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Internal and External Oriented Problems of Utilizing ICT

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Abstract
This paper draws the attention of the Nigerian government to take vibrant steps towards addressing the problems of utilizing ICT in managing SMSEs in Nigeria. Fifty-seven (57) SMSEs were surveyed to identify the internally and externally-oriented problems of ICT usage. Two research questions and a hypothesis were analysed to determine whether or not the types of problems are correlated. The findings revealed that lack of finance and poor facilities seemed to be the major obstacles to the effective usage of ICT. Although, the problems were more external in nature than internal but, the inefficient utilization of ICT is not contingent upon the types of problems as was revealed by the calculated value of the Spearman's rank correlation coefficient (R). The findings also revealed that there is a weak association between the types of ICT utilization problems. This research is relevant to government officials that are responsible in developing policies regarding SMSEs by equipping them with a better understanding of how to revive SMSEs in Nigeria. The management of SMSEs and SMEDAN could gain useful insights from this study which can help them in formulating viable objectives that are worthy of pursuance.

Keywords: ICT, SMSEs, growth, utilization, problems, SMEDAN.

INTRODUCTION

There is no doubting the fact that one of the critical issues of the millennium development goals (MDG) is poverty reduction. The concept of poverty has been addressed from different dimensions yet it continues to be a major concern to both developed and developing countries. Differences in poverty occur across social, economic, religious and geographic boundaries hence, continuous effort is being made to reduce it. Adebayo et al. (2011) suggested that facilitating economic growth and development through the creation of wealth and employment opportunities is one sure way of reducing poverty in Nigeria.

Small and medium sized enterprises (SMSEs) are agents of growth and are apt to making the poverty reduction vision in Nigeria a reality. They have stimulated the growth of many economies in both developed and developing countries like Nigeria. They provide about seventy (70) per cent of employment rate and forty-six (46) per cent of gross domestic product; hence they are central to boosting the Nigerian economy (Mukaila Ayanda and Sidikat Laraba, 2011; NBS and SMEDAN, 2012). Thus, if given the necessary assistance SMSEs will continue to perform the vital role they are expected to play in stimulating the growth of the Nigerian economy.

STATEMENT OF PROBLEM

The drive towards a market economy demands that organizations pursue technological advancements in order to align their operations to global standards and thus, remain competitive in their respective industries. Information and communication technologies (ICTs) are regarded as vital tools for achieving competitive advantage within an industry. Although, the mere acquisition of technological equipment no longer offers such competitive advantage, the ability to apply ICT to deliver superior customer services could enhance it (Woherem, 2000). No wonder, Woherem (2000) opined that what distinguishes a successful firm from a laggard one is the dexterity with which ICT is efficiently applied to offer differentiated products and services to customers. In spite of these profound benefits of using ICT, many organizations are yet to fully utilize it.

While larger organizations in Nigeria are coping with the challenges and complexity that characterizes the ICT age, Small and Medium Sized Enterprises (SMSE) are still struggling to get acclimatized to this new trend. Part of the reason is because they are yet to focus and strengthen their internal capability (Tiemo, 2012). Houghton and Winklhofer (2004) also observed that the adoption of ICT by SMSEs is rather too slow compared to large organizations. This slow growth was attributed to insufficient finance and lack of skilled human capital (Ashrafi and Murtaza, 2008). Although, government had made concerted efforts to address the financial constraint faced by SMSEs through the programs of the Central Bank of Nigeria (CBN), the International Monetary Fund (IMF) and other developmental agencies in the country, but the situation is still dismal. The government also attempted to bridge the ICT gap in other sectors of the economy. In education, tutors in higher education

institutions have been trained through the federal government's Train The Teacher (TTT) program. While the government is concerned about improving the utilization of ICT in the education sector, not much has been done to educate owners and managers of SMSEs in the use and application of basic ICT knowledge.

AIM AND OBJECTIVES OF THE STUDY

This paper expounded the problems of utilizing ICT in managing SMSEs. It hoped to determine whether these problems are triggered more by internal or external forces. And, the study will provide an objective analysis of the problems obstructing the success of SMSEs operation in Nigeria with the hope of resuscitating them. Two pressing questions and a hypothesis that are relevant to this research were addressed. These are as follows;

1. What are the specific problems of utilizing ICT in managing SMSEs?
2. Are these problems internally or externally-oriented?

H_0: There is no correlation between the internally and externally- oriented types of problems.

LITERATURE REVIEW

SMSEs and Information and Communications Technology

Small and medium sized enterprises (SMSEs) are often regarded as business organizations employing not more than two hundred employees whose capital base is less than two million naira (NBS and SMEDAN, 2012). They exist in many forms ranging from manufacturing to the provision of services. While, information and communications technology (ICT) refers to all computer assisted devices that help to facilitate the dissemination and retrieval of information around the world. There are different types of ICT facilities from very simple design such as telephone to complex machines like the computers of all types and sizes which link the every part of the world to the internet.

The introduction of computer in business organizations had helped to reduce distortions and other barriers to effective communication. They are able to interpret and access information from both primary and secondary sources more precisely and accurately. Utilizing ICT fully is one sure way of strengthening their strategic position like those in the developed countries (Tiemo, 2012). Thus, the benefits of adopting ICT are numerous both in the management of large firms and SMSEs. Academic researches supported the claim that there is a positive relationship between the use of ICT and the growth and success of SMSEs (Ashrafi and Murtaza, 2008; Chacko and Harris, 2006; Ion and Andreea, 2008). Small and medium sized enterprises now deliver services more efficiently and promptly than they did before with the use of ICT facilities. They receive up to date information about current trends in the economy and other marketing variables so easily. Ion and Andreea (2008), suggested that SMSEs stand to gain strategic, tactical and operational benefits from utilizing ICT in performing their activities. They believe that the benefits of adopting ICT in managing SMSEs permeate the three spheres of management usually found in every organization.

Internal and External Problems of ICT Utilization

The activities of SMSEs have met series of challenges both from within and outside the organization. Some of the challenges are peculiar to SMSEs in both developed and developing countries while others are pertinent to individual organization or group of SMSEs operating within the same industry or geographic location. Dutta et al. (2003) identified among other things that inadequate research and development (R&D), legal constraints and strategic issues are some of the challenges facing SMSEs in developed countries. While in developing countries in Africa the core problems as identified by researchers are lack of finance (Edmiston, 2007; Lal, 2007; Fida, 2008; Thwala and Mvubu, 2008), administrative/managerial problems (Tushabomwe-Kazooba, 2006) and poor/outdated infrastructures (O'Regan et al., 2006; Deros et al., 2006). But lack of finance is the greatest constraint among all the problems faced by SMSEs in Nigeria (Lal, 2007).

The problems were further categorized by Kapurubandara and Lawson (2006) into internal and external barriers. They described the characteristics of owner/manager, cost, return on investment, and organizations' characteristics as the internal barriers while poor infrastructures and other macro environmental factors are classified as external barriers. SMSEs are finding it hard to cope with the ever-changing technologies on one hand and their internal incompetence on the other hand due to these constraints. Ashrafi and Murtaza (2008) identified lack of internal skills and capabilities as the major constraints facing SMSEs in the country of Oman which is situated in the Middle East. With these persistent problems it is obvious that SMSEs in developing countries are not fully prepared to adapt into this technological driven world as well as globalization (Houghton and Winklhofer, 2004).

Small and Medium Sized Enterprises in Nigeria

The positive relationship that exists between SMSEs and the growth of a nation's economy is undeniable. In high income countries, SMSEs contribute about fifty-five (55) per cent of the countries' Gross Domestic Product (GDP), while in middle income countries they are responsible for contributing seventy (70) per cent of GDP and ninety-five (95) per cent employment in these countries (NBS and SMEDAN, 2012). Among low income countries like

Nigeria, SMSEs and the informal sector is responsible for sixty (60) per cent of GDP and well above seventy (70) per cent of total employment (NBS and SMEDAN, 2012). Although, the constraints faced by SMSEs in Nigeria are quite similar with those in other developing countries but, these issues have constantly been raised and addressed through the onus of the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN, 2011). One of the objectives of SMEDAN is to serve as a medium through which SMSEs can have access to internal and external sources of funds, appropriate technology and skill acquisition (SMEDAN, 2011). The Director-General of SMEDAN, Alhaji Umar recognizes the fact that educating SMSEs' owners in the use of technology is a very necessary step towards enhancing the speedy growth of SMSEs. He opined that educating SMSEs with basic ICT skills will help to build their capacity and inculcate the needed technical skills in them (SMEDAN, 2011).

The National Bureau of Statistics (NBS) in association with Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) surveyed the status and conditions of SMSEs in Nigeria in order to provide an authentic database for SMSEs. Their research revealed that there is proliferation of SMSEs in Nigeria in spite of the factors limiting their growth. There are about seventeen million, two hundred and sixty-one thousand, seven hundred and fifty-three (17,261,753) SMSEs in Nigeria. This comprises of wholesalers, retailers, social activities, accommodation, food services and other territorial organizations and bodies (NBS and SMEDAN, 2012). The distribution of the SMSEs based on their types of business activities is shown in table 1 below.

Table 1: Sectorial distribution of SMSEs in Nigeria

Sector	**Number of SMSEs**	**Percentage (%)**
Agriculture	2,633,041	15.25
Mining and Quarrying	27,365	0.16
Manufacturing	2,831,642	16.40
Construction	556,133	3.22
Wholesale and Retail(vehicle repairs and household goods)	8,884,265	51.47
Hotels and Restaurants	300,324	1.74
Transport, Storage and Communication	635,203	3.68
Real Estate, Renting and business activities	210,115	1.22
Education	33,259	0.19
Health and Social work	12,712	0.07
Other community, social and personal service activities	1,137,694	6.60
Total	**17,261,753**	**100 %**

Source: 2010 National MSME collaborative survey (NBS and SMEDAN, 2012 p.148).

METHODOLOGY

This research adopted a mixed methodological approach in adopting both qualitative and quantitative methods of addressing the issues of this study. The study population includes all SMSEs currently operating in Bayelsa state of Nigeria during the period of this research. Bayelsa state was used as the scope of this study because of the high concentration of SMSEs in the state. The sample consists of fifty-seven (57) SMSEs randomly chosen from the study's population. The choice of the 57 SMSEs is hinged upon ethical and cost considerations of the researcher (Dattalo, 2008).

The study data was obtained from both primary and secondary sources. The primary data was collected directly from the responses of owners and/or managers of SMSEs with the help of a structured questionnaire. And, the relevant literature of the study was reviewed from secondary sources. The responses from the owners and/or managers were used to answer the research questions and the hypothesis. Specifically, the hypothesis was tested using the Spearman Rank Correlation Coefficient (R). The fifty-seven (57) SMSEs that were surveyed are categorized based on their business activities and/or sector. The distribution of the sampled SMSEs is presented in table 2 below;

Table 2: Distribution of SMSEs based on sector

Sector	**Number of SMSEs**	**Percentage (%)**
Education	9	15.79
Agriculture	4	7.02
Manufacturing	8	14.04
Building and Construction	5	8.77
Transportation/Communication	8	14.04
Hotel and Restaurants	10	17.54
General merchandise	13	22.81
Total	**57**	**100**

Source: Field data, 2012.

DATA ANALYSIS AND PRESENTATION

Research Question 1: what are the specific problems of utilizing ICT in managing SMSEs? To answer this question, the following statements in table 3 were used to guide the researcher.

Table 3: Problems of ICT utilization among SMSEs

S/NO.	STATEMENT	SA	A	SD	D
1	System downturns due to poor network, noisy carriers and damaged cables/equipment affect easy usage of ICT.	**57**	-	-	-
2	Lack of finance is responsible for the poor utilization of ICT.	**57**	-	-	-
3	Irregular power supply makes it difficult to use ICT regularly.	**41**	**6**	**1**	**9**
4	Lack of ICT utilization knowledge and skills are key constraints to effective usage.	**52**	**5**	-	-
5	Absence of a national policy on ICT hinders its utilization.	**2**	**7**	**32**	**16**
6	Computer breakdown and lack of maintenance hinders usage.	**57**	-	-	-
7	Outdated/poor infrastructure slows down ICT utilization.	**57**	-	-	-
8	Managerial/administrative problems are major barriers to the effective utilization of ICT.	**6**	**33**	**11**	**7**
	TOTAL				

Source: Field data, 2012.

KEY:
SA-- Strongly Agreed **A—**Agreed, **SD--**Strongly Disagreed, **D** --Disagreed

Research Question 2: Are these problems internally or externally-oriented?
The responses to this question are presented in table 4 below;

Table 4: Classifications of ICT utilization problems

S/NO.	STATEMENT	Internal	External
1	System downturns due to poor network, noisy carriers and damaged cables/equipment.	2	55
2	Lack of finance	-	57
3	Irregular power supply.	-	57
4	Lack of ICT utilization knowledge and skills.	53	4
5	Absence of a national policy on ICT.	-	57
6	Computer breakdown and lack of maintenance.	49	8
7	Outdated/poor infrastructure.	42	15
8	Managerial/administrative problems.	56	1
	TOTAL	**202**	**254**

Source: Field data, 2012.

Hypothesis Testing

H_0: There is no correlation between the internally and externally-oriented types of problems. The Spearman Rank Correlation coefficient (R) was used to test the validity of this hypothesis and this is expressed mathematically as;

$$R = 1 - \frac{6\sum d^2}{n(n^2 - 1)}$$

where:
R = Spearman Rank Correlation coefficient
d = difference between the pairs of ranked values
n = number of pairs of rankings (in this case the sample size).

The analyses of the frequencies from the respondents presented in table 5 below were used to test the hypothesis of this study.

Table 5: Calculation of Spearman Rank correlation coefficient

S/NO	Frequency (Internal)	Frequency (external)	D	d^2 (row1—row2)
1	2	55	-53	2809
2	-	57	-57	3249
3	-	57	-57	3249
4	54	4	50	2500
5	-	57	-57	3249
6	49	8	41	1681
7	42	15	27	729
8	56	1	55	3025
Total				**20491**

$$R = 1 - \frac{6\sum d^2}{n(n^2 - 1)}$$

$$1 - \frac{6 \times 20491}{57(57^2 - 1)} = 1 - \frac{122946}{185193}$$

$$= 1 - 0.66 = 0.34$$

INTERPRETATION

The calculated value of R is 0.34 and because this value is less than 0.5 it implies that, there is a positive correlation between the external and internal oriented problems. But then, the association or relationship is a weak one.

DISCUSSION OF FINDINGS

From the analysis of the distribution of SMSEs, it was quite obvious that majority of the SMSEs operating in Bayelsa state were engaged in general merchandise. This is because of the ease of starting such businesses which needed little or no form of documentation. The easy formation was made possible by the activities of SMEDAN whose major objectives include reducing the bureaucracies of registering SMSEs in Nigeria. Also, general merchandises normally involves very little amount of capital to set up unlike other businesses. Some of the respondents added that general merchandise yield return on investments more quickly than other types of business activities. These types of businesses offer

quick turnovers thereby generating revenue and funds for the owners.

In accordance with previous researches, the problems of ICT utilization were identified as finance, system downturns, poor network from service providers, epileptic power supply, poor facilities and lack of ICT knowledge and skills. These findings supported Esselaar et al. (2006), Lal (2007) and Apulu and O Ige (2011) claim that, lack of finance and poor infrastructures are the key barriers to ICT utilization in Africa and Nigeria in particular.

The study also revealed that the external problems are more in number compared to the internal problems as can be seen from the frequencies of the respondents in table 4. The respondents claimed that the internal problems are contingent upon the external factors therefore finding lasting solutions to them will invariably strengthen the internal capabilities of SMSEs. This view supports Adebayo et al. (2011) suggestion that, establishing centres where basic skills of ICT can be taught will help to educate SMSEs owners/managers. But such education should be free of charge or, offered at a very minimum rate to make it affordable for owners/managers of SMSEs.

CONCLUSION AND RECOMMENDATIONS

This research draws the attention of the Nigerian government to take proactive steps towards addressing the problems of utilizing ICT in the management of SMSEs. Despite the financial assistance, government can take practical steps in the indoctrination of ICT among SMSEs in Nigeria. Most of the external problems are hinged on the failure of government to provide the enabling environment where SMSEs can thrive successfully thus; government has a greater role to play. This action will place SMSEs in a better position to compete favourably within their industries and also enjoy the benefits that comes from utilizing ICT.

The weak relationship that exists between the types of ICT utilization problems literally means that the inefficient utilization of ICT does not solely depend on the nature of the problems. It is rather contingent on the problems themselves hence; concrete efforts needs to be taken to address the problems irrespective of their orientation types. And that the use of ICT should be imbibed and sustained continuously as part of the organizations' culture.

A major limitation of this study is the inability of the researcher to obtain accurate data concerning SMSEs that collected loans or other financial aids in the past. This would have helped the researcher to further investigate the correlation between the funds and ICT utilization. The study is thus inconclusive as further research can be conducted on ICT utilization problems while holding capital constant.

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