

Impact of Information Technology Towards Organizational Performance of Slected Commercial Banks in South-South Nigeria

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Abstract

This research study was carried out to investigate the impact of information technology towards organizational performance of selected Commercial Banks in South-South Nigeria. A set of structured questionnaire was used as the instrument of data collection and administered on one hundred (100) employees of the commercial Banks under study in south-south Nigeria, randomly selected using Taro Yemane formula. Applying this formula, the sample size from a population of 134 is 100 respondents at 95% confidence level. Data analysis was made using simple percentage tables and the hypotheses formulated were tested using the pearson product moment correlation co-efficient and the t-test at 0.05 level of significance. The findings from the study revealed among others that information technology operation, information technology knowledge and information technology competency have effect on organizational performance of commercial banks in south-south Nigeria. The study concludes the information technology has a significant impact on organizational performance. Based on the findings and conclusion, it was recommended that top managers should continuously and systematically in the purchase and maintenance of information technology, adoption of the idea of using up-to-date information technology devices and tools so as to avoid obsolescence, adequate and regular training and re-training of personnel on the use of information technology tools.

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1.Introduction

Information technology refers to any technology that assists in producing, processing, manipulating, storing, communicating, and or spreading information. It consists of computer hardware, networks, software, data and other relevant materials used to build information systems. Information technology has become imperative in every organisation in recent times (Chulkov, 2017). Bayo (2019) stated that information technology is a major assistance to the growth and development of developing countries. Information technology has shifted the way we go about our daily activities at our place of work, in our homes, banking institutions, our mode of thinking and communication activities. As at today, the world is globally linked with internet connectivity which assist individuals to relate with one another from different locations of the world using personal computers, mobile phones and the likes, (Byo, 2019). The increase in emerging information technology has made banking services to become highly automated and reduction in paper work than what took place in the past.

Banks operating have noticed that they would soon be out of corporate business unless they adhere strictly with the use of information technology which has enhanced the creation of value and service delivery for their numerous customers.

The purpose of this research study is to examine the impact of information technology toward organizational performance of selected commercial banks in south-south Nigeria. In particular, the following research questions were addressed; What is the relationship between information technology and organizational performance of commercial banks in south-south Nigeria? to what extent does information technology knowledge influence organizational performance of commercial banks in south-south Nigeria.

1.1 Statement of the Problem

Customers of Banks in Nigeria demand effective quick and reliable services. Customers are keenly interested in Banks that will render them banking services that will enhance their needs and enhance their business goals and aspirations. For example, business owners want to tour and travel long distances without carrying large sums of money for security reasons. They want to assess their account balance online and other financial transactions online. Customers want a cashless economy without problems. Bickersteth (2015) attributed the slow pace of economic development of electronic payment transactions to the problem of adequate infrastructure, low internet penetration, lack of trust among banks and as well as absence of adequate legislation policy on information technology development. According to Olesin (2016) and Ezeoka (2016) image problem is another issue. The advance free fraud code tagged 419, is one of the internet frauds operating in Nigeria.

Denny (2018) viewed e-payment challenges to the issue of customer identification and account verification of online purchasers. Another problem is lack of security. It is essential to put in place adequate security measures to protect the would be client, server as well as the mode of transmission (Ghosh, 2017) electronic banking is an information technology banking activities that leads to all monetary transactions in an account opened by a customer to be conducted within a short time at any functioning branch of these operating banks.

1.2 Objectives of the Study

The major objective of the study is to investigate the impact of information technology on organizational performance in selected commercial banks in south-south, Nigeria. the specific objectives of the study include to:

- i. Examine the relationship between information technology operation and organizational performance of selected commercial banks in south-south Nigeria.
- ii. To investigate if there is any relationship between information technology knowledge and organizational performance of selected commercial Banks in south-south, Nigeria.
- iii. Evaluate the relationship between information technology competence and organizational performance of commercial banks in south-south, Nigeria

1.3 Research Questions

Based on the objectives of the study, the researcher developed the following research questions:

- i. What is the relationship between information technology operation and organizational performance of commercial Banks in south-south, Nigeria?
- ii. To what extent does information technology knowledge influence organizational performance of commercial Banks in south-south, Nigeria?
- iii. Evaluate the relationship between information technology competence and organizational performance of commercial banks in south-south, Nigeria.

1.4 Hypotheses

In order to answer the research questions, the researcher posed the following set of null hypotheses:

HO 1: There is no significant relationship between information technology operations and organizational performance of commercial banks in south-south Nigeria.

HO 2: information technology knowledge does not significantly influence organizational performance of commercial Banks in south-south Nigeria.

HO 3: Information technology competency does not significantly affects organizational performance of commercial banks in south-south, Nigeria.

2 Review of Related Literature

3 Conceptual Framework

The conceptual model of the study incorporated the independent and dependent variables of the study, which is illustrated with the aid of the diagram below.

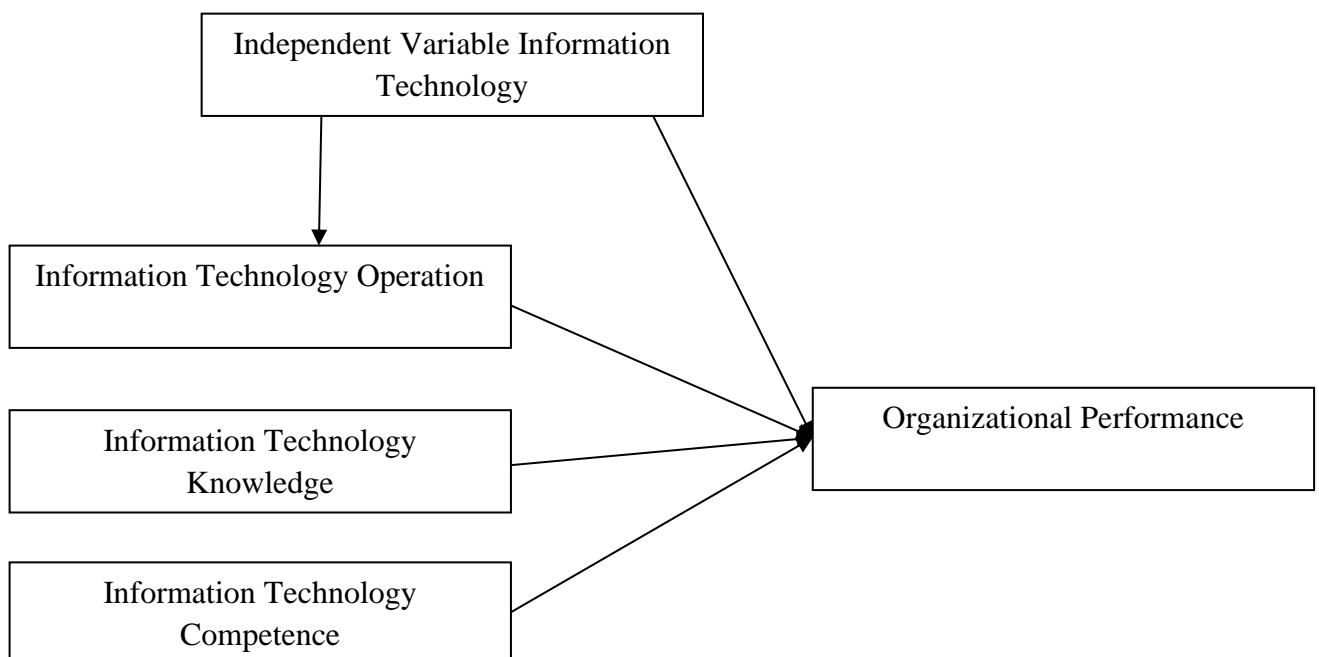


Fig 1.

Source: Research Conceptual model 20

❖ **Conceptual frame work on information technology and organizational performance**

Conceptual framework are the various concepts relating to the research or the study or the problem under investigation. A conceptual framework is a research tool a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent study or research.

Conceptual framework is a system of variable relationships that is logically assigned to present the systematic view of the study. It studied independent and dependent variables. In the conceptual framework information technology is the independent variable whereas organizational performance is the dependent variable.

Concept of Information Technology

Information technology is the process of using computers to store retrieve, transmit and manipulate data or information. It is a technique used for processing, the application of statistical and mathematical methods to effective decision making and the simulation of the effective order thinking through the aid of computer programmes (Chinedu et al. 2018). The terminology is generally used as a similarity for computers and computer networks but it also consists of other information assisted technologies such as televisions and telephones.

Information Technology Operations

Information technology operations is referred to as the installation or the working of information technology in an organization operating on a routine daily basis and on a higher management functions which entails decision making and collection of data. Information technology operations is concerned with day-to-day tasks operations. Information technology operations consists of both the information technology tools in addition to the knowledge used. (Soelton et al, 2021). The motive behind effecting a change from outdated to new technological operations is not a smooth ride as it involves variation in work flow and aligning with information technology operations and it may take considerable time to achieve challenges emanating from it can be solved with a positive direction from the organization with the aid and assistance of information technology knowledge (Sundram, 2016).

Information Technology Knowledge

In the current dynamic organization, knowledge is one of the principal ingredients for a successful organization world over organizations are encouraging the use of information technology to enhance their operations, information technology will enhance information competence which is imperative for organizational growth. Information technology knowledge also consists of experimentation process that has been used in the organization in order to enhance a modern competitive advantage factor that can bring gains and advantages to enhance the growth of the organization. Through the process of experimentation, employees can acquire new knowledge which can result to enhance skilled staff through improved organizational performance (Chegus, 2018).

Information Technology Competency

According to Foroudi et al, (2019) competency has two key dimensions that have been identified which results of training which leads to skilled enhancement. The second dimension is the necessary input which is imperative to enhance skill performance. Competency as a process of having a proper knowledge and required skills by thinking and responding confidently and the strength to assess (Buckley et al, (2019).

In order to assess the concept of information technology concept, (Chegus, 2018) has divided information technology competency into three major parts and each of the parts has been questioned in the survey that has been given to the respondent.

As follow-up, these methods reflect the presence of physical information technology assets as well as the knowledge of how to use them as well as their usefulness in practice.

Organizational Performance

The performance of an organization is necessary for the overall benefits of the stakeholders and also to the growth of the economy. Information technology is at the forefront of organization functions and rendering of services. A huge allocation of investment funds are spent on information technology and other communications frequently. As it is the link between business and growth, fund invested on information technology remains essential for the existence and efficient operation of business organizations in Nigeria, Garcia – Sanchez et al (2020) viewed technological assets as one of the key variables for a firm's competitive advantage.

2.1 Theoretical Framework

This study is anchored on innovation diffusion theory. Rogers (1996) defined organizational innovation as the overall development and possible implementation of recent ideas or behaviours (Rogers 1996), the innovation does not need to have to be recent in terms of its discovery or invention. It only has to be seen as recent by the organization (Zaltman, Duncan and Holbek, 2021). Thus, innovation diffusion theory is better fitted for researching the acceptance of e-commerce in developing countries. Kimberly and Evanisko (2022) pointed out three groups of factors that acts as a predictors of innovation and they are, characteristics of organizational leaders characteristics of organization and characteristics of environment.

2.2 Review of Empirical Studies

The following empirical studies were used to improve the study; Agbooda (2019) studied the impact of information management technology on the performances of banking services operating in Lagos and observed that Banking electronic system has improved the service deliveries of banks to their customers who are in Lagos. He made a distinction between the old and new generation banks and discovered differences in the significant rates of using the automated devices. Aragba-Akpore (2018) carried out a study on the use of information technology in Nigerian Banks and observed that information technology has significant impact on banks service delivery in Nigeria. He revealed that Diamond integrated services of Diamond Bank Limited and application of Electronic smart card Account of All States Bank Limited is strategy geared towards enhancing performance in the banking sector.

Ovia (2015) opined that the banking sector in Nigeria has tremendously depended on the use of information technology for the operations of the banking industry.

Gap in Literature

The gap identified in literature is that empirical studies access by the researcher in the areas of work on the impact of information technology on organizational performance of commercial Banks in south-south, Nigeria did not investigate how information technology operation, information technology knowledge and information technology competence influenced organizational performance. This study fills the gap observed.

3. Methodology

The study adopts the survey research design. The questionnaire is used as the instrument for data collection. For the population of study, a population of 134 respondents were drawn from the commercial banks operating in south-south, Nigeria. A sample size of 100 respondents was selected from a population of 134 using the Taro Yemane's formula which is given as;

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = sample size sought

N = Number of items in the universe or population

e = level of significance

e = 0.05 or 0.0025

$$n = \frac{134}{1 + 134(0.05)^2}$$

$$= \frac{134}{1.335} = 100 \text{ respondents}$$

The hypotheses formulated were tested using the Pearson product moment correlation co-efficient and the t – test at 0.05 level of significance.

3 Test of Hypotheses

The null hypotheses stated in this research study, were statistically tested in this section. The outcome of the statistical testing was used to make conclusions on whether the hypotheses should be accepted or rejected.

Testing of Hypothesis one

HO: There is no significant relationship between information technology operation and organizational performance of commercial Banks in south-south, Nigeria.

HI: There is significant relationship between information technology operation and organizational performance of commercial banks in south-south, Nigeria.

In order to test the hypothesis stated above, the Pearson product moment correlation- co-efficient is used.

Table I: Calculation of person product moment correlation co-efficient.

Options	X points	Y responses	XY	X ²	Y ²
Strongly Agree	5	41	205	25	1681
Agree	4	31	124	16	961
Undecided	3	16	48	9	256
Strongly disagree	2	8	16	4	64
Disagree	1	4	4	1	16
TOTAL	15	100	397	55	2978

Source: Field Survey, 2024

A 5-point likert type scale was used with the following response categories

Strongly Agree (SA) = 5 points

Agree (A) = 4 points

Undecided (UD) = 3 points

Strongly Disagree = 2 points

Disagree = 1 point

The formular for calculating the Pearson product moment correlation co-efficient is

$$r = \frac{N\sum XY - \sum X \sum Y}{\sqrt{[N\sum X^2 (\sum X)^2 - (N\sum Y^2 - (\sum Y)^2)]}}$$

$$r = \frac{5(397) - (15)(100)}{\sqrt{(5 \times 55) - (15)^2 - (5 \times 2978) - (100)^2}}$$

$$r = \frac{1985 - 1500}{\sqrt{(275 - 225) - (14890 - 10000)}}$$

$$= \frac{485}{\sqrt{244500}}$$

$$= \frac{485}{494.46}$$

$$r = 0.9808$$

the above results shows that there is positive and significant relationship between information technology operation and organizational performance of commercial banks in south-south, Nigeria.

Testing of Hypothesis Two

HO: There is no significant relationship between information technology knowledge and organizational performance of commercial banks in south-south Nigeria.

HI: There is significant relationship between information technology knowledge and organizational performance of commercial Banks in south-south Nigeria.

Table 2: Calculation of Pearson product moment correlation co-efficient.

Options	X points	Y responses	XY	X ²	Y ²
Strongly Agree	5	43	215	25	1849
Agree	4	28	112	16	784
Undecided	3	14	42	9	196
Strongly disagree	2	9	18	4	81
Disagree	1	6	6	1	36
TOTAL	15	100	393	55	2946

Source: Field Survey, 2024

$$r = \frac{5(393) - (15)(100)}{\sqrt{(5 \times 55) - (15)^2 - (5 \times 2946) - (100)^2}}$$

$$r = \frac{1965 - 1500}{\sqrt{(275 - 225) - (14730 - 10000)}}$$

$$r = 0.95617$$

The above analysis implies that there is significant relationship between information technology knowledge and organizational performance of commercial banks in south-south, Nigeria.

Testing of Hypothesis Three

HO: There is no significant relationship between information technology competence and organizational performance of commercial Banks in south-south, Nigeria.

Options	X points	Y responses	XY	X ²	Y ²
Strongly Agree	5	46	230	25	2116
Agree	4	30	120	16	900
Undecided	3	13	39	9	169
Strongly disagree	2	7	14	4	49
Disagree	1	4	4	1	16
TOTAL	15	100	407	55	3250

Source: Field Survey, 2024

$$r = \frac{N\sum XY - \sum X \sum Y}{\sqrt{[N\sum X^2 (\sum X)^2 - (N\sum Y^2 - (\sum Y)^2)]}}$$

$$r = \frac{5(407) - (15)(100)}{\sqrt{(5 \times 55) - (15)^2 - (5 \times 3250) - (100)^2}}$$

$$r = \frac{2035 - 1500}{\sqrt{(5 \times 55) - (15)^2 - (5 \times 3250) - (100)^2}}$$

$$r = \frac{2035 - 1500}{\sqrt{(275 - 225) - (16250 - 10000)}}$$

$$r = 0.9570$$

The above result shows that there is positive and significant relationship between information technology competence and organizational performance of commercial banks in south-south Nigeria.

5. Discussion of Findings.

The following findings emanated in the course of the study. First, there is significant positive relationship between information technology operations and organizational performance of commercial banks. This findings corroborates with the findings of Chulkov (2017), whereby it was found that there exists a significant positive relationship between information technology operations and organizational performance of commercial banks in Nigeria. Furthermore, the study reveals a significant positive relationship between information technology knowledge and organizational performance of commercial Banks in Nigeria. The findings is in agreement with the findings of Bicker Steth (2015) who established that there was a strong positive relationship between information technology knowledge and organizational performance of commercial banks in Nigeria. lastly, the findings of this study reveal that there is significant relationship between information technology competence and organizational performance of commercial banks in Nigeria. The finding is in support of the work of Denny (2018) who found that information technology competence was strongly correlated with organizational performance of commercial banks in Nigeria.

Conclusion

The study investigated the impact of information technology towards organizational performance of selected commercial Banks in south-south Nigeria. Based on the findings, this study concludes that information technology through its dimensions of information technology operations, information technology knowledge and information technology competence influence the organizational performance of commercial Banks in south-south, Nigeria.

Recommendation

Based on the findings of this study, the following recommendations were made.

- i. Commercial Banks in Nigeria should adopt the idea of using up-to-date information technology devices and tools so as to enhance adequate service delivery.
- ii. There is also the urgent need by commercial Banks for regular training and retraining of their staff on the effective operations of information technology equipments, adequate management of information system software and equipment as it will help to enhance productivity and minimize errors and saves times.
- iii. In addition, there is need for management of banks to provide adequate funds in order to enhance information technology infrastructure and enhance energy supply.

- iv. More back-up storage devices should be provided to enhance the organizational safety of vital information.
- v. Lastly Banks should invest huge resources on information technology for there to be efficiency in operations.

References

- Agboola, A. A. (2019). Impact of Electronic banking on customer services in Lagos, Nigeria. *Ife Journal of Economics and finance*. Department of Economics, O. A. O, Ile-Ife Nigeria, Vol. 5. Nos. 1 and 2.
- Aragba – Akpore, S. (2018). The Backbone of banks service regeneration, *money watch*, July 22, P. 23.
- Bayo, P. L. Technological challenges in management of organizations. *International journal of business and law research* (2019, 7(2):99-111.
- Bickersteth, S. (2015). Making 3-commerce a reality in Nigeria. *Financial standard* 7, 1, October 2015, Pg. 15.
- Buckley, J. Seery, N., Power, J. and Phelan J. (2019) the importance of supporting technological knowledge in post-primary education. A cohort study. *Research in Science and Technological Education*, 37(1), 36 – 53.
- Chegus, M. (2018). Influence of technology on organizational performance. The mediating effect of organizational learning.
- Chinedu, P.U. Okeke, C, Onyewkwu, C. The impact of ICT on National security: A case of Nigerian security and civil defense corps. *Internal and public affairs*, 2018; 48 – 61.
- Chulkov D. V. (2017). On the role of switching costs and decision reversibility in information technology adoption and investment *journal of information systems and technology management*, 2017: 14(3).
- Denny, S. (2018). The electronic commerce challenges. *Journal of internet banking and commerce* vo. 3, No 3, June, 2018.
- Foroudi, p. Gupta, S, Nazarian A., and Duda, M (2019). Digital technology and marketing management capability achieving growth in SMES. *Qualitative market research: an international Journal*.
- Garcia-Sanchez, E. and Garcia –Morales V. (2020). Influence of technological Assets on organizational performance sustainability *Journal*, 10 – 3390.
- Ghosh, A, (2017), securing E-commerce. A systematic approach. *Journal of internet banking and commerce*, vol, 3 no 3, june 2017.
- Kimberly, J. R. and Evanisko, M, J, (2022) organizational innovation: the influence of individual, organizational factors. *Academy of management Journal*.
- Olesin, A., and Ezeoha, (2016) Regulating internet banking in Nigeria. problems and challenges part 1. *Journal of internal banking and commerce*, volume 10, no. 3, February, 2006.

- Ovia, J. (2015). From Banking Hall to E-platform, Financial Standard, January 15.
- Rogeis, D. M. A (1996) The challenge of 5th generation research and development research technology management journal July-August.
- Soelton, M., Noermijati, N, Rohman F and Mugiono, M. (2021). Conceptualizing the role of organizational performance in Indonesia. The journal of Asian finance, Economics and business, 8(6).
- Sundram, V. P. (2016). Research methodology: Tools methods and techniques: Malaysia logistics and supply chain Association (MLSCA).