

Does Information Technology (IT) Influence Entrepreneurial operations Efficiency: An Empirical Investigation of the Nigerian Small and Medium Businesses SMBs.

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Abstract: This study aim by the side of investigates the influence Information Technology (IT) on Entrepreneurial operational performance in Nigeria. The study examine (IT) perceptions about business benefits of Information Technology (IT) and provides an insight on the barriers for the adoption of Information Technology. the study was carried out in Lagos state with Two hundred (200) Questionnaires administered and distributed to the member of national association of small and medium businesses (NASMBs) across all the (20) Twenty local Council Development Area (LCDA) in Lagos state purposively. Sample was drawn from small and medium Business consisting of manufacturing, services businesses, printing businesses, food vendors and restaurants, business centers, and Artisan with employment capacity ranging from 2-30 employee. The data collected were analyzed using descriptive and inferential statistical tools. The descriptive statistics used included percentages and tables while Chi-Square was used to analyse the study hypothesis. Finding reveals that Information Technology (IT) has a positive Influence on Entrepreneurial operation and the result of tested hypothesis buttress the significance relationship between IT and Entrepreneurial operation. Also majority of surveyed (SMBs) have reported a positive performance and other benefits by utilizing IT in their businesses. The paper recommends that government should provide enough funds to the entrepreneur in order to ensure the new technology are made use of effectively by all SMBs in Nigerian which will facilitate expansion and Entrepreneurs should be educated and informed about the important of IT and how it could be used to increase operational efficiency.

Keywords: Information Technologies (IT), Small and Medium Businesses (SMBs), Operational Efficiency, Entrepreneurial, Nigeria

I. Introduction

Today organizations of all types are utilizing Information Technologies (IT) around the globe, not only for cutting costs and improving Operation efficiency, but also for providing better services. The adoption of IT by organizations requires a business environment encouraging open competition, trust and security, interoperability and standardization and the availability of finance for IT (UNCTAD 2004). Most of the large and international organizations have effective computer systems to efficiently conduct business. A number of large organizations have spent huge amounts of money on installing computer systems to support their business processes. However, the situation has not been the same with (SMBs) in Nigeria and other parts of the world for various reasons (Parker and Castelman 2007), and (Fink and Disterer 2006). The Nigeria government has taken various measures to diversify the economy for sustainable development of the country and one of the major steps is to transform into a digital society.

Statement Of The Problem

Some Researchers are still doubtful on relevance of Information Technology (IT) effects on Entrepreneurial operation efficiency. In many countries, including much of the developed, these effects have yet to materialize. Different scholar, (Akande, 2014; Akande & Yinus, 2013; Oladejo and Yinus 2014). have focused on Information Technology adoption and business performance in developing country such as Nigeria, and some questions remain unanswered regarding their relationships. This study remain germane by assessing the Impact of Information Technology on Entrepreneurial operation in Nigeria. Specifically, the study will answer the following research questions:

- What are the factors influencing Adoption of Information Technology by Entrepreneurial?
- Does Information Technology Adoption Influence Entrepreneurial Operational performance?
- Is there a relationship between Information Technology and SMBs operation?

Research Hypothesis

The hypothesis for this study are stated in the null form

Ho: Information technology has no positive Influence on Entrepreneurial operational Efficiency in Nigeria.

II. Literature Review And Conceptual Explanation

Evolution of Information Technology

Oladejo (2010) defined Information Technology as the processing of data via computer: the use of technologies from computing, electronics and telecommunications to process and distribute information technology is now becoming common and often being used in place businesses. It is not surprising that nowadays Technology has far reaching effect on almost every aspect of human life. Emmanuel and Sife (2008) observed that positive effects of ICT have continually been noted in business, production, education, politics, governance, culture and other aspect of human life, owing to the fact that installing a functional Technology into the management information system (MIS) of an organization requires a huge sum and the usage of Information Technology comes with several other challenges like low technological literacy of workers, low internet connectivity, maintenance and most importantly unstable power supply especially in a developing society like Nigeria.

Emmanuel and Sife (2008) observed that positive effects of IT have continually been noted in business, production, education, politics, governance, culture and other aspect of human life. This view is corroborated by Agboola (2004) and Ayo (2006) that the growing rate of Information Technology has influenced at an exponential rate. Highlighting the impact of Information Technology in recent years, Rao, Metts and Mong (2003) observed that the 1990s witness the proliferation and hyper growth of technologies, which together are creating a global and cost-effective platform for business to communicate and conduct commerce. More recently, as new data were made available and new methodologies were applied, empirical investigations have found evidence that Information Technology is associated with improvements in business Operation, in intermediate measures and in economic growth. (Sichel, 1997; Brynjolfsson and Hitt, 1996). These adoptions of ICT allow for a reduction of transaction costs and leads possibly to more efficient markets. Also, empirical investigations have found evidence that Information Technology (IT) is associated with improvements in business performance. (Akande, 2013; Oladejo and Yinus 2013,).

Small and Medium Businesses (SMBs)

Small and medium Business have been long recognized as an instrument of economic growth and development. This growing recognition has led to the commitment of World Bank group on SMBs sector as core element in its strategy to foster economic growth, employment and poverty alleviation. the importance of small and medium scale enterprises has not been in doubt, unfortunately classifying businesses into large and medium scale is subjective and premised on different value judgment. Such classification has followed different criteria such as employment, sales or investment for defining small and medium scale enterprises. According to extant literature the definition vary in different economics but the underlying concept is the same. Ajayi et al (2009) contends that the "definition of small and medium scale enterprises varies according to context, author and countries". Small and medium scale enterprises are certainly not transnational company, multinational cooperation, publicly owned enterprises or large facility of any kind. However they can depend on business and ownership structure to become a large business unit Clarke (2004) while it can be argued that 80% of the financing of SMBs come from owners, friends and families, business form can take different form including private ownership, limited partnership, contract and sub-contracts, cooperatives or association (Kozak, 2007). Small and medium Business have a narrow context within which its operation is carried out. However, where it is effectively operated it has capacity to sprout the economic growth and national development. In every economics small and medium scale enterprises has been seen has a pivotal instrument of economic growth and development either in developed for developing economics. Several studies have confirmed this (Ogujiuba; et al 2004, Onugu, 2005, Ihua; 2009). This standard is consistent with other similar studies (Kapurubandara et al 2006) and was used to identify and qualify SMBs for the purpose of this research.

Importance of Small and Medium Businesses (SMBs)

It has been widely recognized that small and medium Businesses (SMBs) not only play an important role in the economy of a country, but are crucial to the country's economic stability. In New Zealand SMBs make up more than 99% of all businesses and account for about 60% of employment. In the USA more than half of all the employment comes from firms with fewer than 500 employees (Baldwin et al 2001). In the UK, SMBs employ 67 % of the workforce (Lange et al 2000). In most EU member states SMBs make up over 99% of enterprises, 67% of jobs and 59% of GDP. In most countries SMBs generate a substantial share of GDP and a key source of new jobs as well as a breeding ground for entrepreneurship and new business ideas. The United States of America, UK, Japan, Australia, New Zealand, Canada and other developed, as well as developing, countries are making policies to facilitate the growth of SMBs. Realizing the importance of Information Technology in New Zealand spend about 10% of her GDP on IT, making it the top ranking country in the world

(Clarke 2004). Estimates from the World Bank indicate that SMBs have contributed over 55% percent of GDP in OECD countries and between 60 to 70 percent of GDP in middle-income and low income countries generating 60 to 70 percent employment (Oman Economic Review 2007). The above facts show that SMBs play a very important role in the growth of economy of a country, and Nigerian should not be an exception.

Information Technology transmission in Small and Medium Businesses (SMBs)

There are a number of studies that discuss adoption of Internet and e-business in SMBs in developed countries. (Gregor et al 2004; Koellinger, 2006; Morikawa, 2004 Schubert and Leimstoll, 2007) Governments around the globe recognize the importance of adoption of Information Technology by SMBs and they have created special groups to study various aspects of IT adoption in SMBs. Despite the importance of Information Technology and emphasis by various governments to encourage SMBs to adopt IT, it has been reported that SMBs have been slow in adopting Information Technology for various reasons ((Dawn et al, 2002; Houghton and Winklhofer, 2004; Lawson et al 2003). This is wanted to examine reasons for the slow adoption of IT by Small and Medium Businesses in developing country such as Nigeria and provide sustainable solution to Entrepreneurial operation.

Barriers to Information Technology (IT) Adoption by Small and Medium Businesses (SMBs)

(Duan et al 2002) identified lack of Information Technology skills and knowledge in Small and Medium Businesses SMBs as one of the major challenges faced by Developing country, particularly in Nigeria. Also (Shiels et al 2003) found that characteristics of the firm and industry sector are contributory factors to the adoption and exploitation of Information Technology by Small and Medium Businesses (SMBs). (Kapurubandara et al 2006) have categorized internal and external barriers that impede adoption of Information Technology by Small and Medium Businesses in a developing country such as Nigeria. The internal barriers include owner manager characteristics, firm characteristics, cost and return on investment, and external barriers include: infrastructure, social, cultural, political, legal and regulatory.

Measurement of Information Technology (IT) Effect on Business Operation.

It has also been argued that the traditional IT investment – performance analyses have not been very successful in the past because of their over reliance on financial data. Some researchers (Birchall, et al 2009) have called for additional research to identify “hidden cost and benefits” that a typically net included in the traditional analysis of IT investment relationship with organizational performance and productivity. However the divide between the different groups of researchers is rather common knowledge. One group emphasizing the need for use of qualitative analysis, believes that quantitative measures have received preferential consideration in the research performed to date. The quantitative group is somewhat vocal about what it considers the superiority derived from the rigors of its approach. They argued that qualitative measures can only be used if they first concur with the quantitative measure of IT pay-offs. Ideally the works of both groups should complement the other.

III. Methodology

The 4,535 registered SMBs in Lagos constitute the study population of the research. However For purpose of this study the population was drawn from the list of member of national association of small and medium businesses (NASMBs) in Lagos state. The choice of Lagos state is connected with the fact that Lagos has high degree of socio-economic activities and serve as a settlement state that accommodate a lot of people from other part of country which consequently lead to its rapid market expansion. Multi-stage sampling techniques were used in which Lagos state was stratified into Twenty (20) local Council Development Area (LCDA) from which the sample of various Associations of small medium scale business was drawn through the simple random sampling procedure. Two hundred (200) Questionnaires were purposively administered and distributed to the member of national association of small and medium businesses (NASMBs) across all the (20) LCDA in Lagos state, Ten (10) NASMEs each was picked from the twenty (20) LCDA due to their approved and recognition by the Federal Government. The major instrument used in the collection of data for this research work was questionnaire. The questionnaire consists of questions that are related to IT Adoption, investment and Entrepreneurial Operational Performance as identified in the literature. Data collected coded and analyzed using frequency table, percentage and mean score while non-parametric statistical test (Chi-Square) was used to test the formulated hypothesis using STATA Data Analysis Package/Software.

IV. Results And Discussions

Effect of Information communication Technology on Entrepreneurial Operational Efficiency

From Table I below, it can be deduced that information technology helps to increase operational efficiency because it makes the operations of small and medium businesses easier to be carried out. Also that

information technology creates new competitors and services. The table also reveals that information technology helps to reduce the likely errors that would have been made in reporting business transactions, while recording transactions manually or reporting results. Also information technology helps the manager to monitor the work of their subordinate without them knowing.

From the table, it shows that information technology plays important role on Entrepreneurial operational activities in Nigeria.

Table I: Influence of Information Technology on Entrepreneurial Operational Efficiency

QUESTIONS (Q1-Q3)	STRONGLY AGREE		AGREE		UNCERTAIN		DISAGREE		STRONGLY DISAGREE	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Information technology is to help increase operational efficiency.	110	55	87	43.5	3	1.5	Nil	Nil	Nil	Nil
Information technology is to speed up the business transactions and creates new competitors and services	55	27.5	124	62	19	9.5	2	1.0	Nil	Nil
Information technology provides up to date information.	94	47	100	50	6	3.0	Nil	Nil	Nil	Nil

Source: Field Survey 2014

From the Table II below, it can be deduced that the primary impact of information technology on SMBs is to increase competitive advantage i.e. to have competitive advantage over its Business competitors. It also shows that the use of information technology minimizes inconvenience, recording of transactions and payment for ordering of goods and other things have been made convenient for SMBs because transactions can now be recorded through the use of computers, payments can now be made through the use of automated machine card at supermarket, and ordering for goods online And also that information technology minimizes cost of transaction in small and Medium Businesses. From the Table it can also be imitative that the benefits that SMBs derived from the use of information technology outweigh the costs. The table also shows that the use of information technology saves time. Finally, the table reveal that is that IT has impact on the Entrepreneurial managerial and there are various barriers towards the adoption of Information Technology by SMBs.

Table II : Impact of Information Communication technology on the Entrepreneurial Managerial Practice and Barriers towards ICT Adoption by SMBs .

QUESTIONS: (Q4-Q12)	STRONGLY AGREE		AGREE		UNCERTAIN		DISAGREE		STRONGLY DISAGREE	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
The use of information technology minimizes inconvenience.	54	27.0	119	59.5	17	8.5	8	4.0	2	1.0
Information technology minimizes cost of transaction.	57	28.5	105	52.5	19	9.5	17	8.5	2	1.0
The benefits derived from information technology in business enterprises outweigh the cost	73	36.5	103	51.5	19	9.5	5	2.5	Nil	Nil
The use of information technology saves time	101	50.5	92	46.0	5	2.5	2	1.0	Nil	Nil
The use of information technology helps to reduce error rate	55	27.5	117	58.5	25	12.5	2	1.0	1	0.5
Technology system is user friendly or easy to use.	84	42	105	52.5	8	4.0	3	1.5	Nil	Nil
Lack of professionals in the field of information technology affects the adoption of IT by SMBs.	73	36.5	99	49.5	17	8.5	9	4.5	2	1.0
Complexity of ICT makes SMBs to avoid the use	70	35	86	43	28	14	16	8.0	Nil	Nil
Employees' knowledge about information technology affects SMBs investment on ICT.	68	34	103	51.5	18	9.0	4.0	4.0	3	1.5

Source: Field Survey 2014

Test of hypothesis

H₀: Information technology has no positive Influence on Entrepreneurial operational Efficiency in Nigeria
 Decision Rule: According to table III below Since the chi-squares calculated (X²-cal) are greater than chi-square tabulated (X²-tab) which makes all the figures to be highly statistically significant with the probability of F = 0.000. Collectively; we reject null hypotheses stated earlier: Information technology has no positive

Influence on Entrepreneurial operational Efficiency in Nigeria due to the result. Thus, we accept alternative hypothesis that: Information technology has positive Influence on Entrepreneurial operational Efficiency in Nigeria and there is significant relationship between Information Technology (IT) and Entrepreneurial operational Efficiency.

Table III: Relationship between IT, SMBs and IT Influence on SMBs operational Practice in Nigeria using Chi-Square Analysis.

S/N	Relationship	Pearson Chi-Square (Value)	Pr (Value)	Remark
1	Q1 VS Q2	121.3027	0.000	Significant
2	Q2 VS Q6	167.4675	0.000	Significant
3	Q3 VS Q4	100.2652	0.000	Significant
4	Q6 VS Q8	168.1818	0.000	Significant
5	Q3 VS Q9	161.1157	0.000	Significant
6	Q1 VS Q8	116.0760	0.000	Significant
7	Q1 VS Q9	180.6207	0.000	Significant
8	Q6 VS Q11	107.3895	0.000	Significant
9	Q4 VS Q10	158.6806	0.000	Significant
10	Q2 VS Q5	174.9242	0.000	Significant
11	Q2 VS Q9	146.4915	0.000	Significant
12	Q5 VS Q8	117.5979	0.000	Significant
13	Q2 VS Q8	93.4343	0.000	Significant
14	Q2 VS Q9	232.3232	0.000	Significant
15	Q8 VS Q10	156.9562	0.000	Significant
16	Q7 VS Q12	122.7891	0.000	Significant
17	Q4 VS Q8	109.6939	0.000	Significant
18	Q8 VS Q9	212.3352	0.000	Significant
19	Q4 VS Q5	211.8056	0.000	Significant
20	Q7 VS Q8	216.1198	0.000	Significant
21	Q8 VS Q10	156.9562	0.000	Significant

Source: Computations and Out-Put of STATA 10 based on Author’s Field Survey ` (2014).

V. Conclusion

In view of the findings of this study, it is concluded that the implementation of information technology to the operations of Small business has made a great positive impact on Entrepreneurial practices in Nigeria. Also finding from the tested hypothesis buttress the Significance of Information Technology to Entrepreneurial practice from the perspectives of SMBs in Nigeria.

VI. Recommendations

In view of the findings from the research work, the following recommendations were made:

- The government should provide enough funds to the entrepreneur in order to ensure the new technology are made use of in the small business enterprises which will facilitate expansion.
- Entrepreneurs should be educated and informed about the important of ICT and how it could be used to increase operational efficiency.

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