Information and Communication Technology and Decision Making In the Selected Banks in Cross River State, Nigeria

Eteng, Joy Umuolo, Inyang, B. J, Ene-Ita, Ene Okpo Bassey, Victoria Ebong
Department of Business Management
University Of Calabar, Calabar

ABSTRACT

The study empirically examined Information and communication technology and decision making in the selected banks in Cross River State, Nigeria. The specific objectives of the study are: to determine the extent to which quality of ATM influence decision making performance in the selected banks in Cross River State, to ascertain the extent to which speed of POS influence decision making timeliness in the selected banks in Cross River State, to determine the relationship between accuracy of online banking and decision making creativity in the selected banks in Cross River State, and to determine the influence of human resource capability on the relationship between ICT and decision making effectiveness in the selected banks in Cross River State. This study adopted the survey research design. The study adopted random sampling technique so as to select the respondents/ sample from the total population of 200 staff of the three banks. Data for this research was collected from two sources, primary and secondary source. The Pearson product moment correlation statistical technique was used in confirming stated hypotheses. Based on the analysis, the major findings of this study include: there was a significant influence between quality of ATM and performance of selected banks in Cross River State, there was a significant influence between speed of POS and effectiveness in selected banks in Cross River State, there was a significant influence between accuracy of online banking and decision making creativity in selected banks in Cross River State. Human resource capability significantly moderates the influence of ICT on decision making effectiveness in selected banks in Cross River State. The study recommended that the management of selected money deposit banks in Cross River state should increase quality of information given to the public in order to increase knowledge and reduce uncertainty in the act of decision making.

***Keywords**: ATM, POS, online banking, human resource capability, ICT, decision making*

INTRODUCTION

Information communication technology (ICT) and decision making effectiveness in organization is the focus of this study. The application of information communication technology concepts, techniques, policies and implementation strategies to banking services has become a subject of fundamental importance and concern to all banks and indeed a prerequisite for local and global competitiveness. ICT directly affects how mangers decide, how they plan and what products and services are offered in the banking industry. It has continued to change the way banks and their corporate relationships are organized worldwide and the variety of innovative devices available to enhance the speed and quality of service

delivery when compared to the old system which was characterized by book keeping known for its man- hour consumption otherwise referred to as traditional practices. Decision making effectiveness is a process through which alternatives are selected and then managed through implementation to achieve business objectives. Effective decision result from a systematic process with clearly defined element that is handled in a distinct sequence of steps (Drucker 1967). Acota (2004) stated that information is a critical tool in facilitating management decision and therefore ICT is seen to be a crucial tool to help facilitate acquisition of these information required by management to make effective decision. Bassey (2011) noted the need for financial service providers to modify their traditional operating practices to remain viable in this 21st century and the decades that follow. He further argued that the most significant shortcoming in the banking industry today is a wide spread failure on the part of decision makers in the banks, to grasp the importance of technology and incorporate it into their strategic plan accordingly.

Akpan (2013) noted 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 advised banks to re-examine their service and delivery systems in order to properly position them within the framework of the dictates of the dynamism of information and communication technology. Inyang, Oden and Esu (2003) noted that the banking industry in Cross River State has witnessed tremendous changes linked with the developments in ICT over the years. The quest for survival, global relevance, maintenance of existing market share and sustainable development has made the use of automated devices imperative in the industry. This study evaluates the response of Nigerian banks to this new trend. The dependent variables are performance, timeliness and creativity. Performance in terms of bank profitability accesses a business ability to generate earnings compare to it expenses and other relevant cost incurred during a specific period of time. Timeliness is the ability of information to reach the recipient within a prescribed time frame for effective decision making. In the other hand, creativity enable people or individuals to move out of their normal problem solving mode to enable them consider a wide range of alternative to make effective decision, improve performance and quality of work.

The independent variable is ICT which is measured in terms of quality, speed and accuracy. Quality is the ability of ICT to sustain steady growth as a result of making standard strategic plan for effective decision. Speed is consider in terms of ICT giving banks the ability to respond quickly to market events, changes in business environment etc. with high speed communication links-support, the internet dissemination of banking service, financial report needed to influence decision of the manager. Accuracy is the state of being exact or correct or the ability to do without mistakes. ICT in banks is the back bone of bank service regeneration due to its accurate and less time consuming in service delivery. Human resource capability is the moderating variable of the study. It is refer to ICT knowledge and skills of human resource personnel and how they apply ICT knowledge and skills to make effective decision in the bank. The study intended to fill the gap of limitation in storing and processing information by banks in Cross River State. Therefore, the study is aimed at examining the relationship between ICT and decision making effectiveness in selected banks in Cross River State.

LITERATURE REVIEW

There is an overwhelming awareness that there are great potentials in the availability and use of information and communication technologies. The use of ICT promotes development and improves services in any organization. It brings changes in today's business environment. In spite of the above observation about the potentials, and benefits of using ICT, the level of awareness and use in Nigeria appears to be very minimal. Organizational, environmental and cultural factors stand against the good and perceived will of the use of ICTs (Haliso, 2011). The following factors influence the use of ICT and decision making effectiveness: Limitations in human memory: Limitations in memory is a crucial aspect of human cognition that impinges on decision making, Baddeley (2004) noted that, psychologists make a distinction between short-term or working memory and long term memory. Working memory holds the information that is the focus of our attention, sustains this information by rehearsal and is the workspace where ideas and concepts are registered, transformed and manipulated. The most important feature of this memory is that it has limited capacity for processing and storing information that leads to the issues and problems. Baddeley (2004) focused on the second type of memory, long term memory (LTM) that retains large quantities of information over relatively long periods of time.

There are some key limitations in long term memory that are particularly critical for decision making (Baddeley, 2004). First, the amount of knowledge that can be acquired by any single individual is necessarily limited and so, for any particular decision domain, what can be retrieved from memory is very likely to be less than the total sum available. Second, even if domain relevant information is acquired, people forget, further reducing the amount of knowledge that a particular decision makers may have. Together these two limitations reduce the amount of relevant information used to inform a decision, thereby reducing its effectiveness. Third, and in many more ways important, there is strong evidence that human memory works by association and reconstruction rather than simple recall. Thus people remember associations between features of an event or fact and then, when they recall it, do so by reconstructing it from these associations. However, they may not use all the associations nor in the same order (Hogarth 1995), so their memories are often distorted. In addition, when they retrieve a memory, aspects of the current context is often incorporated into that memory thereby changing it further. People rarely appreciate these biases nor consider the implication they have for their decision making Fourth, human memory is subject to priming – when particular memories are accessed related memories become temporarily more accessible increasing the chances that they will also be recalled, so biasing the retrieval of decision relevant information. For example, when assessing whether we should embark on a new business venture we might begin by thinking about a past example that was successful. This will make all other successes temporarily more accessible and failures relatively less accessible thereby biasing our experienced based judgments of the likelihood of success of the new venture. These four examples show how the information we draw on when making decisions may be distorted or even wrong. In contrast to this, computers can acquire and hold more information about a particular decision domain than most experts.

In addition, computers recall precisely what they store in terms of both the data themselves and their format so are not subject to the human memory biases outlined above.

Thus, it is not surprising that computers have been used extensively to provide decision relevant information in the form of different types of information systems. French (2009) discuss the use a variety of computer based techniques for delivering information to decision makers. French (2009) argue that decision makers exist in the flow of time from past to present and present to future with the past setting the context for their current decisions; making decisions and solving problems in the present; and planning and developing strategies for what they think will happen in the future. They argue that these three functions correspond loosely to three different types of information system: Databases that hold historical data that can be queried and analyzed in a variety of ways; Knowledge Management Systems (KMS) that deploy what has been learnt from the past to address the problems of the present; Decision Support Systems (DSS) that help DMs anticipate and shape the future. While these systems have considerable potential to help decision makers there are other facets of human cognition that, if not recognized by developers and decision makers alike, may considerably reduce their effectiveness.

Omolayole (2002) points out three strong reasons that stand against the effective use of ICTs in Nigeria. Each of the factors mentioned has a resultant effect on availability and use of ICT. The factors are: low level of computer culture: poor telecommunications infrastructure; and general lack of awareness. Another constraint that affects the use of ICTs in Nigerian banking industry is low level of computer culture. When bankers are not computer literate, utilizing the facility would be a problem. In other words, having a good background in computer skill makes the use of computers in work places very practicable. Lack of awareness on the other hand makes availability impossible. Bank managers must be aware of the advantages of using ICTs in banking sector. Training workers on the use of computers and other related technologies for services in any organization is very important. A well trained worker can perform effectively and efficiently in his/her work place than he/she who is not trained at all. Chisenga (2004) opines that lack/inadequate ICT personnel, erratic power supply, and lack of fund can affect the use of ICT in the banking sector. Okiy (2005) points out poor and inadequate telecommunication facilities; poor level of computer literacy, poor level of computer facilities; poor level of awareness of Internet facilities among policy makers as factors militating against the use of ICTs. Furthermore, Low level of ICT skills; lack of functional ICT policy; economic barriers (funds); ICT infrastructure; resistance to change; low capacity of communication facility; lack of policy for manpower development etc. are common barriers mentioned as factors undermining the use of ICTs. Other factors that contribute to the under-use of ICTs is culture. System designers need to understand or undertake a systematic study of the organization within which the system will be used (implemented). Supporting this, Odedra (1992) opines that culture is a strong factor that dictates if technology be accepted or not accepted. The challenge goes to system planners and programme writers to consider the local way of thinking, cultural setting, level of education and awareness. Haliso (2011) points out that lack of funding; limited and expensive Internet bandwidth; unstable power sources; and insufficient staff development affects the use of ICT in the banking industry. Other factors influencing ICT as addressed in this study include: lack of organizational commitment towards ICT acquisition, lack of ICT strategy, erratic power supply, and lack of fund.

The decision making process in an organization

The decision making process begins with planning decisions setting forth previously non-existent behavioural norms which are communicated to subordinate managerial, or non-managerial personnel (Hartzell, 2006). Performance information is relayed back to the superior who may make motivational decisions if behaviour is not in accord with the norms and rules of planning decisions. The process of decision making involves five stages, which include: defining the problem; analyzing the problem; developing alternative solutions; selecting the best solution; and converting the decision into action. Adequate conceptual understanding of decisions skill is required for taking sound decisions. With the development of intellectual, communication and organizational understanding skills, the manager reaches that stage of awareness when he can take effective decisions. The decisions so made will have to be carried out at the working level and hence the most difficult task is to see that such decisions are carried out at the proper time by the right people. This is to say that, decision making in industry is made simpler if management sets the boundaries within which the business is to operate. These boundaries are established by defining the objectives which should generally understand whether implicitly or preferably, explicitly.

Similarly, there are three traditional levels of decision-making in organizations: Intelligence activities- individuals and groups attempt to recognize and understand the nature of the problem, search for the possible causes and potential solutions. Design activities- Here alternatives causes of action are formulated and assessed in light of known constraints. Choice activities- where the actual choice among possible alternative decision is made. How well or thorough the individuals or groups carry out these activities can influence the quality of outcome, that is, the decision made. The institutional level for strategic planning, is those concerned with general organizational objectives and broad problems of the position of the company in its environment. The managerial level which focuses on the gathering, coordinating and allocating of resources for the organization, e.g planning budgets, formulating personnel practices, and deciding on routine capital expenditure; and the technical level, involving the acquisition and utilization of technical knowledge for operational controls, e.g production scheduling, inventory controls, and decisions concerning the measurement of workers' efficiency.

Empirical Review

Achara (2008) examined the impact of web design features of a community banks performance using a sample of 55 community bank with online services in the five Midwestern states of the USA. The author utilized both primary and secondary data by applying multiple regression models. The results show that banks with higher usability of ICT perform significantly better than those with low ICT usability. It was concluded that ICT help in improve web design. It was recommended that the business development analysts or experts should improve more on its information technology towards web design features so as to enhance its organizational productivity. Berger (2003) studied technological progress and its effects in the banking industry using data collected from the banking industry in the United State over the period 1967 to 2001. The author employed multiple regression model and the findings revealed the progress made in costs of lending capacity due to improvements in "bank office" technologies, as well as consumer benefits from improved quality and

variety of banking service. It was concluded that technological progress have a significant influence in the banking industry. The study recommended that the use of ICT in the banking sector should not only be restricted to the cities alone, rural business activities and operations should be improved upon. Malhotra (2009) examined the implications of internet banking on the Indian banking industry using information drawn from a survey of 85 scheduled commercial bank and found out that the quality of ICT enable managers to make rational decision by communicating with relevant branch of the bank within a short period. It was concluded that internet banking helps manager to make decision within a sIt was recommended that from time to time there should be enlightenment given to the general public through the transactions, e-commerce activities, smart cards, ATM of the banking sector, etc and its importance should be made known to the public in India.

Dos Santo (1993) empirically studied the effects of early adoption of Automated Teller Machine (ATM) technology by banks on employee efficiency in United States using a sample of 3.838 banks covering the period of 1979 by applying multiple regression models. The finding revealed that the introduction of ATM technology improves the bank's performance and customer's satisfaction. It was concluded that adoption of ATM technology has a significant influence on employee efficiency. It was recommended that the banking experts and workers should be used side by side with ICT rather than reducing human capital which will in turn lead to unemployment in United States. Hamdam (2010) examined the effects of information and communication technology (ICT) on Jordanian banking industry for the period of 2003-2007. The authors used a sample of 15 banks to analyze the data obtained by applying multiple regression model diagnosis tests to check the normality and multi-co linearity problems. The results of the study indicated that there is a significant impact on the use of ICT in Jordanian banks on the market value added (MVA) earnings per share (EPS). Return on Assets (ROA) and Net Profit Margin (NPM).

MATERIAL AND METHODS

This study adopted the survey research design. The adoption of this design allowed the use of structured questionnaire in data collection and in determining the impact of the variables under study, the impact of information and communication technology on decision making effectiveness in selected banks in Cross River State This study was carried out in three money deposit banks. First Bank Plc, Union Bank plc and Eco Bank Plc are all operating in Cross River State, except for Eco bank plc, the other two Banks are known as old generation banks, presently all these banks uses ICT. FBN has several branches within Calabar and its environs, Union Bank have other branches within Cross River State. Each of these branches uses ICT irrespective of where it is located. Also there are managers at the branches who take decision at their level, the most interesting aspect is that there exist network of communication within and between their head offices. These three banks were selected among many banks in Cross River State due to the fact that it is the researcher banker as such, there was ease of accessibility to materials. The study is restricted to bank staff within Calabar head office for accessibility.

The population of this study consisted of management staff and senior staff of First. Bank Plc (94 employees), Union Bank Plc (37 employees) and Eco Bank Plc (69 employees)with a total of (200) two hundred staff. The population of the study was drawn

from the following departments: ICT department, Administration, Human Resource, marketing, accounting. The researcher adopted random sampling technique so as to select the respondents/ sample from the total population of 200 staff of the three banks (FBN 94, Union bank 37 and Eco Bank 69) without being bias. The researcher studied the entire population because it is not too large. This means that the entire 200 staff constituted the sample size of this study. Data for this research was collected from two sources, primary and secondary source, primary sources come from the information gathered through the administration of questionnaire and the secondary source was obtained from the printed and electronic media. The use of questionnaire as a primary source of data collection enables the researcher to obtain first class information. Personal interview was conducted with the aim of allowing those that did not get the questionnaire to air out their views. It helped to ensure vital information omitted in the questionnaire is supplied. This technique was used primarily as supplement to the questionnaire in situation where the respondents were unable to understand the content of the questionnaire. Secondly, source of data collection involved the extensive use of libraries especially published data. The study study consulted professional and government journals, professional textbooks in management magazine and unpublished works, particularly seminar papers and lecture notes. The generated data from the questionnaire item was tabulated after ascertaining their completeness, relevance and consistency, using non-parametric simple percentages such as strongly agreed, strongly disagreed and disagreed, in section A, the socio-demographic characteristics of respondents was categorized and scored accordingly, section B shall equally be tabulated accordingly to each respondents view as well as each hypothesis, the data shall then be collated, extracted and arranged in mean ( ). Standard deviations (SD), percentage and contingency tables where necessary, this enable the determination of the test result. The Pearson product moment correlation statistical technique was used in confirming stated hypotheses. The Pearson product moment correlation was used because it tested the relationship between the independent variable (ICT) and dependent variable (decision making effectiveness).

RESULTS AND DISCUSSION

The study examined information and communication technology (ICT) and decision making effectiveness in organization: A study of selected banks in Cross River State, Nigeria. In hypothesis one, it was revealed that quality of ATM influence performance in selected banks in selected banks in Cross River State. The finding conforms with the works of scholars who posit that, quality towards management systems can be clearly seen by the aggregation of the product quality, and this has promoted a general perception that quality is about procedures and documentation. Quality of a product or service refers to the perception of the degree to which the product or service meets the customer's expectations. The study posits that, quality information increases knowledge, reduces uncertainty in the act of decision making. The quality of ICT influence and effective decision making in an organization base on its application, in various areas like in business, computerized data management information system and management information system. Quality in ICT improves good organization and very useful at each stage of the management decision making procedure.

In hypothesis two, it was revealed that speed of POS influence effectiveness in

selected banks in Cross River State. The findings conforms with the works of Acok (2004) who posit that contribution of ICT to the banking sector, has helped in reducing the cost of doing business in banks, banks all over the world are involved in certain time consuming and routine tasks on a daily basis. He posits that ICT gives banks the ability to respond quickly, change in the business environment. Speed in ICT brings communication links in the banking services. Akpan (2013) posit that ICT is its capacity to support interactivity for users and decision makers. ICT is very important for speed and efficiency in decision making in organization like the banking industry. Financial institutions are adopting innovative technologies that can support strategic decision making. The speed provided by the use of ICT, the accuracy and satisfaction are expected to surpass fraud and crime-related activities especially with the large volume of data they process. In hypothesis three, it was revealed that accuracy of online banking influence creativity in selected banks in Cross River State. The finding conforms with the works of Hamdam (2010), who posit that ICT in Nigeria banks is becoming the backbone of bank services regeneration due to its accuracy and less time wasting in service delivery. He viewed that, the application of ICT in banks has come to change the horizontal and vertical practice of the old banking system, characterized by several bookkeeping and time consuming. ICT in the banking sector has enabled the cashless policy of the Central Bank of Nigeria to succeed. Okiy (2005) posits that, the impact of ICT on the banking services has tremendously improved the services of some banks to their customers. It is shown that banks provide accurate and timely services to enable effective decision making as well as customers' satisfaction. French (2009) posits that, banking in Nigeria has increasingly depended on the deployment of information technology. Online system has facilitated internet banking in Nigeria in an accurate and less time consuming manner. The major findings of this study include:

(1) There is a significant influence between quality of ATM and performance of selected banks in Cross River State.
(2) There is a significant influence between speed of POS and effectiveness in selected banks in Cross River State.
(3) There is a significant influence between accuracy of online banking and decision making creativity in selected banks in Cross River State.
(4) Human resource capability significantly moderates the influence of ICT on decision making effectiveness in selected banks in Cross River State.

CONCLUSION/RECOMMENDATIONS

The study empirically examined information and communication technology (ICT) and decision making effectiveness in organization: A study of selected banks in Cross River State. Information and communication technology (ICT) has influence on decision making effectiveness in organization. Information and communication technology is a potentially powerful tool for decision making process through improving the quality of the decision made in the organization. Information and communication technology in Nigeria banks is becoming the backbone of bank services due to its accuracy and less time wasting in service delivery. It provides accurate and timely services to enable effective decision making as well as customers satisfaction. Information and communication technology has provided an adequate platform for the financial services to adequately provide satisfactory services to its

customers. It is concluded that the quality of ATM, speed of POS, accuracy of online banking, human resource capability positively affected decision making effectiveness of selected banks in Cross River State. Based on the above findings, the following recommendations were;

1. Management of selected money deposit banks in Cross River state should increase quality of information given to the public in order to increase knowledge and reduce uncertainty in the act of decision making.
2. Management of selected money deposit banks in Cross River state should put in place fast, interactive and easy to navigate sites with quality searching capability to help quicken decision making.
3. Management of selected money deposit banks in Cross River state should give room for creative ideas which can make the employee think " out of the box" to bring about the success of the banks.

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