



The Use of ICT Adoption as a Business Strategy to Increase Performance of SMES in Bauchi Local Government

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Abstract: *The purpose of the study is to examine determine how Small and Medium Enterprises in Bauchi local government area of Bauchi State, Nigeria adopt Information and Communication Technology (ICT) as a business strategy to increase performance and productivity. The study would assist SMEs by making them ready in a way that they would be able to compete within the business environment, create enabling business environment and enhancing customer support services. Effect of perceived ease of use of ICT and effect of perceived ICT cost of deployment, is critically analysed and study gap is identified. The design used for the study was descriptive survey and the instrument was structured questionnaire. The population of the study was all the 165 registered SMEs of small and medium scale enterprises in bauchi local government area from which the respondents, consisting of 158 were drawn. Mean and standard deviation were used in analyzing the data collected. Five hypotheses tested at 0.05 level of significance were upheld. Findings of the study showed that the ICT perceived ease of use has a significant effect on the SMEs performance, there is a significant relationship between perceived cost of deployment and ICT adoption on the performance of SMEs. The study has implications on SMEs, researchers and government agencies. Based on the findings, recommendations were made which include that management of SMEs should support ICT adoption to increase their profitability, government should subsidize the cost of internet sales to reduce the burden of lack of fund on SMEs,*

Keywords: *ICT Adoption, Business Strategy, SMEs performance*

INTRODUCTION

Small and Medium Enterprises (SMEs) assume a vital part in the economy of numerous nations and they are fundamental parts for the monetary advancement in Nigeria, an emerging nation in sub-Saharan Africa. Along these lines, issues should be addressed to guarantee measures are set up that would assist in SMEs' development. It is fundamental that Nigerian SMEs pursue the fruitful reception and powerful use of Information and Communication Technology (ICT) which has turned into a vital management device for enormous endeavors just as SMEs. In spite of the expanding capability of technology in all part of lives, there are various Nigerian SMEs that are yet to embrace it due to some unresolved issues militating against them. This thus influences

the economic advancement of the country, as a result of the role plays in economic development. SMEs are a significant wellspring of business, advancement, and commercialization of development and a way to. SMEs are a major source of employment, development, and commercialization of innovation and a means to. In developed nations, for example, the USA and United Kingdom, SMEs represent more than close to 100% (99%) of employers and offer more than 50% to the nation's (GDP). In non-industrial nations, for example, Ghana, SMEs contribute around 70% to the GDP and record for roughly 92% of business (Zafar and Mustafa, 2017).

In the same way as other others, Nigeria's economy depends generally on SMEs which establish around 90% of complete organizations in the manufacturing, business and service areas and contribute hugely to the work of its residents yet offer under 10% to the GDP.

The term ICT is likewise used to refer to the convergence of varying media and telephone networks with computer networks through a solitary cabling or connection framework. There are large economic benefit to merge the telephone network with the computer network system using a single unified system of cabling, signal distribution, and management. ICT is an umbrella term that incorporates any specialized gadget, enveloping radio, TV, PDAs, PC and organization equipment, satellite frameworks, etc, just as the different managements and apparatus with them, for example, video conferencing and distance learning. An audit of ICT reception patterns inside both created and creating economies can assist with working on the comprehension of the difficulties of ICT reception, especially those looked by SME pioneers in non-industrial nations. The adoption and utilization of ICT address an empowering system by which authoritative pioneers work on the efficiency and adequacy of their business processes, just as change existing plans of action (Jones et al., 2014).

Bigger organizations are more beneficial for economic development since they are bound to create innovations than smaller firms (Harness et al., 2018; Rahayu and Day, 2015), while others have argued that SMEs play a more significant job in financial improvement than their bigger companies. Bigger organizations enjoy numerous upper hands over Small firms, for example, more profound degrees of specialization, further developed information in science, capacity to use economies of scale, admittance to less expensive and bigger financial assets, and better danger the board. The benefits that SMEs have over bigger organizations are inborn in their size. SMEs and SME pioneers have more noteworthy flexibility, less management, less hierarchical order to make due, casual authoritative societies that work with better correspondence, and more prominent nearness to showcase; SME pioneers are bound to take on new, inventive thoughts.

Despite the fact that innovation is significant as it extraordinarily affects organizational performance in various ways, individuals are the vital HR whose information and performance are significant for propelling the reason, mission, and procedures of an organization (Schermerhon et al., 2019). To put it plainly, organizational performance can be defined as the aggregate exhibition of individual representatives while individual worker performance is

characterized as “An evaluation of the results of a person’s behavior: determining how well or poorly a person has accomplished a task given” and it is observed that inspiration, character and capacity are the significant elements influencing workers' presentation. Furthermore, feelings of anxiety in an organization are viewed as decidedly influencing hierarchical performance on the suitable levels yet when stress begins to build, it prompts a reduction in individual and organizational performance (Balzac, 2017).

SMEs work in a competitive climate, and to exist in the current market, they face bunches of difficulties that diminish their presentation. For example, SMEs face these difficulties, for example, lack of common sense, social issues, financial issues, prizes and remuneration issues, regulatory issues, business technique issues, ecological vulnerability issues, initiative issues, abilities issues, and issues with respect to robotic controls. Performance is an essential mark of any business achievement or disappointment. For example, SMEs that have high performance successful in the market and on the other hand those SMEs that perform not well consider failure in the market. These days, SMEs' performance assuming a critical part for endeavors particularly in which grants unhindered use, circulation, and multiplication in any medium, if you give proper credit to the first creators and the source, give a connection to the Creative Commons permit, and demonstrate on the off chance that changes were made (Rehman, et al., 2019).

Several factors establish SMEs performance, for example, plan of action viability (efficiency), effectiveness, and results. The performance of any SMEs depends in huge part on the level of skill its leaders possess when it comes to implementing strategies. The performance of an organization likewise relies upon its representatives, who are a vital piece of the organization and structure the group that pursues accomplishing the organization's objectives. Virtual groups are set up by pioneers to guarantee accomplishment of a particular objective. Remarkably, research demonstrates that virtual groups can't prevail without viable authority (Pech, 2016). Mental capabilities of the two groups and pioneers are additionally viewed as indispensable for successful organizational performance. SMEs performance measures in term of both quantitative just as subjective term, and it is accomplished by the endeavors of individual worker and offices. Additionally, the accomplishment of organization in view of their exhibition that how well an organization accomplishes its destinations (Randeree and Al Youha, 2019).

In view of the foregoing, this research investigate the extent to which SMEs in Bauchi local government area use ICT adoption as a business strategy in increasing their business performance.

The aim of this study is to examine the use of ICT adoption as a business strategy to increase performance of SMEs in Bauchi local government.

The following research questions guide the study:

- i. How does the perceived ease of use of ICT affect SMEs performance?
- ii. How does the perceived cost of ICT deployment affect SMEs performance?

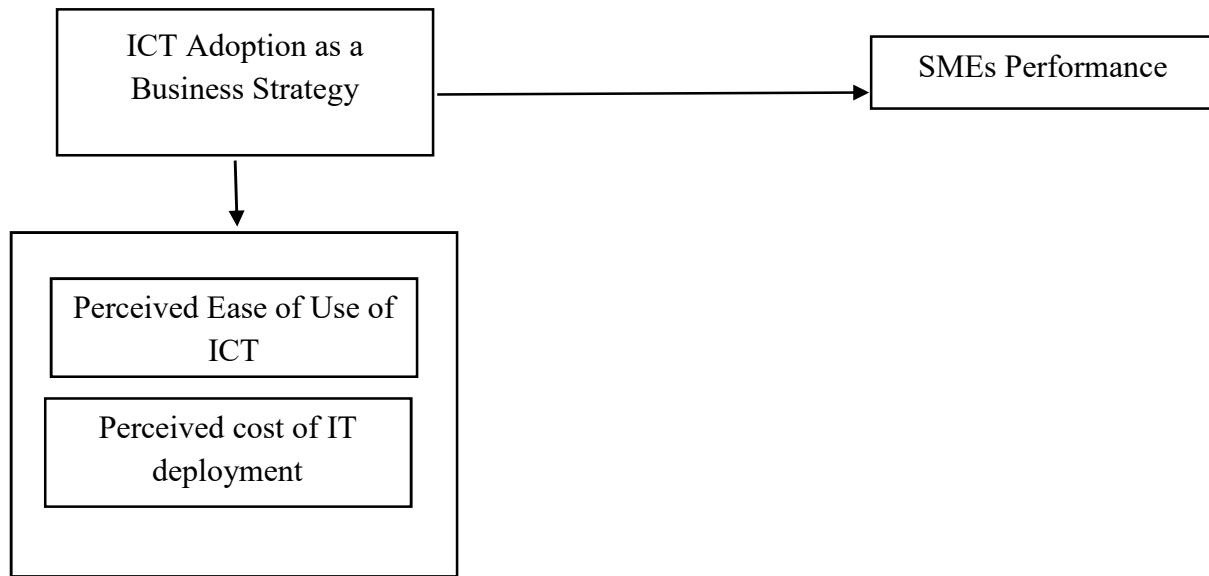


Fig.1 Conceptual framework of the study variables

Source: Author's Desk Research, 2022

LITERATURE REVIEW

Theoretical Foundation

Davis' Technology Acceptance Model

The Technology Acceptance Model (TAM) is an expansion of Ajzen and Fishbein's Theory of Reasoned Action (TRA) (Priyanka and Kumar, 2013) which was a hypothesis started by Fred Davis in 1986 and from that point forward has gone through a few changes and approval. The point of the hypothesis is to portray factors that decide innovation acknowledgment, data innovation use conduct and to give a closefisted hypothetical logical model (Bertrand and Bouchard, 2018). Ducey (2013), clarifies that the TAM incorporates Perceived Ease of Use and Perceived Usefulness which are the significant determinants of innovation acknowledgment and client conduct.

In this review, TAM would be applied as a structure to clarify the ICT reception techniques of SME pioneers in Bauchi neighborhood government. The TAM specifies the connection between saw helpfulness, saw convenience, demeanor toward PC use, and goal to utilize innovation (Wunnava, 2015; Yeh, 2015). The TAM is a set up hypothetical model used to clarify and anticipate client conduct toward ICT, where seen value is one of two causal predecessors of reception and utilization of new innovation (Abdullah and Ward, 2016; Rahayu and Day, 2017; Toft et al., 2014). The most proper structure for examining the business procedures of SME pioneers toward settling on choices on ICT reception is TAM, which is suitable for investigating the impact of various variables, including society, on the apparent convenience and saw

usability of ICT (Olise et al., 2016). Innovation Acceptance Model has six factors that are characterize at beneath:

External factors: External elements incorporates any elements like organizational elements, social elements, PC frameworks elements, for example, equipment and programming, how to educate and help of others in the utilization of PC frameworks that impacts on the view of the handiness and simplicity of utilizing data innovation. Outside factors offer this understanding that how much the utilization of innovation upgrades the exhibition and how much exertion it requires. As per this model, saw value and convenience is affected by outside factors that impacts on the disposition (Porter and Donthu, 2016).

Information and Communication Technology (ICT) Adoption

The implemetation of Information and Communication Technology (ICT) in Small-to Medium-Enterprises (SMEs) is indispensable for the financial turn of events, particularly in non-industrial nations (Rahayu and Day, 2017; Yunis, et al., 2017). Heads of SMEs gradually use ICT-based electronic trade to acquire upper hand in the worldwide commercial center (Rahayu and Day, 2017; Tob-Ogu et al., 2018; Zafar and Mustafa, 2017). Notwithstanding the development of ICT-based electronic business inside SMEs in created nations, the pace of ICT reception inside SMEs in non-industrial nations has remained moderately low (Napitupulu, et al., 2018; Rahayu and Day, 2017). The low reception pace of ICT by SME pioneers in non-industrial nations, for example, Nigeria has added to a low pace of monetary advancement in these nations as well as the other way around (Jones et al, 2014; Rahayu and Day, 2017; Tob-Ogu et al., 2018; Zafar and Mustafa, 2017).

The reception and utilization of ICT have assisted organizations with accomplishing development by turning out to be more efficient, compelling, imaginative and all around the world cutthroat (Jones et al., 2014; Rahayu and Day, 2015, 2017; Tarute and Gatautis, 2017). The utilization of ICT empowers SMEs to contend at similar level as their bigger partners in the worldwide market (Agwu and Murray, 2015). ICT reception inside both enormous and independent ventures in created nations has significantly expanded starting around 2015 (Niebel, 2018; Rahayu and Day, 2017). Notwithstanding, the pace of ICT reception inside SMEs in agricultural nations has remained somewhat low and has added to the low pace of financial development in the district (Jones et al., 2014; Napitupulu et al., 2018; Rahayu and Day, 2017). Contrasted with enormous organizations that have observably profited from ICT reception, the pace of ICT reception inside SMEs has remained somewhat low (Agwu and Murray, 2015; Harness et al., 2018; Rahayu and Day, 2017; Tob-Ogu et al., 2018).

Perceived Ease of Use on ICT Adoption by SMEs

Davis (1999) contended that perceived ease of use is the extent to which an individual considers that making use of a specific system would be effortless and hassle free; at the end of the day, ease of use means freedom from complexity and trouble. Hence, an application that is seen to be more straightforward to utilize is by and large acknowledged and used by more

individuals. Zhu, Linb and Hsu (2016) add that Perceived Ease of Use connotes how much an individual acknowledges that utilizing specific innovation would be easy and bother free. The framework attributes can assist the usability of innovation and framework use with canning similarly lead to the procurement of Information Literacy ability.

Nanthida (2017) counts specific factors that might impact the convenience of current assets, for example, qualities of data assets, the professional training, specialized hardware and backing.

Coming up next are the elements to think about when assessing Perceived Ease of Use: PC self-adequacy, impression of outer control, web self-viability, PC tension, data nervousness, saw satisfaction and objective, convenience and conduct aim to utilize.

Perceived Cost of Deploying ICT on Adoption by SMEs

Surviving research has demonstrated that Cost connected with organization of ICT framework is a component that influences SMEs behaviour of adoption (Ernst and Young, 2014). SMEs are bound to take on ICT frameworks that are seen to have lower monetary inflications that those that do as such, SMEs are more averse to take on ICTs when their underlying organization costs are high (Dixon et al., 2016). Likewise research directed by Poon and Swatman (2019) observed that SMEs frequently have moves in gaining funds to put resources into ICT as they might have really squeezing administrative responsibilities, and don't see the quick need to contribute . Likewise because of the scant idea of capital SMEs might think that it is difficult to legitimize the need to burn through cash on ICT foundation and frameworks (Reynold et al., 2018). Tan and Wu (2018) showed that monetary issues are crucially critical to proprietors and administrators and such issues frequently impact the reception of ICT in SMEs.

Concept of Organizational Performance

In the present cutthroat business climate, organizations should perform better compared to the adversary firms in any industry. The fundamental errand of an organization's design should serve a climate, which urges individuals to buckle down, and can facilitate their endeavors to guarantee more significant levels of hierarchical performance (George and Jones 2015). Better performance relies upon the general exhibition of the organizations that is straightforwardly connected with HR, as such, representatives. In spite of the fact that innovation is significant as it incredibly affects hierarchical performance in various ways, individuals are the fundamental HR whose information and performance are significant for propelling the reason, mission, and methodologies of an organization (Schermerhon et al., 2019). So, organizational performance can be characterized as the aggregate presentation of individual representatives while individual worker performance is characterized as "an assessment of the consequences of an individual's conduct: deciding the way in which well or ineffectively an individual has achieved an errand given" and it is observed that inspiration, character and capacity are the significant elements influencing workers' exhibition (George and Jones 2015). Also, feelings of anxiety in an organization are viewed as decidedly influencing hierarchical performance on the proper

levels yet when stress begins to expand, it prompts a reduction in individual and organizational performance (Greenberg, 2015).

SMEs performance encompasses three specific areas of outcomes: (1) financial performance (profits, return on assets, return on investment); (2) market performance (sales, market share); and (3) shareholder return. Organizational performance involves the recurring activities to establish organizational goals, monitor progress towards the goals, and make adjustments to achieve those goals more effectively and efficiently (Adubasim, Unaamm Akaninyene & Ejo-Orusa, 2018).

Concept of Small and Medium Enterprises (SMEs)

The idea of SMEs is relative and dynamic (Apulu, 2016). There is no widespread meaning of SMEs that is broadly acknowledged as the definition is dynamic and relies to a great extent upon a nation's level of advancement (Aruwa and Gugong, 2017). Shifting definitions among nations might emerge from contrasts in organizations at various degrees of financial turn of events. For instance, the Department of Business, Enterprise and Regulatory Reform (BERR) (2019) utilizes the accompanying definitions: Micro firm: 0-9 representatives; Small firm: 0-49 workers; Medium firm: 50-249 representatives; and Large firm: north of 250 representatives. In Nigeria, the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) characterizes SMEs in view of the accompanying models: a miniature undertaking as a business with under 10 individuals with a yearly turnover of under ₦5,000,000.00, a Small endeavor as a business with 10-49 individuals with a yearly turnover of ₦5 to 49,000,000.00; and a medium venture as a business with 50-199 individuals with a yearly turnover of ₦50 to 499,000,000.00. This examination embraces the meaning of SMEDAN (2015).

SMEs are an indispensable piece of advancement and development in a powerful economy; accordingly, SMEs play a fundamental part in work creation (Napitupulu et al., 2018; Niebel, 2018; Zafar and Mustafa, 2017). Creating SMEs through business has turned into a famous methodology for making occupations, producing income, taking out destitution, and establishing a climate for financial development inside both created and non-industrial nations just as further developing the worldwide market intensity (Elbeltagi, et al, 2016; Rahayu and Day, 2017; Tob-Oguetal., 2018; Zafar and Mustafa, 2017).

Perceived Ease of Use of ICT on SMEs performance

Celik and Yilmaz (2017) also used the Technology Acceptance Model in a study about the acceptance of the Internet for customer's commercial transactions in Turkey. Their findings show that perceived ease of use effects on attitude, attitude effects on intention and intention effects on actual use of the internet for buying. In another study by Seyal and Rahim (2019) in the field of electronic commerce acceptance in small and medium-sized businesses that was conducted in Brunei, the result showed that variable that is perceived ease of use of technology in electronic commerce acceptance by small and medium business were effective in Brunei. Lee and Kim (2019) used technology acceptance models to assess the acceptance of E-commerce

technology. According to the survey results, perceived ease of use, perceived usefulness and shopping pleasure effect on attitude.

Research on factors that contribute to perceived ease of use which is a factor that influences adoption behavior of individuals and organizations in regards to ICT adoption, found that control over the technology, motivation to use and emotion towards the technology are proposed as general building blocks in the formation of perceived ease of use in regards to a new technology (Ajzen & Fishbein, 1980). Hence it was hypothesized that:

There is no significant relationship between perceived ease of usage and ICT adoption on the performance of SMEs.

Perceived ICT cost of deployment on SMEs performance

According to Cloete et al., (2017) finding in a study of SMEs in South Africa they discover that ICT adoption is significantly influenced by lack of access to computer software, other hardware, and telecommunication at a reasonable cost; security concerns and unclear benefits from ICT. A similar study in China by Kunda and Brooks (2018) confirm that limited diffusion of computers, high cost of internet access and a lack of online payment processes are the major factors that directly inhibit ICT adoption by SMEs. Similarly, a survey conducted by Lal (2017) on globalisation and the adoption of ICT in Nigerian SMEs discovers that high cost of ICT infrastructure is a major factor inhibiting ICT diffusion. Arendt (2018) agrees with previous researchers that cost of ICT equipment and networks, software, and re-organisation are barriers to ICT adoption in most SMEs.

Okwuonu, (2018), concludes that poor communications infrastructure leads to limited access and higher costs. Many SMEs operating in Nigeria still experience this, as they still use outdated equipment and state owned monopolies, which often lead to expensive charges and limited coverage, especially in the rural areas. Also due to the scarce nature of capital SMEs may find it hard to justify the need to spend money on ICT infrastructure and systems (Reynold, et al., 2018). Tidd et al. (2018) research also revealed that SMEs challenges in the formation of ICT policies and strategies, due to the lack of expert knowledge and skills brought by specialized staff, which most companies find too costly to engage with. Hence it was hypothesized that

There is no significant relationship between cost of deployment and ICT adoption on the performance of SMEs

METHODOLOGY

The design used for the study was descriptive survey and the instrument was structured questionnaire. The population of the study was all the 165 registered SMEs of small and medium scale enterprises in Bauchi local government area from which the respondents, consisting of 158 were drawn from the Krejcie, and Morgan (1970) table. The instrument for the data collection was developed using validated items from previous studies and has a

reliability value not less than 0.7 using the Cronbach Alpha. Mean and standard deviation were used in analyzing the data collected. The hypotheses were tested using the Spearman's Rank Order Correlation Coefficient with the aid of Statistical Package for Social Sciences version 26.0. The tests were carried out at a 95% confidence interval and a 0.05 level of significance.

RESULTS AND DISCUSSION

Answers to Research Question and Hypotheses Testing

A standard multiple regression was performed between the independent variables: Perceived ease of use and Perceived cost of deployment and the dependent variable as SMEs performance on 0.05 level of significance. The analyses was performed using SPSS regression for evaluation of assumptions confirmed that there was no outliers (an extreme deviation from the mean), the data have good normality and linearity. N = 158.

Table 1: Hypotheses Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Hypothesis Testing
	(β)	Std. Error	(Beta)			
Perceived ease of use	.279	.083	.311	3.376	0.001	Accept
Perceived cost of deployment	.178	.087	.191	2.046	0.043	Accept

a. Dependent Variable: SPR1

Table 1 displays the regression between the variables, the standard coefficients show that perceived ease of use β (0.311) and had p-value of (0.001); perceived cost of deployment β (0.191) and a significance value of (0.043). This means that at a significance value of (0.05); perceived ease of use and perceived cost of deployment were significant.

Discussion of Findings

The result of the hypothesized direct relationship/effect of each independent variable on the dependent variable was presented. Two hypotheses were tested in order to obtain the t -values and p -values.

There is a significant relationship between perceived ease of use and ICT adoption on the performance of SMEs.

Hypothesis two was formulated to find out whether there is a significant relationship between ICT perceive ease of use and ICT adoption on the SMEs performance. The result of the hypothesis revealed that ICT perceived ease of use has a significant effect on the SMEs performance. This is in line with the findings of Lee and Kim (2019) that shows that ICT perceive ease of use is significant. TAM proposes the perceived ease of use (PEOU) as one of the two most important factors for explicating technology acceptance (Davis 1989).

There is a significant relationship between perceived cost of deployment and ICT adoption on the performance of SMEs.

Hypothesis three was formulated to find out whether there is a significant relationship between perceived cost of deployment and ICT adoption on the performance of SMEs. The result of the hypothesis revealed that there is a significant relationship between perceived cost of deployment and ICT adoption on the performance of SMEs. This is in line with the findings of Lal (2017) on globalisation and the adoption of ICT in Nigerian SMEs discovers that high cost of ICT infrastructure is a major factor inhibiting ICT diffusion. This means that perceived ICT cost of deployment significantly affects its adoption by SMEs.

According to Vankatesh et al., (2003) there is a significant relationship between perceived cost of deployment and ICT adoption on the performance of SMEs.

CONCLUSION AND RECOMMENDATIONS

Based on significant relationship between perceived cost of deployment and SMEs performance, we concludes that perceived cost of deployment can influence the SMEs ICT adoption decision.

Based on insignificant relationship between perceived usefulness and SMEs performance we concludes that perceived ease of use cannot influence the SMEs ICT adoption decision.

The study recommends that:

- i. SMEs in bauchi local government should adopt ICT because it makes their job easier which in turn boost their performance level.
- ii. Perceived cost of deployment should not prevent SMEs from adopting ICT because it boost performance level.

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