DIGITAL DISRUPTION AND OPERATIONAL PERFORMANCE OF COMMERCIAL BANKS IN ANAMBRA STATE, NIGERIA

Nnonyelu Pauline Chinaza[1] Leonard Tabugbo Onwuzuligbo, PhD[2]
[1&2] *Department of Business Administration, Nnamdi Azikiwe University, Awka, Anambra State, Nigeria.*
Correspondence: chinazannonyelu@gmail.com

Abstract
This study ascertained the effects of digital disruption and operational performance of commercial banks in Anambra State, Nigeria. Specifically, the study examined the effect of mobile banking on customer satisfaction of commercial banks. It also ascertained the effect of point of sale (POS) on profitability of commercial banks. The study employed descriptive survey research design on a population of 899 with a sample size of 277 determined using Taro Yamane formula. The hypotheses were tested with simple linear regression analysis. Hypothesis one revealed that there is a statistically significant and positive effect of mobile banking on customer satisfaction of commercial banks. Hypothesis two revealed a significant and positive effect of Point of Sale (POS) on profitability of commercial banks. The study concludes that there is a statistically significant positive effect of digital disruption on operational performance of commercial banks in Anambra state, Nigeria. Based on the conclusion, the study recommends that commercial banks need to prioritize the development and enhancement of mobile banking services to significantly improve customer satisfaction. Also, the management of commercial banks need to strategically expand and optimize their Point of Sale (POS) networks to significantly enhance profitability.

Key words: *Digital Disruption, Operational Performance, Mobile Banking services, Point of Sale, Commercial Banks, Anambra State.*

Introduction

Digital disruption refers to the profound transformation of industries, markets, and business models driven by the adoption of digital technologies. Disruptive technology, as described by McConnell (2015), is a new form of innovation that fundamentally changes how things are done, often overturning traditional business structures. In the banking sector, digital disruption is reshaping operational frameworks, compelling institutions to adapt or risk obsolescence. Closely linked to the concept of disruptive innovation introduced by Clayton Christensen, digital disruption transcends conventional innovation by fostering entirely new value creation mechanisms, digital business models, and markets.The financial services industry has been significantly affected by digital disruption, particularly through the digitalization of banking

services. Matt, Hess, and Benlian (2015) noted that the digital revolution has introduced new banking technologies, delivery channels, and competitors, effectively challenging and replacing traditional bank products, organizational structures, and operational processes. As Kretschmer and Khashabi (2020) further assert, digitization is radically redefining how banks configure their operations, interact with customers, design services, and deliver value.

In Nigeria and specifically Anambra State, the impact of digital disruption on commercial banks has become increasingly evident. The widespread adoption of smartphones since the early 2000s enabled mobile banking apps, granting customers greater access to banking services and increasing digital interaction. The 2010s marked the emergence of fintech startups that utilized digital technologies to offer innovative services such as peer-to-peer lending, digital wallets, and robo-advisors, thereby challenging the dominance of traditional banks. According to Aleksej, Marie, Alex, and Gordon (2018), open banking initiatives further promoted competition by mandating that banks securely share customer data with authorized third-party providers through APIs. Furthermore, tech giants like Google, Amazon, and Facebook are now offering financial services powered by advanced digital tools and data analytics, directly competing with traditional banking services (Wren, 2020). This increasing competition has forced conventional banks to embark on digital transformation journeys to remain relevant and improve operational performance. The COVID-19 pandemic accelerated this transition as restrictions on physical interactions pushed both banks and customers toward online platforms, mobile apps, and digital payment solutions. Some central banks even began experimenting with digital currencies, potentially reshaping monetary systems and the role of commercial banks in the financial ecosystem (Mirzagayeva & Aslanov, 2022). In this context, commercial banks in Anambra State must reassess their operational models to align with the fast-paced digital evolution. Understanding the influence of digital disruption on their operational performance is crucial for these institutions to maintain competitiveness, improve efficiency, and deliver value in the digital age.

Statement of the Problem

The banking industry in Nigeria, including commercial banks operating in Anambra State, is undergoing a significant transformation driven by digital disruption. Emerging digital technologies such as mobile banking and Point of Sale (POS) systems have revolutionized how banks operate and engage with customers. While these innovations present opportunities to enhance operational efficiency and expand service delivery, they also pose challenges in terms of service quality, customer experience, and operational adaptability. Mobile banking has thus become a critical tool for enhancing

customer satisfaction by offering convenient, on-the-go access to banking services. However, despite the increasing adoption of mobile banking platforms, customers frequently report issues such as transaction delays, app downtime, security concerns, and limited functionality. These shortcomings raise concerns about the extent to which mobile banking contributes to improved customer satisfaction in commercial banks within Anambra State. Similarly, the deployment of POS systems was intended to improve service delivery by providing seamless payment experiences for customers and reducing reliance on cash-based transactions. Yet, frequent POS network failures, transaction reversals, and poor connectivity often result in customer dissatisfaction and operational inefficiencies. These challenges cast doubt on the effectiveness of POS systems in enhancing the quality of service delivery in the region's banking sector. Given the growing reliance on digital channels, it is imperative to critically assess the impact of mobile banking on customer satisfaction and the influence of POS systems on quality service delivery in order to help commercial banks in Anambra State make informed decisions about technology investments and digital strategy so as to optimize operational performance and remain competitive in a rapidly evolving digital landscape.

Objectives of the Study

The broad objective of the study is to determine the effect of Digital Disruption on Operational Performance of Commercial Banks in Anambra State, Nigeria. The specific objectives are, to:

1. examine the effect of Mobile Banking on Customer Satisfaction of commercial banks.

2. ascertain the effect of Point of Sale (POS) on Quality Service Delivery of commercial banks.

Research Hypotheses

The researcher proceeded to formulate the following hypotheses which were tested in the course of the study:

H_{o1}: There is no significant effect of Mobile Banking on Customer Satisfaction of commercial banks.

H_{o2}: There is no significant effect of Point of Sale (POS) on Quality Service Delivery of commercial banks.

Review of Related Literature

Digital Disruption

The term disruption has several connotations which have clouded understanding and development. Disruption refers to a very specific process that explains how entrants can successfully compete with incumbents (Vial, 2019). In common parlance, however, the verb disrupt has slightly different meaning to prevent something especially a system, process or even from contributing as usual or as expected, to break apart, to throw into disorder or interrupt the normal course or unity; for example, an industry with new technology (Westerman, 2014). Digital disruption is the change that occurs when new digital technologies and business model affect the value proposition of existing goods and services with mobile phone, we now have an expectation for enterprise to deliver multi-channel solution. It is agreed that digital disruption may shake "the core of every industry" and induce "short fuse, big bang" situation capable of threatening entire sectors (McConnell, 2015). Given the major potential risks and rewards, several authors have suggested that abilities to either instigate digital disruption and induce systematic change or exploit accompanying changes in core conditions are crucial for successful firm in the age of digitalization (Bughin, 2017).

Digital disruption is generally perceived from the perspective of firms that are heavily invested in old conditions and who's typical; or planned course of development is interrupted. As the proliferation of certain digital processes are artefacts leads to change in established industry structures, established firms face server pressure to respond. Such responses can prompt fundamental change to operations of the technologies that support legacy business models. (Rauch, 2016). Digital technologies have indeed redefined how people live, and technology is changing traditional industry structures and reinterpreting what it means to be a customer and a citizen (Butt, Imran, Kantola, Jussi and Petri, 2021).

Mobile Banking

Mobile banking is a popular and most preferable way of sending and receiving money in Africa since the vast majority of the continents‟ population are ruler dwellers or uneducated. This is the process of using mobile telephone applications to do actual banking. This involves depositing, withdrawing and saving money in one's account. This type of service also allows users to be able to purchase and sell goods and services in different kinds of business settings. Additionally, users are happy to pay their bills through their phones (Feig, 2017). The main idea behind the emergence of using technology to facilitate money transfers via mobile phones was to create financial awareness to the poorer populations in developing countries, who either had no access

to formal banks or could not afford to have a bank account due to expensive rates levied by the banks (Terrence, 2012).

The software can afford a variety of uses such as the ability to check one's account balance via text message, the means to pay with or send money from a digital account on a mobile phone, or the practice of receiving insurance or credit products over the mobile network including purchasing of airtime from one's account (Aoko, 2017). Mobile Money can be defined as money that can be accessed and used via mobile phone (Mirzagayeva, and Aslanov, 2022). Mobile Money Transfer services have several advantages such as accessibility and lower cost. The use of mobile money transfer allows consumers to perform financial transactions in a relatively inexpensive and reliable way, mobile money transfer improves firm performance by allowing for more efficient transfers, through the reduction in risky cash-holdings, and increased access to credit (Amal, 2020).

Point of Sale

"Point of Sale (POS)" or "Point of Purchase (POP)" refers to the location and time where a retail transaction is completed (Wilson, and Liu, 2015). The POS terminal is also known as a POP terminal and is used for instant payment of goods and services, as it is user-friendly, easy to operate, and has multi-functional capabilities (Kasavana, 2013). POS terminals allow customers to access their linked bank accounts in real-time through debit or credit cards. They are considered as a virtual replacement for cash transactions (Seals, 2016). The terminal keeps a record of customer purchases and deposit transactions, allowing customers to check their balance, pay for items, and perform funds transfer transactions without the need for physical cash. In other words, the POS terminal facilitates virtual movement of funds to support merchants in monitoring their customers' transactions (Mbaabu, 2020). A POS terminal is a device deployed in a merchant location that allows users to swipe their electronic cards to make payments instead of using physical cash (Solomon, 2016).

The adoption of POS terminals has significantly reduced the volume of cash-based transactions, as such adoption of POS technology allows cardholders to make payments at sales or purchase outlets without the need for physical cash (Osang, 2017). The terminal offers many advantages, including ease of payments, convenience, and security (Morufu, 2016). Merchants use the POS terminal as a digital device for customers to make payments, check their balance, and perform electronic fund transfers by inserting their smart card into the device and entering their PIN (Njenga, 2019). Point of sale software gives business owners a convenient way of finding out customers and of recording sales. It can keep a record of the shop inventory, updating it when an order is processed. It can even print out receipts; perform credit card processing, track

customers, et cetera. Point of sale software eases the flow at checkout terminals while recording all the data which will assist you to make better business decisions (Kasavana, 2013).

Customer Satisfaction

Customer satisfaction involves the feeling of wellbeing and pleasure that results from obtaining what one hopes for and expects from an appealing product and/or service (Farris, Neil, Phillip, and David, 2010). "Customer satisfaction is an outcome of purchase and use resulting from the buyers' comparison of the rewards and costs of the purchase in relation to the anticipated consequences". It is also defined in terms of an emotional state that usually ari ses in response of evaluating a particular service (Coelho, and Esteves, 2017). The concept highlights the former fact that satisfaction is determined through a cognitive procedure by comparing what customers give up to get a service (cost) and what they receive in response (reward). However, the later concept takes satisfaction as an emotional feeling that results during the process of evaluation. Consistent with this concept, "customer satisfaction is defined as an emotional response, which results from a cognitive process of evaluating the service received against the costs of obtaining the service" (Dawes, Stocchi, and Olmo-Riley, 2020). There are two general conceptualizations of satisfaction, namely, the transaction specific satisfaction and the cumulative satisfaction. Transaction specific satisfaction is the customer's very own evaluation of his/her experience and reaction towards a particular service encounter. This reaction is expressed by the customer who experiences a product or service for the first time; whereas, cumulative satisfaction refers to the customer's overall evaluation of the consumption experience to date; an own accumulation of contacts with services provided to him/her from day to day (Deighton, 2022).

Theoretical Framework

This study is anchored on Disruptive Innovation Theory by Christensen Clayton (1995). Chrsitensen describes innovation as a proves through which a product or service flourishes at the bottom level of a relatively mature market and then relentlessly moves up the market level displacing established competitors in the process (Hnag and Ru, 2010). This means that a whole new market and value network is created that ends up disrupting an existing market and value network along with established leading firms and alliances. The theory is highly relevant in explaining how fintech startups and digital-only banks initially offering basic services are now rapidly improving and competing with traditional banks in Anambra State. These disruptors appeal to price-sensitive or previously underserved customers, such as rural dwellers and small

business owners who prefer mobile banking or POS solutions.

Empirical Review

Jia, Chen and Jin (2024) examined digital disruption and energy efficiency: The impact of regional digitalization on China's industrial sector. Using the unique micro-data of industrial enterprises' Nitrogen oxides (NOx) and Sulfur oxides (SOx) emissions covering 58,725 enterprise-year observations, this study investigated how digitalization affects energy efficiency. The empirical results showed that regional digitalization can significantly promote the improvement of energy efficiency of industrial enterprises. Specifically, the result of PSM-DID method indicated that the impact of digitalization on energy efficiency is significantly enhanced by the "National innovative pilot cities" policy, while the dynamic result validated the continuity of industrial enterprises' energy efficiency.

Thakur, Al-Saleh and Hale (2023) explored digital disruption: a managers' eye view in United States of America. This study used survey data from US managers. Out of 1,000 managers, 272 provided responses eligible for use in the analysis. The study used EQS 6.2 software to analyze the data. Eight hypothesized relationships were tested in this study. The results of this study indicated that convergence of intelligence, convergence of technology, support from C-level executives, organizational cultures of innovation and managerial skills act as drivers of digital disruption. The results also showed that digital disruption improves both user experience and firms' digital disruptive performance.

Alathamneh and Al-Hawary (2023) investigated the impact of digital transformation on sustainable performance in Jordan. The research population consisted of employees of industrial companies listed in Amman stock exchange that is 23 companies. Because of the difficulty of collecting data using a complete census, a random sample of 530 employees was determined. 397 responses were used for the purposes of the statistical analysis of this research. In order to find the impact of digital transformation on sustainable performance, the structural equation modeling (SEM) technique was used. Research results showed that digital transformation dimensions had a positive impact on sustainable performance. Big data had the greatest impact.

Nwankwo (2022) examined impact of emerging digital technology on organizational performance: A study of Fidelity bank in Anambra State. The population of the study comprised of 200 staff selected from different location of fidelity bank in Anambra state. 183 copies of questionnaire were duly completed and returned showing 94.68% response rate. Research hypotheses were tested using ANOVA method which was carried out with the aid of statistical package for social science (SPSS) version 23.

Findings from the study revealed that, E-mail has significant impact on organizational performance of fidelity bank in Anambra state. Internet technology has significant impact on organizational performance of fidelity bank in Anambra state. E-commerce has significant impact on organizational performance of fidelity bank in Anambra state.

Mangifera and Mawardi (2022) examined digital transformation and its impact on financial performance: in the food and beverage small business sector in Indonesia. Quantitative research with a sample of 104 small business actors in the food and beverage sector who have adopted e-commerce and fintech in Surakarta and its surroundings with data analysis using Smart PLS 3.0 modeling. The results of the study indicated that there is a considerable impact from the availability of technology, and the adaptive ability of business actors in managing their business through a digital transformation during a pandemic.

Methodology

This study utilized a descriptive survey research design to gather pertinent data from the targeted respondents through a structured questionnaire. Data were gotten from primary and secondary sources. The primary source of data are first-hand responses that were obtained directly from the target respondents through questionnaire. The secondary data were obtained from existing literature in the field of study such as: journals, articles, text books and online academic materials. The study focused on five banks in Awka whose annual turnover is 10 billion naira and above. The selection of these banks was because they have the highest annual turnover than others, and they helped the researcher in facilitating effective data collection.

Breaking down of the population using Taro Yamane technique to determine the sample size. The formula and workings:

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

Where N = population

n = Sample Size

e = 0.05

$$n = \frac{899}{}$$

$$n = \frac{1+899\ (0.05)^2}{1+899(0.0025)}$$

$$n = \frac{899}{1+2.2475}$$

$$n = \frac{899}{3.2475}$$

n = 277

Questionnaire were used as the instrument for primary data collection with a five-point Likert Scale structure. The questionnaire was divided into two sections; section A and section B. Data were collected and presented in mathematical table based on frequency percentage. Data were analyzed using descriptive statistics and the hypotheses were tested using simple linear regression analysis with the aid of Statistical Packages for Social Science (SPSS version 23) at 5% level of significance.

Result and Analysis

Questionnaire Distribution and Collection

This study achieved an exceptional response rate of 97%, with 269 participants diligently completing and returning their questionnaires out of 277 targeted respondents. This outstanding response rate underscores the efficacy of the tailored distribution strategy employed.

Table.1: Analysis of Questionnaire

Questionnaire	**Frequency**	**Percentage**
Questionnaire returned	269	97.1
Questionnaire not returned	8	2.8
Total	**277**	**100**

Source: Field survey, 2024

Analysis of Data Related to Research Questions

Decision Rule

The decision in the analysis section is determined by the average of the response of respondents. Strongly Agreed (5 points), Agreed (4 points), Disagreed (3 points), Strongly Disagreed (2 points) and Undecided (1 point). The average of the responses:

$$\frac{(5 + 4 + 3 + 2 + 1)}{5} = 3.0$$

Therefore, mean score below 3.0 would be considered as rejected and mean score of 3.0 and above will be considered as accepted.

Research Question 1: What is the effect of mobile banking on customer satisfaction of commercial banks?

Table. 2: mobile banking and customer satisfaction

S/N	Items	N	Mean	Remark
1	I believe that the introduction of mobile banking services has significantly improved our customers' overall satisfaction with the bank	269	2.14	Rejected
2	Mobile banking has reduced the number of customer complaints related to transaction errors and service delays	269	3.44	Accepted
3	I feel that our mobile banking platform provides customers with a convenient and efficient way to manage their finances	269	4.02	Accepted
2sa4	The training I received on mobile banking services adequately prepared me to assist customers effectively	269	3.60	Accepted
5	I believe that the bank should continue to invest in enhancing our mobile banking	269	1.95	Rejected

	features to further improve customer satisfaction			
6	Customers frequently express satisfaction with the ease of use of our mobile banking application	269	3.14	Accepted
7	I have observed an increase in customer engagement due to the availability of mobile banking services	269	1.98	Rejected
8	I feel that mobile banking has enhanced our ability to meet customer needs and expectations effectively	269	4.27	Accepted

Source: Field Survey, 2024

Table 2 presents the results addressing the first research question: "What is the effect of mobile banking on customer satisfaction of commercial banks?" The data analysis reveals that items 2, 3, 4, 6, and 8 surpassed the criterion mean of 3.0, while items 1, 5, and 7 fell below this threshold. Notably, the majority of respondents affirmed that mobile banking has an effect on customer satisfaction of commercial banks.

Research Question 2: What is the effect of point of sale (POS) on Quality Service Delivery of commercial banks?

Table 3: point of sale (POS) and Quality Service Delivery

S/N	**Items**	**N**	**Mean**	**Remark**
9	POS allow more customers to access banking service	269	2.22	Accepted
10	POS terminals have increased the number of transactions processed by our bank	269	1.28	Rejected
11	POS transactions have contributed to a reduction in cash handling costs for the bank	269	3.27	Accepted

12	Customers show satisfaction of using POS systems for their transactions	269	3.42	Accepted
13	Bank should continue to invest in expanding POS services to enhance the quality-of-service delivery	269	2.14	Rejected
14	Training on POS systems adequately prepares staff to assist customers effectively	269	3.00	Accepted
15	POS systems have improved the efficiency of transaction in the bank	269	1.92	Rejected
16	Without POS accessed banking services will reduce	269	4.11	Accepted

Source: Field Survey, 2024

In table 3 all the items were addressing the second research question which is "What is the effect of point of sale (POS) on profitability of commercial banks?" From the data analysis, items 9, 11, 12, 14 and 16 obtained a mean rating above the criterion mean of 3.0 and items 10, 13 and 15 obtained a mean rating below the criterion mean of 3.0. The result of the analysis indicated that majority of the respondents supported that the point of sale affects the profitability of commercial banks.

Hypotheses Testing

Decision Rule: Reject the null hypothesis and accept the alternate if P-value < 0.05; if otherwise, accept the null Hypothesis.

Hypothesis One

H_o: There is no significant effect of mobile banking on customer satisfaction of commercial banks.

H_i: There is a significant effect of mobile banking on customer satisfaction of commercial banks.

Table 4: Model Summary of Hypothesis One

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.751[a]	.565	.562	.38111

a. Predictors: (Constant), Mobile Banking

The results of the simple linear regression analysis indicate a significant positive effect of mobile banking on customer satisfaction. The model summary shows that the model explains 56.2% of the variance in customer satisfaction (Adjusted R Square = .562). Given that the p-value (.000) is less than the significance level (0.05), the study rejects the null hypothesis and concludes that there is a statistically significant positive effect of mobile banking on customer satisfaction of commercial banks.

Hypothesis Two

H_o: There is no significant effect of Point of Sale (POS) on Quality Service Delivery of commercial banks.

H_i: There is a significant effect of Point of Sale (POS) on Quality Service Delivery of commercial banks.

Table 5: Model Summary of Hypothesis Two

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.812	.660	.658	.29119

a. Predictors: (Constant), Point of Sale

Hypothesis two analysis revealed a significant positive effect of Point of Sale (POS) on Quality Service Delivery of commercial banks. The model summary shows that the model explains 65.8% of the variance in Quality Service Delivery (Adjusted R Square = .658). Given that the p-value (.000) is less than the significance level (0.05), we reject the null hypothesis and conclude that there is a statistically significant positive effect of Point of Sale (POS) on Quality Service Delivery of commercial banks.

Discussion of Findings

Hypothesis one revealed that there is a statistically significant positive effect of mobile banking on customer satisfaction of commercial banks. This implies that commercial banks can significantly enhance customer satisfaction by investing in advanced mobile banking services, leading to increased loyalty, retention, and business growth. This discovery is supported by the findings of Rabiu, Ladan, Usman and Garba (2020) in the study on impact of e-banking on the operational performance of banks in Nigeria. Also, the result of hypothesis is harmonious with the result of Solomon and Worku (2016) in the study on the role of electronic bank and operational performance of commercial banks in Ethiopia.

Hypothesis two analysis revealed a significant positive effect of Point of Sale (POS) on Quality Service Delivery of commercial banks. The implication of this is that commercial banks can boost Quality Service Delivery by leveraging Point of Sale (POS) systems to increase transaction efficiency, reduce costs, and drive revenue growth. This finding agrees with the results of Nwankwo (2022) in the study on impact of emerging digital technology on organizational performance: A study of Fidelity bank in Anambra State. The result is also congruent with the discovery of Alaka and Adewuyi (2020) in the study on point-of-sale technology and organizational performance in the banking industry in Nigeria.

Summary of Findings

1. There is a significant relationship between mobile banking and customer satisfaction in commercial banks.

2. There is a significant relationship between Point of Sale (POS) and Quality Service Delivery in commercial banks.

Conclusion

The study concluded that there is a statistically significant positive effect of digital disruption on operational performance of commercial banks in Anambra state, Nigeria. The conclusion reveals the transformative effect of digital disruption on the operational performance of commercial banks. Specifically, it highlights that embracing these digital technologies significantly enhances banks' efficiency, productivity, and competitiveness, leading to improved customer satisfaction, reduced operational costs, and increased business growth. This finding emphasizes the imperative for commercial banks to prioritize digital transformation, investing in cutting-edge technologies and innovative business models to remain competitive and relevant in the rapidly evolving financial landscape.

Recommendations

The study recommends that:

1. Commercial banks need to prioritize the development and enhancement of mobile banking services to significantly improve customer satisfaction. This can be achieved by investing in user-friendly mobile apps, expanding mobile payment options, and providing real-time transaction updates to ensure seamless and secure banking experiences.

2. The management of commercial banks need to strategically expand and optimize their Point of Sale (POS) networks to significantly enhance Quality Service Delivery. This can be achieved by increasing POS deployment in high-traffic areas, offering competitive transaction fees, and integrating value-added services such as mobile payment processing and loyalty programs.

Contribution to Knowledge

This study enhances understanding of how digital disruption impacts the operational performance of commercial banks in Anambra State, Nigeria. It provides empirical evidence demonstrating the positive effects of mobile banking and Point of Sale (POS) systems, customer satisfaction, service delivery, and accountability. The findings underscore the necessity for banks to adopt innovative technologies to remain competitive and responsive to customer needs.

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