

LEVERAGING ON INFORMATION COMMUNICATIONS TECHNOLOGY FOR ENHANCED ENTREPRENEURIAL PERFORMANCE

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ABSTRACT

Empirical literatures have shown that Information Communications Technology (ICT) is quickly growing universally in recent times. Also, the concept has spread like wild-fire as it is evidenced in our community in almost all areas of endeavour such as business operations, job performance, cultural and personal relationships. However, our social requirements have also been altered as a result of the influence of information communications technology. In view of these, ICT has ample influence on performance of entrepreneurial firms and have created an entirely new encounter for entrepreneurs of our time. The implementation of ICT to promote business productivity is among the challenges faced by entrepreneurs of our generation. This has posed a challenge to some entrepreneurs due to non-awareness of the benefits of implementing ICT in running day to day activities of their firms. As a result of the perspectives that some entrepreneurs view the benefits of adopting ICT in conducting their business operations, a vast majority of them have continued adopting conventional mechanism to remain competitive. Considering the earlier stated facts, entrepreneurial managers could have been able to identify on

going commercial viability of harnessing ICT as an important instrument for enhanced business performance. Hence, this research emphasized on how to leverage on the adoption of ICT for enhanced performance of entrepreneurial firms. The researchers used secondary approach to gather information from existing literatures such as from journals, conference articles, newspapers and magazines and the internet. The researchers found that Information Communications Technology adoption in business operations serves three visibly important roles as follows: helps in massive generation of jobs, aids in boosting information distribution in the work environment, and substantially promotes competitiveness of entrepreneurial firms. The researchers suggest that entrepreneurial managers could harness ICT as a mechanism for business success.

Keywords: Information Communications Technology, Entrepreneurship, Performance, E-commerce, Entrepreneurial Firms, Knowledge Economy.

1.0 INTRODUCTION

Considerable research had been performed to figure out the impact that the adoption of Information Communications Technology (ICT) has on entrepreneurial performance. Among these researches are the remarkable findings of Gartner (1990), who suggested the idea of creative knowledge networks that have the capacity to unleash tremendous creative energy of our society. This could be achieved by helping people dream and convert their dreams into reality by networking with other individuals and institutions. The use of up to date ICT devices such as “real time connectivity through data bases and multimedia technology across language and cultural boundaries was suggested as having the capacity to increase societal capacity to spur, spawn, stimulate and sustain grassroots innovations”. Nowadays, Information and communication are two fundamental tools needed for entrepreneurial activities. McGregor & Kartiwi (2010) adds that information communications technology in line with social entrepreneurship is a leverage for sustainable development. In another research, the author concludes that information communications technology has become the representative of every innovations taking place in diverse areas in a civilized society. It is also proven that durable productivity gains have been achieved in entrepreneurial firms which make use of ICT services (Singh, 2000; Akande, 2013). The level of advancement of globalization has strengthened, among other things, the effectual circulation of data in entrepreneurial firms, which would only be made possible by the use of ICT. A study conducted by Poston (2010) shows that the proper circulation of information in an organization is the background of any business operating unit regardless of its size. Similarly, Mutula & Brakel (2006) asserts that most entrepreneurship across the globe are increasingly embracing ICT tools to enhance their e-readiness status to classify, obtain, coordinate, circulate and utilize information for informed decision making. In addition, ICT plays a major role in strengthening accountability systems of entrepreneurship firms. For instance, the performance of employees in entrepreneurial firms can be monitored and budget procedures can be clearly applied (David, 1970; Carlos, 2007). However, entrepreneurial firms have diverse degree of adopting and putting to use the relevance of information communications technology services for the enhancement or to the detriment of their performance. Since the major aim of this study is to assess the impact of information

communications technology on entrepreneurial performance. The study will be further arranged in the following manner. The first section presents the concept of information, information theory, information communications technology, concept of entrepreneurship, components of entrepreneurial performance, information communications technology and entrepreneurship and finally the concluding and recommendations section. The figure 1 below represents the conceptual framework of the research comprising the various variables under review showing the relationship between information communications technology and performance of entrepreneurial firms.

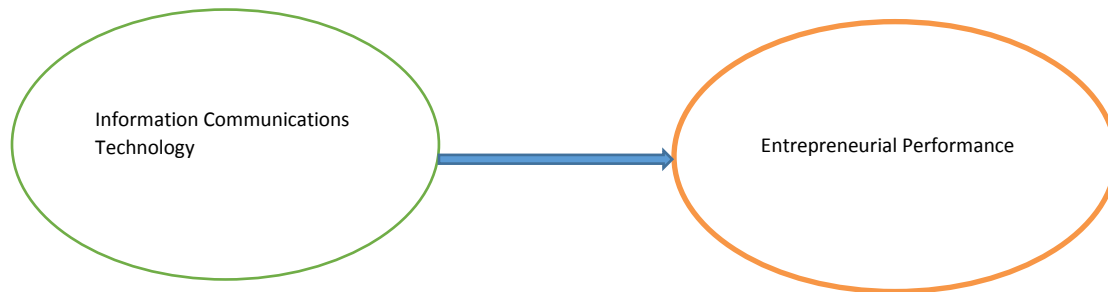


Fig.1 Conceptual Research Framework

2.0 LITERATURE REVIEW

2.1 Information

Oladejo & Adereti (2010) argues that the term information originates from Latin word “informare” which means "give form to". They proposed that it is perhaps the most commonly used meaning of the word. However, many people perceive information as disjointed little bundles of "facts". In the Oxford English Dictionary definition of the word, it is connected both to knowledge and communication. Knowledge communicated concerning some particular fact, subject or event; that of which one is described or told; intelligence or news. According to Wiener (1948) information can also be seen as both facts and the communication of the fact. He states that the “notion of the amount of information attaches itself very naturally to a classical notion in statistical mechanics: that of entropy. Just as the quantity of information in a system is a measure of its degree of organisation, so the entropy of a system is a measure of its degree of disorganisation”. To him, information is a structure that has a meaning. In another finding, Shannon & Weaver (1959) sees information as “purely quantitative measure of communicative exchanges”.

2.2 Information Theory

In 1959, the information theory developed separately from the communication theory. The components of the information theory are the computer science, data processing cyber nets etc. Each of these areas has contributed immensely to the communication concept. Thus information theory gives a multi-disciplinary approach to the communication theory. Ajagbe et al. (2011a)

opines that in recent times, the communication theory has been considered as an interdisciplinary theory. They added that as such it is still in a probing stage of development, for it has been drawn from various disciplines (Ajagbe et al., 2011b; Solomon et al., 2014). After recognizing communication as an interdisciplinary area of study, there is a need to draw from various disciplines from various points of view example Psychology, Mathematics (Mkomange & Ajagbe, 2012), Linguistics, Etymology, Semantics, management, English, Sociology, and so on (Sooryanarayana, 2000).

2.3 Information Communications Technology

Information communications technology as defined by U.S. Information Technology Association (ITA) is “a technology which studies, designs, develops, implements, supports or manages computer-based information systems, especially computer software and hardware programs”. Mkomange & Ajagbe (2012) posits that information communications technology involves the use of electronic computers and software to turn, store, protect, process, transfer, receive and retrieve information securely. The authors argues further that information technology is a devise among many other devices which managers can use to enhance efficiency through problem solving (Lowden & Lowden, 2001; Lasisi et al., 2012a). To some researchers, information technology connotes the processing of data or information through computers, in addition to the use of technologies from computing and telecommunications to process and disseminate information (Oladejo & Adereti, 2010; Lasisi et al., 2012b). It is now becoming common and frequently used in carrying out various businesses. Faithian & Mahdavi (2004) argues that information technology is an arm of technology which makes the “survey, usage and process of data possible in the areas of storage, manipulation, transfer, management, control and automated data preparation using hardware, software and NetWare”. Orlikowski & Gash (1992) put forward that it is any form of computer-based information system, including mainframe as well as microcomputer applications. In entrepreneurship firms, the range and strategic impacts of such systems are vast; for example, Xerox provides master production schedules on-line to suppliers to facilitate efficient deliveries, reduced inventory costs, and improved supplier relationships (Ajagbe & Ismail, 2014). According to Singh (2000), information technology is the capabilities offered to organizations by computers, software applications, and telecommunications to deliver data, information, and knowledge to individuals and processes. However, and with regard to the concept of supplier relationships, Carr & Smeltzer (2002) defines information technology as the use of computerized purchasing systems, supplier links through electronic data interchange (EDI), and computer-to-computer links with key suppliers and finally information systems.

Researchers have suggested that the objectives of information technology usage in entrepreneurial firms are to provide better means of information and data messages in the form of written or printed records, electric, audio or video signals by using wires, cables and telecommunication techniques (Ajagbe et al., 2011a; Lasisi et al., 2012a; Ajagbe & Ismail, 2014; Solomon et al., 2014). Information technology plays a vital role in information handling due to developments such as reduction in computing and operation time, availability of files on video discs, use of T.V as convenient information display, telecommunication and satellite communication facilities such as internet, e-mail, skype, facebook and other platforms. Ajagbe et

al. (2011b) suggests that the arrival of social media was instrumental to the interactive nature of the digital landscape. In other words, information technology aids easier communication of information among people.

3.0 CONCEPT OF ENTREPRENEURSHIP

Drucker (1985) defines entrepreneurship as the process of obtaining profits from new, exceptional and valuable combinations of resources in an uncertain and ambiguous environment. This is closely linked to Kirzner (1983), who defines entrepreneurship as the process of realizing profitable opportunities and making the moves to fill currently unsatisfied market needs or doing more efficiently what is already being done. The understanding of the concept of entrepreneurship will certainly not be complete without accounting the contributions of Joseph Schumpeter to its definition. Schumpeter (1934) defines entrepreneurship as the process of forming “new combinations” of factors to yield economic growth. Schumpeter rejected the widely accepted view of the market as a perfectly competitive construct and instead viewed it as a dynamic process driven by creative destruction. He pioneered the view that entrepreneurship is the act of innovation – “creative destruction” to create something new and more valuable, the essence of economic development. Ajagbe et al. (2012) argues that Schumpeter’s definition of entrepreneurship places importance on innovation, which is noticeable in the form of new products, new production methods, new markets and new forms of organization. In a Delphi study, Gartner (1990) finds eight themes expressed by the participants that constitute the nature of entrepreneurship. They are the entrepreneur, innovation, organization creation, creating value, profit or non-profit, growth, uniqueness, and the owner-manager. The idea could be seen as a result and expansion of Schumpeter’s earlier concept. Kirzner (1973) explains the concept of entrepreneurship in terms of “alertness to opportunity” in other words, the discovery of knowledge which was previously hidden. Ismail & Ajagbe (2013) adds that entrepreneurial discoveries are the realizations of past mistakes or shortcomings made by market participants. The existence of mistake provides scope for profit opportunities that performers can realize. Therefore, in entrepreneurship, an entrepreneur responds to opportunities rather than creating them. For Kirzner, a competitive market and entrepreneurship are inseparable; the competitive process is in essence entrepreneurial. In summary, the definitions of entrepreneurship vary as researchers have not been able to arrive at a valid and reliable definition (Brockhaus & Horwitz, 1986; Sexton & Smilor, 1986). The definitions have emphasized a broad range of activities including the creation of organizations (Gartner, 1990), the carrying out of new combinations (Schumpeter, 1934), the exploration of opportunities (Kirzner, 1973), the bearing of uncertainty (Knight, 1921) the bringing together of factors of production (Say, 1803) including others. The various definitions of entrepreneurship visibly clarify the differences in the concept of entrepreneurship. So far, many efforts have been made in defining entrepreneurship, but none of them considered in isolation provides an absolute explanation to its meaning; rather they are complimentary. However, from the various definitions available, it can be summarised that Entrepreneurship process involves creativity and innovation; scanning of the environment, identifying opportunities and evaluating them, organizing resources to execute them, establishing and running a business that grows by making profit. Growth remains the major objective of entrepreneurship and maximizing profit indicates some elements of growth.

4.0 INFORMATION COMMUNICATIONS TECHNOLOGY AND ENTREPRENEURSHIP

Information Communications Technology possesses many possibilities of addressing the shortcomings of entrepreneurial firms such as improving the organization's performance, ability to do computations which were not possible before, decreasing activities and paperwork, improving the quality and accuracy of tasks, improving the decision making, more relationship and coordination in the institution level, improving costumers' services, making a linkage between costumers and goods suppliers, decreasing the time of work processes, supporting the organizations' strategies, improving the competition, and improving the redesign of work process (Jahangiri, 2007; Solomon et al., 2014; Ajagbe & Ismail, 2014). The internet compresses time and space making it easier for organisations to expand beyond regional boundaries (Solomon et al., 2014). From another study, Sarrafzadeh (2009) proposes the following ICT's advantages and they include; eliminating geographical boundaries in the study, business and relationships, economic, scientific and political connections, increasing the communicational ability, achievement, processing and implementing financial affairs in the global business, dramatic improvement and development of equipment, functions and technology systems, increasing the information and creating advanced industries, and decreasing human error in processes and performance. Aganga (2012), emphasizes that the internet information for instance is a worldwide system of computers which links independent microcomputers to end computers, local area network, wide area networks and worldwide network together in such a way that they share information hard and software resources. Millions of computers spread throughout the globe are currently associated to the internet. These computer networks communicate with each other in agreement with some internationally accepted and standardized rules or procedures. Ghobakhloo et al. (2011) argues that ICT acceptance within users of information technology as a part of firm's employee will impose positive impacts on information technology adoption. The adoption of ICT allow for a reduction of transaction costs and leads possibly to more efficient markets. Also, empirical investigations have found evidence that ICT is associated with improvements in business performance (Akande, 2013; Oladejo & Adereti, 2010). The authors suggested that the level of ICT adoption and usage by users will be affected through providing ICT course and training while higher knowledge of ICT among users would help them in implementing the new technology. Entrepreneurship firms that adopt and make proper use of information communications technology tends to experience an increase in their sales revenue. This type of firms can be seen as 'technology based firms' because they make use of about "51 percent of technology based operations such as aerospace, internet, electronics, mechanical, automobile, clean energy, bio medical, communications, telephone and fax" (Ajagbe et al., 2012; Ajagbe and Ismail, 2014). In other words, this further emphasizes the benefits of adopting technology by firms for efficiency and easy operations.

Beaumaster (1999) argues that information communications technology has emerged as an umbrella which comprises a group of equipment, services, functions and basic technologies. The author categorizes ICT facilities into three groups namely computer, multimedia devices and telecommunication tools. Every business in this planet manifests out of entrepreneurship, it has been the emerging platform for various discoveries, inventions, creativity, innovations, products

and processes. Ajagbe & Ismail (2013) opines that entrepreneurship connotes an individual discovering the kind of business to indulge in and doing it successfully. Entrepreneurship is the process of creating something new with value, time, effort, finances, psychological and social risks to achieve financial resources, job satisfaction and independence. The information technology role in entrepreneurial firms is as dominant as that of other public organizations. Entrepreneurs should adopt ICT as strategies to improve the performance of their business ventures (Poston, 2010). Information communications technology contains indexes related to advanced computer science and technologies, computer design, information systems implementations and their utilities. The advancement in information communications technology is deeply related to the basic concepts of creativity which enables new technologies to emerge (Ajagbe et al., 2012; Ismail & Ajagbe, 2013). Information communications technology is essentially a wide and dynamic field. In fact, it is not farfetched to say that currently ICT is practically involved in every aspect of people's life.

As stated by Dawn et al. (2002) who recognizes the inadequacies of ICT skills and knowledge in entrepreneurial firms as one of the key challenges encountered by Developing countries, specifically in Nigeria. Similarly, Shiels et al. (2003) discovers that attributes of the firm and industry sector are causative factors to the adoption and utilization of information technology by entrepreneurial firms. Kapurubandara & Lawson (2006) classifies internal and external barriers that hinder the adoption of ICT by entrepreneurial firms in a developing country such as Nigeria. The internal barriers include owner-manager attributes, firm attributes, cost and return on investment, while external barriers include: infrastructure, social, cultural, political, legal and regulatory.

5.0 ENTREPRENEURIAL PERFORMANCE

There are many literatures on performance and even on entrepreneurial performance. McGregor & Kartiwi (2010) posits that productivity is the most common yardstick to measure entrepreneurial performance. Performance is commonly stated as doing business and executing it successfully. Performance which is the main yardstick for measuring success, could be viewed as quite a wide concept that evaluates the ability to successfully achieve the entrepreneurial targets. Poston (2010) contributes that it can be determined using qualitative criteria such as job satisfaction, entrepreneurial commitment, perception of justice while quantitative criteria could include profitability, investment return ratio, and sales growth and amongst other variables. In this study, qualitative criteria such as financial, market and innovation performance are used. Financial performance measures the entrepreneurial basic economic targets, and these targets are important to entrepreneurs. Financial performance evaluation criteria include profitability, revenue, returns on investment ratio. In addition to financial performance, market performance such as market and sales growth are also important to entrepreneurs in determining performance of their firms. Akande (2013) supports that customer satisfaction, dedication, change in market share, communication with customers by advertising or sales are used commonly in studies as market performance criteria. Due to the dynamism of consumer needs and wants as well as behaviour, the existence of most products are limited. To handle this problem, entrepreneurial firms must make drastic innovations (Hunt & Morgan, 1996). The innovation performance

criteria are about the R&D rate in the firm's budget, the new products, the new projects, and the quality of the new projects as well as the products.

Market Performance: Yap et al. (2010) states that bank websites makes information readily available to internal and external stakeholders. For example, the marketing department can promote the bank's new products on their websites, and the financial department can as well file their financial statements on the website. The public relations press releases can be made available to the public through the banks' websites. He further emphasizes that having a website is very crucial to entrepreneurial performance. Solomon et al. (2014) reports that the use of websites has allowed companies to develop new and cheaper ways of reaching new markets, offering customers the opportunity of buying goods and services whenever they want and often at reduced cost, whilst also enhancing the level of customer service. This has been coupled with the expansion and use of e-mails, on-line sales, facebook, tele-marketing, which again has been used by entrepreneurs to market their goods and services directly to potential customers, as well as communicating with existing customers and suppliers (McGregor & Kartiwi, 2010; Ajagbe et al., 2011a; 2011b). Increasingly the marketing campaigns of businesses include the use of technologies such as Contact Management Systems that allows them to cooperate. However, effective communication and ability to access information and so on remains critical to the productivity of entrepreneurial firms.

Financial Performance: Practically, all entrepreneurial firms now use software programs such as Sage or Excel to manage their accounts (McGregor & Kartiwi, 2010; Lasisi et al., 2012b). This has allowed them to look at financial information when required, monitor and respond to their customers purchasing patterns by offering discounts and generally improve the management of their finances. The result of this has been for many firms a reduction in their accountancy fees.

Innovation Performance: Ajagbe et al. (2015a) posits that virtually all businesses now have or ordinate, monitor and report on various aspects of their marketing campaigns in new ways making these campaigns more targeted and effective. For many businesses, the need for staff to be away from the office attending meetings or to be based in another geographical location has grown alongside employee demands for more flexible working patterns by having access to a computer. The existence of two or more computers in an office usually leads to the creation of a network. The main advantage of doing so is that resources can be shared example, printers, internet access, files/information can be managed and shared amongst workstations and the security of information can be better managed through a network (Poston, 2010; Lasisi et al., 2012a). Increasingly networks are not just confined to the office but are being adopted so that they allow home/remote working that supports changing business needs. Ajagbe et al. (2015b) argues that innovation has really taken place over a number of years now and continues to transform the way business is done. The authors added that no business today can ignore the use of technology as its effective use helps businesses to remain competitive and profitable, thereby creating or safeguarding jobs.

6.0 CONCLUSION OF THE STUDY

This study which is a detailed literature review of empirical articles was aimed to find out the impact of information communications technology on performance of entrepreneurial firms. This study reported three key findings as important yardstick to measure entrepreneurial performance in firms. They are financial, market and innovation performance variables. Furthermore, this study finds that the use of information communications technology in enhancing performance of entrepreneurial ventures is rapidly evolving, changing the rich and poor societies alike. It has become a powerful tool for participating in the global economy and for offering new opportunities for development efforts. Mobile phones provide market links for urban entrepreneurs and other forms of entrepreneurial ventures. Computers improve public and private services and increase economic productivity. Information communications technology can advance the business or economic landscape, increase growth of entrepreneurial firms as well as reduce poverty in both developed and developing countries if effectually utilized. The study therefore recommends that entrepreneurial firms should embrace effective and efficient application of information communications technology facilities in their businesses as this will enhance rapid growth and development. In addition, entrepreneurial firms could also adopt formal and scientific strategies in the implementation of information communications technology.

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