

Influence of Information Systems Use on Organizational Performance of First Bank PLC, Nigeria

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Abstract

Business managers in Nigeria view the implementation of Information Systems as a tactic to combat competition by improving productivity, profitability and most especially organizational performance. The extent to which banks in Nigeria employ Information Systems is yet to be ascertained. This research discussed the relationship between information systems and organizational performance of banks using First Bank PLC as a case study. Using a structured questionnaire administered to 102 selected staff of three selected branches of First Bank in Ogun State, Nigeria, and analysing the obtained data with the descriptive and regression method of statistical analysis, this study examined the role Information Systems (IS) play in organisational performance of banks. The result obtained indicated that First Bank's staff are aware of the importance of information systems to organisations and ensured that the available information systems within their branches are well engaged of by their staff and customers but there is still a gap when compared with the developed countries. The researchers recommended that First bank allocates more funds to the purchase of information systems thereby increasing organisational chance of surviving amidst daunting challenges.

Key words information systems; Organisational performance; Business information; First Bank.

Introduction

Organisations today are confronted with rapidly changing market conditions indicated by high turnover rates and strong competitions. Under these conditions, traditional management approaches that focus on financial figures and on centralized analytical planning methods are considered to be insufficient for effectively steering the organization in a dynamic environment (Hoffmann, 2002). Recent management support approaches, like intellectual capital, aim at providing a broader view of organizational performance. They combine both financial and non- financial aspects to monitor, plan and influence organisational performance.

Companies today are facing a turbulent business environment that is characterised by constant changes. To survive, companies must alter the way they conduct businesses with customers, and must offer superior services in order to retain and satisfy their customers. Customer satisfaction is an absolute requirement for any successful business. Without customer satisfaction there can be no customer loyalty. With no customer loyalty, there will be no business boom.

The strategic importance of information links between customers and suppliers has given rise to an interest in inter-organisational information systems. More specifically, with the recent advances in Electronic

Commerce (EC), Information Systems which support customers and their transactions with organisations are becoming more important. Organisations are increasingly faced with problems such as the identification of Information system application which can contribute to customers' satisfaction and the improvement of organisation-customers' relationships. An information system by simple definition is any organized system for the collection, organization, storage and communication of information. Exclusively, it is the study of complementary networks of hardware and software that people and organizations use to collect data, filter it, process it, create data and distribute it. An information system is defined by Hooper and Page (1997) as the sum of all the tools, techniques and procedures used by the business to process data. As suggested by Fisher and Kenny (2000), organisations should infuse information systems into their operations so as to enhance competitiveness and facilitate business growth and success. On the other hand, Laudon and Laudon (2001) believe that information systems are embedded in organisations and are the result of standard operating procedures, work flows, politics, organisational culture and structure. Other researchers have also argued that information system is a work system whose activities are devoted to capturing, transmitting, storing, retrieving, manipulating and

displaying information. It is widely believed by firms/organisations that investment in information systems will enable firms cut costs and compete strategically and effectively (Butler and Sellbom, 2002; Palanisamy, 2005). Information System exists to help an organization to accomplish its objectives. An Information System collects data, manipulates it, compiles it and integrates that data into something that has meaning for a manager or operator (Palanisamy, 2005). Information Systems provides guidance to the organizations employees to better assist them in the accomplishment of their objectives. It has a great impact on all levels of organization be it operational, tactical, or strategic aspect. It impacts on all functional areas including finance and accounting, manufacturing and production, sales and marketing, and human resource. An evaluation of the performance of information systems and the role it plays in an organization with focus on commercial banks becomes an indispensable point for managers and employees of banks and customers as it affects profit and returns.

First Bank PLC was first incorporated in Liverpool as the bank for British West Africa in 1894 and also acquired African Banking Corporation which was established in 1892. In 1896, it opened first international branch in Accra, Ghana and later incorporated locally as the Standard Bank of Nigeria Ltd in 1969. It listed on the Nigerian Stock Exchange in 1971 and established the first offshore financial subsidiary of Nigerian-owned bank in the UK in 2002. It also acquired two banks namely; MBC International Bank Ltd. and FBN (Merchant Bankers) Ltd. and announced business discussions with Ecobank in 2005. It floated first ever hybrid capital offering out to Africa and floated Nigeria's biggest offer in 2007 (Firstbanknigeria.com, 2016). Being one of the foremost commercial banks in operation in Nigeria, it has become imperative to be an appropriate case study for this research work. With record of performance shown over the years in its influx of customers and its trust worthiness as a corporation, this research is therefore going to assess to the extent to which information system has contributed to this increased performance.

Statement of the Problem

Businesses need to continuously find better and faster ways to adapt to the competitive marketplace in order to compete in today's high technology and fast paced environment. Some organizations have not fully embraced information management tools and as a result are confronted with many information management problems and issues. In many ways, the growth of electronic information has only worsened these issues over the last decade or two. In fact, the practice of

generating, processing, storing and retrieving of information at maximum security level becomes almost impossible without appropriate information systems. Academic researchers have conducted many research projects in order to stress the importance of such applications, propose models and methodologies to identify such applications. However, few researches have been done on the current situation and the potentials of Information Systems within the financial sectors in Nigeria. The influence of Information Systems in organizational performance was the main thrust of this research work.

Objectives of the Study

The broad objective of this study was to examine to ascertain the use of information systems in and how it affected their organizations' performance, using First bank as a case study. Within the framework of the above objective, the following specific objectives are outlined to:

1. Determine the types of information systems used in First Bank, PLC, Nigeria.
2. Ascertain the frequency of use of such information systems to enhance the organisational performance of First Bank, PLC.
3. Determine the relevance of the information systems in the day to day activities of First Bank, PLC.
4. Identify the barriers to the use of information technology systems in First Bank, PLC.

Research Questions

The following research questions guided study:

1. What types of information systems does First Bank, PLC use in the performance of its duties?
2. Which information systems are frequently used to enhance performance in First Bank, PLC?
3. What role does information system play in the day to day activities of First Bank PLC
4. What are the barriers to effective information technology systems' use in First Bank, PLC?

The study would enable employees and managers who are involved in the information systems of their organizations to see opportunities for improvement in the use of information technology systems thereby increasing patronage through customers' satisfaction. This research work is very essential to all managers of organizations. It will aid the managers in decision making not just decisively but effectively and efficiently in order to bring about change that will benefit the organization.

Literature Review

An information system is any organized system for the collection, organization, storage and communication of

information. More specifically, it is the study of complementary networks that people and organizations use to collect, filter, process, create and distribute data. A computer Information System (IS) is a system composed of people and computers that processes and/or interpret information. The term is also sometimes used in more restricted senses to refer to only the software used to run a computerized database or to refer to only a computer system. Information system is an academic study of systems with a specific reference to information and the complementary networks of hardware and software that people and organizations use to collect, filter, process, create and also distribute data. An emphasis is placed on an Information System having a definitive boundary, users, processors, stores, inputs, outputs and the aforementioned communication networks (Jessup, Joseph & Valacich, 2008). Any specific information system aims to support operations, management and decision making (Bulgacs, 2013). An information system is the information and communication technology (ICT) that an organization uses, and also the way in which people interact with this technology in support of business processes. Some rapid growths achieved in some organizations are as a result of acquisition and efficient use of new information systems (Nicholls-Nixon, 2005).

There are different types of information systems used in organizations designed to enable humans to perform tasks for which the human brain is not well suited, such as: handling large amounts of information, performing complex calculations, and controlling many simultaneous processes. There are (1) Transaction Processing Systems, for example activities in using a credit card, making a reservation or making cash withdrawal at an ATM (2) Management Information Systems (MIS) that produces regular reports on operations for every level of **management** in a company (3) Decision- Support Systems (DSS) which includes any system that might support decision making. For Instance, unstructured and Semi- Structured decision problems. Decision support systems can be either fully computerized, human- powered or a combination of both (4) Executive Support Systems which is a software reporting tool that provides the executive level officers the critical organization's data in a useful concise format so that the executives make quick decisions (5) Knowledge- Based Information Systems is a computer program that reasons and uses a knowledge base to solve complex problems. The system has two types of sub-systems: a knowledge base and an inference engine. The former represents facts about the world, often in some form of subsumption ontology while the later represents logical assertions and conditions about the world, usually represented via IF-THEN rules. (6) Office

Automation Systems which refer to the varied computer machinery and software used to digitally create, collect, store, manipulate, and relay office information needed for accomplishing basic tasks. The basic activities of an Office Automation System comprises of raw data storage, electronic transfer, and the management of electronic business information. The system helps in optimizing or automating existing office procedures. (6) Electronic Communication Systems, this refers to information system that involves the transmission and distribution of text and images in electronic form over telecommunications networks, reducing the need of individuals sifting through stacks of paper records to retrieve data and also enabling the easy recovery of data even when lost e.g. Electronic mail, Voice mail, and Facsimile. It is difficult for some organizations to pay at once for some ICT equipments due to their cost; so they split the payment and pay in installment (census.gov, 2013).

Methods

This study adopted a descriptive survey design. Description of the findings was done using figures and percentages. The population comprised all workers in First Bank PLC branches in Ogun State, Nigeria as shown in Table 1.

Table 1: List of First Bank branches situated within Ogun State.

| S/N | FIRST BANK PLC | BRANCH |
|-----|----------------|--|
| 1 | First bank | |
| 2 | First bank | Abeokuta II Branch 2, Onikolobo Road, Panseke, Abeokuta. |
| 3 | First bank | Agbara 2, Ilaro Road, Agbara |
| 4 | First bank | Ewekoro Branch Kilometer 57, Lagos Abeokuta Expressway |
| 5 | First bank | Ibafo branch km37, Lagos /Ibadan express way ,Ogun state |
| 6 | First bank | Igbogila Branch Sawonjo Road, Igbogila, Yewa North LGA, Ogun State |
| 7 | First bank | Mosinmi Branch NNPC/ PPMC Complex, Kilometer 17, Ikorodu Sagamu Road |
| 8 | First bank | Mowe Branch Km 35 Lagos/Ibadan Express Way, Mowe, Ogun State |
| 9 | First bank | Ota Main Branch Lagos-Abeokuta Expressway, Sango Ota, Ogun State |

Simple random sampling technique was used to select 3 branches while purposive sampling and total enumeration were used to include all the workers with first degree and above. This gave a total number of 102 bankers.

Table 2: Selected population sample

| S/N | FIRST BANK PLC | Employees |
|-------|--|-----------|
| 1. | First bank - Ewekoro Branch Kilometer 57, Lagos Abeokuta Expressway | 41 |
| 2. | First bank - Mosinmi Branch NNPC/PPMC Complex, Kilometer 17, | 25 |
| 3. | Ikorodu Saga mu Road, Ogun State First bank - Ibafo branch Km37,Lagos /Ibadan Express Way, Ogun state | 36 |
| TOTAL | | 102 |

Source: First Bank HR, 2016

Research Instrument

The instrument for data collection was a questionnaire titled: 'Influence of Information system use on Organizational performance in First Bank PLC'. The questionnaire was made up of four sections, Section A: Demographic Profile; Section B: Information System; Section C: Relevance of Information System use on bank's organizational performance; and Section D: Factors that hinder the utilization of information systems. In this section, respondents are required to provide answers on some of the factors that they believe affects the efficient utilization of information systems in First Bank PLC. The instrument was validated by professionals in the field of information management and a reliability test was done section by section for the four sections using Cronbach's alpha. The results were Section A: 0.84, Section B: 0.58, Section C: 0.76, and Section D: 0.80. The overall result was 0.75. The questionnaire was distributed and collected back by the researchers. Data collected was analysed using the Statistical Packages for Social Sciences (SPSS V.16). Descriptive statistics was used to derive the frequency distribution on all variables on the questionnaires.

Results

Table 3: Demographic Profile of Respondents

| Characteristics | Categories | Frequency | Percentage |
|--------------------------------|--------------------|-----------|------------|
| Gender | Male | 41 | 32.4 |
| | Female | 61 | 67.6 |
| | Total | 102 | 100.0 |
| Age (in years) | | 60 | 59.5 |
| | 31-40 | 40 | 36.8 |
| | 41-50 | 2 | 2.7 |
| | Above 50 | 0 | 1.0 |
| | Total | 102 | 100.0 |
| Marital Status | Single | 35 | 21.5 |
| | Married | 67 | 78.5 |
| | Total | 102 | 100.0 |
| Educational Qual. | Diploma | 0 | 0 |
| | BA/B.SC/HND | 91 | 90.5 |
| | Master | 11 | 9.5 |
| | Total | 102 | 100.0 |
| How long have you | Less than 1 year | 16 | 8.1 |
| Been working in the department | 1-5 years | 66 | 59.5 |
| | 6-10 years | 20 | 27.0 |
| | More than 10 years | 0 | 0 |
| | Total | 102 | 100.0 |

From the finding presented in Table 3 above, it was obvious that 32.4% of the total respondents are males while 67.6% are females. This implied that most of the respondents in First Bank are females. As regards their marital status, married respondents dominated the study locale with 78.5%. Most of the respondents are BA/BSc/HND holders. Finally majority of the respondents have been working in First Bank for a period of 1-5 years, while 27.5% have worked for a period of 6-10 years, so most of them have had enough experience to provide competent answers.

Information Systems in First Bank, Ogun State

Table 4 captured transaction processing systems (ATMS), in First Bank and only 50% asserted that they had a decision support system in their branch while 20% claimed they had a Knowledge-based information system at their branch. First Bank have majorly all the types of Information Systems, and this shows that they are technologically inclined and that they are quite aware of the role Information systems play in influencing their organizational performance.

Table 4: Types of Information Systems used in First Bank?

| S/N | Types of Information System available | Responses |
|-----|---------------------------------------|------------|
| 1. | Transaction Processing Systems (ATMs) | 102 (100%) |
| 2. | Management Information Systems | 102(100%) |
| 3. | Executive Support System | 102(100%) |
| 4. | Office Automation Systems | 102(100%) |
| 5. | Electronic Communication Systems | 102(100%) |
| 6. | Decision- Support Systems | 51(50%) |
| 7. | Knowledge-Based Information Systems | 22(20%) |

Figure 1: The frequency of usage of the Information Systems in First Bank PLC.

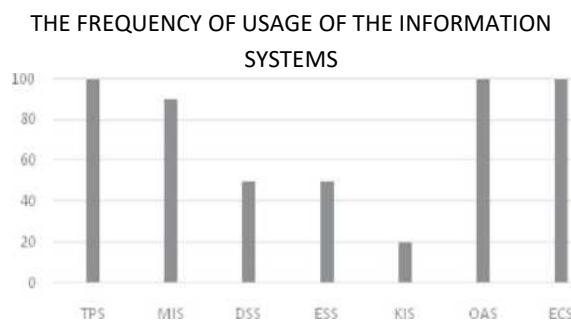


Figure 1 revealed that 100% of the respondents affirmed that transaction processing systems (ATMS), management information systems, executive support systems, office automation systems, electronic communication systems are the most frequently used in their branch, while 20% claimed that Knowledge- Based Information Systems is often used. This could mean that the Knowledge-Based Information System is

available and only assessed by top level management within First Bank PLC. From reviewed literature, this can be seen as normal since the Knowledge-Based Information Systems are used to solve very complex problems and requires professional skills to use therefore meaning that the system is not for all employees and bankers.

Relevance of Information Systems on First Bank's Organizational Performance

On the question whether information systems in First Bank influence its organizational performance, 96% of the respondents claimed that information systems is relevant to First Bank's organizational performance while the remaining 4% agreed that Information system does not.

Table 5: Relevance of information system on First Bank's organizational performance

| S/N | Relevance of Information System within First Bank | SA | A D | SD |
|-----|--|------------------------|----------------------|------------|
| 1. | ----- | 94 (84.7%) | 13(11.7%) 2(1.8%) | 0% |
| 2. | IS is imposing security and control threat on my bank | 0% | 0% 14 (12.6%) | 102(95%) |
| 3. | Computer virus and many other fraudulent manipulations are threat to exposure of confidential information confronting my bank. | 110(97%) | 17(15.3%) 13 (11.7%) | 12 (10.8%) |
| 4. | IS has made service continuity a more appropriate term than business continuity. | 66(59.5%) | 10(9%) 0% | 2 (1.8%) |
| 5. | IS has made decisions leading to the achievement of my bank objectives attainable. | 0% | 0% 8 (7.2%) | 42(37.8%) |
| 6. | IS is a major issue that affects my bank survival. | 0% | 0% 16(14.4%) | 42(37.8%) |
| 7. | With IS accurate and well-presented information is available to improve our productivity. | 107(96.4%) | 0% 0% | 0% |
| 8. | IS enables planning, coordinating, organizing and controlling functions of management. | 103 (92.8%) | 0% 10(9%) | 9 (8.1%) |
| 9. | IS is the Life Blood of my bank. | 110(97%) | 0% 0% | 0% |
| 10. | From My Own Perspective, IS is that least important | 0% | 0% 0% | 115(98%) |
| 11. | IS has a profound contribution on our Operation | 109(98.2%) | 2(1.8%) 13(13%) | 2(2%) |
| 12. | Strategic ability to deal with Crisis and Interruptions effectively is again of IS | 90(74.1%) | 51 (55.9%) 45 (45%) | 0% |
| 13. | IS has made decisions leading to the achievement of my bank objectives attainable. | 99(89.2%) | 12(10.8%) 13 (13%) | 9 (9%) |
| 14. | With IS accurate, timely well-presented information is available to improve our productivity. | 108 (97.4%) 27 (24.3%) | 16 (16%) | 7 (7%) |
| 15. | With IS accurate and well-presented information is available to improve our productivity. | 109(98.2%) | 2(1.8%) 27 (27%) | 0% |
| 16. | IS enables planning, coordinating, organizing and controlling functions of management. | 90(81.1%) | 0% 41(41%) | 32(32%) |

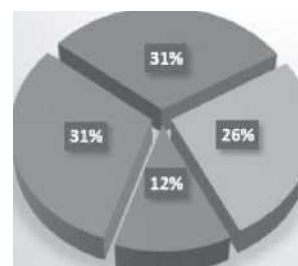
Table 5 revealed that 84% of the respondents strongly agreed that Information System is a major issue that affects First Bank's survival, 95% strongly disagrees that Information system is imposing security and control threat on First bank. Also, 97% strongly agrees that computer virus and many other fraudulent manipulations are threat confronting First bank. 59.5% strongly agreed that Information system has made service continuity a more appropriate term than business continuity. Table 5 revealed that Information Systems are indispensable in organizations like the bank.

Barriers to the utilization of Information Systems in First Bank

This section provided questions that captured responses that helped in revealing the factors that hinder the utilization of Information systems within first bank.

Figure 2: Factors that hinder the utilization of information systems in First Bank

FACTORS THAT HINDER THE UTILIZATION OF Information systems in First Bank



- Budgetary allocation
- Privacy issues
- Integration of new systems
- Lack of Job security
-

Figure 2 showed the respondents' answers when asked about the factors that hinder the utilization of Information systems in First bank where 50% responded that budgetary allocation and privacy issues are the major factors that mitigate against the utilization of Information systems, and 43% asserts that integration of new systems is also a factor while 20% holds that lack of job security is also a problem, Unemployment (as processes are becoming automated) was not a barrier for any of the respondents.

Discussion

Findings from this research revealed that 96% of the respondents agreed that information systems are relevant to First Bank's organizational performance. While the findings also revealed that most of the respondents regard information systems as important for their everyday banking processes. Also, the research's tested hypothesis proves that there's a significant relationship between information system and organizational performance. Associating this finding to the assertion of Kling (1996), who confirmed that when information systems are integrated into a bank's operations they often appeal to a strong transformation of workflow.

This study revealed also that the bank performed most of her operations with an information system, and when asked if information systems influence their performance, respondents affirmed that it does. This is in line with the finding of Kasasbeh (2007) who ascertained the role of information systems in improving the efficiency of the performance of the Free Zones Corporation Jordan during the period 1996 - 2005. The

assertion made by Armstrong (2009) gives credence to the findings that the overall objective of information systems is to develop and improve the performance of individuals and teams and therefore organizations.

The study found out that the bank rarely performed any operation without using an information system. Eaton and Bawdon (1991) specified the importance of information systems to every institution because information is now one of the most important assets to service providers, such as the banks, as they support quick decision making.

Majority of the respondents declared that budgetary allocation, privacy issues and integration of new systems are the major issues that interfere with smooth running of the bank. Many reliable hard- and software are expensive and some of them require the purchase of user licenses.

Conclusion and Recommendations The introduction of computers into the Nigerian banking industry had a great and beneficial impact on the industry. Transactions now take very short time to be processed, customers' expectations are being met, and volume of business transaction has increased tremendously, both for the banks and its customers. It is evident that all banks understand its importance to the sustainability of business. Therefore, information systems should be given a high attention because it is very critical to the survival of banks for staying in the competitive world and be viable

Based on the findings of the study, the researchers recommend that First Bank should reevaluate her current investments and reduce the information technology wider gap found when compared with the developed countries and allocate more funds to the purchase of information systems thereby increasing organisational chance of surviving amidst daunting challenges.

The top management in First bank must develop a strategy to overcome the barriers to effective use of this important investment in information systems, disseminate it through the company, establish a shared vision and must take into consideration the relevant aspects of information systems.

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