

Relationship between Electronic Banking and Customer Satisfaction: Evidence from Enugu, Nigeria

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Abstract

Extant literature has shown conflicting results on the relationship between e-banking and bank customer satisfaction. Moreover, this research area has scanty empirical evidence in Nigeria. As a result, this study examined the relationship between e-banking and customer satisfaction in Enugu, Nigeria. The research was anchored on Davis' (1989) technology acceptance model. The study population comprises 1,004,132 adult bank customers. A sample of 400 customers was determined using Yamane's formula. The survey utilized convenience sampling to select participants who had used the e-banking tools. The research data were collected and analyzed using a structured questionnaire and Pearson Product-moment Correlation technique. The survey determined a positive correlation among Internet banking, ATM, POS, mobile banking, and customer satisfaction. The management of banks was advised to conduct period security checks on the firm's websites; monitor and update ATMs at regular intervals; standardize POS service operations and charges for banks and independent operators; and deploy user-friendly mobile Apps for effective service delivery.

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1. Introduction

In Nigeria, electronic banking (e-banking) has increased tremendously. The banks make the most use of e-banking tools such as Automated Teller Machine (ATM), mobile banking, internet banking, and point of sales (POS) (Mang, John, John, 2023; Okoro, 2013) to outcompete rivals (Mohammad & Bello, 2022). In a 2022 report, ATM, POS, internet transfers, and mobile app transfers recorded 1,506,991,903.00; 3,885,782,065; 14,063,927,436; and 1,861,362,984 volumes of transactions that amounted to NGN32,648,023,588,216.20, NGN41,035,801,320,926.60; NGN783,660,029,415,336.00; and NGN111,122,110,680,403.00, respectively (Central Bank of Nigeria, 2022). The e-banking usage was connected to the increasing use of information communication technology; the desire to maximize service time; and the quest for convenient transactions. The surge in e-banking indicates changes in customer lifestyle and their preference for contactless banking (Parveen, Saghir, & Beg, 2023). Commercial banks tend to review customer payment patterns to understand a suitable e-banking tool for their services. Despite its adoption, e-banking was underutilized to the extent that banks were not as productive as they should be (Mang, John & John, 2023). Mang, John, & John (2023) reported that only ATMs made a significant contribution to GTB's profitability while POS, mobile banking, and Internet banking made insignificant contributions to the profitability of the bank.

It was becoming clear that e-banking has not got to the peak of its performance in Nigeria. This was why Nwekpa, Djobissie, Chukwuma & Ezezue (2020) raised concerns about faulty ATMs, service outages, online fraud, and failed transactions. Although banks have difficulty resolving failed transactions, e-banking usage is relatively massive. The study was motivated by some recent conflicting reports on the relationship between e-banking and bank customer

satisfaction in different areas. On one hand, e-banking instruments had a significant influence on customer satisfaction (Anyadighibe, Ebitu, Ezekiel, Edim, & Asueze, 2023; Ismaila, & Akintola, 2023). On the contrary, there was an insignificant relationship between e-banking and customer satisfaction (Oyedele, Remi-Aworemi, Aworemi & Abiri, 2023). To close an existing research gap in Southeastern Nigeria, the study investigates the relationship between e-banking and customer satisfaction in Enugu, Nigeria.

1.1. Review of Related Literature

a. Electronic Banking (E-banking)

E-banking involves the use of devices to provide financial services. E-banking involves using electronic and internet-driven services without visiting the bank (Yaqub & Odeleye, 2017). E-banking techniques are tools used by banks to ensure the availability and accessibility of financial services (ALafeef, 2020). The tools include Internet (Web) banking, ATM, POS, and mobile banking (Chimaobi, Akujor, and Mbah, 2020; Mohammad, 2015).

Internet banking is an e-banking tool that involves the use of a bank's website to enable the customer to complete transactions (Chimaobi, Akujor, and Mbah, 2020). Internet banking is used to check account balances, conduct inter-account transfers, and pay bills. It empowers customers to search, identify, and obtain valuable banking information from the comfort of their location. Internet banking has established statistical influence on customer satisfaction (Anyadighibe, Ebitu, Ezekiel, Edim, & Asueze, 2023; Ismaila, & Akintola, 2023; Mohammad & Bello, 2022; Chimaobi, Akujor, & Mbah, 2020). This study hypothesized that:

H₁: Internet banking does not significantly relate to customer satisfaction in Enugu, Nigeria.

Automated Teller Machine (ATM) was introduced to decongest banking halls and to provide a better service experience. In 2003, ATMs were first deployed by the United Bank for Africa (UBA) and the First Bank of Nigeria (FBN) (Chimaobi, Akujor, and Mbah, 2020). ATM is a computer-controlled, self-service machine that dispenses cash and performs some human teller functions with a personal identification number (PIN) (Mohammad & Bello, 2022; Tefera, 2018; Ikechi, Robinson, & Emelike, 2018). ATM is useful for cash transfers, cash withdrawals, purchase of recharge cards, and other transactions. It helps in making cash available to customers at all times (Chimaobi, Akujor, & Mbah, 2020). ATM statistically correlated with bank customer satisfaction in previous studies (Anyadighibe, Ebitu, Ezekiel, Edim, & Asueze, 2023; Mohammad & Bello, 2022; Chimaobi, Akujor, & Mbah, 2020; Amene & Buta, 2019; Ikechi Robinson and Emelike, 2018; Yaqub & Odeleye, 2017). In very few studies, ATMs had an insignificant influence on customer service experience (Ismaila, & Akintola, 2023). This research hypothesized that:

H₂: There is no significant relationship between ATM and customer satisfaction in Enugu Nigeria.

The point of sale (POS) is the location where a bank transaction occurs (Worku, Tilahun, and Tafa, 2016). It is an electronic device that is useful for credit card transactions (Mohammad & Bello, 2022). POS is an online system that uses a debit card to facilitate funds transfer within an outlet (Mang, John, & John, 2023). It is a bank service tool that facilitates payments, cash transfers, withdrawals, and deposits. POS machines create and print receipts as material evidence of service delivery. The POS system has attracted huge investment from entrepreneurs recently (Chimaobi, Akujor, and Mbah, 2020). POS was an important predictor of bank customer satisfaction (Anyadighibe, Ebitu, Ezekiel, Edim, & Asueze, 2023; Ismaila, & Akintola, 2023; Yaqub & Odeleye, 2017). On the contrary, a few studies reported an insignificant relationship between POS and bank customer satisfaction (Mohammad & Bello, 2022; Chimaobi, Akujor, & Mbah, 2020). The study hypothesizes that:

H₃: Point of sale does not significantly influence customer satisfaction in Enugu Nigeria.

Mobile banking (or M-banking,) describes the use of mobile phones and other smart devices to perform balance checks, make payments and cash transfers, and apply for credit facilities (Mang, John, & John, 2023; Worku, Tilahun, and Tafa, 2016). As the most convenient self-service technology, mobile banking eliminates queues and saves service time. Mobile banking is boundless as it is functional in most locations (Chimaobi, Akujor, and Mbah, 2020). Previous studies determined the influence of mobile banking and bank customer satisfaction

(Anyadighibe, Ebitu, Ezekiel, Edim, & Asueze, 2023; Chimaobi, Akujor, & Mbah, 2020) except in Mohammad & Bello's (2022) study. This study hypothesized that:

H₄: Mobile banking has no significant relationship with customer satisfaction in Enugu Nigeria.

b. Customer Satisfaction

Customer satisfaction has been defined as a measure of the extent to which a service meets customer expectations (Ikechi, Robinson, and Emelike, 2018). It was also described as a feeling that a particular service has met customer requirements (Chimaobi, Akujor, and Mbah, 2020). Customers tend to favor modern banking that delivers expected service without requiring them to queue in the banking hall (Chimaobi, Akujor, & Mbah, 2020). They evaluate service performance by comparing the service they expected with their perceived service experience (Nwekpa, Djobissie, Chukwuma, and Ezezue, 2020).

c. Conceptual Framework

E-banking techniques perform similar functions using different platforms in various service situations. The techniques relate and are dependent on each other. Banks link the e-banking tools for effective service delivery. The techniques are potential predictors of customer satisfaction because customers like to get financial service themselves, on their own time, and from the comfort of their locations. The techniques must serve the purposes for which they were developed and they must be easy for customers to use without external assistance. These basic assumptions are encapsulated in Davis' (1989) Technology Acceptance Model (TAM). Customer satisfaction is dependent on the extent to which Internet banking, ATM, POS, and mobile banking meet the perceived customer expectations.

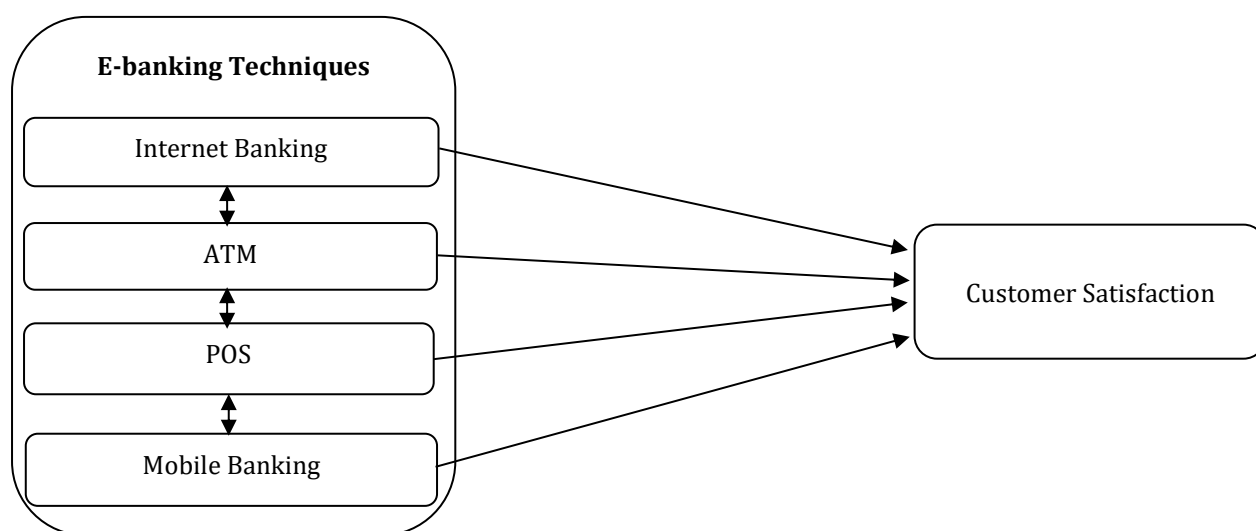


Figure 1. Relationship between e-banking and Customer Satisfaction
Source: Development by Reseacher (2024)

d. Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) was introduced by Davis in 1989. The theory was the foundation of technology adoption and diffusion research (Parveen, Saghir, & Beg, 2023). The theory assumes that innovation acceptability is determined by its usefulness and ease of use. TAM suggested that perceived technology usefulness, ease of use, customer attitude, and intention influence when and how the technology is used (Mang, John, & John, 2023). E-banking appeals to bank customers and becomes acceptable when it serves a useful purpose and when it is easy to use, otherwise, customers will ignore the innovation. E-banking tools are required to facilitate service enquiry, inter-bank-payments, and loan processing, without having direct contact with the bank. The services must be conducted using a simple procedure that guarantees instant service delivery.

2. Methods

The study adopted a descriptive survey research design. The study was conducted in Enugu North Local Government Area, the commercial hub of Enugu State, the capital of old Eastern Nigeria. The population of the study comprises adult bank customers in Maryland, Garki Awknanaw, Uwani, Achara Layout, Emene, Abakpa, Trans Ekulu, Iva Valley, GRA, Ogbete, Asata, Ogui, Independence Layout, New Haven, Nike with a total of one million, four thousand, and one hundred and thirty-two (1,004,132) (NPC, 1991), see appendix 3 for details. The population figure was determined using a 3.5% growth rate proposed by the National Population Commission (Vanguard, 2016). A sample of 400 was determined using Yamane’s (1964) formula (see Appendix 2). The sample of each locality was proportionally allocated using Kumar’s (1976) formula (see Appendix 3). The research used a convenience sampling technique to select the research respondents because of similar characteristics of the study population (Hair, Bush & Ortinau, 2000). The research carefully selected adults with presumed knowledge of e-banking. Primary data were obtained using a structured questionnaire. Content validity was conducted on the research instrument before its reliability test with Cronbach Alpha. The Pearson Product-moment Correlation technique was used for the analysis of data.

The research showed the reliability coefficients of the variables. It was determined that the variables exceeded the benchmark of 0.70 (Pallant, 2007), see Table 1.

Table 1. Reliability of Research Instrument

Variable	Number of items	Cronbach's Alpha
Internet Banking	4	0.866
ATM	4	0.786
POS	4	0.849
Mobile Banking	4	0.864
Customer Satisfaction	4	0.889

Source: Data Processed (2024)

3. Results and Discussion

3.1. Results

Demographic Analysis

Demographic analysis showed that young adult participants (aged 18 – 45 years) outnumbered older customers (aged 46 years and above). 48.7% of males and 51.3% of females participated in the study. 55.4% were single, 43.1% married, 1.2% divorced and .3% had separated from their spouses. A greater number of the research participants had basic degree certificates as 32.1% held ND/NCE, 51.3% held HND/B.Sc./B.Ed./B.A, 11.7% held MBA/M.A/M.Ed./M.Sc., 5.0% held Ph.D. These established the maturity, experience, and capacity of the respondents to provide relevant data.

Test of Hypotheses

H₁: Internet banking does not significantly relate to customer satisfaction in Enugu, Nigeria.

Table 2. The Relationship between Internet Banking and Customer Satisfaction

		Internet Banking	Customer Satisfaction
Internet Banking	Pearson Correlation	1	.601**
	Sig. (2-tailed)		.000
	N	326	326
Customer Satisfaction	Pearson Correlation	.601**	1
	Sig. (2-tailed)	.000	
	N	326	326

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Data Processed (2024)

The relationship between Internet banking and customer satisfaction was tested using Pearson Product-Moment Correlation. The research established a strong, positive relationship between the variables ($r = 0.601$, $n = 326$, $p < 0.01$). Consequently, the null hypothesis was rejected. The result showed that a unit increase in the quality of Internet banking leads to a unit increase in the level of customer satisfaction and vice versa.

H₂: There is no significant relationship between ATM and customer satisfaction in Enugu, Nigeria.

Table 3. The Relationship between ATM and Customer Satisfaction

		ATM	Customer Satisfaction
ATM	Pearson Correlation	1	.770**
	Sig. (2-tailed)		.000
	N	326	326
Customer Satisfaction	Pearson Correlation	.770**	1
	Sig. (2-tailed)	.000	
	N	326	326

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Data Processed (2024)

The relationship between ATM and customer satisfaction was investigated using the Pearson product-moment correlation coefficient. There was a strong, positive correlation between the two variables, $r = 0.770$, $n = 326$, $p < 0.01$. Consequently, the null hypothesis was rejected. The result suggested that an increase in the functionality of ATMs was associated with an increase in the level of customer satisfaction and vice versa.

H₃: Point of sale does not significantly influence customer satisfaction in Enugu, Nigeria.

Table 4. The Relationship between POS and Customer Satisfaction

		POS	Customer Satisfaction
POS	Pearson Correlation	1	.780**
	Sig. (2-tailed)		.000
	N	326	326
Customer Satisfaction	Pearson Correlation	.780**	1
	Sig. (2-tailed)	.000	
	N	326	326

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Data Processed (2024)

The research assessed the relationship between electronic point of sale (POS) and customer satisfaction using the Pearson Product-moment Correlation. The study found a strong, statistical correlation between POS and customer satisfaction at ($r = 0.780$, $n = 326$, $p < 0.01$). Thus, the null hypothesis was rejected. The result indicated that an increase in the quality of POS services increases the level of customer satisfaction and vice versa.

H₄: Mobile banking has no significant relationship with customer satisfaction in Enugu, Nigeria.

Table 5. The Relationship between Mobile Banking and Customer Satisfaction

		Mobile Banking	Customer Satisfaction
Mobile Banking	Pearson Correlation	1	.857**
	Sig. (2-tailed)		.000
	N	326	326
Customer Satisfaction	Pearson Correlation	.857**	1
	Sig. (2-tailed)	.000	
	N	326	326

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Data Processed (2024)

The relationship between mobile banking and customer satisfaction was examined using the Pearson product-moment correlation coefficient. The study ascertained a strong, positive correlation between the two variables, $r = 0.857$, $n = 326$, $p < 0.01$. Hence, the null hypothesis was rejected. The result suggested that successful mobile banking transactions increase the level of customer satisfaction and vice versa.

3.2. Discussion

The research determined a positive, statistical relationship between e-banking tools (for example, internet banking, ATM, POS, and mobile banking) and bank customer satisfaction in Enugu, Nigeria. In the first instance, internet banking had a statistical relationship with customer satisfaction. This was in line with the result of previous studies (Asiimwe, Arinaitwe, Kazaara, and Omedo, 2023; Chimaobi, Akujor, and Mbah (2020). This implied that a unit increase in the Internet banking feature would lead to a unit increase in the level of customer satisfaction. Customers tend to favor banks that provide an opportunity for online interaction more than those that don't deploy web service platforms. The customer needs to make the best use of his time to achieve as many objectives as possible. He does not like to risk his bank details while accessing the bank's website. As a result, bank managers were advised to develop websites that are appealing, interactive, and free from cybercriminals. They should always conduct security checks on the firm's website to guarantee the safety of the platform.

The research also ascertained a positive significant relationship between ATM and customer satisfaction. Previous studies reported similar results (Anyadighibe, Ebitu, Ezekiel, Edim, & Asueze, 2023; Mohammad & Bello, 2022; Chimaobi, Akujor, & Mbah, 2020; Amene & Buta, 2019; Ikechi Robinson and Emelike, 2018; Yaqub & Odeleye, 2017). The result suggested that an increase in ATM functionality leads to an increase in the level of customer satisfaction. Customer satisfaction emanated from good network service, instant cash dispensing, and simplicity of ATM operating procedure. Functional ATMs increase the speed of service delivery thereby reducing the service time. This is why customers are attracted to ATMs that pay faster than others. The management of banks was advised to engage in periodic servicing and updating of the firms' ATMs.

The survey established that POS had a positive significant influence on customer satisfaction in Enugu, Nigeria. The result was in line with previous studies (Anyadighibe, Ebitu, Ezekiel, Edim, & Asueze, 2023; Ismaila, & Akintola, 2023; Yaqub & Odeleye, 2017) except in Chimaobi, Akujor, and Mbah's (2020) study. A unit increase in the efficiency of POS leads to a unit increase in the level of customer satisfaction. Bank customers expect POS terminals to provide instant financial solutions at low and consistent charges in all service locations. The Central Bank of Nigeria was advised to standardize POS service operations and charges for banks and independent operators. Banks should monitor the activities of POS operators to ensure that customer interest is protected.

The study found a positive significant relationship between mobile banking and bank customer satisfaction. Similar findings were reported in previous studies (Anyadighibe, Ebitu, Ezekiel, Edim, & Asueze, 2023; Chimaobi, Akujor, & Mbah, 2020) except in Mohammad & Bello's (2022) survey. The implication was that a unit increase in the number of successful bank transactions with mobile Apps led to a unit increase in the level of customer satisfaction. Mobile App was like a companion to customers who always demand instant bank services. The bank management was advised to develop a user-friendly mobile App and to engage in periodic updates of the app to ensure steady service delivery.

4. Conclusion

The study had geographic limitations as it was carried out in the urban area of Enugu, one of the five states in Southeast, Nigeria. An expanded survey would improve the generalization of the result. The research also focused on a few e-banking channels thereby giving less attention to credit cards and other e-banking tools. It was suggested that subsequent surveys should add

more variables to cover a wider range of e-banking tools. The study might have neglected the potential influence of customer characteristics on the relationship between e-banking techniques and customer satisfaction. Thus, researchers were required to examine the mediating effect of customer characteristics on the relationship between e-banking techniques and customer satisfaction.

References

- Alafeef, M. (2020). The influence of service marketing mix on customer loyalty towards Islamic banks: Evidence from Jordan. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 10(3), 239–255.
- Amene, T. B., & Buta, D. B. (2019). Factors affecting customers' satisfaction towards the use of automated teller machines (ATMs): A case in commercial bank of Ethiopia, Chiro Town. *African Journal of Business Management*, 13(13), 438–448. <https://doi.org/10.5897/AJBM2019.8823>
- Amofah, O., Gyamfi, I., & Tutu, C. O. (2016). The influence of service marketing mix on customer choice of repeat purchase of restaurant in Kumasi, Ghana. *European Journal of Business and Management*, 8(11), 102–112.
- Anyadighibe, J. A., Ebitu, E. T., Ezekiel, M. S., Edim, E. J., & Asueze, C. E. (2023). Electronic banking and customer satisfaction in commercial banks. *Uniben Journal of Marketing*, 2(1), 129–151.
- Asiimwe, B., Arinaitwe, J., Kazaara, A. G., & Omedo, V. (2023). Electronic banking and customer satisfaction in Centenary Rural Development Bank, Uganda. *Metropolitan Journal of Business & Economics*, 2(5), 120–140.
- Central Bank of Nigeria. (2022). Industry e-payment figures for January – December 2022. *Central Bank of Nigeria*. <https://www.cbn.gov.ng/Paymentsystem/ePaymentStatistics.asp>
- Chimaobi, I. J., Akujor, C., & Mbah, J. C. (2020). Electronic banking and customer satisfaction in Imo State (A study of selected commercial banks in Imo State). *European Journal of Business and Management Research*, 5(6).
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Erasmus, A. C., Boshoff, E., & Rousseau, G. G. (2002). The potential of using script theory in consumer behavior research. *Journal of Family Ecology and Consumer Sciences*, 30, 1–9. <https://www.ajol.info/index.php/jfec/article/download/52819/41422>
- Hammoud, J., Bizri, R. M., & El Baba, I. (2018). The impact of e-banking service quality on customer satisfaction: Evidence from the Lebanese banking sector. *SAGE Open*, 8, 1–12. <https://doi.org/10.1177/2158244018790633>
- Huppertz, J. W., Arenson, S. J., & Evans, R. H. (1978). An application of equity theory to buyer-seller exchange situations. *Journal of Marketing Research*, 15(2), 250–260. <https://doi.org/10.2307/3151255>
- Ikechi, A., Robinson, J. C., & Emelike, N. O. (2018). Effect of ATM service quality on customer satisfaction: A study of selected banks in Abia State. *International Journal of Management and Marketing Systems*, 13(4), 76–90.
- Ismaila, S. O., & Akintola, A. F. (2023). Electronic banking and customer satisfaction of selected deposit money banks in Ogun State, Nigeria. *The International Journal of Business & Management*, 11(4), 66–79. <https://doi.org/10.24940/theijbm/2023/v11/i4/BM2304-017>
- Kumar, R. S. (1976). *A manual of sampling techniques*. Heinemann Limited.
- Mang, N., John, B. A., & John, E. K. (2023). Impact of electronic banking channels on the profitability of deposit money banks in Nigeria. *Nigerian Journal of Management Sciences*, 24(2), 207–216.
- Mohammad, H. I. (2015). 7Ps marketing mix and retail bank customer satisfaction in Northeast Nigeria. *British Journal of Marketing Studies*, 3(3), 71–88.

- Mohammad, H. I., & Bello, K. B. (2022). Banks' distributional channel strategies, customer satisfaction and the mediating role of trust. *Management and Entrepreneurship: Trends of Development*, 2(20), 31–49. <https://doi.org/10.26661/2522-1566/2022-2/20-03>
- Musiime, A., & Ramadhan, M. (2011). Internet banking, consumer adoption, and customer satisfaction. *African Journal of Marketing Management*, 3(10), 261–269.
- National Population Commission. (1991). *Final result of the 1991 population census of Nigeria*.
- National Population Commission. (2010). *2006 population and housing census: Population distribution by sex, state, LGA, and senatorial district (Priority table, Vol. III)*.
- Nguyen, T., & Singh, M. (2004). Impact of internet banking on customer satisfaction and loyalty: A conceptual model. *The Fourth International Conference on Electronic Business (ICEB2004)*, Beijing.
- Nwekpa, K. C., Djobissie, I. C., Chukwuma, N. N., & Ezezue, B. O. (2020). Influence of electronic banking on customer satisfaction in a Fidelity Bank PLC in Nigeria. *Journal of Business and Management*, 22(4), 49–58.
- Oduşina, A. O. (2014). Automated teller machine usage and customers' satisfaction in Nigeria. *Global Journal of Management and Business Research: C Finance*, 14(4), 69–74.
- Okoro, A. S. (2013). Impact of electronic banking instruments on the intermediation efficiency of the Nigerian economy. *International Journal of Accounting Research*, 1(4), 1–9.
- Oliver, R. L., & Swan, J. E. (1989). Consumer perceptions of interpersonal equity and satisfaction in transactions: A field survey approach. *Journal of Marketing*, 53(2), 21–35.
- Oyedele, J. K., Remi-Aworemi, F. O., Aworemi, J. R., & Abiri, O. N. (2023). Impact of electronic banking on the performance of deposit money banks: A case study of Polaris Bank and Zenith Bank. *Iconic Research and Engineering Journals*, 7(3), 120–124.
- Pallant, J. (2007). *SPSS survival manual: A step-by-step guide to data analysis using SPSS for Windows* (3rd ed.). McGraw-Hill Education.
- Parveen, S., Saghir, V., & Beg, S. (2023). An empirical study of customer satisfaction towards e-banking services in Delhi. *Indian Journal of Finance and Banking*, 13(1), 54–62. <https://doi.org/10.46281/ijfb.v13i1.1974>
- Sikdar, P., Kumar, A., & Makkad, M. (2015). Online banking adoption: A factor validation and satisfaction causation study in the context of Indian banking customers. *International Journal of Bank Marketing*, 33, 760–785.
- Tefera, T. G. (2018). Assessment of customer satisfaction on point-of-sale (POS) terminals in Commercial Bank of Ethiopia (South Addis District).
- Vanguard. (2016, November 5). Nigeria's population is now 182 million – NPC. *Vanguard*. <https://www.vanguardngr.com/2016/11/nigerias-population-now-182-million-npc/>
- Worku, G., Tilahun, A., & Tafa, M. A. (2016). The impact of electronic banking on customers' satisfaction in the Ethiopian banking industry: The case of customers of Dashen and Wogagen banks in Gondar City. *Journal of Business & Financial Affairs*, 5(2), 1–18.
- Yamane, T. (1964). *Statistics: An introductory analysis*. Horper & Row.
- Yaqub, J. O., & Odeleye, A. T. (2017). Electronic banking services and customer satisfaction in Lagos State, Nigeria. *Babcock Journal of Economics*, 6E, 160–173.