



Covid-19 Pandemic and ICT Performance in Nigerian Banks: Financial Transaction Perspective

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Abstract

The global outbreak and spread of coronavirus disease (COVID-19) have been referred to as the most dangerous pandemic since World War II. The speed of the spread and the severity of the damage caused by the virus has traumatized the global economy affecting both banks and customers. With the lockdown imposed by the government to restrict the movement of people and activities caused by the increased level of coronavirus cases in Nigeria, the fate of the financial users of about 40 million became unknown. Given the analysis of data on trends of COVID-19 infections from the World Health Organization and Nigerian Centres for Disease Control and Prevention, the study assessed the current situation. It indicated some specific concepts that the banking sector should consider and address while taking the necessary measures to cope with the new change. The study used an ex-post-facto research design, enabling the researcher to measure the effect or relationship between the dependent variable and explanatory variables using time-series secondary data. The data collected was reviewed, and validated by CBN, the Nigeria Bureau of Statistics, and the Nigerian Inter-Bank Settlement System (NIBSS) websites. The study concluded that the ICT volume of e-payment has no significant effect on operational efficiency in Nigeria Banks, and the ICT value of e-payment significantly affects operational efficiency in Nigeria Banks during the coronavirus lockdown.

Keywords *Banking Operation, Corona-Virus, Information and Communication Technology*

INTRODUCTION

The deep-rooted risk in making cash transactions over many years has made customers solicit a convenient way of carrying out financial transactions other than the use of cash. In the era of conventional banking, delivering services was difficult but cheaper. It was generally uncomfortable and inconvenient, in the sense that customers could only go to the branch in which their account is domiciled to carry out bank transactions. The need for performance and efficacy in bank operations as a prerequisite for the survival of the financial services providers and banks needs not be overemphasized (Binuyo & Aregbeshola, 2014; Peace et al., 2018). Putting into consideration the potency of knowledge as one of the forces that enhance economies across the globe has made the world digress to a knowledge-productive economy, thus presenting ICT as one of the principal drivers of economic growth (San-Jose et al., 2009; Binuyo & Aregbeshola, 2014). The effects of ICT enhance the improvements in the work rate and economic growth of firms (Brynjolfsson & Hitt, 1996; Binuyo & Aregbeshola, 2014) and the entire economy.

The efficiency of banking operations is a major concern in the new monetary and financial environment (Kosmidou & Zopounidis, 2008). Many investigators have attempted to measure productivity and efficiency in banks using outputs, costs, efficiency, and performance. Performance

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is the central pillar of the continued existence of any organization (Ndofor & Levitas, 2004; Isichei et al., 2020a). It is the result of a set of organizational activities that shows the foundational basis of determining the extent to which a firm attains its set objectives over time (Richard et al., 2009; Isichei et al., 2020b). By bank performance, it implies whether a bank has fared well within a trading interval to realize its objectives (Samuel & Sunday, 2020). The documents that explain performance are probably published financial statements. A bank's performance is evaluated by the ability to accomplish the objectives set by management and stockholders. Operational efficiency expands the ideas of business performance by incorporating the factors of core operational success that might lead to financial performance, such as market share, product quality, marketing effectiveness, the reputation of the company, product launch, and manufacturing value-added products. Stock prices and their behaviour as market indicators may not always be reliable for accessing bank performance, but the reliable indicators are the bank's size, the volume of deposits, and profits (Samuel & Sunday, 2020). Profitability indicators like Return on Equity Capital (ROE) and Return on Assets (ROA) are used to assess bank performance (Samuel & Sunday, 2020). Return on equity (ROE) is a notable profit indicator, which quantifies the management of the bank in all capacities that creates an image of the method to use the capital purchased by shareholders and the retainer's effect on the bank's activity (Ben Bouheni et al., 2016), while return on assets is the indicator that expresses profitability for the entire banking activity. This indicator is also called the profitability of the assets, which measures the effect of management function, using the financial and real resources of a firm for profit generation.

In this era, banks need information and communication technology to a great extent, and it has become essential in every aspect of service delivery. Being a customer-oriented business, data or information embraces emerging technologies in managing client information, identifying needs and risks, research and training, and designing products and services using the data available. Banks need Information and Communication Technology (ICT) to survive in an increasingly sophisticated environment to meet customer and market demands. Despite the benefits of ICT that are prevailing in the banking industry, some identified challenges pose a great threat to the operations of ICT in the banking sector; they are the dominance of cash dealings within the national economy, illiteracy, poverty, lack of expertise, high unbanked population, and poor infrastructural facilities. A vast population of Nigerian workers is informally employed, and they depend on daily earnings for survival. But the pandemic restrictions have disrupted business activities, and the regular income of this workforce has been deprived.

This effect caused low business and operational losses reducing the profit level and capital of most banks. The banking industry experienced operational risks, such as business execution systems and process management failure, which led to a drastic reduction in the performance of most banks. This is a result of increased reliance on digital channels creating pressure on technological infrastructure and resources. Banks can lose customers due to poor quality services and not being able to establish, maintain, and sustain ICT-supported programs. This could affect banks' performance and existence. In this aspect, several studies have been conducted to assess the impact of information and communication technology on several aspects of financial management (Alabar & Agema, 2014; Batiz-Lazo, & Wardley, 2007; Cavus & Chingoka, 2016; Fu and Mishra, 2002; Subanidja, Sarongan, & Legowo, 2022; Olawale, Balogun & Oluselu, 2023; Parilla & Abadilla, (2023). These studies revealed that the application of information and communication technology in the banking sector is gaining users' acceptance appreciably, and a gradual rise in the percentage of operational efficiency has been recorded. However, the extent the adoption of ICT has driven increased performance during the covid-19 lockdown still remains under researched, hence, justifying the study which aims to investigate the information and communication technology effect on the performance of the financial transaction in the Nigerian banking industry. It is this gap

in the literature that this study seeks to fill.

The main goal of every bank is to remain relevant in the market. All these aforementioned challenges have compelled the banking industry to be sufficiently responsive to change and create new processes to face the competition existing in the industry. Information and communication technology is needed in the organization to change and create new processes, to face the challenges in the sector. A lack of skilled workers and the unavailability of appropriate expertise could lead to a loss of attractive opportunities, low productivity, and turnover. Nowadays, organizations are pressured to produce more with fewer resources to increase their organizational productivity and succeed in the market. The question now is, "What effects do the introduction of IT have on these problems and the management of bank service delivery? In line with the objectives of the study, the following research questions were formulated, as the researcher has chosen to use the volume and value of e-payment transactions as a reliable indicator for bank performance in this study.

- i. What are the effects of ICT on the volume of e-payment transactions and the operational efficiency of banks in Nigeria during the coronavirus lockdown?
- ii. To what extent do ICT tools drive the value of e-payment transactions in banks during the coronavirus lockdown?

LITERATURE REVIEW

The foundational theory that buttresses this paper is the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). The concept of UTAUT cannot emerge without discussing TAM (Davis, 1989; Davis et al., 1989; Venkatesh, 2015).

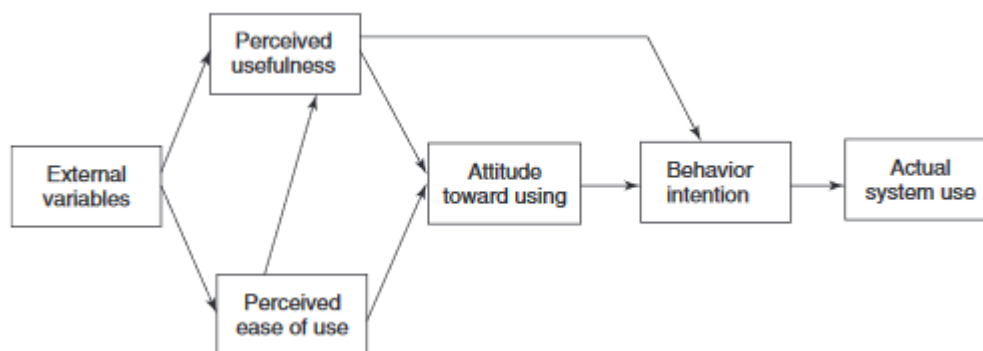


Figure 1. Technology Acceptance Model (Davis, Bagozzi, and Warshaw, 1989)

Original TAM (Developed by Davis, Bagozzi, and Warshaw (1989))

This theory explains how users accept and use technology (Samuel & Sunday, 2020). Given that innovation in technology, such as personal computers, is complex, it brings up an element of uncertainty in people's minds. Regarding the successful adoption of technological innovation, people have developed attitudes and intentions before using new technologies. The user's attitudes towards usage and the intention to use the system might be abnormal or not convincing, which may happen at the early stage of learning how to use the newly evolved technology (Samuel & Sunday, 2020). The aim to pursue effective measures for predicting and explaining use has brought up two theoretical constructs, perceived usefulness and perceived ease of use, theorized to be the fundamental reason for using the system.

Perceived usefulness is the degree to which an individual agrees that making use of a

specific system would improve the person's job performance and function (Davis, 1989). Within an organizational setting, people are reinforced for work efficiency by upliftments, promotions, bonuses, and other incentives (Vroom, 1964; Schein, 1979; Pfeffer, 1982; Davis, 1989). An institution known for increased perceived usefulness shows that the user agrees that there is an existing positive use-performance interrelationship. At the same time, Perceived ease of use is the extent to which an individual accepts that making use of a specific system tends to be free of effort. The effort has been described as a limited resource which an individual may put towards assigned responsibilities (Radner & Rothschild, 1975; Davis, 1989).

A review of eight models of technology use formed the unified theory of acceptance and use of technology (Venkatesh et al., 2003; Venkatesh et al., 2012). UTAUT has refined the reproving and the eventuality factors associated with the prediction of behavioural intention to use technology and technological usage in an organizational setting. In a long-term field study of employee technology acceptance, UTAUT emphasizes the model to understand technology diffusion outside the workplace and in society. The generalizability of UTAUT offered to various technology use and group settings, a point to develop a model that was more contextualized to consumer settings. UTAUT explains three new predictors, which include price value, hedonic motivation, and habit. Hedonic motivation is "the pleasure experienced while using technology" (Venkatesh et al., 2012; Venkatesh, 2015). The price value is defined as "consumers' rational exchange between the assessed benefits of the applications and the monetary cost for using them" (Venkatesh et al., 2012; Venkatesh, 2015). Habit is "the degree of unconscious behaviour which users tend to perform while learning"; Venkatesh, 2015).

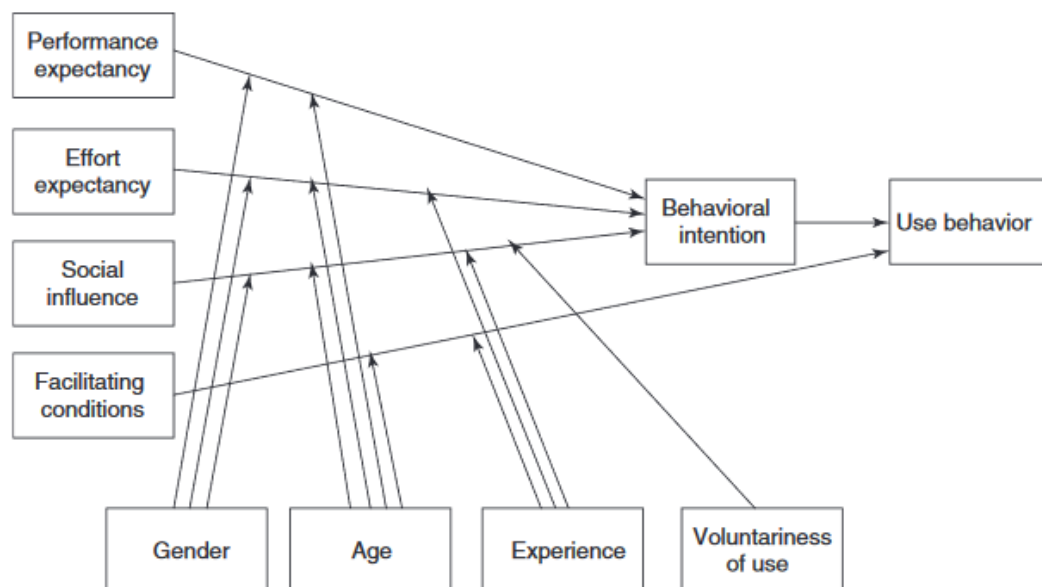


Figure 2. UTAUT Framework (Venkatesh et al., 2003)

Performance expectancy, effort expectancy, social influence, and facilitating conditions are the four significant predictors in UTAUT. Performance expectancy has been defined as "the extent to which a person believes that making use of the system will help an individual to achieve effective job performance" (Venkatesh et al., 2003). Effort expectancy involves "the degree of ease that an individual has when making use of the system, (Venkatesh et al., 2003). Social influence occurs when a person perceives that it is pertinent when people that matters believe an individual should use the new system" (Venkatesh et al., 2003). Facilitating conditions is "the degree to which a

person believes that an organizational and technical infrastructure is available for the support and use of the system", (Venkatesh et al., 2003). To identify the four core predictors, these four moderating variables are identified, they are age, gender, experience, and voluntariness of use.

This study applies these theories to understand the effect of ICT on bank performance. If banks can invest more in technology and bank users become financially digitized, there could be enhanced productivity and more happy bank customers and civilians, regardless of the challenges inherent in their external environment. Because a failed system can lead to undesirable outcomes such as unsatisfied customers, dissatisfaction among employees, low access to financial services, and low productivity, to overcome these challenges, the regulators should promote financial digitization with new banking technologies and enhance technological transformation in banks and other sectors, which will create more impact on the customers and bank efficiency. Policies that will foster digitization should be adopted to ensure a high level of security to protect customers from privacy infringements and digital fraud.

Information and Communication Technology

Information and Communication Technology has been defined as the collation, storing, processing, and dissemination of different kinds of information with the aid of telecommunication systems and computer technology (Thyaga, 2016). It is an organized, integrated framework for automating processes and controlling information production using computers, telecommunication devices, software, and other communication gadgets to improve the efficiency of daily operational activities to achieve strategic goals (Dalis et al., n.d.). ICT comprises devices and software that connect different computer hardware components to transfer data from a particular geographical location to another (Peace et al., 2018). Due to the nature of banks' operations and services, new technologies need to be adopted. (Polasik & Wisniewski, 2008; Binuyo & Aregbeshola, 2014).

Delgado and Nieto (2003) posit that electronic communication channels have an intense impact on the development of the banking industry, while Irechukwu (2000) confirmed this statement by highlighting some banking services that have been revolutionized through ICT usages such as customer account mandate, account opening, transaction processing and recording, (Muhammad et al., 2013). ICT products that are used in the banking industry include automated teller machines, smart cards, telephone banking, MICR, electronic funds transfer, electronic data interchange, and electronic home and office banking. The electronic distribution of retail banking services introduced automated teller machines (ATMs), automation that was first launched by Barclays Bank in 1967 (Batiz-Lazo & Wood, 2002; Bátiz-Lazo & Wardley, 2007). This machine was invented to deliver various services; originally, it was manufactured for withdrawal purposes, but it can be used for depositing and account details. The latest invented "Touch screen" interface with custom-made shortcuts has replaced the old machine "Hole in the wall" ATM (Riad, 2017). Subsequently, the world has witnessed the increased use of desktop computers with the emergence of electronic banking channels (Binuyo & Aregbeshola, 2014). The popularity of the internet became well-known in the business world, and the adoption of electronic banking increased appreciably (Polasik & Wisniewski, 2008).

ICT and Bank Operations During the Coronavirus Lockdown

The covid-19 pandemic is the biggest threat in the history of health, social welfare, well-being, and the world economy (Kickbusch et al., 2020). The outbreak and spread of coronavirus disease (COVID-19) in Africa have caused severe infections and deaths from the pandemic. An estimate from the Africa Centres for Disease Control and Prevention revealed, on September 24, 2020, a figure of 1,429,704 cases of infections, 34,839 deaths, and 1,175,855 recoveries

(AfricaUnion, 2020). Ideally, the world is known for neoliberalism, where the economy has always been the priority, but in this instance, many governments of the world consider people's health over the economy (Kickbusch et al., 2020). Containment of the virus was a genuine strategy, which was the choice or necessity made by the country that had drastically controlled the outbreak (Kickbusch et al., 2020). To control the pandemic beyond these forbidding statistics, African countries employed measures such as non-pharmaceutical interventions such as testing, isolation, treatment, and contact tracing, ((Department for International Development, 2020), and containment measures which involve the strict imposition of hand-washing hygiene practices, observation of social distancing, and travel restrictions. Other measures were also implemented by the government, some of which were border closure, full and partial lockdown of economic activities, including banning of public gatherings, closure of markets as well as micro, small and medium scale businesses (especially the informal economic activities), and restriction of movements between state (Kihato & Landau, 2020). However, if rigidly applied, it may lead to negative health and socio-economic impacts (Department for International Development, 2020).

During the pandemic lockdown, individual and corporate businesses provided continuous services and sold their products under e-commerce platforms via the internet. The informal sector depended on daily transactions to survive. How were the banks able to serve this workforce efficiently, mostly in carrying out daily cash transactions and making payments? Of course, it may be difficult and inconvenient for them to transact business because they were not prepared due to the prompt decision taken by the government to curtail the spread of the virus. Furthermore, there is limited knowledge of how the informal workforce transacted or would transact their businesses if a virus or pandemic occurrence takes place in the future. This has been considered an important knowledge gap for the study and how managing their business transactions could contribute to bank operational efficiency.

What will determine the efficiency of banks is the ability to operate and respond to issues while they run a skeletal system during the period of remote work. Globally the shutdown of activities and closure of public places has forced civilians to sit at home to work and transact businesses online from their different locations. Banks may need to maintain the delivery of online banking services from various branches within and outside the country. Essential services like withdrawal and depositing of cash, credit extension, payment facilitation, and making market sales are to be resiliently rendered. ICT may play a great role by enabling bank delivery services, online communication, strategic processes, and integrating all branch networks via the use of specialized information technology tools. The new development enabled by ICT is remote banking, self-inquiry facility, and electronic banking instrument (Hassan, 1998; Ekwonwune et al., 2017). Information technology has become an essential factor for future innovations in banking, which has affected banking operations, marketing, and business strategies. The modification in information technology has strengthened the financial institution, increased initiative, and fastened reliable financial operations in the banking sector (Dangolani, 2011).

Relationship between ICT and Banks' operational efficiency

Dawodu & Osondu (2013) studied the effect of information and communication technology on the growth and development of banking activities in Nigeria. The study explained the contributions of information and communication technology to the growth and development of bank operations. The effect of the adoption and use of ICT in the industry is measured by means of a survey, and questionnaires were administered to elicit information on the perspective of organization ICT usage. The study revealed that there was a strong connection between ICT and banks' profitability in Nigeria. ICTs are very important and highly regarded in the organizational value chain.

Alabar & Agema (2014) conducted a study on information and communication technology and customer satisfaction in the Nigerian banking industry. The study took a critical look at the level of information and communication technology (ICT) in determining the relationship that existed between the current state of ICT and customer satisfaction in the industry as a prerequisite for banking efficiency. The study is an empirical design that utilizes responses from a structured Questionnaire of 400 respondents from 10 banks to explore the impact of ICT adoption on the quality of customer service delivery and profitability of banks in Nigeria. The study concludes that there is a positive relationship between ICT adoption and bank customers' satisfaction in Nigeria. This implies that the adoption of ICT by banks can enhance their efficiency, quality of service delivery, and profitability. The findings imply that the industry should endeavour to update its ICT facilities regularly, given their impacts on quality of service delivery and profitability.

Saranya et al. (2014) carried out an empirical study on the role of ICT in the banking sector. The study identified that Information and communication technology changed business methods and how people used ICT in the banking sector to achieve job efficiency. Three hypotheses were tested to analyze the effect of ICT on banks. 200 samples were chosen from the total population of Chennai town for the study, and the data was collected through a Structured Questionnaire. Meaningful inferences were analyzed and drawn using various tools such as simple percentage analysis, factor analysis, and chi-square. The study revealed that ICT caused a change in the operation of Banks. This study recommends that banks should collate necessary information as regards factors that may enable banks to contribute meaningfully to the usefulness of IT in effective service delivery.

Dalis et al. (n.d.), Investigated the effect of ICT adoption on the competitive performance of banks in an emerging economy: The Nigerian Experience. The study took a critical look at the level of banks of the 21st century operating in a complex and competitive environment that is characterized by the ever-changing economic and financial environment. The descriptive design was employed in carrying out the study. The total population of the study was 896 Zenith Bank staff, Diamond, UBA, and GT-Bank Plc situated in FCT, Abuja. The total number of questionnaires distributed was 175, and the total number of returned questionnaires was 171; the findings of the study stated that there is a positive relationship between ICT and bank performance in Nigeria. The study recommends that it is pertinent for bank management to intensify investment in ICT products to facilitate speed, convenience, and accurate service delivery, thus enhancing efficiency, profitability, and competitiveness in banks.

Ekwonwune et al. (2017) used Diamond Bank Plc. Imo State as a case study to investigate the role of Information and Communications Technology in enhancing banking operations. The objective of the study was to determine the impact of Information and Communications Technology on Diamond Bank Plc. The study took a critical look at the extent to which information and communication technology (ICT) affects the banks, employees, and customers' perceptions of job efficiency. Primary and secondary data were used to investigate the role of information and communications technology in banks. The result revealed that ICT had affected banks, employees, and customers positively, and the application of ICT in banks created a significant improvement in rendering bank services.

Kyeremeh et al. (2019) carried out a study on the effect of information communication and technology on the performance of banks as financial institutions. (A case study of Barclay Bank, Sunyani Branch). The study critically analyzed the extent to which information and communication technology (ICT) contributed to banks' service delivery in financial institutions. The study employed exploratory and descriptive research design. A sample size of 50 respondents was used. A structured questionnaire was an instrument for collecting data. The main tool used for the data analysis was the Social Sciences Statistics Package. The study revealed that ICT has a significant

impact on customer-related services. The study revealed that ICT has a significant effect on performance due to improved customer service delivery.

Peace et al. (2018) conducted a study on the impact of information and communication technology on the performance of deposit money banks in Nigeria between the periods 2006 to 2015. The study's objective was to assess the effect of different types of information and communication technology tools on the performance of commercial banks in Nigeria. The study adopted the log-linear regression model to test the impact of ICT on the return on equity (ROE) in banks. The result revealed that the implementation of ICT has a great influence on the efficiency of banking operations, profitability, and an increase in the return on equity in banks. The study recommends that investment in information and communication technology should be an important component in the overall strategy of banking operations to enable Nigerian banks to be more efficient, profitable, and competitive in the market.

First Hypothesis:

H₀₁: The ICT volume of e-payment has no significant effect on operational efficiency in Nigeria Banks during the coronavirus lockdown.

Second Hypothesis:

H₀₂: The ICT value of e-payment has no significant effect on operational efficiency in Nigeria Banks during the coronavirus lockdown.

RESEARCH METHOD

This study made use of an ex-post-facto research design, which enables us to measure the effect or relationship between the dependent variable and explanatory variables using time-series secondary data (Dabwor, Ezie & Tukur, 2018). These variables of the study consist of the ICT value of e-payment (ICTV), ICT volume of e-payment (ICTVO), and ICT revenue of e-payment (ICTR) for the period of 2018 to 2020. The secondary data was sourced from the Nigeria Bureau of Statistics and Nigerian Inter-Bank Settlement System (NIBSS) websites and different publications of CBN bulletin reports. Leveraging findings from studies conducted by the government creates access to a volume of data that the researchers might find difficult to amass themselves, especially during the pandemic lockdown. The population of the sample size was 21 commercial banks listed and approved by the Central Bank of Nigeria. The data were analyzed with the Ordinary Least Square (OLS) method of regression analysis, and we ensured that the conditions were satisfied (Friday, Isichei & Oluwayemisi, 2022).

Model Specification

Thus, the model is represented in a functional form, as shown below:

$$ICTR = f(ICTV, ICTVO) \dots (1)$$

Where ICTR is the ICT revenue of e-payment, ICTV is the ICT value of e-payment, and ICTVO is the ICT volume of e-payment. In a linear function, it is represented as follows:

$$ICTR = \beta_0 - \beta_1 ICTV - \beta_2 ICTVO + U_t \dots (2)$$

Where: β_0 = Constant term, β_1 to β_2 = Regression coefficient and U_t = Error Term.

FINDINGS AND DISCUSSION**Results and Discussion of Findings****Table 1. Model Summary**

Model	R	R Square	Adjusted R Square	Stil Error of the Estimate
1	.745 ^a	.554	.525	22260505.66

a. Predictors: (Constant), ICTVO, ICTV

Table 2. ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	1.850E+16	2	9.248E+15	18.662	.000 ^b
Residual	1.487E+16	30	4.955E+14		
Total	3.336E+16	32			

a. Dependent Variable: ICTR

b. Predictors: (Constant), ICTVO, ICTV

Table 3. Coefficient^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig	
	B	Std. Error	Beta			
1						
(Constant)	3134408.769	4870241.856		.644	.525	
ICTV		.672	.122	.769	5.494	.000
ICTVO		.753	1.970	.054	.382	.705

a. Dependent Variable: ICTR

In testing this hypothesis, the ICT value of e-payment (ICTV) and ICT volume of e-payment (ICTVO) were regressed against the ICT revenue of e-payment (ICTR). The result of the multi-regression analysis summarized in Table above shows the model to evaluate the extent to which the ICT value of e-payment (ICTV) and ICT volume of e-payment (ICTVO) affect ICT revenue of e-payment (ICTR) in Nigeria Banking Industry during coronavirus lockdown.

From the above analysis, the estimated form of the specified model is as below:

$$ICTR = 3134408.769 + 0.672ICTV + 0.753ICTVO$$

The empirical result shows that the coefficient of the ICT value of e-payment (ICTV) has a positive effect on the ICT revenue of e-payment (ICTR); it means that the ICT value of e-payment (ICTV) has a positive and direct influence on ICT revenue of e-payment (ICTR). Again, the empirical result shows that the coefficient of ICT volume of e-payment (ICTVO) has a positive effect on ICT revenue of e-payment (ICTR); it means that ICT volume of e-payment (ICTVO) has a positive and direct influence on ICT revenue of e-payment (ICTR).

The results of the t – statistics denote that the coefficient of the ICT value of e-payment (ICTV) was statistically significant. This is because the observed values of t – statistics (5.494) are greater than their critical values (0.000). The results of the t – statistics denote that the coefficient of ICT volume of e-payment (ICTVO) was not statistically significant. This is because the observed values of t – statistics (0.302) are less than their critical values (0.705).

The results of the F – statistical test show that the overall regression of hypothesis one was statistically significant. This is because the observed value of the F – statistics (18.662) was great than its critical value (0.000). Again, our empirical result shows that the Pearson product-moment correlation analysis (r) was 0.745. The strength of the relationship between the two variables was high.

Test of Hypothesis

First Hypothesis

H₀₁: The ICT volume of e-payment has no significant effect on operational efficiency in Nigeria Banks during the coronavirus lockdown.

The results of the t – statistics denote that the coefficient of ICT volume of e-payment (ICTVO) was not statistically significant. This is because the observed values of t – statistics (0.302) are less than their critical values (0.705). Therefore, we concluded that the ICT volume of e-payment has no significant effect on operational efficiency in Nigeria Banks during the coronavirus lockdown.

Second Hypothesis

H₀₂: The ICT value of e-payment has no significant effect on operational efficiency in Nigeria Banks during the coronavirus lockdown.

The results of the t – statistics denote that the coefficient of the ICT value of e-payment (ICTV) was statistical significance. This is because the observed values of t – statistics (5.494) are greater than their critical values (0.000). Therefore, we concluded that the ICT value of e-payment has a significant effect on operational efficiency in Nigeria Banks during the coronavirus lockdown.

CONCLUSIONS

The COVID-19 containment measures across Nigerian states could be referred to as strict and repressive exercises. The disproportionate force used by security agencies to enforce COVID-19 protocol across Nigeria, such as a ban on public gatherings, restriction of inter-state movements, curfew, and physical distancing, completely changed the trading and payment systems of the informal economy in Nigeria. The consequences of the lockdown had the hardest hit on the informal

economy, which affected bank operational processes.

The study revealed that there is a significant effect of ICT on the operational efficiency of Nigeria's Banking Industry during the coronavirus lockdown in Nigeria. The rate at which e-payment has been embraced in Nigeria is quite promising. Both private and public sectors and even individuals are increasingly employing the e-payment system. The volume and value of e-payment transactions have grown before and after the lockdown. The study, therefore, critically analyzed the effect of ICT on the volume and value of e-payment as one of the performance indicators in banks during the coronavirus pandemic lockdown; from the findings of the test of the first hypothesis, the study revealed that ICT volume of e-payment has no significant effect on operational efficiency in Nigeria Banks during the coronavirus lockdown. This is due to the Nigerian payment system is still cash-based; regardless of the electronic payments systems that have been adopted by the financial sector, the use of cash is still influenced by the preferences made by merchants and economic agents, thus giving cash-based payment upper arm over other methods of payment systems. The factors that have contributed to the use of cash are a lack of trust and a high rate of unbanked population and informal workforce, especially in the northern part of the country, which is caused by the insurgency, high rate of illiteracy, insecurity, a cumbersome requirement of bank services and distanced bank offices. The analysis of the second hypothesis reveals that the ICT value of e-payment has a significant effect on operational efficiency in Nigeria Banks during the coronavirus lockdown. The banking industry employed e-payments as means to transact financial business.

Conclusively, the increase in the use of many digital banking tools has proven to be caused by the lockdown; the majority of Nigerians who are stuck in their homes had no other option than to opt for digital banking to transact their businesses. Technological innovations through ICT enabled the banking industry to set up efficient delivery channels, capacitating the banking industry to solve the problems that are posed by the new change.

LIMITATION & FURTHER RESEARCH

The study was limited to a quantitative approach that required the use of a questionnaire for data collection. The sample of the study is limited to deposit money banks in Nigeria and the employees, which may be used as the unit of analysis. Future studies can adopt a qualitative approach or longitudinal study to enrich Current Findings or the current body of knowledge on the subject matter.

Recommendation

Due to the outcome of the study, it is recommended that the following development should take place:

1. Central Bank of Nigeria (CBN) should create more rooms for other players in the telecommunication sector to bring in more innovative techniques to enhance e-banking.
2. CBN should emphasize on cashless policy. Even though we claim to be a cashless economy, minor transactions have not been digitalized in Nigeria.
3. The aftermath of the coronavirus will introduce changes in the services. More innovative policies should be created to adapt to the changes.
4. CBN should promote digital banking, which is well-positioned to function effectively and efficiently in these challenging conditions brought by the coronavirus lockdown.
5. More responsive, adaptable, and scalable technology should be employed to enable the system to manage the offsite operation and resilient services to maintain viable 24/7 services.

6. Hi-Tech security systems should be built to check the security threats that all digital operators in the banking industry have to contend with during the lockdown.
7. Banks and regulators should increase the awareness of alternate digital payment platforms, especially in rural areas, as part of the financial inclusion drive.
8. Women, rural areas, youth, and Northern geopolitical zones should be the primary focus of financial exclusion intervention.

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