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Use of Information and Communication Technology by Small and Medium Enterprises in Ogun State, Nigeria

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Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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ABSTRACT

Small and medium enterprises have emerged as promising opportunities to eliminate and reduce unemployment globally. Increasing levels of technological advancement has revolutionized the dynamics of the business terrain. However, SMEs in developing countries are yet to fully explore the benefits of Information and Communications Technology.

Survey data was collected from 75 SME ICT users and non-users in Abeokuta and Otta through a structured questionnaire using stratified random sampling technique.

Results of regression analysis revealed that demographic variable (Staff Strength) significantly influences use of ICT among SMEs while SME service delivery had no influence on ICT use. Also, analysis of variance on the categories of SMEs was not a determinant factor on the use of ICT.

The outcome of this study has implications for owners/ managers of SMEs, stakeholders, government and academic researchers in developing countries as it can provide patterns to help bridge the existing digital divide especially among Nigerian SMEs.

Keywords: Information and communication technology use; SMEs; unemployment.

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1. BACKGROUND TO THE STUDY

Small and medium enterprises play very important roles across different sectors in any nation. The experience of developed countries as regards SMEs buttresses the fact that their roles cannot be overemphasized especially among developing economies.

Different regions of the world define SMEs differently. In Nigeria, SMIEIS and CBN [1] define the micro/cottage industry as an industry with a total capital employed of not more than N1.5M excluding cost of land and working capital and labor employed of not more than 10 workers; small-scale industry as one with a total capital employed of over N1.5M but not more than N50M, excluding the cost of land and working capital with labor size of 10 to 100 workers while medium-scale industry has total capital outlay of over N50M but not more than N200M excluding the cost of land and working capital and labor size of between 100 to 300 workers. This study however adopts the SMEDAN [2] definition of small scale industries. Therefore, SMEs in this study refers to organizations having a total number of 10 to 100 employees and a capital asset of over N1.5million but not more than N50 million excluding cost of land and buildings.

Despite the notable developments witnessed in western countries like USA, Britain and Germany, SMEs in developing countries like Nigeria still continue to perform poorly, Ihua [3]. Their performance and effectiveness as an instrument of economic growth and development in Nigeria has long been under scrutiny. The reason is not far-fetched considering the fact that SMEs are still beleaguered with several main but otherwise surmountable challenges. Accordingly, a recent study by Fatai [4] asserted that problems and challenges of SMEs in Nigeria are consequently tied to certain economic variables that generally characterize the nation's economy. Some of the identified challenges include high levels of unemployment, lack of finance, inconsistent government policies among other numerous issues.

Countries that have navigated out of the dark waters of under development consequently have had to engage the use of a veritable tool in the form of information and communication technology. ICT comprises different technologies such as computers, mobile phones, fixed-lines telephones, networks and various specialized devices whose integration and deployment have

rapidly changed present day business environment. As a matter of fact, Ruhode [5] noted that the world wide community is now being driven by the use of ICT which aids the quick transfer and exchange of information.

Studies abound on the importance of the SME sector to many economies. Apulu and Latham [6], Mpofu, Milne and Watkins-Mathys [7], Ongori and Migiro [8] to mention a few have all equally noted that the use of ICT among SMEs can assist in promoting SMEs competitiveness but quite regrettably, SMEs in Nigeria have failed to effectively tap into several of the benefits offered by ICT. These is largely attributed to major constraints such as poor telecommunication infrastructures, limited ICT literacy, high cost of ICT, incomplete government regulations for e-commerce and a host of other problems, Lucey [9].

The challenges opposing the use of ICT among SMEs in Nigeria are hydra-headed. Consequently, there continues to be need for further research on factors that affect effective utilization of ICT in its different context around the world, Olatokun & Kebonye [10]. For example, Harindranath, Dyerson and Barnes [11] noted in particular that a lack of technical expertise among SME owners/managers could hinder their ability and willingness to engage in ICT matters. Also, recent findings from Joyce and Felix [12] further identified factors militating against the use of information technology in Nigeria to include inadequate electricity, insufficient availability of ICT resources, inability to deploy appropriate type of ICT, inconsistent monetary fiscal and industrial policies to mention a few.

The main focus of this study therefore is to determine factors that promote and inhibit the use of ICT, to determine available types of ICTs and extent of use of such ICTs as well as activities such ICTs are used for among selected SME sectors in Ogun State.

1.1 Statement of the Problem

The success level of SMEs in Nigeria still leaves much to be desired, Osagie [13]. As unemployment assumes a frightening dimension, efforts undertaken by the Nigerian government to promote ICT use among SMEs across different industries have not yielded many dividends; many of the SMEs have failed to reap the benefits evenly.

The moderating effect of industry type on the diffusion of technological innovation and ICT use among SMEs remains yet to be discovered which presents a significant gap in knowledge. In similar vein, though studies like an investigative study of factors affecting use of ICT in SMEs in Nigeria, Irefin et al [14], adoption and utilization of e-business by SMEs in Ibadan, Bankole [15] abound, such researches were carried out on single SME sectors within a given state. Hence, these studies did not effectively address peculiar factors affecting sectors of trading, agro-allied, telecommunications, pharmaceuticals, manufacturing, textile, building & construction, transport, tourism as well as events & entertainment. Also, the nature of ICT used by specific SME sectors and their specific applications were not determined.

Furthermore, it is still quite unclear whether the factors that affect SMEs in Nigeria cuts across different SME sectors or are restricted to particular sectors. Likewise, research in the area of ICT utilization among developing countries is still under researched and Nigerian SMEs are no exception.

1.2 Objectives of the Study

The major objective of this study is to investigate factors that promote and inhibit ICT use among SMEs in Ogun state. The specific objectives of the study are to:

1. Identify the type of ICTs used by the selected SMEs in Ogun State.
2. Identify the transactions / activities ICTs are used for in the SMEs.
3. Determine the influence of characteristics of owner of small and medium scale enterprises on the use of ICTs.
4. Identify elements that promote and inhibit use of ICT among the SMEs in Ogun State.
5. Determine the extent of ICT usage by SMEs for services delivery in Ogun state.
6. Identify the benefits of effective utilization of ICT among SMEs sectors in Ogun State.

1.3 Research Questions

1. What type of ICT are used by SMEs in Ogun State and what services do they use them to deliver?
2. What factors promote or inhibit use of ICT among the SMEs in Ogun state?
3. To what extent do SMEs in Ogun state use ICT for services delivery?

4. What benefits do SMEs in Ogun State derive from the utilization of ICT?
5. What challenges are faced by SME ICT users in Ogun State?
6. What are the prospects of using ICT by SME non- ICT users in Ogun State?

1.4 Research Hypothesis

- ❖ **H₀₁**: There is no significant relationship between the demographic profile of SMEs and the use of ICT.
- ❖ **H₀₂**: There are no significant differences in the diversity of ICT used among the different categories of SMEs.₂
- ❖ **H₀₃**: Use of ICT will not have a significant influence on SME service delivery.

2. REVIEW OF LITERATURE

In order to guide the study, relevant bodies of literature were reviewed. The term ICT has become a part of daily language use synonymous with mobile phones, PDAs, handheld devices etc. often times, ICT is used as an extended synonym for information technology. In the real sense, ICT is the convergence of telecommunication equipment's and devices through a link system for the sole aim of sharing resources.

Apulu and Latham [6] view ICT as a tool that brings about competitive advantage which in turn helps to deliver business value in organizations. In today's fast paced and highly dynamic business environment, change is inevitable. ICT is fast becoming one of the main drivers of such change within organizations, Adebambo and Toyin [16].

Information and Communication Technology has metamorphosed from a luxury to a necessity, Onourah [17] and accordingly, the need to survive and thrive in the ever changing business terrain have forced businesses even in remote areas of Nigeria to begin to embrace ICT.

On a grander scale, Frempong [18] observed that the contributions of ICT to business development have become pervasive to the extent that it is becoming increasingly difficult for companies to compete effectively in the world market without adequate ICT infrastructure. Though ICT vital to SMEs, a balanced understanding of appropriate forms of ICT needed by SMEs is equally necessary as different SMEs need not use ICT to the same degree of complexity. For instance, the first ICT

tool that most SMEs take on is having basic communication capabilities, the next ICT upgrade is usually a PC with basic software. With the internet, SMEs are able to use more advanced communication capabilities such as e-mail, file sharing and e-commerce. This may prove sufficient for most SMEs, especially those in service industries such as tourism.

However, more importantly, like any firm, an SME decides which type of ICT product to accept based on the concrete benefits they can bring to its core business, the ICT capacity of its employees and the financial resources available.

In today's technology driven age, ICT is critical in helping SMEs facilitate one or more strategic choices. Though the evidence in terms of SMEs use of ICT for strategic objectives is somewhat mixed, Bingi et al [19] opined that SMEs have the opportunity to achieve competitive advantage from advances in ICT through innovation, marketing, efficiency gains, better quality and customer responsiveness.

2.1 Benefits of ICT to SMEs in Nigeria

The benefits of ICT span across different sectors of a nation's economy and all other fields of human activities. ICT plays a major role in the way organization products are produced, promoted and provided, Arekemase [20].

SMEs are known to be the driving force behind Nigeria's march towards economic development thus the effective utilization of ICT is of uttermost importance since ICT can help in the advancement of their businesses and also help them to make strategic choices.

The use of ICT can provide several significant benefits to SMEs such as increasing productivity in the production process, enhancing and increasing the efficiency of internal business operations, connecting SMEs more easily and cheaply to external contacts whether locally or globally, improving inventory management systems, decreasing wastage in production processes, improving communication between different departments within a firm, improving accounting and budgeting practices among other benefits.

2.2 Factors Affecting ICT Use among Nigerian SMEs

The use of ICT among SMEs in a developing economy like Nigeria is plagued with many

problems, Lal & Peedoly [21] and in spite of the high infusion growth rate of digital technologies in recent years, the penetration rate in Nigeria remains low.

Gwangwava & Gutu (2012) categorized these challenges into internal and external barriers. The internal barriers include; owner / manager characteristics, cost and returns on investment, low ICT literacy, lack of finance and many more while the external barriers include social, cultural, political, legal and regulatory issues.

Furthermore, several studies on factors affecting ICT use among developing countries abound. Olatokun [22], Akpan-Obong (2007), Lal [23] and Apulu et al [24] amongst others have identified one or more factors affecting use of ICT among SMEs in Nigeria. For example, Olatokun [22] noted that low levels of education as well as illiteracy among a percentage of the Nigerian population have continued to affect Nigeria's ICT use and development.

Similarly, the electricity constraint in Nigeria is described as one of the factors affecting the implementation of ICT among Nigerian organizations, SMEs inclusive. Baker [25] rightly noted that Nigeria is the largest oil producer in Africa and holds approximately one third of the proven gas reserves in Africa, but a lack of power supply has remained a major problem in the country.

Many studies confirm the poor state of infrastructure as another major reason for the slow uptake of ICT among businesses. The lack of these vital infrastructures ranges from inadequacies in their provision on the part of the government to poor service delivery on the part of service providers. Apulu et al. [26] observed that insufficient provision of facilities such as network backbone and fibre-optic for Wide Area Networks for interconnectivity is responsible for low levels of ICT use among SMEs. Likewise, Folorunsho, Gabriel, Sushil and Jeff [27] identified cost associated with the implementation of ICT within SMEs as a possible factor inhibiting many Nigerian SMEs from using ICT. Cost of implementation was defined as the total amount required for business organizations to implement a new technology. According to Folorunsho et al. [27], many SMEs in Nigeria stress that the cost of implementing ICT is very high and that the money can be used for other purposes that will be more effective and profitable when compared to the benefits that could be derived from the implementation of ICT.

3. METHODOLOGY

The purpose of this study is to examine the factors promoting and inhibiting use of ICT among SMEs in Abeokuta and Otta, Ogun state. Ogun state is a state in the south-western part of Nigeria with a current estimated population of 3, 728,098 people. It is bordered to the south by Lagos state, to the North by Oyo and Osun state, to the East by Ondo state and to the West by Republic of Benin. The state is approximately 19 per cent, that is, 17,542 square kilometers of Nigeria's 923,219 square kilometers land area.

There are several industrial areas in the state; hence, many SMEs operate within the state, providing income and employment for several people. The various SMEs in the state include, transport, pharmaceutical, manufacturing, hospitality, textile, construction, agriculture, media, real estate, telecommunication, energy, fashion & style, tourism, industrial and chemical, banking & finance amongst others. These SMEs employ a significant proportion of the total working population in Ogun state and also account for a larger fraction in terms of physical presence, employment provision and service delivery within the state.

The study adopted a stratified random sampling research design, which involves collection of data from SMEs in pharmaceutical, manufacturing, textile, telecommunication, agro-allied, tourism, printing, building & construction, events & entertainment and trading based on sectoral distribution. The dispersed nature of the subjects and the unavailability of ample data on registered SMEs in the state justify selecting a few respondents from whom generalization about the population could be made.

Ease of access to the SMEs was negotiated through their professional associations. SMEs in Nigeria belong to various associations like: Nigerian Association of Small-Scale Industrialists (NASSI), Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), Chamber of Commerce and Industries.

To select a sample for the study, the researcher visited the various offices of the different SME associations. However, no comprehensive list of firms operating within the state could be provided while some associations outrightly refused to divulge any information. The Ogun state chamber of commerce however proved helpful as it had a list of 113 registered firms across the different sectors within the state. The researcher

also independently discovered that some unregistered SMES had incorporated the use of basic ICT's like the mobile phone and the computer system in their business activities. Conversely, this development made the researcher to purposively select 40 SMEs who use other forms of ICT which specifically include (the internet, intranet, e-mail, web portal, video conference and enterprise resource systems) and 40 of SMEs who do not use the aforementioned forms of ICT. Nonetheless, the unevenness in the population made the researcher to randomly select variable sampling elements to ensure proportional representation of the different SME sectors.

Primary data for this study was collected over a period of two weeks personally by the researcher using two structured questionnaires for ICT users and non- ICT users. In administering the questionnaire, owners / managers of the SMEs were the targeted respondents. Out of the 80 copies of questionnaires administered, 2 copies were not retrieved, 3 had some missing key information and 75 were correctly completed. Regression analysis was used to show significant influence among demographic profiles of the SMEs and to show the influence of ICT use on service delivery while Anova was used to compare differences between groups.

4 RESULTS

4.1 Demographic Characteristics of SME ICT Users

The demographic characteristics of the SMEs was obtained using a number of measures that include nature of organization, organization type, age of organization, staff strength of organization, owner ICT literacy and number of years of ICT usage.

Table 4.1 presents the demographic characteristics of the SME ICT user.

The table shows that high percentage of the nature of organizations sampled are from private limited companies, followed by sole proprietor and family owned business with 14 (37.8%), 10 (27.0%) and 5 (13.5%) respectively. The largest proportion of respondents was the manufacturing organization with 7(18.9%), closely followed by pharmaceuticals 5(13.5%) and trading 5(13.5%). The table also shows that 28(75.7%) of the SMEs have being in operation for above five years while 9(24.3%) of the SMEs were less than 5 years old in operation. From the table,

14 (37.8%) of the organizations have employees between 1-10, followed by large organizations with 101- 250 employees. The table further shows that 27(73.0%) of the owners of the SMEs were ICT literate and 10(27.0%) were not ICT literate. Also, years of usage of ICT by organizations was highest within 4-6 years range (35.1%) and 4 (10.8%) declined response about their organizations number of years of ICT use.

4.2 Demographic Characteristics of SME Non- ICT Users

The demographic characteristics of the SMEs was obtained using variables which include the type of organization, age of organization, number of employees and estimated annual income.

Table 4.2 presents the demographic characteristics of non- ICT users.

The table shows that SMEs involved in trading had the highest proportion of 7(18.4%), followed by textile and agro-allied with 6(15.8) and 6(15.8) respectively. Majority of the SMEs sampled 33(86.8%) had being in existence for over 5 years as shown in the table. Table 4.2 also shows that 13(34.2%) of the organizations had employees within the 10-49 range followed by smaller organizations with 10(26.3%) having 0-9 employees. Furthermore, 12(31.6%) had an estimated annual income above 5000,000 while 2(5.3%) of the sampled organizations declined response on their estimated annual income.

Research Question 1a: What are the types of ICTs used by SMEs in Ogun State?

Results revealed that majority of the organizations used mobile telephone 32(86.5%) in their businesses, 31(83.7%) reported that they used computer, 29(78.4%) used internet while

27(72.9%) used the electronic mail. However, very few of the sampled organizations made use of video conference and enterprise resource system as portrayed by 9(24.3%) and 10(27%) respectively, the reason for the low volume can be attributed to the nature of their businesses.

Research Question 1b: What Services do SMEs use ICT to deliver?

Table 4.4 revealed the services SMEs use ICT to deliver.

Table 4.4 shows that the sampled organizations primarily use ICT to keep up with competitors on a daily basis as indicated by 16(43.2%). Fifteen (40.5%) admitted using ICT for online transaction daily while 14(37.8%) said they used ICT to communicate with members of staff daily. Also from the table, results showed that 12(32.4%) used ICT to communicate with customers and suppliers on a monthly basis and 9(24.3%) used ICT to communicate with customers and suppliers on a weekly basis. Likewise, 8(21.6%) said they used ICT to provide company information online annually.

Research Question 2: What factors promote or inhibit use of ICT among the SME ICT users and non-users in Ogun state?

This section is further divided into two:

1. Section 1 focuses on factors that promote ICT use among SME ICT users.
2. Section 2 focuses on factors that inhibit ICT use among SME non- ICT users.

What are the factors that promote ICT use among SME ICT users in Ogun State?

The distribution of factors that promote ICT use among SME ICT users is presented in Table 4.5.

Table 4.1. Demographic characteristics of the SMEs ICT Users

	ICT Users	
	Frequency	Percent
Organization nature		
Private Limited Company	14	37.8
Public Limited Company	4	10.8
Partnership	4	10.8
Sole proprietor	10	27.0
Family Owned Business	5	13.5
Others		
Organization Type	Frequency	Percent
Manufacturing	7	18.9
Textile	3	8.1
Telecommunication	2	5.4
Tourism	2	5.4

Building & Construction	3	8.1
Printing	4	10.8
Pharmaceutical	5	13.5
Events & Entertainment	3	8.1
Trading	5	13.5
Agro- Allied	3	8.1
Age of organization	Frequency	Percent
0-5 years	9	24.3
>5 years	28	75.7
Staff strength	Frequency	Percent
0-9	14	37.8
10-49	7	18.9
50-100	5	13.5
101-250	8	21.6
>250	3	8.1
Owner ICT literacy	Frequency	Percent
Yes	27	73.0
No	10	27.0
Years of ICT use	Frequency	Percent
1-3 years	8	21.6
4-6 years	12	32.4
7-10 years	7	18.9
>10 years	6	16.2
No response	4	10.8

Table 4.2. Demographic characteristics of the SMEs non-ICT Users

NON-ICT Users		
Organization Type	Frequency	Percent
Manufacturing	5	13.2
Textile	6	15.8
Telecommunication	1	2.6
Tourism	2	5.3
Building & Construction	2	5.3
Printing	3	7.9
Pharmaceutical	4	10.5
Events & Entertainment	3	7.9
Trading	6	15.8
Agro- Allied	6	15.8
Age of organization	Frequency	Percent
0-5	5	13.2
5- 10 years	11	28.9
11-15 years	8	21.1
>15 years	14	36.8
Staff strength	Frequency	Percent
0-9	10	26.3
10-49	13	34.2
50-100	9	23.7
>100	6	15.8
Estimated annual income	Frequency	Percent
<500,000	10	26.3
500,000 - 1000,000	7	18.4
1000.000-5000,000	7	18.4
>5000,000	12	31.6
No Response	2	5.3

Table 4.3. Distribution of types of ICT used by SME ICT users

	Video conference		Internet		E-mail		Credit card system		Web portal		Computer		Enterprise resource System		Intranet		Telephony (mobile)		Broadcasting (Radio/TV)	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Pharmaceutical	1	20	3	60	3	60	2	40	3	60	4	80	2	40	4	80	4	80	3	60
Manufacturing	5	71.4	7	100	6	85.7	5	71.4	5	71.4	6	85.7	5	71.4	3	42.8	7	100	5	71.4
Textile	0	0	2	66.7	3	100	1	33.3	1	33.3	3	100	0	0	3	50	3	100	3	100
Telecommunications	0	0	2	100	1	50	0	0	0	0	1	50	1	50	1	100	1	50	0	0
Agro-allied	0	0	2	66.7	2	66.7	2	66.7	3	100	2	66.7	2	66.7	3	66.7	3	100	2	66.7
Tourism	0	0	2	100	2	100	0	0	1	50	1	50	0	0	1	50	2	100	0	0
Printing	1	25	2	50	2	50	1	25	2	50	4	100	1	25	2	66.7	3	75	2	50
Building & Construction	0	0	3	100	3	100	0	0	2	66.7	3	100	0	0	1	50	3	100	1	33.3
Events & Entertainment	0	0	3	100	2	66.7	2	66.7	3	100	3	100	0	0	2	66.7	3	100	1	33.3
Trading	2	40	3	60	3	60	2	40	2	40	4	80	1	20	5	83.3	3	60	1	60
Total	9	24.3	29	78.4	27	72.9	15	40.5	22	59.5	31	83.7	12	32.4	25	67.6	32	86.5	18	48.7

Table 4.4. Distribution of services SMEs use ICT to deliver and frequency of use

ICT services	Daily		Weekly		Monthly		Yearly		No response	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Online transaction	15	40.5	5	13.5	5	13.5	6	16.2	6	16.2
Communicating with the members of staff	14	37.8	5	13.5	3	8.1	7	18.9	8	21.6
Keep up with competitors	16	43.2	4	10.8	5	13.5	6	16.2	6	16.2
Providing company information online	7	18.9	6	16.2	4	10.8	8	21.6	12	32.4
Communicating with customers and suppliers	4	10.8	9	24.3	12	32.4	7	18.9	5	13.5
Obtaining information about new market value	6	16.2	3	8.1	10	27	7	18.9	11	29.7

Table 4.5. Distribution of internal factors promoting ICT Use among SME ICT users

Possible Factors	Disagree		Agree		No response	
	Freq	%	Freq	%	Freq	%
Owner's high level awareness of ICT	20	54	13	35.1	4	10.8
Large size of the organization	23	62.1	10	27	3	8.1
Use of ICT by customers and suppliers	15	40.5	19	51.3	3	8.1
Perceived benefits of ICT	15	40.5	17	45.9	5	13.5
ICT Infrastructure	11	29.7	20	54	6	16.2
Adequate ICT literate staff	10	27	23	62.1	4	10.8
Owners decision to use ICT	14	37.8	12	32.4	11	29.7
High cost of ICT infrastructure	14	37.8	19	51.3	4	10.8
Nature of your organization's business	8	21.6	26	70.2	3	8.1
Low ICT maintenance costs	10	27	17	45.9	10	27

Among the internal factors promoting ICT use, 26(70.2%) agreed that the nature of business of their organization was a major reason for their use of ICT. The table further shows 23(62.1%) agreed that adequate ICT literate staff in the different organizations was also a major reason for use of ICT followed by ICT infrastructure and use of ICT by customers and suppliers with 20(54%) and 19 (51.3%) respectively.

Table 4.6 presents the distribution of external factors promoting ICT use.

The table shows that 21(56.7%) agreed that preference of customers and suppliers of the SMEs was a major factor promoting use of ICT. The table further shows that 18(48.6%) agreed that popularity of online marketing and sales was also responsible for their usage of ICT in their businesses while 15 (40.5%) attributed their use of ICT to reliable internet service. Twelve (32.4%) indicated adequate legal framework for businesses using ICT as a factor promoting their use of ICT.

What are the factors that inhibit ICT use among SME non- ICT users in Ogun State?

The distribution of factors that inhibit ICT use

among SME non- ICT users is presented in Table 4.7.

The table revealed that SMEs operating within Ogun State face several factors inhibiting their use of ICT. The table shows that 27(71.1%) agreed that high ICT maintenance cost was the leading inhibiting factor. Also the table shows that 26(68.4%) were of the opinion that ICT yields little returns on investment furthermore, 19(50%) agreed that owners decision to use ICT was also a significant factor preventing their organization's from using ICT while 17(44.7%) agreed that the nature of their organization's business and owners lack of awareness inhibits their use of ICT. Furthermore, 16(42.1%) indicated lack of necessary ICT infrastructure as a factor affecting their use of ICT.

Table 4.8 presents the external factors inhibiting SME non- ICT users.

The table showed that a high proportion of the SMEs, 28(73.7%) agreed that power failure was a critical factor inhibiting their use of ICT. Twenty two (57.9%) were of the opinion that lack of popularity for online marketing and sales inhibited them from using ICT. Furthermore,

19(50%), 19(50%), 19(50%) agreed that uncertain government taxation rules, inadequate legal framework for businesses using ICT and customers/suppliers preference for face-to-face interaction were among the external factors inhibiting their organizations from using ICT.

Research Question 3: To what extent do SMEs in Ogun state use ICT for services delivery?

Table 4.9 presents the extent of use of ICT by SME ICT users.

The table showed that 30(93.7%) and 25(80.6%) admitted using mobile telephone and the computer respectively to a very large extent as represented by 31% and above. Also, 19(65.5%) and 15(55.5%) claimed to use the internet and the electronic mail to a fairly large extent as represented by 21-30%. The table further revealed however that 10(83.3%), 8(53.3%) and 6(24%) admitted using enterprise resource system, credit card payment service and intranet respectively to a very little extent as indicated by 1-10%.

Research Question 4: What benefits do SMEs in Ogun state derive from the utilization of ICT?

The findings presented in Table 4.10 showed that there were appreciable benefits in the usage of ICT among SMEs across the state. The result revealed that business owners within the industry made judicious use of the different means of promoting their businesses. Table 4.10 presents the benefits of utilization of ICT among SME ICT users.

Results from the table show that 24(64.8%) agreed that improved marketing was their greatest benefit since embracing ICT. Twenty three (62.1%) agreed that ICT has enabled them to effectively share information. Similarly, the table shows that 22(59.4%) agreed that ease of carrying out their business transactions and improvement in productivity was one of the

benefits derived from using ICT. Twenty one (56.7%) agreed that increased sales was one of the benefits of ICT to their business organization. Twenty (54%) agreed that use of ICT has accounted for reduced cost of doing business, improvement in productivity and also 24hrs customer service.

Research Question 5: What challenges are faced by SME ICT users in Ogun State?

In answering the challenges faced by SME ICT users in Ogun state, Table 4.11 presents the responses obtained from the sampled SMEs.

Several of the SMEs operating within the state are still being faced with different forms of challenges. Results revealed that 28(75.6%) agreed that the greatest challenges currently being faced by SME ICT users in Ogun state was inability to integrate ICT into their businesses and electricity constraints. The results also showed that 22(59.4%), 20(54%), 20(54%), 19(51.3%), 18(48.6%), 16(43.2%) indicate high cost of implementation, lack of funds, lack of adequate ICT policies, lack of infrastructural facilities, corruption and low computer literacy as the challenges faced by their organization using ICT.

Research Question 6: What are the prospects of Using ICT by SME non- ICT users in the next 2-5 years?

Several of the sampled SMEs indicated their intention to use some forms of ICT technologies in the future as presented in Table 4.12.

The results of Table 4.12 showed that 68.4% of the organizations intended to use internet technology in the next 2- 5 years while 65.8% planned to embrace point of sales in the near future. 57.9% also said they intend to embrace electronic mail system. Also, 52.6% intended using credit card system sometimes later in their business activities. All of the firms showed intent of using a particular form of technology in the future, showing that they all realize the importance of ICT to their various businesses.

Table 4.6. Distribution of external factors promoting ICT use among SME ICT users

External	Disagree		Agree		No response	
	Freq	%	Freq	%	Freq	%
Consistent government policies	22	59.4	9	24.3	6	16.2
Adequate legal framework for businesses using ICT	19	51.3	12	32.4	6	16.2
Customers and suppliers preference	11	29.7	21	56.7	5	13.5
Reliable internet service	18	48.6	15	40.5	4	10.8
Popularity of online marketing and sales	10	27	18	48.6	9	24.3

Table 4.7. Distribution of internal factors inhibiting ICT use among SME non-ICT users

Possible factors	Disagree		Agree		No response	
	Freq	%	Freq	%	Freq	%
Internal						
Owners lack of awareness of ICT	19	50	17	44.7	2	5.3
Owners decision to use ICT	17	44.8	19	50	2	5.3
Low volume of organization activities and transactions	23	60.5	14	36.9	1	2.6
Lack of necessary ICT infrastructure	20	52.7	16	42.1	2	5.3
Nature of the organizations business activities	20	52.6	17	44.7	1	2.6
Lack of qualified staff to develop and support ICT	23	60.5	13	34.2	2	5.3
High ICT maintenance cost	11	29	27	71.1	0	0
Little return on investment	11	29	26	68.4	1	2.6

Table 4.8. Distribution of external factors inhibiting SME non- ICT users

External	Disagree		Agree		No Response	
	Freq	%	Freq	%	Freq	%
Customers and suppliers preference for face-to-face interaction	18	44.7	19	50	1	2.6
Uncertain government taxation rules	18	47.4	19	50	1	2.6
Poor maintenance culture	18	47.3	18	47.4	2	5.3
Inadequate legal framework for businesses using ICT	17	44.7	19	50	2	5.3
Lack of popularity for online marketing and sales.	14	36.8	22	57.9	2	5.3
Power failure	9	23.7	28	73.7	1	2.6

Table 4.9. Distribution of extent of use of ICT among SME ICT users

ICT Types	1-10%		11-20%		21-30%		31% and above	
	Freq	%	Freq	%	Freq	%	Freq	%
Video conference	5	55.5	4	44.4	-	-	-	-
Internet	6	20.6	4	13.7	19	65.5	-	-
Electronic mail	6	22.2	6	22.2	15	55.5	-	-
Credit card payment service	8	53.3	7	46.6	-	-	-	-
Web portal	4	18.18	-	-	6	27.3	12	54.5
Computer	-	-	1	3.2	5	16.1	25	80.6
Enterprise resource system	10	83.3	2	16.67	-	-	-	-
Intranet	6	24	5	20	14	56	-	-
Telephony (mobile)	-	-	-	-	2	6.25	30	93.7
Broadcasting (radio/television)	-	-	-	-	7	38.8	11	61.1

Table 4.10. Distribution of benefits of ICT among SME ICT Users

Benefits Possible	Disagree		Agree		No response	
	Freq	%	Freq	%	Freq	%
Improvement in response time	12	32.4	18	48.6	7	18.9
Increased sales	11	29.7	21	56.7	5	13.5
Reduced cost of doing business	10	27	20	54	7	18.9
Effective sharing of information	9	24.3	23	62.1	5	13.5
Improved marketing	6	16.2	24	64.8	7	18.9
Ease of transactions	6	16.2	22	59.4	9	24.3
Improvement in Productivity	8	21.6	22	59.4	7	18.9
Improvement in supplier relations	11	29.7	20	54	6	16.2
24hrs customer service	10	27	20	54	7	18.2

Table 4.11. Distribution of challenges associated with the use of ICT among SME ICT users

Possible Challenges	Disagree		Agree		No response	
	Freq	%	Freq	%	Freq	%
Lack of infrastructural facilities	10	27	19	51.3	8	21.6
High cost of implementation	9	24.3	22	59.4	6	16.2
Excessive reliance on foreign technology	12	32.4	11	29.7	14	37.8
Lack of funds	11	29.7	20	54	6	16.2
Inability to integrate ICT into business	4	10.8	28	75.6	5	13.5
Electricity constraints	4	10.8	28	75.6	5	13.5
Lack of adequate ICT policies	9	24.3	20	54	8	21.6
Corruption	11	29.7	18	48.6	8	21.6
Low computer literacy	12	32.4	16	43.2	9	24.3
Lack of supportive organizational culture	11	29.7	12	32.4	14	37.8

ICT services to be provided after embracing ICT by non- ICT Users

Table 4.13 presents the services to be provided after embracing ICT by non- ICT users.

Results showed that all of the sampled SMEs intended providing one form of service or the other to their various customers. The kind of services they planned to provide is shown in Table 4.9. Majority of the sampled organizations intended advertising their goods and services electronically upon acceptance of ICT as indicated by 22(57.9%). Furthermore, 21(55.3%) intended starting to take online orders. 19(50%), 18(47.4%), 16(42.1%) all intended providing company information online, receiving payment online and selling electronic goods respectively. The results showed that majority of the firms intended carrying out their business transactions online and in real-time in no distant future.

4.3 Test of Hypotheses

Hypothesis 1: There is no significant relationship between SMEs' demographic profiles and the use of ICT.

Table 4.14 presents the significant relationship between SMEs' demographic profiles and the use of ICT.

Table 4.14 revealed that strength of staff of a company among other SMEs' demographic profiles was significant ($p < 0.05$), other variables such as nature of organization, type of organization, how long the organization had been in existence, ICT literacy of SME owner and period of adoption of ICT are not significant ($p > 0.05$). This implies that SMEs who have higher staff tend to use ICT.

Hypothesis 2: There are no significant differences in the diversity of ICT used among the different categories of SMEs.

Table 4.15 presents the significant differences in the diversity of ICT used among the different categories of SMEs.

Results from Table 4.15 shows that the null hypothesis is not rejected ($F = 0.553$; $p > 0.05$). This implies that there is no significant difference in the diversity of ICT used by SMEs in different sectors for service delivery.

Hypothesis 3: Use of ICT will not have a significant influence on SME service delivery. Table 4.16 presents the influence of ICT use on SME service delivery.

Results from Table 4.16 shows that use of ICT does not have a significant influence on SME service delivery. The result revealed that the null hypothesis is accepted and the alternative hypothesis is rejected ($t = -0.772$; $p > 0.05$). This implies that there is no significant influence of ICT use on SME service delivery.

5. DISCUSSION OF FINDINGS

The study revealed that majority of the SMEs are still at the early stage of ICT use. They predominantly use basic ICT equipments like mobile telephones and computers. This explains why Irefin et al [14] noted that the most basic ICT tool for SMEs is having communication capabilities through fixed or mobile phones and those SMEs may then use a personal computer with basic software for things like information processing or keeping track of accounting items. Quite remarkably, result also revealed that, few of the companies have begun to use some advance communication equipment like the

electronic mail, internet browsing, web portal, intranet and enterprise resource system. This affirms the findings of Kotelnikov [28], who observed that ICT use by SMEs ranges from basic technology such as radio and telephone lines to more advanced technology such as emails, e-commerce and information processing systems.

However, availability does not imply use. Further enquiry into the services delivered by the SMEs using available ICTs revealed they are channeled towards keeping up with competitors and providing online transaction services while also using it to communicate with members of staff of the organization thereby suggesting that the technologies are predominantly used as a marketing and communication tool. This form of ICT use is considered beneficial on the long run. The ability of organizations to communicate effectively with customers and suppliers can enable a company attain greater levels of competitive advantage.

In understanding the reasons why organizations tend to use ICT, results revealed that the nature of business, adequate ICT staff, available ICT infrastructure and use of ICT by customers and suppliers significantly stimulate a company's use of ICT. Little wonder Mpfu et al [7] noted that organizational readiness of every organization is reflected in the size, type, nature of business as well as ICT expertise and the perceived benefits upheld by the management and employees.

From the study, result revealed that SMEs now boast of having adequate ICT infrastructures for promoting their various businesses as opposed to findings from previous studies. This can be attributed to the presence of numerous ISPs and mobile operators within the country. Also, ICT is changing the way we live, work and study. Findings from the study revealed that SMEs are being driven to integrate ICT into their business operations by external influence of customers and suppliers. This discovery agrees with Harindranath et al [11] which identified use of ICT by SMEs in Southeast England for improvement of customer service, keeping up with competitors and enhancing supplier relations.

Likewise, to have a more robust understanding of the whole study, factors inhibiting use of ICT were also considered. The study revealed that high ICT maintenance cost was a chief factor inhibiting ICT use. Accordingly, Apulu et al [24]

noted that high cost associated with ICT implementation makes SMEs in most cases ignore the utilization of ICT. The researcher therefore suggests more effort on the part of the government, ICT providers and regulatory authorities to make ICT readily available for business owners.

Among other factors inhibiting use of ICT discussed in this study, little returns on investment was discovered to be a second leading reason as stated by more than two-third of the organizations. This could be an extension of Harindranath et al [11] who affirmed that after cost, the single biggest constraint on ICT investment was the uncertainty over the potential business benefit from such investments. This finding do not however downplay the effect of external factors like power failure and customer willingness to engage in online transactions in Nigeria due to various security concerns and restrictions in the global market.

One of the major objectives of this study was to investigate the extent of use of ICT. The study showed that the mobile phone was widely used to a very large extent. Mobile phones have overtaken computers as tools in supporting the running of SMEs, given their prevalence and accessibility even though the computer system is equally used to a large extent. Further still, SME owners are now very much familiar with the benefits ICT could bring to their businesses. The study established improved marketing as a major benefit while also enabling organizations effectively share information. Some others reported an improvement in productivity. This is in-line with Apulu [26] who opined that the automation of business processes in companies provides a quicker means for achieving their desired output. Thus, SMEs have been seen from this study to enjoy ease in carrying out their business transactions using ICT. This shows that Nigerian SMEs can eliminate their labour intensive nature if they use ICT in their business operations thereby increasing output, reducing cost of manpower and increasing profitability.

For Nigerian SMEs, the biggest challenge among several others is the problem of ICT integration according to this study.

The only constant phenomenon is change, organizations who do not presently use ICT also indicated from this study a desire to use the internet technology within the next 2-5 years. This suggests a strong aspiration to showcase their businesses on a wider platform.

Table 4.12. Prospects of using ICT among SME non-ICT users in the next 2-5 years?

Sectors	Internet technologies		E-mail system		Credit card system		Electronic billing system		E-Cheque system		Electronic shopping system		Point of SALES	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Pharmaceuticals	3	75	2	50	3	75	1	25	3	75	2	50	4	100
Manufacturing	3	60	2	40	3	60	1	20	2	40	2	40	2	40
Textile	3	50	3	50	3	50	1	16.7	0	0	3	50	3	50
Telecommunications	0	0	0	0	0	0	1	100	1	100	1	100	1	100
Agro-allied	6	100	6	100	3	50	2	33.3	2	33.3	4	66.7	4	66.7
Tourism	1	50	1	50	1	50	0	0	0	0	0	0	1	50
Printing	3	100	2	66.7	1	33.3	1	33.3	0	0	2	66.7	2	66.7
Building &Construction	1	50	1	50	1	50	0	0	2	100	0	0	1	50
Events & Entertainment	2	66.7	2	66.7	1	33.3	1	33.3	2	66.7	2	66.7	2	66.7
Trading	4	66.7	3	50	4	66.7	2	33.3	2	33.3	2	33.3	5	83.3
Total	26	68.4	22	57.9	20	52.6	10	26.3	14	36.8	18	47.4	25	65.8

Table 4.13. Distribution of services to be provided by non- ICT Users

ICT Services	Yes		No		No Response	
	Freq	%	Freq	%	Freq	%
Taking order online	21	55.3	11	28.9	6	15.8
Receiving payment online	18	47.4	14	36.8	6	15.8
Sales of electronic goods	16	42.1	16	42.1	6	15.8
Providing company information online	19	50	13	34.2	6	15.8
Ordering and payment of inventory purchasing	16	42.1	15	39.5	7	18.4
Delivery of digital goods or services	15	39.5	16	42.1	7	18.4
Electronic advertising	22	57.9	9	23.7	7	18.4
Online recruitment	14	36.8	17	44.7	7	18.4

Table 4.14. Showing regression analysis of SME demographic profile on Use of ICT

	B	Std. error	Beta	T	Sig
(Constant)	19.751	5.769		3.423	.002
Nature of organization?	.741	.698	.181	1.062	.297
Type of organization?	-.663	.334	-.336	-1.927	0.063
For how long has your company been in operation?	.863	2.411	.059	.358	.723
What is the staff Strength of this company?	1.820	.812	.403	2.242	.033
Is the owner of this company ICT literate?	.768	2.476	.054	.310	.758
Since when has your organization adopted ICT for its operations?	-.965	1.846	-.086	-.523	.605

a. Dependent Variable: USEFICT

Table 4.15. Anova Analysis of differences in the diversity of ICT used among the different SME categories

Dependent Variable: Use of ICT						
Source	Type III Sums of Squares	df	Mean Square	F	Sig.	
Corrected Model	247.928 ^a	9	27.548	.618	.771	
Intercept	18123.528	1	18123.528	406.510	.000	
Types of Organisation	247.928	9	27.548	.618	.771	
Error	1203.748	27	44.583			
Total	23101.000	37				
Corrected Total	1451.676	36				

a. R Squared = .171 (Adjusted R Squared = -.106)

Table 4.16. showing the influence of ICT Use on SME service delivery

Service Delivery	Unstandardized Coefficients		Standardized Coefficients	T	Sig
	B	Std. Error	Beta	-0.772	0.450
	-0.229	0.296	-0.179		

In this study, certain demographic characteristics of SMEs were considered to determine their influence on SMEs who use ICT. A major attribute of SMEs in Nigeria relates to ownership structure, which largely revolves around one-man or a family. Among SMEs who use ICT, findings on the nature of SMEs from this study reveals no significant influence on ICT use. Onourah [17] affirmed that Nigerian SMEs are predominantly

owned by a sole proprietor or by partners. In such arrangements, capital for running the business is raised among friends, relatives and acquaintances. A major implication of such organization type however is that it limits the capacity for expansion while also mostly restricting the business within the confines of the local environment in which it operates consequently leaving very little capital left for ICT

consideration or uptake. This observation is in agreement with Ogunsiji and Kayode [29] who also noted that the manager/proprietor's vision in sole proprietorship business is mostly confined to the local community in which the business operates and there is generally little or no knowledge of the wider or distant markets. Similarly, Ogunsiji and Kayode [29] opined that the rate of business mortality amongst Nigerian SMEs is high probably because of a strong mutual distrust and the dominance of the sole proprietor which militates against the formation of partnerships or limited liability companies. Similarly, Adelaja (no date) comments that SMEs have the problem of lack of continuity whereby in most cases, immediately the owner, proprietor or entrepreneur dies or loses vision or commitment, most small-scale enterprises die.

The age of an organization is often considered as one of the factors that promote use of ICT. The finding of this study however proves otherwise as there was no significant influence of age on use of ICT by companies. This is similar to the findings of Oye, Iahad, Zaivah and Rahim [30] who reported that age does not have a significant effect on acceptance and use of ICT.

Also from this study, regression analysis on the staff strength of an organization among other demographic factors of SMEs has been discovered to be a potential factor that significantly promotes the use of ICT. However, as important as employee training and re-training is to any organization, majority of SME owners/managers in Nigeria are skeptical of investing in training and skill acquisition of their staff as regards issues such as ICT due to the cost implications and also out of fear of losing such employees to competition upon completion of such trainings. Nigerian SMEs on the contrary could gain competitive advantage and pioneer innovative developments if owner/managers change their orientations on staff capacity development. This not only ensures competition which is good for growth, but also guarantees sustained human power development among the Nigerian workforce.

Furthermore, owners ICT literacy did not influence use of ICT. From this study, a high percentage of owners/managers confirmed they were ICT literate. Crook and Kumar [31] and Tarafdar and Vaidya [32] noted that a proactive approach and active championship on the part of top managers can however lead to the successful adoption of ICT. Regrettably, ICT

literacy among SME owners in Nigeria has not translated to envisaged growth over the years.

Although Mouelhi [33] advocates that the adoption of ICTs, such as internet, mobile telephony and broadband networks, in many developed countries has been found to have a positive effect on organizations' performance, diversities in the types of ICT used among SMEs in different sectors have been shown not to have a significant influence on use of ICT from this study. Sectoral distribution does not determine type of ICT used by SMEs. Most SMEs regardless of industry type are directly influenced by ICT factors in ICT, Khong Sin, Uchenna, and Siong [34] adoption decisions. This may be especially so considering the fact that developing countries are still well behind developed countries in access to ICT [35]. Hence, SMEs in Nigeria generally make-do with available forms of technology within their environment. Also, Beekhuizen et al. [36] noted that access to ICT continues to be a global problem especially in developing countries. This shows that countries are digitally divided due to lack of access and availability of ICT.

SMEs deliver various forms of services. The outcome of this study shows an opposing view to widely acclaimed influence of ICT use on performance as there was no significant influence of ICT use on Service delivery among SMEs. The reason for such among Nigerian SMEs may not be far-fetched. Mouelhi [33] rightly suggested that the greatest benefits of ICT are realized when ICT investment is combined with other organizational changes and human capital upgrade. These key factors are still lacking among SMEs in Nigeria. Most of the SMEs are owned by proprietors who often times are resistant to change, aim at maximizing profit as well as reducing all other forms of cost including staff development.

6. CONCLUSIONS

Findings from this study give better insight into some of the issues concerning the use of ICT among SMEs in Ogun state. SMEs within the state are still at the early stages of ICT use. From this study, nature of organizations business, adequate ICT literate staff and use of ICT by customers and suppliers are key internal motives for the use of ICT by SMEs and inadequate power, lack of popularity for online marketing and sales are main reasons inhibiting use.

Although SME owners are often times aware of ICT functions, awareness of strategic benefits of ICT can be further improved upon. The findings from this study approve that most of the SMEs are unable to integrate ICT into their businesses. However, it is believed that an external motivator can effectively tilt the scale towards more pronounced use of ICT especially among SMEs in Ogun state. The researcher opines that an innovative brand leader can sufficiently influence many SMEs by developing tailor made ICT solutions and services that showcases short and long term benefits of ICT.

7. RECOMMENDATIONS

The challenges and problems of ICT usage among SMEs in Nigeria are hydra-headed and hence can only be effectively tackled by a multi-dimensional and concerted approach by all stakeholders i.e. the government (Federal, State and Local) and other agencies and parastatals, banks, regulatory authorities as well as SMEs (owner and Management), the employees and other donor agencies.

For an SME to set itself apart from its competitors and also have a sustainable competitive advantage there is a need to invest in ICT. Thus for SMEs in Ogun State to remain competitive or to become successful, it is important for owner-managers to understand the critical success factors related to ICT usage and also develop a strategic vision.

In respect of these enormous but surmountable challenges that have being identified in this study, the following recommendations are made:

- (1) The ICT industry must intermittently develop ways of making SMEs owners/managers realize the supplementary value and latent benefits inherent in the use of appropriate ICT while also developing products and services targeted at addressing specific business needs. It can be done by having seminars or induction sessions to allow SMEs assess their new inventions. In order to receive greater responses towards ICT acceptance, it is recommended that certificates should be given as a token and financial support to attend such seminars. These would help authorities in establishing a close link with the SMEs and get continuous feedback from them in order to identify problem

areas in their products or services and take necessary actions to rectify them.

- (2) This study also recommends that Government should as matter of urgency assist prospective entrepreneurs to have access to finance and necessary information relating to business opportunities, modern technology, raw materials, market, plant and machinery which would enable them to reduce their operating cost and be more efficient to meet the market competitions.

8. CONTRIBUTIONS TO KNOWLEDGE

There is lack of scholarly articles on the level of utilization of ICT applications amongst Nigerian SMEs. Therefore, this study adds to the existing body of literature and makes specific contributions to the field of information science as well as being able to identify the types of ICT mostly used by the SMEs.

This research has also made a novel contribution to the area of ICT use by identifying inadequacies of previous research in recognizing major stakeholders responsible for promoting effective utilisation of ICT amongst Nigerian SMEs, which has not been identified in previous researches. The research has also highlighted key motivating factors for ICT adoption in Nigerian SMEs and common benefits of ICT with respect to the organizational performance of many SMEs who utilise ICT solutions. Though some literatures have identified both the challenges to and the benefits of ICT adoption, only a few literatures have considered SMEs' specific utilisation of ICT. This research contributes to knowledge by validating the findings which comprise the key factors hampering SMEs' advancements in Nigeria and also highlights chief motivating factors promoting ICT use. Insights from this research show that factors which affect the adoption and use of ICT in every country are quite different, even though some factors may be analogous. Previous research, as indicated in chapter two, had identified, for example, the lack of stable electricity as a key factor that affects ICT adoption in SMEs. However, in this research, although electricity is important but the inability of the SMEs to effectively integrate ICT into their business operations posed a significant challenge in utilization. The research findings suggest that many SMEs would like to use sophisticated ICT if they knew how to effectively incorporate it.

This research has also added to policy and practice by providing a rich insight into SMEs' experiences with respect to ICT use. This is evident, based on the different views of the SME's who participated in the study. SMEs can now benefit more from the government and other stakeholders that are involved in their affairs. Consequently, this can result in SMEs becoming more enlightened about certain government policies and the effects of such policies on their business.

Furthermore, this research has also brought to limelight appropriate recommendations applicable to several SME categories which can assist both the stakeholders and government in resolving problems confronting SMEs. Hence, this research provides a richer view of the factors that affect ICT use in Nigeria than found in the previous studies uncovered during the review of existing literatures.

There is no research without a limitation. One major limitation of this research is the non-availability of a comprehensive list of firms operating within the state which hindered the use of a larger representative sample size. Also, the study focused on SMEs operating within Ogun state, the second most industrialized state in Nigeria after Lagos State.

It is the researchers' belief that although the research was limited to Ogun, still, some of the research findings are likely to be similar to those in other parts of Nigeria. However, the current research findings cannot be generalized without additional research.

9. SUGGESTION FOR FUTURE STUDIES

(1) Future research could explore regional and sectoral variations in ICT usage patterns within Ogun State as well as differences across regions within Southwest Nigeria. Re-testing the research findings and the recommendations in different regions within Nigeria especially, will help to determine whether the findings have the same impact or are less significant in other areas.

(2) The researcher also recommends that future studies can adopt other data collection techniques like interview and focus group discussion to get more robust and revealing qualitative data.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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