Chiware & Dick, (2008).

The current study was motivated by the studies of Okello-Obura & Manishi-Majaja (2010), which was conducted on Small and Micro-Enterprises (SMEs) in Uganda found that SMEs can flourish, create jobs and contributes to poverty reduction if SMEs have access to relevant ICTs. The current study sets out to advance understanding of access, technological skills and usage of ICTs by SMMEs entrepreneurs operating their businesses in under-developed areas. Duncombe and Heeks, (2002) defined ICTs to be any artefact, technique, or knowledge used for capturing, storage, processing and dissemination of information. ICTs usage in this study is defined as an application of modern ICTs such as mobile phones, laptops/PC, Tablets, social media and Internet by SMMEs. The reason of selection of the above mentioned ICTs is because of their prevalence and accessibility (Esselaar et al 2007; Mbuyisa, 2017). Globally, access to ICTs and web have been reported by Kemp (2016), to be via mobile phones (39%), laptops and desktops (56%), Tablets (5%), others devices (0.1%).
**METHODOLOGY**

**RESEARCH DESIGN**

The researcher used purposive sampling method to approach fifty-four (54) SMMEs entrepreneurs operating clothing, furniture, panel beating and groceries businesses in Township areas within Buffalo City Metropolitan. The Townships selected were Mdantsane, Gompo, Parkside, Duncan Village and Scenery Park. The selected participants were considered as the key source of obtaining quality data out of the entire population (Welman & Kruger 2001, Polkinghorne 2005). Both questionnaire and interview method were used at the same time in this study. The interview gave the participants an immediate chance to clarify themselves directly to the researcher, which helped to overcome misunderstanding and misinterpretation of words or questions on the questionnaire. It also helped to reduce the chance of participants planning about lying in their response. The researcher decided to restrict the selection of participants based on SMMEs entrepreneurs operating their businesses in Townships selected for the study.

**DATA ANALYSIS**

A tally sheet was created for the questions on the questionnaire. The process was such that when the researcher approached participants and questionnaire was completed, the researcher would capture it onto the tally sheet. Tallies were then captured into MS Excel spreadsheet database that have been designed in line with the questions on the questionnaire for conversion into percentages for the descriptive statistics.

**DATA PRESENTATION AND DISCUSSION**

In today’s world, no nation or region is untouched by the forces of globalization and digital economy. One of the key pioneering forces of globalization is the advances of ICT like internet, social networks, etc. In the sphere of business, this pioneering force has also altered the way businesses and organizations communicate and interact with customers and society. Such alternation presents obvious opportunities for wealth creation and growth for businesses and organizations that are well equipped to take advantages of them. However, for those that are less equipped, particularly SMMEs, globalization can easily lead to foreclosures and marginalization. It is a common knowledge that SMMEs entrepreneurs mostly rely on ICT gadgets like mobile phone, Laptops, Tablets to conduct their business activities as many of them do not have enough capital to set up offices with necessary equipment. Therefore, using various ICT functions/programs on these ICT devices to enhance their business activities are critical to their businesses in 21st century digital economy.

**RESULTS AND DISCUSSION**

**DEMOGRAPHIC BACKGROUND OF PARTICIPANTS**

Age and gender have been proven to be key moderating variables in most technology acceptance models (Venkatesh et al., 2003) therefore they have been included in this study. Table 1 reveals the demographic background Age, gender and area (location of the business) of participants.

<table>
<thead>
<tr>
<th>Age</th>
<th>Percentage</th>
<th>Areas (Township)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 – 25</td>
<td>18.52</td>
<td>Mdantsane</td>
<td>55.56</td>
</tr>
<tr>
<td>26 – 31</td>
<td>12.96</td>
<td>Gompo</td>
<td>20.37</td>
</tr>
</tbody>
</table>
As can be seen, Table 1 presents the age, gender and areas where the participants are operating their businesses. The results according to table 1, shows that majority of the participants who took part in this study were aged between 32 – 37 years (40.74%), followed by 38 – 43 years (20.37%), 18.52% between 20 – 25 years, 12.96% between 26 – 31 years and the least those aged between 44 – 49 years (7.41%). The proportion of males who participated in the study was approximately 67% while that of females was approximately 33%. This depicts that the sample population had more male than females. This could be probably due to the high number of male to female been the breadwinner at home.

**Means of Access to ICTs and ICTs Programs**

Data was collected on means of access to ICTs and ICTs functions/programs available on their devices that they are confident using it. The findings are as shown in Table 2.

Table 2: Means of access to ICTs and ICTs programs/functions participants can confidently use day-day (N = 54)

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Means of access to ICTs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC or Laptop</td>
<td>13</td>
<td>24.07</td>
</tr>
<tr>
<td>Mobile phone</td>
<td>54</td>
<td>100</td>
</tr>
<tr>
<td>Tablet</td>
<td>10</td>
<td>18.52</td>
</tr>
<tr>
<td><strong>ICTs functions/programs on their devices</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet</td>
<td>52</td>
<td>96.30</td>
</tr>
<tr>
<td>Social media</td>
<td>52</td>
<td>96.30</td>
</tr>
<tr>
<td>Camera/Video</td>
<td>52</td>
<td>96.30</td>
</tr>
<tr>
<td>Microsoft office package</td>
<td>15</td>
<td>27.78</td>
</tr>
<tr>
<td><strong>ICTs functions/programs participants are confident of using day-day on their devices</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Make voice calls</td>
<td>54</td>
<td>100</td>
</tr>
<tr>
<td>SMS</td>
<td>54</td>
<td>100</td>
</tr>
<tr>
<td>WhatsApp &amp; Facebook</td>
<td>52</td>
<td>96.30</td>
</tr>
<tr>
<td>Skype</td>
<td>2</td>
<td>3.70</td>
</tr>
<tr>
<td>Take photos &amp; make videos</td>
<td>50</td>
<td>92.59</td>
</tr>
<tr>
<td>Browse Internet for specific or</td>
<td>6</td>
<td>11.11</td>
</tr>
</tbody>
</table>
As indicated in the background and problem statement, no business or SMMEs owners in the 21st century digital economies can research out to their customers, suppliers and society at large without some form of ICTs, it is interesting to note from the results in Table 2 above that a majority of participants 24.07% owns PC or Laptops, 100% owns mobile phone, 18% owns Tablets with 96.30% of participants having Internet function, social media (96.30%) function and 27.78% Microsoft office package on their ICT devices they own. This finding correlates with the hypothesis of the study, which is also in line with what Adera et al (2014) found out that telephony usage especially mobile phone is popular among SMMEs as well as the report of means of access to ICTs globally by Kemp (2016).

**Useable ICTs functions/programs by SMMEs**

Participants were asked to identify ICTs functions/programs on their ICTs devices that they own that they believe can enhance their day-to-day business activities and state also, how the identified functions/programs can enhance their day-to-day business activities. The result is presented in Table 3 below.

**Table 3: ICTs functions/programs participants believed can enhance and how it can enhance their business activities (N =54)**

<table>
<thead>
<tr>
<th>Functions/programs</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet</td>
<td>31.48</td>
</tr>
<tr>
<td>WhatsApp</td>
<td>37.04</td>
</tr>
<tr>
<td>Facebook</td>
<td>40.74</td>
</tr>
<tr>
<td>Microsoft office package</td>
<td>5.56</td>
</tr>
</tbody>
</table>

**How it can enhance their business activities (group into common points)**

<table>
<thead>
<tr>
<th>Functions/programs</th>
<th>How it can enhance their business activities (group into common points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet</td>
<td>1) It can be used for banking</td>
</tr>
<tr>
<td></td>
<td>2) It can be used to check where I can get cheap materials and suppliers</td>
</tr>
<tr>
<td></td>
<td>3) Communicate with customers</td>
</tr>
<tr>
<td>WhatsApp &amp; Facebook</td>
<td>Chart with customers</td>
</tr>
<tr>
<td>Microsoft office package</td>
<td>It can be used to prepare my invoice and quotations</td>
</tr>
</tbody>
</table>

The results from Table 3 shows 40.74% of the participants identified Facebook, followed by WhatsApp (37.04%), Internet (31.48%) and Microsoft office package (5.56%). The common ways participants mentioned how the identified programs can enhance their day-to-day business activities
is using these programs to communicate with customers, for banking, for checking where to find cheap materials and suppliers, for preparing invoice and quotations.

**Usage of Identified Functions/Programs in Day-to-Day Business Activities**

The participants also answered questions on whether they are using the identified programs in their day-to-day business activities or not and their reasons if they are not using them.

**Table 4: Participants using/not using and their reasons for not using (N=54)**

<table>
<thead>
<tr>
<th>Functions/programs</th>
<th>Yes</th>
<th>No</th>
<th>Reasons for not using (Grouped into common points)</th>
</tr>
</thead>
</table>
| Internet           | 9.26% | 90.74% | 1) It will finish my data and data is expensive.  
2) I do not have the skills.  
3) People can have access to my banking details if my phone is lost. |
| WhatsApp & Face-  | 12.96% | 87.04% | It will give people opportunity to ask me for money.  |
| book               |     |     |                                                   |
| Microsoft office package | - | 100% | It will cost to print always.                 |

The results in Table 4 shows that only 9.26% of participants are using Internet, WhatsApp (12.96%) and none of the participants are using Microsoft office package to enhance their day-to-day business activities. This finding confirms the findings of Buhalis (2003) that SMMEs are not utilizing ICT in their business to its full potential as well as the low utilization of ICTs in SMMEs reported by Chiware and Dick (2008).

**CONCLUSION**

Much as it is encouraging to see that many of the participants have technological skills to use functions/programs like social media on their ICT devices, the participants however are not using these functions/programs to enhance their businesses. The results in Table 4 is an interesting results in the sense that although respondents in Table 3 explained how identified programs can enhanced their businesses it is surprising to see the percentages (90.74% of Internet, 87.04% of WhatsApp & Facebook, 100% of Microsoft office package) of not using. Considering the opportunities these programs will bring to their businesses and their reasons for not using, participants can overcome their reasons and harness the opportunities these programs presents. For instance, most marketing professionals worldwide pinpoint videos as the type of content with best return on investment (Bowman 2017). These SMMEs entrepreneurs can make videos about their businesses and post them on their social networks, which can advertise their businesses and bring returns as highlighted in the work of Bowman 2017. By not using these functions/programs will in no doubt hinder them and their businesses to maximizes the opportunities that 21st century digital economies present.
To address this issue, it is imperative that the agencies tasked with looking after SMMEs to organize seminars and workshops to educate SMMEs entrepreneurs about the role, opportunities and importance of ICT in the 21st century digital economies. Moreover, there is the need for more in depth research to uncover why SMMEs are not using ICT to enhance their business activities.

REFERENCES


The use of ICT by SMMEs in a Digital Economy


**Biographies**

Agyei Fosu is a lecturer in the Department of Information Technology at the Walter Sisulu University where he lectures Information Technology Skills as well as mathematics for IT. He is actively involved in ICT in education and in business research.