



E-ISSN: 2707-6644
P-ISSN: 2707-6636
IJCPDM 2022; 3(1): 132-140
Received: 18-12-2021
Accepted: 21-01-2022

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Information technology function in the development of SMEs in Ghana: A case study of Blash enterprise, Kumasi

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DOI: <https://doi.org/10.33545/27076636.2022.v3.i1b.52>

Abstract

The research was on the role of ICT in the growth of Small and Medium Enterprise in Ghana at Blash Enterprise in Kumasi. Descriptive survey was used and the purposive and the systematic methods of sampling were used to select the study units. A questionnaire was used for the employees while the Branch Manager, and the other staff purposively selected were interviewed in addition to responding to questionnaires.

The study revealed that most Ghanaian SMEs are employing at least one of the following ICT tools in their business, i.e. mobile phones, fixed line, internet or postal box. While mobile phone usage seems to be high, internet and fixed lines usage are still low. Mobile phones popularity among Ghanaian SMEs could be attributed to its mobile nature and easiness of use.

Most of these SMEs use these mobile phones primarily for making voice communications and short messaging service (SMS). However the use of computer and the internet by SMEs are still low as only 30% among the respondents use computers in their business.

Keywords: Information, technology, function, development, Ghana, study, Blash, enterprise

Introduction

Information Communication Technology (ICT) refers to technologies that provide access to information through telecommunications. Beckinsale and Ram (2006) [3] defined ICT as 'any technology used to support information gathering, processing, distribution and use'. ICTs can be viewed as all form of technologies and product for wide range of software, hardware, telecommunications and information management techniques, applications and devices, and are used to create, produce, analyze, process, package, distribute, retrieve, store and transmit or receive information electronically in a digital form such as computers, email, internet, websites, social networking and other wireless communications devices, networks, broadband, and as well as the various specialized devices and applications associated with them, such as satellite systems and videoconferencing (Porter and Millar, 1985 Brady *et al.*, 2002, Nicol, 2003) [32, 5]. ICT is an important tool that provides the opportunity for small to medium enterprises (SMEs) to improve their competitiveness in business arena. In the rapidly changing business environment of the twenty-first century, it is extremely important for SMEs to adopt ICT in order to maintain their competitive edge, develop a global network of product exchange and establish wider international network. The effective use of information system (IS) and information technology (IT) can provide SMEs with the opportunity to take advantage of ICT in order to enhance the way they conduct business and increase core competencies.

Information and Communication Technology (ICT) has influenced the way in which business is conducted globally, resulting in, for example, a faster turnaround of products and production, smart products, and 24 hours of shopping around the world.

Businesses are re-engineering their processes and investing huge sums of money in ICT solutions such as Customer Relations Management (CRM) systems and Enterprise Resource Planning (ERP), in order to take advantage of the changing environment. Knowledge is the cornerstone of this new environment, normally referred to as the "knowledge economy". Customers in this new economy demand knowledgeable products and want to buy knowledge. For example, cars today have more knowledge about their surroundings than in the past, being equipped with tools such as rain sensors, night vision or driver's assistance to ensure safe and comfortable journeys.

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With their financial power, human capital (highly skilled staff) and resources (state-of-the-art equipment), big businesses have managed to take advantage of ICT to gain the edge over competitors, unlike small and medium enterprises (SMEs). According to Galloway and Mochrie (2005) [15], there is evidence that ICT is the driver of economic growth, which explains the drive by many governments around the world for SMEs to adopt ICT. The main reason for this drive is that governments acknowledge the considerable contribution of SMEs towards gross domestic product (GDP) and employment figures. Information and Communication Technologies (ICT) are regarded to be powerful tools for socio-economic development. Effective ICT- utilization, appropriate applications, and individually tailored solutions can create cross-sectorial opportunities and, thus, ICT can play a substantial role to address a number of goals on the development agenda of many organizations. In an attempt to identify sectors that are likely to be responsive to technological change and promise high return on investment, Small and Medium Enterprises (SMEs) have materialized as one potential target sector to harness ICT for development and growth.

Usage of mobile telephony and the internet among Ghanaian organizations primarily the Small and Medium Scale enterprises are on the rise. More companies and firms are now fixing broad band internet at their office premises while many executives of these companies use mobile devices like tablets, laptops, modem (dongles), etc. on the move.

All these are to ensure that the business man harness the benefits ICT bring in the development of these enterprises. More companies are now providing smart phones to their employees to ensure they can respond to their mails wherever they are. All these ensure speed and productivity which the SME need. Several recent studies have examined the effects of ICT investment on economic performance in varying regions throughout the world. One recent study, "Socio-economic Impact of Internet in Emerging and Developing Economies" estimates that when Internet penetration rises by 10% in emerging economies, it correlates with an incremental GDP increase of one to two%. Similarly, another study found that the comparative GDP growth rate of a developing country can be boosted by 0.59% per annum for every 10 mobile telephones added per 100 inhabitants. ICT is now known to be a harbinger of productivity in developing nations. Leonard Waverman, Dean of the Haskayne School of Business at the University of Calgary, is of the view that ICT must be used to accelerate the global recovery since is the key infrastructure of the 21st Century.

Background of the Study

Due to the huge capital investment that should be made into ICT Infrastructure projects, many organisation including SMEs have really questioned the returns on investment on budget allocated for such projects. These organisations see ICT and the IT department as cost centre instead of a business driver or tool that can catalyse growth and development of their organisations. It is against this background that this study seeks to find the role. ICT plays in the growth and development of SMEs in Ghana.

Research Problem/Statement of Problem

ICT plays a very important role in the current knowledge economy. It is vital for SMEs to become a part of this economy in order to grow and develop in the future. The

problem is that SMEs in Ghana are mainly using traditional tools to achieve this development. They need to take advantage of the power of ICT in order to take on the competition that will propel them to development, whether small, big or global. Both the traditional and the ICT tools are very important for the competitiveness of the business. There are number of reasons why an SME might not implement ICT tools, such as limited funds, lack of knowledge, lack of skilled staff, perceived lack of applicability to the business that the SME is engaged in etc.

Objectives of the Study

The study sets out to identify the role of ICT in the development of small and medium scale enterprises.

Specific Objective

The key objectives of this research are therefore to:

1. To identify the preferred ICT tools for communication by Ghanaian SMEs.
2. To Explore how ICT benefit SMEs in Their Operations
3. To identify barriers to the use of ICTs among SMEs;

Research Questions

The research seeks to answer the following questions:

1. What is the preferred ICT tool for communication by Ghanaian SMEs?
2. How does ICT benefits SME relationships and Interactions?
3. What are the barriers to the use of ICT by SMEs in Ghana?

Justification of the Study

The role of ICT in the development of SME's has not been given much attention due to low research on it. However ICT is known to contribute about 2.5% of countries GDP. As such a study to reveal the way ICT can facilitate the development of SME's will have tremendous impact on how SME's can exploit information and communication technology to their advantage. The study will enable owners of SME's reap the benefit in reaching customers, accessing international market, reducing cost of transaction and facilitating transactions, reducing turnaround times etc.

Scope of the Study

The study concentrates mainly on the role of ICT in development of SMEs and e.g., adoption of ICT and its relationship to customer service delivery sales, and cost savings, etc. The study was restricted to some selected SME's within the Kumasi Metropolis in Ashanti Region. The area was selected due to proximity to the researcher and for convenience. It will be based on primary and secondary sources of data. In primary research, the study will survey some owners and employees of SMEs in the Tema Metropolis using a questionnaire. The researcher will use both open-ended questions in a semi-structured format and closed end question with possible answers in order to seek deeper understanding and interpretation.

Secondary data was collated using various published and unpublished articles and reading materials. These will be consists of business, management and ICT, journals, magazines and newspapers, thesis and related studies and the Internet. The details collated will be subjected to thorough secondary data analysis. The purpose of analyzing the information is to extract substantial concepts that will

contribute to the breadth and depth of the study. The information was synthesized and then integrated to one another.

Limitations of the Study

Due to the large population of SMEs in Ghana, the research should have been done with sample space all over the country; however, due to limited time associated with this research this could not be achieved. The research was also constrained by other factors such low awareness of ICT levels among owners of SME's, non-cooperation of some SMEs approached and general constraints that are associated with quantitative research. However, it should be noted that the study is a snapshot or cross-section in time and, to that extent, the data and statistics are subject to rapid change.

Literature Review

Introduction

Information Communication Technology (ICT) has a critical role to play as an enabler of Socio- economic development, as well as providing a pivotal support for effective Governance of the political system. It also plays an important role to enterprise Development. The contributions of ICTs to business development have been pervasive to the extent that it is becoming increasingly difficult for companies to compete effectively in the world market without adequate ICT infrastructures. The reason is that ICTs are revolutionizing every activity in the global market, as the various components of ICT's have their significant roles in facilitating business promotion, efficiency and growth. The Internet, for example, has provided the platform for the development of electronic Commerce (e-commerce) and offers potential for establishing low cost, open and 'many to Many trading systems (Humphrey *et al.*, 2003). According to Labbè (2006) ^[23] the Internet Has become the global channel of unmatched scope for communication between people and between businesses, and at the moment, with over 80 million websites and over a Billion internet users. Therefore, this provides an important medium for increased competition among businesses.

Again business processes such as ordering, transaction, delivery, inventory control and accounting can be streamlined and connected regardless of location through the use of Network of computers (UNCTAD, 2005) ^[37]. UNCTAD additionally report argues further that The Internet has the potential of improving customer management relationship and enable Firms to customize their services to meet the needs of their different clients. The Customized service, according to the UNCTAD report will allow companies to respond to their customers in real time and thereby improving customer confidence. It also helps in monitoring customer's preferences and lead to developing targeted marketing strategies. Invariably, the computer-mediated networks will allow these activities to be carried out quickly and efficiently, and contribute to efficiency in the operations of businesses. Further, computers supported by various types of business software can enhance Information and knowledge management within a firm and result in an evolvement of Better business processes and performance (OECD, 2004). The use of e-mail system and The Internet can support business communication within the context of business to Customers (B2C) or business to business (B2B). Invariably transaction costs may be reduced.

Other ICT-mediated services such as e-banking and e-business are dramatically affecting the traditional ways of providing those services and have great implications for many Economic activities. However, small firms may adopt e-business and e-commerce.

Strategies when benefits outweigh investment and maintenance costs (OECD, 2004). The Report argues further that the use of and investment in ICT requires complementary Investments in skills, organisation and innovation and investment and change entail risks And costs. Therefore, effective adoption of ICT services by SME calls for the need for these issues to be addressed. For SMEs which are the dominant economic operatives in many countries, especially the developing ones, ICTs offer great potential for growth, Profitability and competitiveness. Support for SMEs is buttressed by the Action Plan Developed at the first World Summit of Information Society held in Geneva, 2003. The Action Plan calls on governments to develop strategies that will facilitate widespread use Of ICTs. It is also to make plans to support the growth of micro, small and medium scale enterprises and boost e-business. The issue is to what extent does the SMEs in Ghana have access and use ICTs to enhance their operations and competitiveness? How can SMEs utilise ICTs to facilitate their economic activities? It is important to address these issues since the country's Business landscape is dominated by SMEs and they have great potential in achieving the Developmental objectives of the country.

What is ICT?

ICT stands for "Information and Communication Technologies." ICT refers to Technologies that provide access to information through telecommunications. It is similar To Information Technology (IT), but focuses primarily on communication technologies. This includes the Internet, wireless networks, cell phones, and other communication Mediums.

In the past few decades, information and communication technologies have provided Society with a vast array of new communication capabilities. For example, people can communicate in real-time with others in different countries using technologies such as instant messaging, voice over IP (VoIP), and video-conferencing. Social networking websites like Face book allow users from all over the world to remain in contact and communicate on a regular basis.

Modern information and communication technologies have created a "global village," in which people can communicate with others across the world as if they were living next door. For this reason, ICT is often studied in the context of how modern communication technologies affect society.

Research Methodology

Introduction

This chapter describes the methodology used for the study. The main issues discussed here are the research design, research population, sample and sampling technique, source of data and data collection methods, and method of data analysis.

Research Design

Saunders *et al.* (2007), defines research design as the general plan of how the research questions would be answered. It is the conceptual structure within which research is conducted. It constitutes a blue print for the

collection, measurement and analysis of data. A survey is a method of collecting data in which people are asked (number of questions usually answered in the form of a questionnaire). The reliability of a survey results depends on whether the sample of people from which the information has been collected is free from bias and sufficiently large (Encarta, 2009). The research design for this study was the survey research design to assess the relationship between the effect of motivational packages and staff performance. This is therefore qualitative and quantitative in outlook. Research tools are the methods of data collection (e.g. questionnaire, observation, document analysis). The research tools used for the study were questionnaires and interviews

Population

All the items under consideration in any field of inquiry constitute a population. It can be presumed that in such an inquiry when all the items are covered no element of chance is left and highest accuracy is obtained. Sekeran (1990) reported that population refers to the entire group of people, events or things of interest that the researcher wishes to investigate. For time and cost efficiency, the size of the population was sampled for the case study. Out of the numerous workers around, eight (8) out of the total population were contacted.

Sampling and sampling technique for the study

The sample size for the study was 40. As a rule, test of a study must have properties that speak to the entirety. According to Malhotra and Birks (2007), sample size is a portion of populace that is designated for a study. Stratified sampling was used in obtaining the sample frame, with this, the population was divided into groups of which four (4) departments were selected and out of these at least two (2) respondents were contacted from each department. The advantages were that, it caused increase in cost efficiency, increase in accuracy without increasing the size and helps in adequate sample representation.

Source of data collection

The study depended on primary data collected from the staff and some secondary data. Primary data is a data that has been collected by the researcher without the data passing through somebody else's hands (it is an original data) whilst secondary data is essentially data that has already been collected and analyzed to a certain extent (Turkson, 2016). The primary source of data collection involved interviewing and administering questionnaires.

The secondary sources were those that involved gathering of information from already existing sources of literature which included the company's magazines, annual performance review reports, text books and existing methods.

Data analysis and presentation

The data collected was processed using the statistical package for social science (SPSS). The results of the study are shown in tables, percentage charts and graphs. Both qualitative and quantitative methods of data analysis were used for the study. The variables of interest to the researcher were motivation and job satisfaction and these were analyzed after analyzing the demographic description

of respondents.

These methods were used because it gives a more real view of the situation being studied and aids better and easy understanding of the subject matter.

Data analysis and discussion of findings

Introduction

This chapter is devoted to the presentation of analysed field data and the discussion of findings. The Statistical Package for Social Science (S.P.S.S) enabled the researcher make relevant interpretations and discussions about the phenomenon under study in relation to the objectives. The main focus of the study is to find the role of information communication technology in the growth and development of SMEs. To aid in the clarity of presentation, this chapter is divided into two main sections. The first section presents the analysis and interpretation of the findings, whilst the second section details the discussions of the relevant findings from the study.

Demographics

From the demographic data collected, it is indicative that about 46.7% of SMEs in Ghana are in the services sector. However this does not necessarily reflect the general figures in the country as SMEs were selected based on whether they are using at least one ICT tool. It was also found that 63.3% of the SMEs are owned by men contrary to what Quartey (2000) said that most SMEs in Ghana are female owned. Registration of the businesses was ascertained and it was found out that 86.7% of the SMEs are registered against the 13.3% who were not registered. Among the ones which were not registered all of them were home based and mostly owned by women. This seems to posit the earlier assertion by Quartey *et al.*

The survey also showed that the educational background of most of the SME owners, managers or senior employees in charge of managing these SMEs ranged from basic to tertiary level. More than 50% of these were in the secondary education bracket. However this seem to be lower as one goes into the rural areas as general education levels in these areas are generally known to be low.

Age of respondents

The table 4.1 below indicates the age range of respondents. Out of the total number of respondents, 3 representing 10% were aged less than 25years, 13 representing 43.3% were aged between 25 and 35years, 7 which represents 23.3% of respondents were aged between 36 and 45years, 5 which represents 16.7% were aged between 46 and 55years and 2 which represents 6.7% were aged 55 years and above.

Table 1: Age of Respondents

Age Distribution	Number Of Respondents	Age (%)
Less than 25	3	10
25-35	13	43
36-45	7	23
46-55	5	16.7
Above 55	2	6.7
Total	30	100

Source: Field data, 2022

This shows that the youth are more inclined to venture into SMEs and also embrace ICT than their older counterparts.

Sex distribution of respondents

As seen from table 4.2, 19 of the respondent representing 63.3% of the respondents are male while 11 representing the remaining 36.7% of the respondents are females.

Table 2: Gender Composition of Respondents

Gender	Number of respondents	Percentage (%)
Male	19	63.3
Female	11	36.7
TOTAL	30	100

Source: field data, 2022

Educational background of respondents

Out of the total respondents, 2 representing 6.7% had obtained formal basic education, 13 making up 43.3% had obtained secondary education and 12 representing 40% of the respondent had acquired tertiary level education. 3 representing 10% of the respondent had some vocational

training. The data is represented by a pie chart in figure 3.

Table 3: Educational background of respondents

Background	Number of respondents	Percentage
Basic	2	6.7
Secondary	13	43.3
Tertiary	12	40.0
Vocational	3	10.0
Total	30	100.0

Source: Field data, 2022

SME Distribution by sector

SMEs were selected randomly from the survey area. Analysis revealed that 14 making 46.7% were in the services sector, 2 making 6.7% of the respondents each from health care and retail. 3 of the respondents which are 10% of the total respondents were from clothing, manufacturing and hardware. Graphical representation of the various sectors of SMEs that were sampled is shown in diagram.

Diagram 1.0 SME Distribution by sector

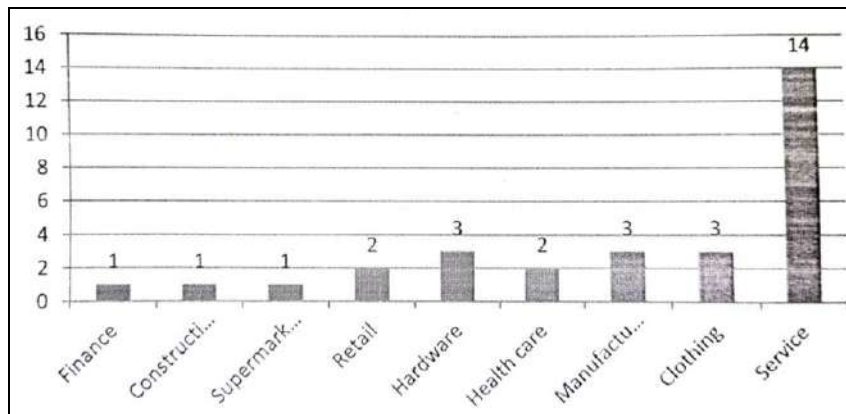


Fig 1: SME Distribution by sector

Categories of SMES

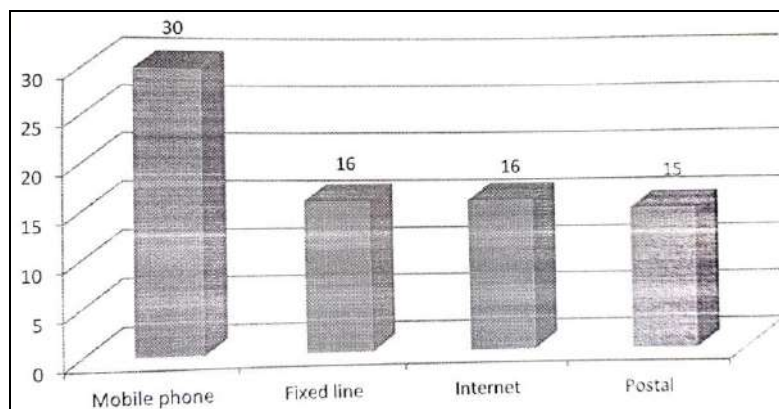
SMES can be categorised into micro, small and medium scale enterprises based on the number of employees. The table below shows the respondents SMEs and the range of number of employees. From the table below, it indicates that 16 (53.3%) of the SMEs sampled are micro enterprises, 9 (30%) are small scale and 5(16.7%) are medium scale enterprises.

Table 4: SME categories by number of employees

Number of Employees	Frequency	Percentage%
Less than 5	16	53.3
5-29	9	30.0
30-99	5	16.7
Total	30	100

Source: Field work, 2022

COMMON ICT tools possessed by SMEs



Source: Field data, 2022

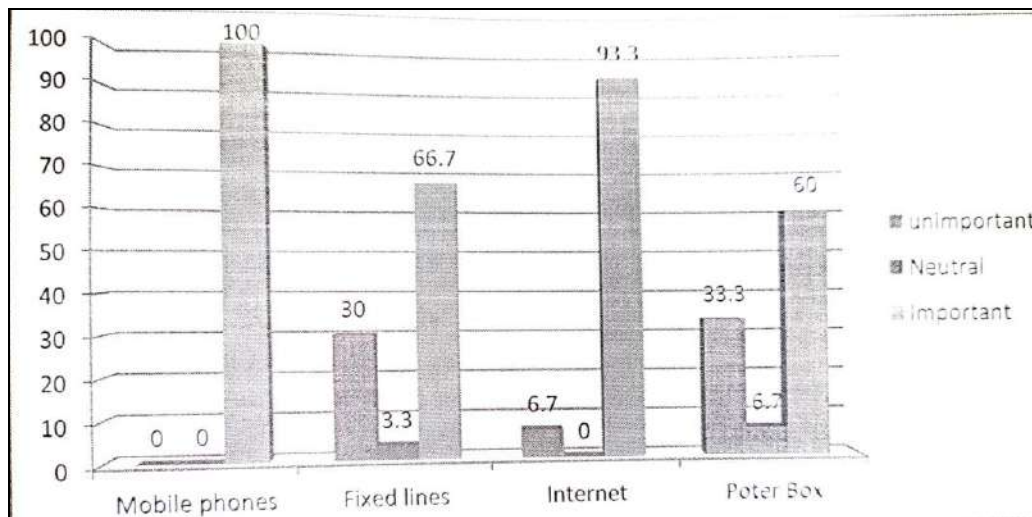
Fig 2: Common ICT tools possessed by SMEs

The figure above shows that 100% of the SMEs surveyed are using mobile phones to communicate to their clients and suppliers. Of all the respondents, only 16 representing 53.3% have fixed line, same percentage for those having internet. When it comes to postal box, only 50% of the respondent have post office box. This shows how popular mobile phones are among SMEs in Ghana and how the postal system has lost its grips in the market as tool for communication among SMEs.

The research further sought to answer the question on preferred tool(s) for Communication among SMEs and their customers by investigating the frequency of Use of these

ICT tools and to know whether same preferred tool is the one preferred for long distance communication and the responses were tabulated below in table 4.4 below.

The chart below represent the SME preference level for the four ICT tools mentioned above. Among these mobile phone ranked as the most preferred tool. On long distance communication the preference of the respondents are as shown in the figure below. Respondent were also asked how important they think the four tools are to the operations of the SMES and the result were shown in the diagram 1.1 below.



Source: Field Data, 2022

Fig 3: Importance of ICT tools to SME's and Customers.

From the diagram above it can be clearly stated that the introduction of ICT in the sector of SMEs has contributed to huge benefits among the SMEs. With the figures shown in chart, it is clearly seen that out of the 14 respondent, 13 of them clearly stated that the introduction of ICT into their enterprise has led to an increase in their daily sales, while the other respondent also states that (12, 10, 9, 9) the introduction of the ICT in their business has generate an increase in customer base, easy access to information, 24/7 marketing and saving of customers time respectively. With the view of the researcher on the data analysis, the researcher can clearly state that the introduction of ICT among the SMEs has really generate greater benefits to the SMEs in Ghana.

Summary, Conclusions and Recommendation Introduction

This chapter is the final part of the study. It is divided into three sections. The first section is devoted to the summary of the entire research work. The second Section captures in synopsis the major findings of the study and the final section details the various recommendations made by the researcher to identity the role of ICT in growth and development of small and medium scale enterprises in Ghana.

Summary of the Findings

The study looked into the role of ICT in the growth and development of SMEs in Ghana and the major findings are as follows: Most Ghanaian SMEs are employing at least one of the following ICT tools in their business, i.e. mobile

phones, fixed line, internet or postal box. Whiles mobile phone usage seems to be high, internet and fixed lines usage are still low. Mobile phones popularity among Ghanaian SMEs could be attributed to its mobile nature and easiness of use. Most of these SMEs use these mobile phones primarily for making voice communications and short messaging service (SMS). However the use of computer and the internet by SMEs are still low as only 30% among the respondents use computers in their business. On the basis of relationships among SMEs and how ICT has facilitated that, 87% of the respondents agreed that ICT especially mobile telephony has enhanced their relationships with their customers as well as suppliers.

ICT has contributed enormously to the growth and development of SMIEs by lowering transaction cost, increasing employee efficiency, decreasing the cost of communication between SMEs and their customers, improving business communication, help firms obtain more information about their work, expanded markets and have better relationship with and their suppliers. These responses varied among individuals but over 90% of the respondents agreed that ICT has contributed to growth and development in the areas mentioned. Though ICT awareness level as in the potential of the c-commerce is known to most SMEs that participated in the survey, most of them over 95% are not fully utilising this potential. This is known by the 6 respondents who represent 20% who use the computer for E-commerce. Computer usage among SMES is also known from the study to be so low among Ghanaian SMEs. Whiles about 30% of the respondents use computers most of these few use the computer for secretarial functions and inventory

management. In finding the barriers that impede the usage of ICT among SMEs in Ghana, it was found out that high cost of software and hardware is ranked as the number one factor why SMEs do not use ICT like their western counterpart. Other reasons attributed are resistance of end users to new technology, lack of applicability to their business model or type, lack of infrastructure and internet and security and trust issues.

Conclusions

The research tries to answer the question: What is the role of ICT in the growth and development of SMEs in Ghana? "The research is based on the assumption we are in the new economy known as the knowledge economy", with ICT as the lifeblood. The most important asset in this new economy is knowledge, which is what we sell and buy. The products are more knowledgeable and the customer demands smart products. Businesses have invested a lot of money in ICT and have been exploiting it to be ahead of their competitors. ICT is an enormous subject which covers, amongst others, normal telephones, cell phones, mobile technologies, point-of-sale systems, ERP solutions, CRM solutions, the internet, PCs and networks. ICT is an enabler for global networking and can be used in different ways, such as:

1. General-user with the general user, ICT is mainly used for administrative purposes such as secretarial and book keeping. Production-integrating in production integrating, ICT is used to support business processes and the production of goods and services Market-oriented ICT is mainly employed for marketing purposes and increasing company presence on the web.

There are two schools of thought when it comes to the value of ICT. One school believes that ICT is a commodity and does not add any competitive advantage to the business or SME, while the other believes that ICT does add value to the business and can give a Company a competitive advantage. Both beliefs could be correct, depending from which angle you view them. When implemented haphazardly without aligning it with the business strategy and companies line of business, ICT might not add any value and probably will not lead to any competitive advantage for the business, but when ICT is implemented as part of the business strategy to support the business processes it will probably lead to a growth and development and competitive advantage. Thus the manner in which SMEs adopt and implement ICT is important as this will determine whether they will gain competitive advantage or not. SMEs play an important role in the global economy: they contribute to the GDP and reduction of unemployment, especially in developing countries. Many governments around the world are pushing for SMEs to adopt ICT in order for them to survive in the knowledge economy. The Ghana Government is no exception. The need for SMEs to adopt ICT is driven by governments, globalisation, innovation, flexibility and competitive advantage. The adoption of ICT should take into consideration that SMEs are different and thus have different needs for ICT. It is important for an SME to adopt that are specific to its needs. A number of barriers make it difficult for SMEs to adopt ICT, such as a lack of knowledge about the strategic use of ICT, a lack of necessary IT skills, perceived high setup cost, the constantly changing ICT environment, and geographical factors such as current power rationing in some parts of the country among others. Geographical factors were not

examined here. The ICT problems in Ghana are both socio-economic and technological ranging from connectivity problems to ICT-skills needs. Ghanaian SMEs should take advantage of various emerging technologies. Even though the problem in rural areas is bandwidth and availability of networks, however, mobile technologies have helped to close the gap. The number of cell phones with 3G and 2G internet has increased though most of these internet speeds are slow and put SMEs off from adopting it. This is a market which the SMEs could be exploiting, whether for marketing purposes or for delivering products or services.

Recommendations

In summary, the recommendations for SMEs to overcome barriers and improve implementation of ICT in their businesses for growth and development are as follows:

Promotion of ICT Education among SMEs

SMEs should invest educating their staff and management about ICT and its benefits. As training cost is known to be of the impediments towards the developing of ICT skills, this will help these SMEs acquire these skills and use them in their work. Training agencies responsible for providing ICT training to SME owners misunderstand not only how this group of adults learn, but also what the obstacles are that they usually face in learning technology related subjects. The government can also come out as form of its adult literacy program with programs in ICT for the Owners of these SMEs must increase its effort to create awareness among SMEs regarding the potential benefits of ICT to small- and medium-sized businesses.

5.4.2 Outsourcing of ICT Functions SMEs should invest in recruiting or outsourcing knowledgeable ICT specialists or consider outsourcing their ICT function to expert to enable them realise the full benefit of ICT. This is impeded by low start-up capital of most of these SMEs. However, IT entrepreneurs can come out with easy and cheaper ways that some of these SMEs can access their services. The government through technology parks and community ICT initiatives can offer some of these services to the SMEs at very low fees. This in turn can generate some revenue for the government.

5.4.3 Development of SME Productivity Application for Mobile Phones Software developers have developed applications that mostly are compatible on computers. However some of these SMEs are not even using computers. Since all the respondents own and use mobile phone, software developers should develop applications that are compatible with mobile phones that can help these SMEs. This is a huge unexploited market for software developers.

5.4.4 Creating Enabling Environment SMEs and their owners (management) should build a culture that is favourable to technology and innovative. SMEs owners should align technology to their business strategy and seek how technology can give them competitive advantage. The government can also come out with some policy that will encourage the usage of ICT among these SMEs. Example registration of SMEs should be made mandatory online, declaring of tax returns and sometimes softcopy submission of tax returns and declarations, e-procurement among SMEs who do business with the government among others. This will precipitate the ICT revolution among SMEs and compel them to adopt and realise the benefit of ICT to their growth and development.

5.4.5 Affordable Software and Hardware. The government,

universities, and other institutions in the country must devise a mechanism for coming out cheaper software and computers but of durable quality to support these SMEs. Computer science and other ICT related students at the various higher institutions of learning can be tasked to develop applications and hardware that meet the needs of the Ghanaian SME. The Universities and other higher institutions of learning can corroborate with the National Board on Small and Medium Scale Industries in championing this.

Suggestions for Future Research

It is recommended that future research be done to investigate what has contributed to the poor ICT skills of SME owners in Ghana, an investigation of learning barriers in this group, and an examination of the relationship between the IT skills of SME owners and the IT infrastructure and IT budget of their respective companies. Further research can also be undertaken on the technology adoption among Ghanaian SMEs. More research will need to be done to ascertain how geographical factors such as power rationing impede.

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