Moderating Influence of Information Technology Capability on Physical Evidence and Customer Patronage Of Banks In Nigeria

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ABSTRACT

The purpose of this study was to assess the impact of information technology capability of bankson customer patronage of quoted Banks in south-south zone of Nigeria. The study populationwere 14 guoted Banks which are functionally registered and listed with the Nigerian StockExchange (NSE); Corporate Affairs Commission (CAC) and Nigeria deposit and insurancecompany (NDIC) and our unit for data generation were the top level managers of the selectedbanks and customers of the chosen banks which were randomly selected. Furthermore, weconducted a census study since our population for the study is not large. Therefore, forty two (42)managers on the ratio of 3 managers per bank and seven (7) customers randomly selected from the banks constituted our respondents for the study. Descriptively, the study variables werepresented at the primary level of analysis. At the secondary level of analysis, the Pearson's PartialCorrelation Coefficient was used to test the stated hypothesis in order to ascertain the extent towhich information technology capability of banks moderate the relationship between physicalevidence and customer patronage. The result of the analysis showed that there is a positive and statistically significant correlation between information technology and how it mediate therelationship between physical evidence and customer patronage. Furthermore, the studyconcludes that information technology capability of banks significantly moderate the relationshipbetween physical evidence and customer patronage. The authors therefore recommended that thepanacea to poor customer patronage is predicated on the bank's ability to efficiently adoptphysical evidence strategies while taking cognizance of information technology capability since itsignificantly impact on their level of customer patronage.

Keywords: ICT Capability and Bank Customer Patronage.

INTRODUCTION

The physical evidence is the outward

appearance of the organization and thus can

be critical in forming initial impression or setting up customer expectations (Arnand, 2008). Arguably, the ability of physical surroundings to facilitate achievement of organizational as well as marketing goals is apparent. Information Technology (IT) has become an essential element of firm capability and a source of sustainable competitive advantage. Although it is widely accepted that IT resources contribute to performance and future growth potential of firm, the empirical results of the relationship between IT capability and firm performance (Customer Patronage) is still ambiguous.

In the modern banking industry, technologies such as ATM networks and transactional internet websites allow banks to interact more efficiently with their customers regardless of geographic proximity. Furthermore, recent innovations in financial technologies provide the capacity to offer these services using long-distance interfaces with customers. These financial innovations may also provide senior banking managers with the ability to monitor the decisions made by loan officers and managers at distant affiliate banks more easily, and to evaluate and manage the contributions of individual affiliate banks to the organization's overall returns and risk more efficiently as well. (Berger & Deyoung, 2006).

Akpan (2009), asserts that maximizing returns and optimizing profit margin became the focus of banks and these can only be achieved through enhanced patronages; that is, increased customer base with attendant satisfaction sufficient to consolidate loyalty. The banks are therefore delivering services in the most efficient ways, using electronic means to deliver additional products and services. Thus, managing their assets of service delivery to customers became a major objective. Furthermore, electronic banking can only be made efficient and effective through the use and deployment of information technology by banks.

Harold and Jeff (2000), contend that financial service providers should modify their traditional operating practices to remain viable in the 21st century. They claim that the most significant shortcoming in the banking industry today is a wide spread failure on the part of senior management in bank's to grasp the importance of technology and incorporate it into their strategic plans accordingly. Therefore, this article is designed to explore and ascertain the moderating influence of Bank's Information technology capabilities on the relationship between physical evidence and customer patronage in the context of retail banks in the south-south zone of Nigeria.

THEORETICAL BACKGROUND

Understanding Physical Evidence

Physical Evidence (services cape) could be seen as the environment in which the service is assembled and in which the seller and customer interact; combined with tangible commodities that facilities performance or communication of the service (Booms & Bitner, 1992). It is important for service organizations including hospitality entities, to manipulate physical their environment effectively to enhance patronage and increase repeat business (Namasivayam & Lin, 2008).

Similarly, Bitner (1992) defined Services Cape as the built environment which has artificial physical surroundings as opposed to the natural or social environment. Furthermore, Namasivayam and Lin (2008), described physical Evidence as the physical environment of an organization encompassing several different elements, such as overall layout, design and décor of a store. The physical Evidence also includes aspects of atmospherics such as temperature, lighting, colours, music and scent. (Bitner, 1992; Namasivayam & Lin, 2008). Physical Evidence is important since it influences not only consumers' cognitive, emotional and physiological states but also their behaviors (Namasivayam & Lin 2008).

Similarly, Blogett (1999) opined that there are three main dimensions of physical Evidence which are: Building design, décor equipment and ambience. They considered the fixed elements of services cape: its architecture, landscape and site design. More so, Baker et al (2002), used design perceptions, employee perception, music perceptions time/ effort cost perceptions, monetary price perceptions, interpersonal service quality perceptions, merchandise quality perceptions, merchandise value perceptions and store patronage intentions. Furthermore, Lucas (2003), measured physical evidence with: seating comfort, ambient conditions, interior décor, cleanliness, layout/ navigation, staff friendliness and service promptness. However, in this work, we conceptualized and

adopted a modified three dimensional framework similar to that of Bitner's (1992). The dimensions are ambient condition, physical Architecture and signs. The choice of these dimensions is anchored on the fact that they will best suit/match the firms under investigation. In this study we operationally define physical evidence as the environment in which service is offered and where the company and customers interacts combined with tangible commodities that facilitates performance or communication of the service (See figure 1).



Fig. 1Physical Evidence DimensionsSources:Author's Desk Research (2014)

Customer Patronage

In the view of Hornby (2000) the word customer or consumer patronage mean a person or thing that eats or uses something or a person who buys goods and services for personal consumption or use. People patronize organizations products/services at one time or the other. In the context of this study, we may use customer patronage and loyalty interchangeably because customer patronage precedes loyalty.

Furthermore, any customer who is loyal to the services of a particular bank say Diamond Bank will always patronize and recommend the bank to his friends, family members and well wishers. There is a strong relationship between patronage and loyalty. Patronage is burn out of a desire to be committed to an

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organization either based on its service quality or perceived service qualities. Hence, the extent to which a customer will patronize the services of a bank depends on how the customer perceives the banks physical environment and how the customer also thinks and feels that the condition of the service environment is consistent with his/her personality. Customers will always patronage organizations whose level of service quality is consistent and reliable. Repeat patronage over time will always impact on the company's turnover rate which will enhance market share. sales volume its and profitability.

Banks in the 21st century often compete for customers in order to increase their market share. The possibility of any of these money deposit or retail banks to achieve their stated aims is hinged on their ability to evolve products (services) that will satisfy the needs and wants of their chosen target customers better than their competitors. Also, their service quality and delivery strategies should be improved while looking for new avenues to regularly attract and retain their customers. The importance or essence of repeat customer patronage is that an increase in sales volume will ultimately and significantly impact on the company's profitability level. banking industry in general The has experienced some profound changes in recent decades, as innovations in technology and the inexorable forces driving globalization continue to create both opportunities for growth and challenges for bank managers to remain profitable in this increasingly competitive environment (James and Jose, 2011). The works of previous researchers on patronage of Banks were anchored on related measures used by the researchers on Business performance, marketing performance or effectiveness etc. Here, in measuring customer patronage, most researchers adopted measures similar to business or marketing performance. Notwithstanding the enormously complex and dynamic nature of the environment in which they compete, there is a growing body of evidence that suggests it is possible to discern relevant measures or indicators of patronage in banks. Accordingly, and in line with previous studies, Goddard et al (2004a), Ramakrishnan Akpan (2009),(2006), BenNaceur (2003), Asiegbu *et al* (2009), and especially Kosmidou *et al* (2006), this study views customer patronage as the means of a customer retention level. respondent's rating for his or her firm's sales volume/volume of transactions, profit margin and



Sources: Author's Desk Research (2014)

Nature of Information Technology Capability

Information and Communication Technology (ICT) is the automation of processes, controls, and information production using computers, telecommunications, software's and other gadget that ensure smooth and efficient running of activities. It is a term that largely covers the coupling of electronic technology for the information needs of a business at all levels. Many IT researchers and practitioners firmly believe that IT is an enabler of innovation. Studies (Farrel 2003, Well 2000, Zahra 2002) also suggest that the role of IT is to drive and lead business strategy formulation, and concern that IT is a means to achieve growth, create and sustain competitive advantage. In other words, the existence of IT capabilities and IT leadership within an industry are antecedents to industry leadership. Baradwaj (2000), Chircu Kauffman (2000) all opined that information technology capabilities of a firm can moderate its level of patronage on performance.

Information technology is the processing and distribution of data using computer hardware and software, telecommunications, and digital electronics (Oghoja for etal 2011). A study by Madueme (2009), on Nigerian banking industry shows that information technology capabilities of a company enhances efficiency and strengthens service quality. Furthermore, information technology capabilities is the ability to easily and readily diffuse or support wide variety of hardware, software, а communications technologies, data, core skills applications, and competencies, commitments, and values within the technical physical base and the human component of the existing IT infrastructure (Bryd & Turner, 2000).

Furthermore, information technology (IT) is the general term that describes any technology that helps to produce, manipulates process, store, communicate, and/or disseminate information (William & Sawyar 2005). Technology usage is regarded as a key driver of organizational success (Devara, & Kholi, 2003; Hall & Swanberg, 2001). At the enterprise level many researchers have defined capabilities as broadly referring to the entire gamut of skills, entrepreneurial, managerial and technical that are needed to establish and operate firms internally. Bone and Saxon (2000) defined capability as "the combination of the right people with the right skills, using the correct plant and equipment through effective business processes, and thereby delivering companies strategic intent. the "more specifically, organizational capabilities are as set of skills, routines, and complementary assets. They are partly tacit and non formalized, based on procedural knowledge and they are not easily transferable (Nelson, 1991). In the views of Kings (2002) research results have demonstrated that the primary mechanisms through which IT capabilities impact overall business performance are through internal business process efficiency and streamlining. Furthermore, Banks, and other service firms that improve their IT based services will attract benefit such as improved product and service quality, improved Sales Volume, higher productivity and improved financial performance. Jeffers (2003) discovers that a potential contribution firm performance of IT to а is iť s complementarities with other resources in leveraging customer service performance which can be a major factor in determining the viability and competitive edge of the firm. Hence, any organization (Bank) whose staff has the requisite information technology capabilities and skills will be better positioned with respect to the prices and quality of products and services offered to their customers who will ultimately enhance Sales Volume, and patronage respectively. In the Baradwaj, (2000) information views of technology capability can be defined as a company's ability to mobilize and deploy IT based resources in combination or co-present with other resources and capabilities. Firms with superior IT capability enjoy superior financial performance by boosting their revenues, increasing productivity, and/or decreasing costs.

Moderating Influence Of Information Technology Capability On The Relationship Between Physical Evidence And Customer Patronage In the modern banking industry, technologies such as ATM networks and transactional internet websites allow banks to interact more efficiently with their customers regardless of geographic proximity. Furthermore, recent innovations in financial technologies provide the capacity to offer these services using long-distance interfaces with customers. These financial innovations may also provide senior banking managers with the ability to monitor the decisions made by loan officers and managers at distant affiliate banks more easily, and to evaluate and manage the contributions of individual affiliate banks to the organization's overall returns and risk more efficiently as well. (Berger & Deyoung, 2006).

However, the phrase "IT capacity" describes different aspects of an organizations base of IT resources. These resources influence and determine the organization's ability to convert IT assets and services into strategic applications (Bharadwag 2000; Sambamurthy & Zikmud 1999), and to mobilize and deploy IT based resources with other resources and capabilities. The five dimensions of IT capabilities are:

IT infrastructure: This includes physical assets in terms of hard ware, software and networks on which systems are built (keen 1991). It provides the technical basis for carrying out IT based product and process innovation.

IT Human Resources: These include technical and managerial skills of information support employees, such as programming, systems analysis, project management coordination leadership (Copeland and McKenny 1988).

IT-Related intangible resources: sustained use of IT can lead to the creation of various intangible benefits, which can serve as the basis for additional capabilities for example; effective use of CRM systems for tracking customer preferences can increase the customer orientation of the firm (Bahardwaj 2000, Hui & Bateson, 1996). Similarly, the use of knowledge management technologies can help in knowledge formalization, consolidation and dissemination.

IT coordination: Mulligan (2002), recognizes IT coordination as an independent construct in the measurement of IT capability. IT Governance: Describes the authority, control, and audit in the allocation and delivery of IT resources and services. The existence of IT governance systems has been shown to affect firm profitability and influences value that strongly the an organization generates from IT (Weill & Ross 2004). From the forgone discussion, it is guite clear that IT enables innovation, and any organization (Bank) that is technologically balanced and oriented can design an architectural physical environment that can attract and improve customer patronage level.

been said, therefore, that only lt has organizations that recognize the power of customers and satisfy their needs will move toward sustainability (Murphy, 2000). In many firms, information technology (IT) gives a major transforming advantage in marketing, operations and other activities of an organization by providing the sales force with the wide array of hand held and laptop computers that enables the firms to collect detailed customer data and demand planning (Karim etal; 2001).

Chircu and Kauffman (2000) argue that a firm obtain а sustainable competitive can advantage if it uses IT capability to exploit specific organizational resources that are unique, difficult, or costly to initiate, and if other firms cannot acquire or build them fast enough. Just like other intangible valuable resources, such as intellectual properties and human capital, the IT infrastructure of the firm, as the most important element of structural capital, is a value driver of the present world.

Baradwaj (2000) reports that firms as in high IT capability tend to out perform a control sample of firms on a variety of profit and costbased performance measures. Hence, a firm (Bank's) IT capability should be beneficial to its performance in the long run and also influence the level of customer patronage. On this basis thus, we develop our hypothesis of the study. This is stated as follows:

Ho₁: Information technology Capabilities (ICT) does not significantly moderate the relationship between physical evidence and customer patronage in the banks in southsouth zone of Nigeria.



IRE 3 FRAMEWORK DEPICTING THE MODERATING INFLUENCE OF INFORMATION TECHNOLOGY CAPABILITY ON THE RELATIONSHIP BETWEEN PHYSICAL EVIDENCE AND CUSTOMER PATRONAGE This study adopted the cross sectional survey method and the objectivist research strategies where major decisions of the study were based on the nomothetic methodology which lays emphasis on the importance of basing research upon systematic protocol and technique. This approach focuses attention upon the process of developing questionnaire and testing hypotheses in accordance with the canons of scientific rigor (Ahiauzu, 2006).

However, primary data were drawn from fourteen (14) functional and registered guoted banks in the south-south zone of Nigeria which also constitute our level of analysis and target population. Moreso, these banks were registered with the Corporate Affairs Commission (CAC), Nigerian Deposit and Insurance company (NDIC), and the Nigeria Stock Exchange (NSE). Forty two (42) copies of structured questionnaire were distributed on the ratio of three copies per bank and our unit of analysis constitute the bank's general managers and other top management staff who have direct contact with the customers. Ideographically, qualitative data were

obtained from seven customers of these banks which were randomly selected.

Furthermore, the generated data were analyzed using tables and percentages and the postulated hypothesis was tested by employing the Pearson Partial Correlation Coefficient Statistical Tool to ascertain the extent to which Information Technology Capability of Banks moderate the relationship between physical evidence and customer patronage. The statistical tool used was facilitated by the Statistical Packages for the Social Sciences (SPSS) version 15.0. Moreso. the research instrument was designed to adopt the likert scale in the measurement of the two Constructs Information Technology Capability and Customer Patronage which ranges from "very high extent" to "very low extent" most of the instruments used to measure the constructs in this study are adapted from previous studies in order to ensure content validity. Items measuring physical evidence, including ambient condition, physical architecture and adapted from Bitner (2000), signs are Rosembaum and Messiah (2011), and Lucas, (2003). Customer patronage was measured by items including sales volume, profit level and customer retention which were adapted from Cronin et al (2000), Asiegbu et al (2011), Adiele etal (2011) and Athanasoglou etal (2005). Moreso, items measuring information technology capability are adapted from Karim etal (2001), Madueme (2009) and Osabuohien (2008). The validation process led us to seeking the opinion of experts in services marketing and service environment Towards this strategist. end. the questionnaire was pretested on selected managers of the different banks within the context of our study. Moreso, academic knowledgeable in this area of study were consulted to help correct errors in the questionnaire such as ambiguity, contradictory questions, poor wording of questions, misleading or poor instructions etc.

Furthermore, the Cronbach's Alpha coefficient was used to ascertain or test for instrument reliability and it is also an indicator of the internal consistency of a measure (Witney, 1996, Ahiauzu, 2006). From the analysis the results were all above (0.70) threshold as suggested by Nunnaly (1978) indicating that our research instrument were

both reliable and valid. We are therefore permitted to regard the items in the instrument as being internally related to the factors they are expected to measure (See table 1).

| S/ NO | Dimensions/ measures of the study variables | Num ber of Item s | Num ber of Case s | Cronba ch's Alpha |
|----------|--|-------------------------------|-------------------------------|-------------------------|
| 1 | Physical Evidence and Customer Patronage | 5 | 42 | 0.969 |
| 2 | Ambient Condition | 5 | 42 | 0.868 |
| 3 | Physical Architecture | 5 | 42 | 0.762 |
| 4 | Signs | 5 | 42 | 0.878 |
| 5 | Sales Volume | 5 | 42 | 0.906 |
| 6 | Profit Margin | 5 | 42 | 0.875 |
| 7 | Customer Retention | 5 | 42 | 0.935 |
| 8 | Information Technology Capability | 5 | 42 | 0.861 |

Table 1:RELIABILITYCOEFFICIENTOF VARIABLES MEASURED

Source: SPSS Output version 15.0

DATA PRESENTATION AND RESULTS

The hypothesis and data on the Moderating Influence of Information Technology Capability on the relationship between physical evidence and customer patronage of retail banks in the south-south zone of Nigeria are presented and discussed in table 2.

TESTING THE SIGNIFICANCE OF THE MODERATING INFLUENCE OF

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ORGANIZATIONAL FACTOR-INFORMATION TECHNOLOGY CAPABILITY ON THE RELATIONSHIP BETWEEN THE PREDICTOR AND CRITERION VARIABLES

Ho₁: Information Technology Capability of an organization does not significantly moderate the relationship between physical evidence and customer patronage in the Banks in South-South Zone of Nigeria.

| Table 2 Corr | elations |
|--------------|----------|
|--------------|----------|

| Control Variables | | | Phy sical Ev idence | Customer Patronage | Information Tech |
|-------------------|--------------------|-------------------------|------------------------|-----------------------|---------------------|
| -none-a | Phy sical Evidence | Correlation | 1.000 | .888 | .520 |
| | | Significance (2-tailed) | | .000 | .000 |
| | | df | 0 | 40 | 40 |
| | Customer Patronage | Correlation | .888 | 1.000 | .519 |
| | | Significance (2-tailed) | .000 | | .000 |
| | | df | 40 | 0 | 40 |
| | Information Tech | Correlation | .520 | .519 | 1.000 |
| | | Significance (2-tailed) | .000 | .000 | |
| | | df | 40 | 40 | 0 |
| Information Tech | Physical Evidence | Correlation | 1.000 | .847 | |
| | | Significance (2-tailed) | | .000 | |
| | | df | 0 | 39 | |
| | Customer Patronage | Correlation | .847 | 1.000 | |
| | | Significance (2-tailed) | .000 | | |
| | | df | 39 | 0 | |

a. Cells contain zero-order (Pearson) correlations.

Source: Research Data 2014 and SPSS ver. 15 Output

DISCUSSION OF THE FINDINGS

Information Technology Capability and how it mediates the relationship between Physical Evidence and Customer Patronage.

The partial correlation coefficient result shown in table (2) indicated that information technology capability does significantly mediate the relationship between physical evidence and customer patronage in the banks in south-south zone. The zero order correlation between physical evidence and customer patronage shows the correlation coefficient where information technology capability is not mediating the variables and this is fairly high at (.888) and statistical significant (p-value 0.00) < 0.05). The partial correlation controlling for ITC is however a high (.847). The observed positive "relationship" between physical evidence and Customer Patronage is due to underlying relationships between each of those variables Information Technology and Capability. Looking at the zero order correlation, we find that both physical evidence and customer patronage are highly positively correlated with Information Technology Capability, the control variable. Removing the effect of this control variable reduces the correlation between the other two variables to be .847 and significant at α = 0.05, therefore we reject the null hypothesis and conclude that: Information Technology Capability of an organization does significantly mediate the relationship between physical evidence and customer patronage of the banks in South-South Zone of Nigeria as evidenced in table 2.

The findings corroborates with the views of Baradwaj (2000), and Chirch (2000) that information technology capabilities of a firm can moderate its level of patronage and performance. It has been said therefore, that only organization that recognize the power of customers and satisfy their needs will move toward sustainability (Murphy, 2000). In many firms, information technology (IT) gives a major transforming advantage in marketing operations and other activities of an organization by providing the sales force with the wide array of hand held and laptop computers that enables the firms to collect detailed customer data and demand planning (Karimi et al, 2001).

Woherem (2000) claimed that only banks that overhaul the whole of their payment and delivery systems and apply ICT to their operations are likely to survive and prosper in the new millennium. He advices banks to reexamine their services and delivery systems in order to properly position them within the frameworks of the dictates of the dynamism of information and communication technology. Furthermore, he observed that Nigerian banks since 1980's have performed better in their investment profile and use of ICT systems than the rest of industrial sector of the economy. Ovia (2005) observed that the revolution of ICT has made the banking sector to change from the traditional mode of operations to presumably better ways with technological innovation that improves efficiency. This finding supports the views of Osabuohien (2008)that ICT impacts positively on the speed of banking service delivery as as productivity and well profitability. Furthermore. а studv bv Madueme (2009), on Nigerian banking industry shows that information technology capabilities of а company enhances efficiency, and strengthens service quality. Banks and other service firms that improve their IT base services will attract benefits such as improved Sales Volume, higher productivity and improved financial performance.

Jeffers (2003) discovers that a potential contribution of IT to a firm performance is it's complementarities with other resources in leveraging customer service performance which can be a major factor in determining the viability and competitive edge of the firm. In the views of Baradwaj (2000), firms with superior IT capability enjoy superior financial performance by boosting their revenues, increasing productivity, and/or decreasing cost. Hence, a firm (Bank's) IT capability should be beneficial to its performance in the long run and also influence the level of customer patronage. From the foregone discussions on the review of the empirical literature, we conclude that information technology capability mediate the relationship between physical evidence and customer patronage. Therefore, we have the impetus to conclude that information technology capability positively and significantly mediate the relationship between physical evidence and customer patronage.

CONCLUSION AND IMPLICATIONS OF THE STUDY

Many IT researchers and practitioners firmly believe that IT is an enabler of innovation studies (Farrel 2003, & Well, 2000) also suggest that the role of IT is to drive and lead business strategy formulation and opine that IT is a means to achieve growth, create and sustain competitive advantage. In order words, the existence of IT capabilities and IT leadership within an industry are antecedents to industry leadership. Baradwaj (2000) and Chircu (2000) all opined that information technology capabilities of firm а can moderate its level of patronage of performance. Based on the findings obtained from summary of discussion, empirical data analyses and the review of empirical related literature thus far. we conclude that information technology capability moderate the influence of physical evidence on customer patronage of banks in the southsouth zone of Nigeria. Furthermore, banks use of hi-tech facilities, web or e-based communication tools, networking facilities affects their output in the form of sales volume, profit margin and customer retention.

However, the implication of the study are that bank's ability to recognize that information technology (IT) gives a major transforming advantage to their operations is very pivotal. Therefore, bank management need to take cognizance of the fact that information technology impact positively on the speed of banking service delivery as well as productivity and profitability. Furthermore, they should regularly update their staff on the use of cutting edge and state of the art technology since theoretically and empirically it has been proven that a bank's ability to adopt and adapt to ICT can enhance its level of customer patronage. From our findings and discussions, we develop a new physical evidence, information technology capability and customer patronage heuristic model presented in figure 3



Figure 4: Physical Evidence, Information Technology Capability and Customer Patronage Model

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