

ADOPTION OF INFORMATION AND COMMUNICATION TECHNOLOGY AS TOOL FOR DEVELOPMENT OF SMALL AND MEDIUM ENTERPRISES SERVICE SECTOR IN ABUJA

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Abstract

Information and communication technology (ICT) is so vital in today's business environment and thus, firms are nowadays encouraged to invest heavily on ICT. ICT is a fundamental ingredient for globalization. The study investigates the adoption of ICT as tool for development of SMEs service sector of Abuja. This is achieved by ascertaining the level of ICT adoption and assessing the extent of achievement of operational excellence among service sector of Abuja. The study was conducted among SMEs in service sector operating within the six area councils of Abuja. (AMAC, Bwari, Kuje, Abaji, Kwali and Gwagwalada area councils). Structured questionnaires were administered to 140 respondents of which 126 respondents returned their questionnaires representing 90 percent response rate and this was deemed useable. The data was analyzed using correlation coefficient and multiple regression analysis. The findings of the study revealed that all the independent variables have significant positive relationship with ICT adoption by SMEs in the service sector of Abuja. The study concludes that the adoption of ICT as tool has led to the development of SMEs in the service sector of Abuja. The study recommends that business managers should make ICT a key component of their operational requirements so as to move away from traditions of manual and analogue operations.

Keywords: Adoption, Business Network, Growth, ICT and SMEs

1.0 Introduction

There is no doubt that the 21st century has clinched itself with ICT as one of the driving forces behind accelerated business growth in the world. ICT is a fundamental ingredient for globalization. The business terrain is thus controlled by strict compliance with ICT innovations through networking, internet connectivity and improved information communication flow. Information communication is so vital in today's business environment and thus, firms are nowadays encouraged to invest heavily on ICT.

The role of ICT is redefined as a fundamental enabler in creating and maintaining a flexible business network of inter-governmental arrangements such as joint ventures, alliances and partnerships, long term contract, technology licensing and marketing agreement (Jant, 2009). ICT is a complex and heterogeneous set of goods, application and services used to produce, distribute, process and transform information. However, despite advances in ICT and the acceptance of such technologies by large organizations, the same level of adoption is not evident among Small Medium Enterprises (SMEs) in Nigeria. Okwounu (2013) asserts that many SMEs operatives are unfamiliar with operating a computer and become skeptical of the benefits and values it gives to the business and have the notion that ICT is only for larger companies even when they have the will and financial resources to integrate ICT into their core business.

The economic importance of SMEs within the service sector is highly recognized at the European Union level. According to Eurostat (2008), in total, there were almost 19 million enterprises in the EU-27s non-financial business economies in 2004. Of these, 99.8 percent were SMEs, the majority of which were micro Enterprises employing fewer than 10 persons. SMEs are very diverse, despite that all of them by definition, employ less than 250 employees. SMEs could be dynamic, flexible and innovative companies, or traditional, family based enterprises, embedded in local business environment.

It is indeed an open secret that the contemporary business practices and environment are heavily influenced by information communication and technological changes. In other words, ICT is currently perceived as the engine of innovations and growth for modern business practices with SMEs as no exception to this disposition. This is to say that ICT is seen as the engine to speed up the growth of business both in local and international terrain of businesses. Again, most of these SMEs do not integrate ICT tool in their operations because of reasons such as inadequate finances, lack of technical knowledge, seasoning lack of applicability of ICT to the business that the SMEs are engaged, rate allusion with ICT and deprived infrastructure growth among others.

This study therefore aims to investigate the adoption of ICT tool for the development of SMEs service sector in Abuja. This will be achieved through ascertaining the level of ICT adoption by SMEs service sector and assessing the extent to which the adoption of ICT tool has led to the development of operational excellence among SMEs service sector in Abuja.

2.0 Research Question

The major question this study seeks to answer is: To what extent does the adoption of ICT tool enhance the operations of SMEs service sector in Abuja?

3.0 Research Objective

The sole objective of the study is to examine the extent to which the adoptions of the ICT tool enhance the operations of SMEs service sector in Abuja.

4.0 Literature Review

4.1 Information Communication Technology (ICT) and SMEs

Information communication technology plays a crucial role in helping small and medium scale business operators to design and deliver new products and services with unique features to design and redirecting and redesigning their business processes to meet current changes. (Attom, 2008). Small and Medium Scale business enterprises require information technology infrastructure to provide a solid platform on which their business processes can be built to meet the dynamic business environment they find themselves.

The advent of modern telecommunication and its associated benefits like faster emails, electronic faxes, and social networks etc., time to deliver a service or offer a deliverable or support has been decreased tremendously leading to enhanced customer satisfaction, leading to reported business growth and development of firms. Similarly, with modern day ICT user of goods and services that are tangible, for instance, those that tracks the location of their goods at any point in time (Porter, 2005). According to Cela (2005), there are benefits that SMEs may get from ICT, they are improve efficiency and efficiency of operations, enhancing the acceptance of original managerial, tactical and decision making models and facilitating the admittance to fresh surrounding including production of fresh operations and business models.

4.2 ICT tool for Communication among SMEs Service Sector in Abuja

These ICT tools are many and vary per the kind of business that is being carried out. Among the tools include the following

A. ICT and SMEs Support Systems

The need to keep back of the elementary business activities and transactions of business enterprises such as sales report, cash receipts, cash deposits, and payroll activities require the different implementation of ICT resources. Business support systems are best implemented where a sound and dynamic ICT capability is established.

B. Transactions Processing Systems (TPS)

Transaction support system according to Laudon and Laudon(2010) is a computerized system that performs and record the daily routine transaction necessary to conduct business such as sales order entry, using point of sales (POS) machines, where barcodes of products are scanned for payment by customers, employee records keeping of data base management system (DBMS) and payroll services. Report can easily be generated by the transaction support system in an accurate manner to support the decision making process in the enterprise

C. Customer Relations Management (CRM) System

O'Brien and Marakas (2010) define CRM system as a cross sectional e-business application that integrate and accommodate many customer serving processes in sales, direct marketing accounts and order management and customer service and support CRM systems are very effective ways to consolidate and integrate customer information from multiple communication channels such as telephone, electronic mails, wireless devices, retail outlets, or the World wide Web (WWW). This enables Small and Medium Scale Enterprises to detail out accurate knowledge about customers and their preferences to support improvements in marketing strategies and quality customer service and support.

D. Computerized Inventory Control System.

A computerized inventory control system requires that a computer to count inventory in its memory such that as withdrawals are made, they are recorded instantly by the computer and the inventory balance is equally revised. In likewise manner, a recorder level is reached for any particular inventory, the computer automatically places an order, such that when the order is recorded, the recorded balance of the inventory is increased. This system of inventory control is very dynamic and time saving and SMEs are assured of accurate stock balances that they are able to track the movements of inventory.

E. Internet, Interactive, Marketing and Business Processes

The internet is one of the modern marketing tools for SMEs to market their products and to enhance business processes. It has an impact on marketing of goods and services and to establish relationships among many firms and external entities of Small and Medium Scale Enterprises Interactive marketing process facilitates a situation where customers are partners in creating, marketing, purchasing and improving products and service delivery. Also, a global sales force via the internet can effectively receive instant product price information.

F. ICT and Financial Control and Reporting

Business, especially SMEs thrive well when their business processes are recorded and reported timely. Generally ICT is considered one of the most reliable means of providing a strong platform for effective system of internal control over financial reporting. It stands to reason that a sound ICT system provides a sure and guarantee medium financial information delivery that covers the entire accounting cycle of the firm. ICT creates a conducive

atmosphere that integrates all financial transactions with the help of accounting software to generate financial report which hitherto would have been very difficult to prepare.

G. ICT in Business and Accounting Functions

The accounting cycle is largely influenced by ICT through data capturing or entry such as point of sales machines, data processing by a way of classifying, arranging and calculating and output in the form financial report such as income statement and position statement. It is worth noting that ICT can give critical impact on financial reporting.

5.0 Methodology

The study was conducted among SMEs in service sector operating within the six area council of Abuja (AMAC, Bwari, Kuje, Abaji, Kwali and Gwagwalada area councils). A purposive probability sampling technique was employed to select a sample size of 140 respondents drawn from SMEs in service sector of Abuja. The main tool for data collection was structured questionnaires. The questions centered on the level of ICT adoption by SMEs in their operations and the extent to which the adoption of ICT tool has led to the achievement of operational excellence among SMEs. Out of the 140 questionnaires administered, 126 responded and this represented 90 percent response rate. The questionnaire was subjected to a test and re-test process in order to establish the reliability of the instruments. The method of analysis is that of correlation coefficient and multiple regressions.

6.0 Results and Discussions

Table 1 shows the coefficient Alpha Values and ICT adoption in SMEs service sector of Abuja. Internet, interactive marketing and Business process has the highest coefficient of 0.90, transaction processing system 0.83, business and accounting function 0.82, ICTSME support 0.81, financial control reporting and customer relation management system both with 0.78 and computerized inventory control system with the lowest coefficient of 0.77.

Table 1: Coefficient Alpha Values and ICT Adoption

Independent variables	Coefficient Alpha	Items
SME support System	0.81	5
Customer relations management system	0.78	4
Transaction processing system	0.83	6
Computerized inventory control system	0.77	5
Internet, interactive, Marketing and Business process	0.90	4
Financial control and reporting	0.78	4
Business and accounting fu	0.82	5

From the table, all the independent variables have high positive coefficient value which signify positive relationship with ICT adoption by SMEs in the service sector o Abuja.

Table 2 shows the means, standard deviation and correlation for all the variables. From this result, ICT SMEs support system has highest mean of 4.586 and $r=0.946$ respectively. This indicates that SMEs support system predicts ICT adoption by SMEs. The study also reveals that internet, interactive marketing and business processes, financial control and reporting

business and accounting functions, computerized inventory control system, customer relations management system and transactions processing system predict ICT adoption by SMEs in service sector of Abuja with ($r=0.834, 0.899, 0.675, 0.500$ and 0.325) respectively.

Table 2: Means, Standard Deviations and Correlations for all Variables

Variable	mean	SD	1	2	3	4	5	6	7	8
ICT Adoption	4.471	0.716	1.0							
SME Support System	4.586	0.712	0.946	1.0						
Customer Relation Management Sysytem	4.343	0.699	0.500	0.516	1.0					
Transaction Processing System	4.328	0.675	0.325	0.243	0.60	1.0				
Computerized Inventory Control System	4.371	0.725	0.677	0.722	0.515	0.025	1.0			
Internet, Interactive Marketing and Services Process	4.500	0.653	0.834	0.367	0.438	0.008	0.562	1.0		
Financial Control and Reporting	4.471	0.716	0.790	0.7400	0.770	0.195	0.731	0.212	1.0	
Business and Accounting Function	0.4428	0.753	0.699	0.595	0.531	0.158	0.525	0.478	0.465	1.0

From the table, this indicates that transaction processing system inhibit ICT adoption by SMEs in service sector in Abuja with a correlation value of 0.325 and being the only independent variable with less than 0.5

Table 3 shows multiple regression analysis. The predictor variables (SMEs support system, customer relations management system, transaction processing system, computerized inventory control system, internet, interactive marketing and business processes, financial control and reporting and Business and accounting functions) were significant joint predictors of ICT adoption by SMEs service sector in Abuja ($F(7,126)=135.619, R^2=0.932, P<0.1$) The predictor variables jointly explained 93.2percent variance of ICT adoption by SMEs in service sector in Abuja.

SME support system ($B=0.714, t=11.396, P<0.1$) financial control and reporting ($B=0.222, t=3.787, P<0.1$), computerized inventory control system ($B=0.150, t=2.293, P<0.5$), Business and accounting functions ($B=0.139, t=3.320, P<0.05$), customer relations management system ($B=0.088, t=1.255, Pns$), transaction processing system ($B=0.083, t=2.406, P<0.05$) and internet, interactive marketing and business processes ($B=0.004, t=0.102, Pns$) were significantly independent predictor of ICT adoption by SMEs in service sector in Abuja.

Table 3: Multiple regression analysis showing the variables

Variable	B	t	Sig	R ²	P	F
SME Support System	0.714	11.396	P<.01			
Customer Relations Management System	0.088	1.255	PnS			
Transaction Processing System	0.083	2.406	P<.05			
Computerized Inventory Control System	0.150	2.293	P<.05	0.932	P<.01	135.619
Internet, Interactive Marketing and Business Processes	0.004	0.102	PnS			
Financial Control and Reporting	0.222	3.787	P<.01			
Business and Accounting Function	0.139	3.320	P<.05			

However from the table, customer relations management system and internet, interactive marketing and business processes also predict ICT adoption for SMEs in Abuja but significant with (B=0.088, t=2.406, Pns) and (B=0.004 t=1.102 Pns) respectively.

6.1 Discussions

The study revealed that all the independent variables have a significant positive relationship with ICT adoption by SMEs in the service sector of Abuja. This implies that ICT plays a crucial role in helping SMEs in service sector to provide a solid platform on which their business processes can be built to meet the dynamic business environment they find themselves. The study also revealed that transaction processing system which is a computerized system that perform and records daily routine transaction of business were not conducted by most of the firms studied, thus inhibiting ICT adoption by SMEs in service sector of Abuja.

However, from the study, customer relations management system and internet, interactive marketing and business processes provided ICT adoption for SMEs in Abuja but insignificant in the achievement of operational excellence among SMEs in the service sector of Abuja with (B=0.088, t=2.406, pns) and (B=0.004 t=0.102 Pns.) respectively.

7.0 Conclusion and Recommendations

The study established that all the independent variables (SMEs support system, customer relations management system, transaction processing system, computerized inventory control system, internet, interactive marketing and Business processes, financial control and

reporting and business and accounting functions) have signify positive relationship with ICT adoption by SMEs in the service sector of Abuja with internet, interactive marketing and business processes with the highest coefficient alpha of 0.90 and computerized inventory control system with the lowest coefficient values of 0.77. The study also established that transaction processing system is the only independent variable that inhibits ICT adoption by SMEs in service sector of Abuja with a correlation value of 0.325.

However, the independent variables jointly explained 93.2 percent variance of ICT adoption by SMEs in service sector in Abuja. Customer relations management system and internet, interactive marketing and business processes are insignificant in the achievement of operational excellence among SMEs in the service sector of Abuja with ($B=0.088$, $t=2.406$, Pns) and ($B=0.004$ $t=0.102$ Pns) respectively.

7.1 Recommendations

1. Management of the enterprises should encourage the use of transaction support system so as to aid in the decision making process in the enterprise.
2. Management should ensure that customer relations management system is very effective so as to consolidate and integrate customer information from multiple communication channels.
3. Business managers should make ICT a key component of their operational requirements so as to move away from tradition.

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