



DIGITAL DISRUPTION IN FINANCE: THE RISE OF FINTECH AND ITS IMPLICATIONS

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ABSTRACT

This study investigated the impact of digital disruption (innovation in financial services) on customer satisfaction among users of financial technology (Fintech) related services. Primary data was collected from users of Fintech, with a focus on the Nigerian Fintech space. A quantitative mini-survey method was employed using an online data gathering tool, and the data was analyzed employing descriptive statistics and percentages. It was found that the most-used Fintech provider in Nigeria is Opay. More than half of the respondents claim to use FinTech services every day, suggesting that the channel serves the users well. On ease of use and quality of service, all respondents claimed Fintech's were either average or above average when rated. Four-fifths of the respondents found how Fintechs handle complaints to be satisfactory, while 20% think it's below average. 93% of respondents found the security architecture of FinTech platforms to be standard, while 96% found them reliable in discharging their services. 100% of the respondents are convinced they will recommend their Fintech service providers to others, including family and friends. 66.7% admitted the use of Fintech platforms limited their use of traditional intermediaries like banks, and the top reasons are high transaction costs, poor customer service, no clear interest on savings, and no access to credit, among others. Traditional financial intermediaries like banks should embrace the fast-paced, technology-driven and changing world of finance if they intend to keep up with the emerging innovations. In order to favorably co-exist with Fintechs, traditional intermediaries must consider new ways to reach the underserved, and unbanked and devise means to lower transaction costs. Fintechs need to improve on their security architecture to protect customer data and scarce funds; and must continue to value customer feedback even when they expand.

KEYWORD(S): Fintech(financial technology), digital disruption, financial intermediaries, financial inclusion, transaction costs, customer satisfaction

1.0 INTRODUCTION

The ongoing digital disruption in finance is a direct consequence of innovative attempts to circumvent the numerous transaction-related costs associated with traditional intermediaries among other reasons. The Schumpeterian school of thought refers to innovation as 'the process of creative change' that brings about destruction of the old. It is no news that there has been a marked increase in Financial Technology (FinTech)-related ventures in the finance space the world over. The historical background of the concept of FinTech is traceable to about thirty years ago, in the early 1990s (Hochstein, 2015), but the searchlight of regulators and other financial services stakeholders turned on the ecosystem with renewed attention following the rise of Fintech's. For instance, there has been a significant rise in global investment in FinTech, from over \$22 billion in 2015 to over \$40 billion by 2017 (Cai, 2018). The change necessitated by the upsurge in FinTech solutions is revolutionizing the financial services sector in a fast-paced manner, although it is not without challenges.

In the Nigerian context, the benchmark for financial inclusion set by the Central Bank of Nigeria at 70% for the year 2023 is yet to be achieved with the current inclusion rate standing at about 64%. The ideal is that all citizens desirous of accessing useful and affordable financial services can do so without any inhibition. But in reality, the problem of exclusion remains: many people are still underserved and many others remain unbanked (due to no accessible physical bank branches). Many are underprivileged and unable to meet the requirement for account



opening or access finance for personal or business needs; or earn from providing funds. There is need for a sustainable means of reaching this category of users of financial services to achieve a better and balanced intermediation process. The arrival of Fintechs is an answer to this need, albeit not without its own peculiar challenges. However, there is a dearth of studies in this area of finance, both globally and especially in Nigeria. This may be largely due to the inability to obtain necessary secondary data, or where possible, it may be expensive to obtain. This study is carried out to assess the likely impacts of the rise of Fintech on customers and competitors (traditional financial intermediaries like banks) in Nigeria

Financial Technology (Fintech) is a concept that denotes the use of technology in the provision of financial services and solutions. This does not understate the fact that traditional financial services providers also use technology in deploying their solutions, but in the case of Fintech's, technology is the sole tool for operation. It is a dynamically developing segment intersecting the sectors of financial services and technology, and the sector is fast entrenching itself as an answer to some of the service delivery challenges of traditional banks. Fintech's attempt to disrupt and disintermediate financial transactions, and given the rate at which the sector is receiving entrepreneurial finance, this may just be the beginning of a coming FinTech revolution. The evolution of the use of technology in financial services is well documented in a review by Cai (2018), and it recognizes three major periods in its development: the first period (1866–1967), dating back to when the first transatlantic cable was constructed; the second period (1967–2008); and we are currently in the third period (2008–present).

In developing economies like Nigeria, there are many FinTech solution providers like Kuda, Palm pay, Moniepoint, Chipper Cash, Opay, and Payday, to mention a few. These Fintech's digitize the customer experience by moving services online, and their focus cuts across lending, saving, payment, trading, investment, and crowdfunding services, among others. It has been found that mobile money payment services have been growing rapidly in developing countries. Fintech's are by-products of financial innovation, and their service effect on the customer satisfaction of users is of paramount importance and interest in this study. This study is an attempt to assess the impact of the rise of Fintech's on customers and their likely implications for traditional financial intermediaries. To this end, this study is an attempt to answer the question, what are the impacts of digital disruption (innovation in financial services) on customer satisfaction of users of FinTech?'. The country of focus for the study is Nigeria, one of the top destinations for FinTech funding in Africa.

1.1 Overview of the Nigerian FinTech Space

The top ten FinTech solutions in Nigeria based on the number of application downloads on the Google Play Store are found in Table 1 in no particular order: Opay, Kuda, FairMoney, Palmpay, JumiaPay, Palmcredit, Okash, Carbon, Piggyvest, and Paga Table 1 gives an in-depth view of each of these FinTech players in terms of user coverage, rating, focus, and feature.

Table 1: Top Ten FinTech Solutions in Nigeria

FINTECH	DOWNLOADS	RATING	ONLINE REVIEWS	FOCUS/FEATURES
Paga	Over 1million	4.0	14535	Transfers, payments, remittances, accessible to unbanked and offline users through a mobile money agent network
Piggyvest	Over 1 million	4.0	41000	Saving and investment tools
Carbon	Over 1 million	4.4	148000	Payments, loan and investment opportunities
Okash	Over 5 million	4.3	155793	Loan
Palmcredit	Over 5 million	4.0	156000	Loan without collateral
JumiaPay	Over 5 million	4.2	133000	E-commerce payment platform
Kuda	Over 5 million	4.3	238000	Fully licensed by the CBN to operate as a microfinance bank(neobank). Savings, transfers, payments
Palmpay	Over 10 million	4.5	478000	Holds a mobile money operator license. Payments, saving, transfers.
Fairmoney	Over 10 million	4.3	577000	Digital bank, instant loan disbursements of up to 1million naira
Opay	Over 10 million	4.4	389000	Mobile money app, savings, payments, offline banking service

Source: Nairametric, 2023

In fact, some of these FinTech applications on the Google Play Store have more downloads than some banks applications. For instance, none of the traditional commercial banks in Nigeria has up to 10 million downloads on

the Play Store, a testament to the fact that Fintech's are gaining traction gradually and competitors cannot afford to ignore them.

In 2021 alone, Nigeria accounted for 59% of FinTech startup funding in Africa, an increase from the previous year's 42%. The predominant FinTech models in the Nigerian FinTech space focus on personal finance, lending, investment, crowdfunding, and payment services. Payment-related FinTech solutions are by far the most accessed and used (FinTech Report 2022).

In the broader African context, Nigeria, Kenya, and South Africa are the top destinations for FinTech funding, with other countries like Ghana and Ethiopia equally preferred. The FinTech industry in Nigeria has experienced growth over the past decade with the attraction of massive venture capital funding. In the years 2020 and 2021, respectively, the Nigerian FinTech sector facilitated about \$440 million and almost \$700 million in digital transactions, with about 200 FinTech startups domiciled in Nigeria and still counting (Techcabal, 2023). Despite challenges faced in the sector (i.e., the cryptocurrency crash of 2022), its growth remains unabated, with telecom companies equally delving into the Nigerian FinTech space with a view to leveraging their already existing platforms and large customer base.

Certain factors predispose Nigeria to the growth being experienced in the FinTech sector: there is a young, teeming population with access to smart phones who prefer cashless transactions (as encouraged by regulatory changes); and besides, many are unbanked due to low infiltration of banking services. The 2020 pandemic necessitated the downfall of many businesses, but on the contrary, it strengthened the position of Fintech's because of the increased need for digitization. This appears to create a new challenge for traditional financial intermediaries like commercial banks, given the new customer expectations that FinTech has accentuated. The entrance of Telecom operators into the FinTech space may amplify the competition even further for traditional banks. Below is a chart showing the biggest Fintech players in Nigeria as reported by the African FinTech State of the Industry 2020 report.



Source: Nigeria Market Map, Africa Fintech: State of the Industry 2020, October 2020

2.0 REVIEW OF LITERATURE

2.1 Conceptual Review

Digital disruption is a concept that typifies the emergence of new products, services, or business models that are capable of affecting existing products (goods and services) or business models while leveraging the use of information technology. Digital disruption occurs as a result of innovation that causes a shift in customer expectations and behavior, making them evolve in the process. In the finance space, a shift in digital strategy occurred due to the emergence of FinTech companies. One of the things that digital disruption in finance has



signalled is that customer needs are shifting, creating a new challenge for traditional intermediaries to keep existing customers happy and find ways to attract new ones. A good practice is to either be the initiator of digital disruptions or respond in a timely manner so they do not become a threat but rather an opportunity. This may largely depend on how much value is placed on securing data from customer feedback.

Digital disruption as a result of innovations can unsettle the market status quo and result in the loss of market share and profit for businesses that choose to ignore a potential disruption (Bower & Christensen, 1995; Lucas & Goh, 2009). New firms that embrace digital disruption are able to seize market share, while existing businesses that do the same are able to maintain their positions (Christensen et al., 2015).

Some studies tidily conceptualized digital disruption as ‘technology-induced innovation that necessitates an attrition of boundaries that previously served as foundations for organizing production and capturing value’ (Karimi & Walter, 2015 and Weil & Woerner, 2015). Such new services and capabilities are models that can change the value of the industry’s existing goods and services. Disruption is a change in expectations and behavior attributable to new digital capabilities able to alter culture, processes, and markets. Disruption is not always harmful, but it does necessarily initiate change. As with any kind of change, it may cause resistance and fear. Digital disruption is a formidable game-changer in an ever-dynamic business world, which, among other things, forces businesses to re-evaluate their market standing with a view to adjusting as required.

2.2 Theoretical Framework

The underpinning theory for the study that is relevant to understanding the subject matter of financial technology and digital disruption is the theory of financial innovation. Fintechs are direct consequences of innovative advances in the financial services sector that has birthed solutions like peer-to-peer lending, micro investment platforms, crowdfunding among others. Financial innovation is first, a process of change, both in the type and variety of product options available to financial intermediaries and in the market itself. Such change poses new demands on regulatory bodies with policy implications. The theory of financial innovation posits that, the demand for innovation arises at the point where the costs of managing a portfolio start to exceed the asset gains. The disappearing benefit may activate a desire for alternative solutions so as to cut costs and increase income.

Crowdfunding (a Fintech model) is capable of eliminating the need for financial intermediaries; as it is an open call for the provision of finance on internet-based platforms without any intermediaries (Schwienbacher & Larralde, 2012; Mollick, 2014). It can be investment-based (peer-to peer where funders invest and receive reward) or donation-based (where no reward is offered for supporting a project) through micro-contributions from numerous people. The donation-based crowdfunding model can exist without intermediaries and have a lower transaction cost, but it is open to the problem of information asymmetry.

The main advantage of financial intermediaries has been to reduce transaction costs; however, this appears to be changing (evidence from the financial crisis occurrences in the last two decades suggests the cost of financial intermediation has only marginally reduced—Bazot, 2017; Philippon, 2016), with customers bypassing traditional intermediaries in order to gain lower costs with fewer restrictions and possible better efficiency, as driven by technology. All these realities undoubtedly favor Fintech innovations, with financial markets more competitive than ever. It is expected that the financial services sector would become more competitive, with the possibility of extending some efficiency gains to customers through lower transaction costs. A review of crowdfunding research suggests that this FinTech innovation does not eliminate the need for financial intermediaries; rather, it creates a substitution for traditional intermediaries. The rise of Fintech’s through innovation has caused traditional financial intermediaries to evolve.

3.0 METHODOLOGY

This section delineates the approach taken in this study to assess the impact of Fintech’s on users largely and, to a lesser extent, on the competition. In order to assess the likely impacts of the rise of FinTech on customers and competitors (traditional financial intermediaries like banks) in Ibadan, Oyo State, Nigeria, a quantitative mini-survey method is employed using an online data gathering tool. The questions are predominantly closed-ended in order to get the most relevant information. The survey link was randomly sent to groups containing Ibadan residents with young adults, adults, and the elderly to get a fair representation of the population of FinTech users in Nigeria.

The data was collected online from respondent’s resident within Ibadan metropolis in Oyo State of Nigeria. The target population for the study comprised of users of traditional banking and Fintech services in the selected

locality. The convenience sampling technique was used although the survey link was randomly sent to online groups consisting of Ibadan residents. The survey contained fourteen questions, and thirty (30) people (respondents) filled out the online questionnaire. Each question is analyzed in terms of the choices of the answerers.

The technique of analysis adopts both descriptive statistics and percentages to draw likely implications from the responses received.

There is a dearth of studies in this area of finance, both globally and especially in Nigeria. This may be largely due to the inability to obtain necessary secondary data, or where possible, it may be expensive to obtain. The aim of this survey is to understand the FinTech users' experiences with innovative products of the identified Fintech players in Nigeria.

4.0 RESULTS AND DISCUSSION

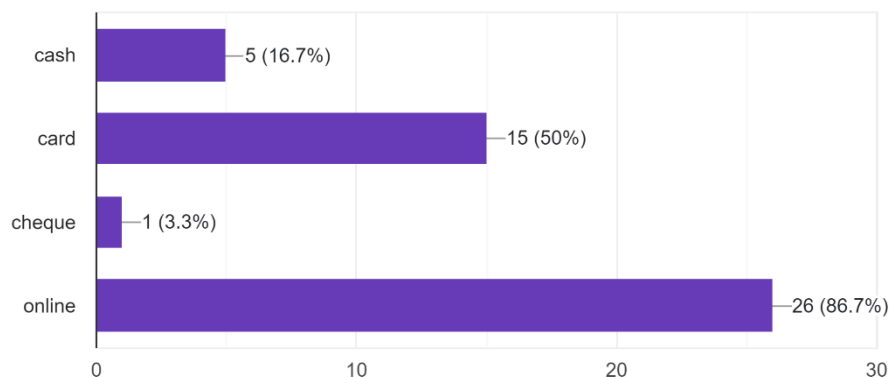
4.1 Presentation of Results

Having received the responses from thirty (30) people, below are the results in descriptive form and percentages. Each of the questions and their responses are analyzed one after the other. The respondents answer to the first question, 'what are your preferred options?', shows 86.7% of the respondents prefer the online payment option compared to card, which comes in close second with 50%, followed by cash (16.7%) and check (3.3%) in that order. This clearly reflects the regulatory authorities' focus on cashless policy in Nigeria. Figure 1 is the chart showing the responses to the first question.

Figure 2: Responses to: What are your preferred options?

1. What is(are) your preferred payment option(s)?

30 responses



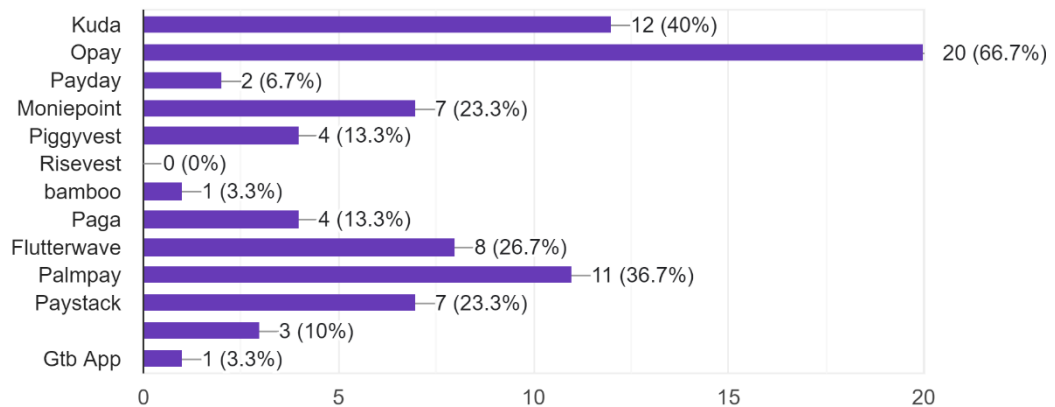
Source: Field Survey 2023.

The second question requested respondents to indicate the FinTech solution providers they use, provided they chose 'online' as a preferred channel in question one. Figure 2 summarizes their responses in a chart. The most-used provider of FinTech services in Nigeria is Opay (66.7%), followed by Kuda (40%), Palmpay (36.7%), Flutterwave (26.7%), and Moniepoint (23.3%). These brands were found to be the five most commonly used FinTech solutions.

Figure 3: Responses to: The FinTech service provider(s) of choice

2. If you answered 'online' in question 1, which of these financial services solution providers have you used or do you use?

30 responses



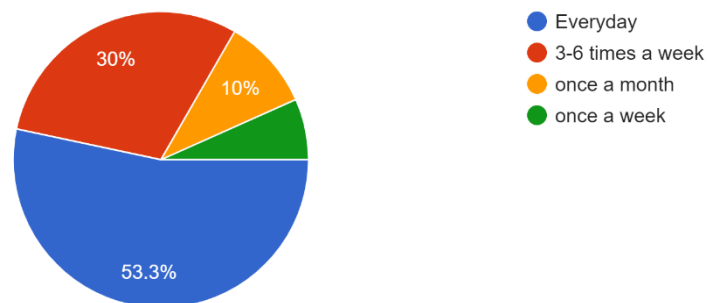
Source: Field Survey 2023.

The third question, as reported in figure 3, sought to know the frequency of usage of the FinTech platforms chosen in question 2. A whopping 53.3% replied 'everyday', while 30% chose 3-6 times a week, 10% said once a week, and 6.7% said once a week.

Figure 4: Responses to: The frequency of use of the FinTech platforms

3. How often do you use the online platform or application of the financial services solution providers you chose in question 2?

30 responses



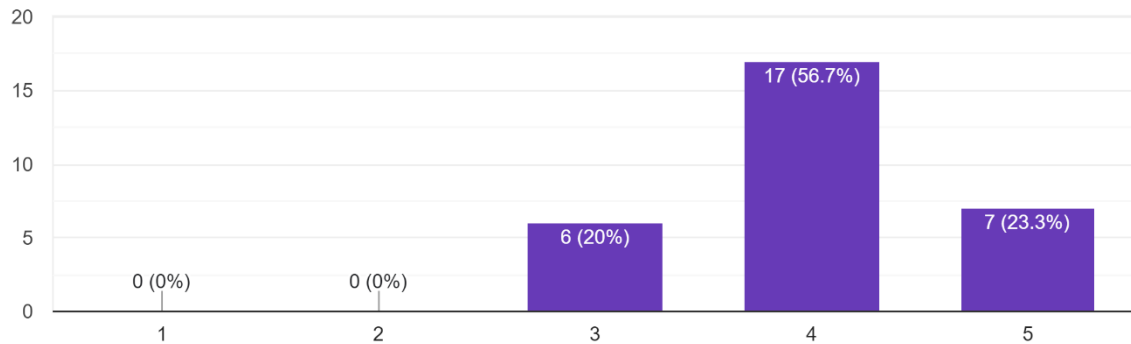
Source: Field Survey 2023.

Question 4 asked respondents to rate the quality of service offered by FinTech platforms on a scale of 1–5 (1 = very poor and 5 = excellent). 23.3% gave an excellent rating, 56.7% chose very good, and 20% perceived them as average. All respondents rated the platforms they use as either average, above average, or excellent. The responses to this question are depicted in Figure 4.

Figure 5: Responses to: The user rating of the FinTech platforms on 'quality of service'

4. How would you rate the financial services provider (i.e. FinTech) that you use on 'quality of service'?

30 responses



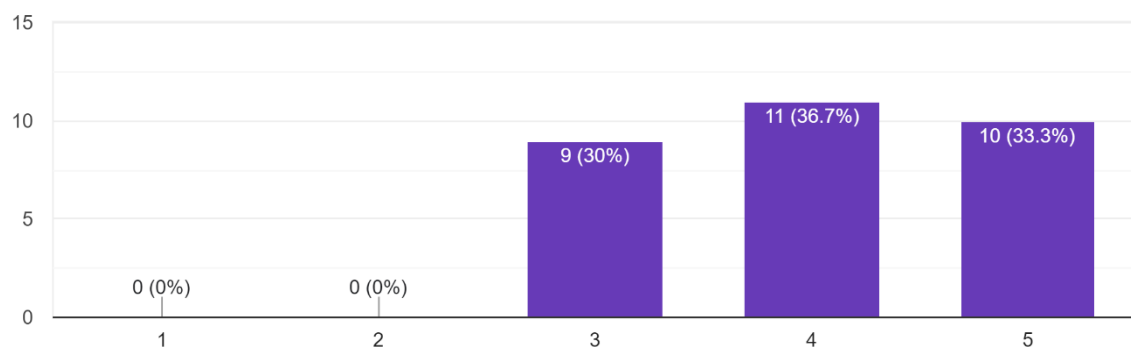
Source: Field Survey 2023.

Question 5 asked respondents to rate the ease of use of FinTech platforms on a scale of 1–5 (1 being very poor and 5 being excellent). 33.3% gave an excellent rating, while 36.7% chose very good, and 30% perceived them as average. All respondents rated the platforms they use as either average, above average, or excellent. This question is depicted in Figure 5.

Figure 6: Responses to: Rating of FinTech Platforms on Ease of Use

5. How would you rate the financial services provider (i.e. FinTech) that you use on 'ease of use'?

30 responses



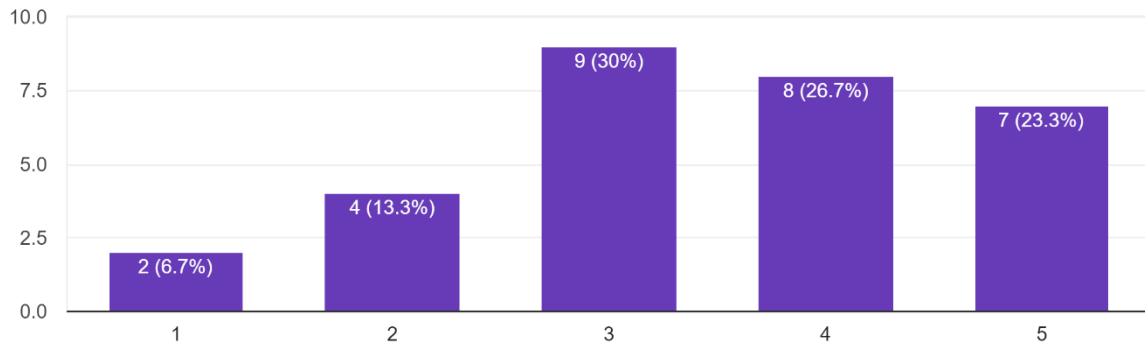
Source: Field Survey 2023.

Question 6 asked respondents how well FinTech platforms handle customer complaints when there are glitches on a scale of 1–5 (1–very poor and 5–excellent). 23.3% gave an excellent rating, while 26.7% chose very good, 30% perceived them as average, 13.5% perceived them as poor, and 6.7% maintain that FinTech platforms are very poor at handling complaints. Altogether, 80% perceive them as either average or above average, and 20% say they are below average when it comes to handling complaints. The responses to this question are depicted in figure 6.

Figure 7: Responses to: Rating on how well FinTech platforms handle complaints

6. How would you rate the financial services provider (i.e. FinTech) that you use on 'handling of complaints'?

30 responses



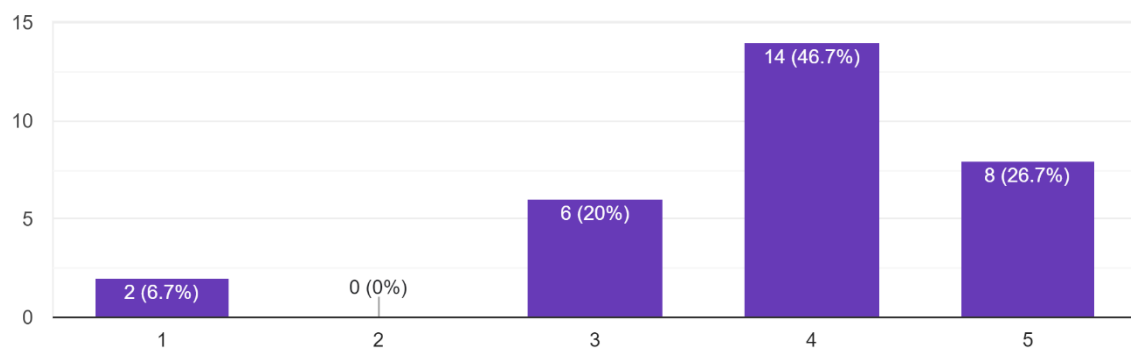
Source: Field Survey 2023.

Question 7 asked respondents to rate FinTech platforms on security on a scale of 1–5 (1–very poor and 5–excellent). 26.7% gave an excellent rating, while 46.7% chose very good, 20% perceived them as average, and 6.5% perceived them as very poor. Altogether, 93.5% perceive them as either average or above average, and only 6.5% say they are below average. The responses to this question are depicted in Figure 7.

Figure 8: Responses to: Rating on how well FinTech platforms handle complaints

7. How would you rate the financial services provider (i.e. FinTech) that you use on 'security'?

30 responses



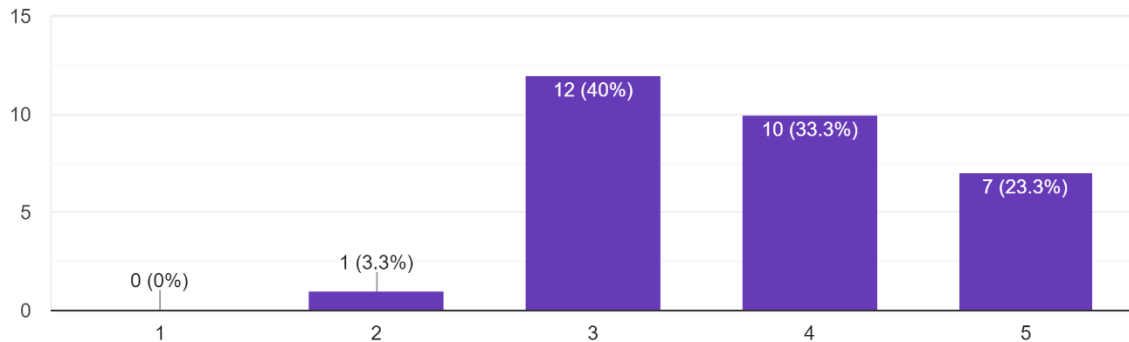
Source: Field Survey 2023.

Question 8 asked respondents to rate FinTech platforms on reliability on a scale of 1–5 (1–very poor and 5–excellent). 23.3% gave an excellent rating, while 33.3% chose very good, 40% perceived them as average, and 3.3% perceived them as poor. Altogether, in terms of reliability of service, 96.7% perceive them as either average or above average, and only 3.3% say they are below average. The responses to this question are depicted in figure 8.

Figure 9: Responses to: Rating on the reliability of FinTech platforms

8. How would you rate the financial services provider (i.e. FinTech) that you use on 'reliability'?

30 responses



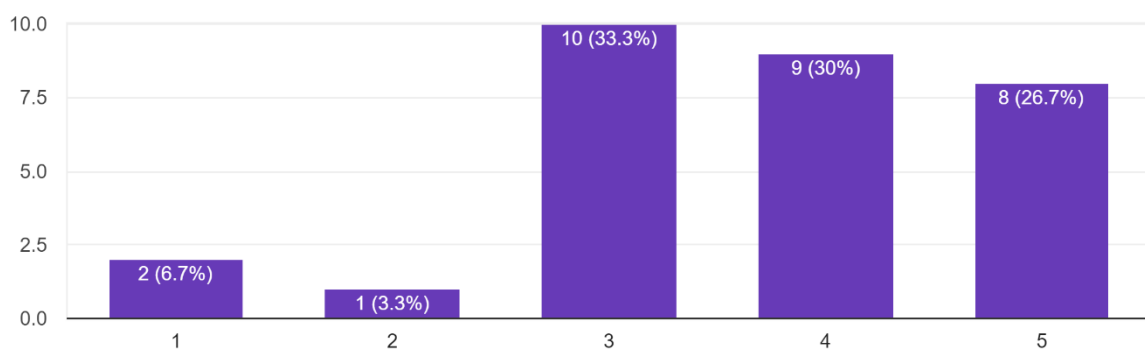
Source: Field Survey 2023.

Question 9 asked respondents to rate FinTech platforms on refund policies on a scale of 1–5 (1–very poor and 5–excellent). 26.7% gave an excellent rating, while 30% chose very good, 33% perceived them as average, 3.3% perceived them as poor, and 6.7% perceived them as very poor. Altogether, in terms of their refund policies, 90% perceive them as either average or above average, and only 10% say they are below average. The responses to this question are depicted in figure 9.

Figure 10: Responses to: Rating on FinTech Platforms Refund Policies

9. How would you rate the financial services provider (i.e. FinTech) that you use on 'refund policies' when there are transaction difficulties?

30 responses



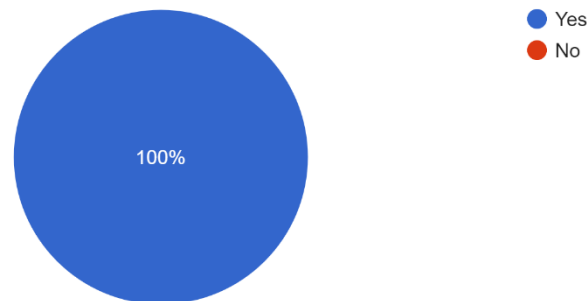
Source: Field Survey 2023.

Question 10 asked respondents whether they would recommend their preferred FinTech platforms to others, including family and friends. All respondents answered in the affirmative, meaning all of the correspondents are willing to inform and persuade others to use their preferred FinTech platforms. The responses to this question are depicted in Figure 10.

Figure 11: Responses to: Whether users will recommend the FinTech platforms to others or not

10. Would you recommend your preferred FinTech service provider(s) to others (like friends and family)?

30 responses



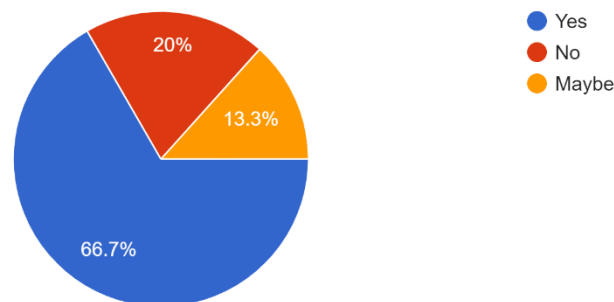
Source: Field Survey 2023.

Question 11 asked respondents whether the use of their preferred FinTech platforms limits the use of traditional financial intermediaries like banks. 66.7% of respondents answered in the affirmative, 20% failed to affirm that FinTech use limits traditional financial intermediaries use, and 13.3% were unsure about its impact. The responses to this question are depicted in Figure 11.

Figure 12: Responses to: Whether the use of FinTech platforms limits the use of other financial intermediaries (e.g., banks)

11. Did your use of the FinTech solution/application (s) limit the use of your traditional bank services(e.g. UBA, Zenith, Access, Stanbic etc)?

30 responses



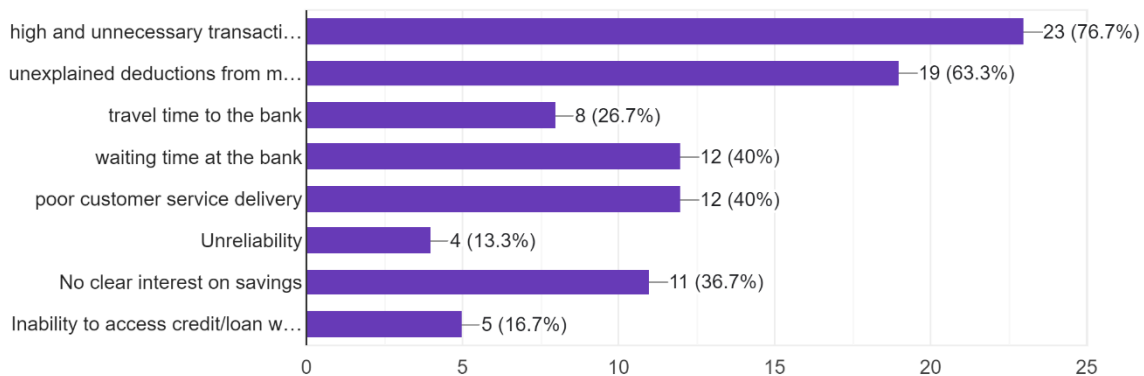
Source: Field Survey 2023.

Question 12 asked respondents who answered 'yes' to question 11 to state the reason(s) why the use of their preferred FinTech platforms limits the use of traditional financial intermediaries like banks. 76.7% of respondents gave the reason of high and unnecessary transaction costs; 63.3% attributed it to unexplained deductions in their accounts; and 40% of respondents indicated waiting time at banks and poor customer service, respectively. 36.7% complained of no clear interest on savings, 26.7% had issues with travel time to the bank, 16.7% were unable to access credit, and 13.3% were unreliable. The responses to this question are depicted in Figure 12.

Figure 13: Responses to: Reasons the use of FinTech platforms limits the use of other financial intermediaries, e.g., banks

12. If you answered 'yes' to question 11, why is this the case?

30 responses



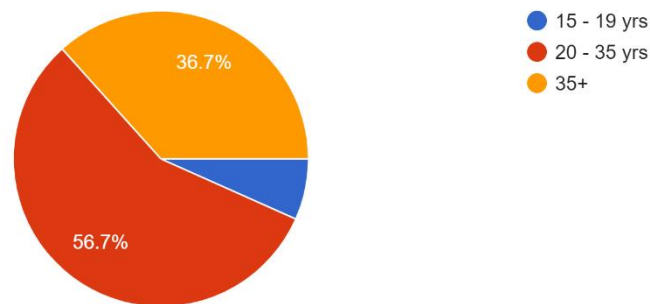
Source: Field Survey 2023.

Questions 13 and 14 profile the demographics of the respondents. From question 13, we can see that 56.7% of respondents are between the age bracket of 20 and 35 years old, 36.7% are above 35 years old, and 6.6% are teenagers. From question 14, 66.7% of respondents have the highest educational attainment of a second degree, 23.3% a first degree, and 10% a senior school certificate. Figures 13 and 14 depict these responses, respectively.

Figure 14: Responses to: Ages of Respondents

13. Age range

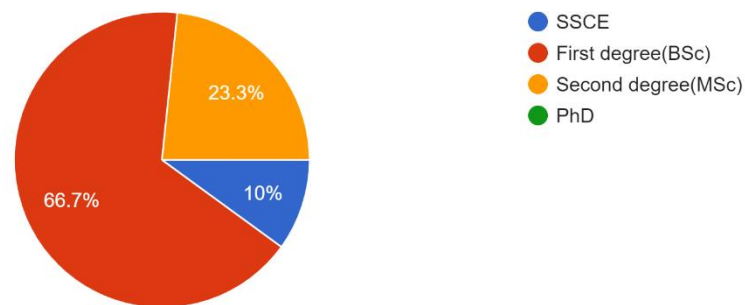
30 responses



Source: Field Survey 2023.

Figure 15: Responses to Educational Attainment of Respondents**14. Highest educational level**

30 responses



Source: Field Survey 2023.

4.2 Discussion

Based on the data gathered, it was found that the most-used Fintech provider in Nigeria is Opay. It will be good to know why this particular provider is in high demand and what they do that attracts customers. More than half of the respondents claim to use Fintech services every day, a good percentage 3-6 times a week, and only a handful employ their services on a monthly basis. Everyday usage suggests that the channel serves its users well. On ease of use and quality of service, all respondents claimed Fintech's were either average or above average when rated. This suggests a good user experience.

Four-fifths of the respondents found how Fintech's handle complaints satisfactory, while 20% thought it was below average. Fintech's need to do more in terms of promptness in handling complaints. 93% of respondents found the security architecture of Fintech platforms to be standard, while 96% found them reliable in discharging their services. 100% of the respondents are convinced they will recommend their Fintech service providers to others, including family and friends.

66.7% admitted the use of FinTech platforms limited their use of traditional intermediaries; this does have implications for regular banks, and high on the list of reasons adduced by the respondents is high transaction costs, poor customer service, no clear interest on savings, and no access to credit.

5.0 CONCLUSION AND RECOMMENDATION

From the results of this study, we can conclude that Fintech's are undoubtedly filling a void in the financial services sector. The customers appear pleased with the services rendered by these Fintechs, as this is the precursor to making all respondents choose to make continue usage of and also refer their FinTech service providers to others. Such unpaid advertising is to the advantage of these Fintech providers.

This should be a wake-up call for traditional financial service providers that customer needs and expectations are changing and that customer feedback must be valued more than ever. The findings of this study are in agreement with the conclusions of the financial innovation theory, as Fintech innovations are disrupting financial services. People are seeking options in order to minimize cost and earn higher income

The advent and continual rise of Fintechs have somewhat altered the expectations of customers and subtly initiated a new challenge for traditional financial intermediaries like banks. Despite the fact that not all Fintechs are startups, they are thriving and able to compete in the same market where huge corporations and financial services players exist. The alternative approach and adoption of agile procedures are some areas of strength for Fintechs. Fintechs are disruptors because they have a customer-focused approach to service design and delivery, and they appear to offer a better value proposition when compared to their traditional counterparts.

Traditional financial intermediaries like banks should embrace the fast-paced, technology-driven and changing world of finance if they intend to keep up with the emerging innovations. In order to favorably co-exist with



Fintechs, Traditional intermediaries must consider new ways to reach the underserved, and unbanked and devise means to lower transaction costs. Fintechs need to improve on their security architecture to protect customer data and scarce funds; and must continue to value customer feedback even when they expand.

An area that can be further looked at is to investigate the magnitude of consequences(costs) for traditional intermediaries (if any) as a result of FinTech activities.

REFERENCES

1. Alade, I., Muse-Sadiq, A., Bella, S., and Osundolire, A. (2022) 'Nigeria: FinTech 2022', Article from *Banwo and Ighodalo*, Published on *Mondaq.com*
2. Bazot, G. (2017). *Financial consumption and the cost of finance: Measuring financial efficiency in Europe (1950–2007)* Journal of the European Economic Association, JVX008.
3. Bower, J. L., and Christensen, C. M. (1995). *Disruptive Technologies: Catching the Wave* Harvard Business Review, 73(1), 43–53.
4. Bussman, O. (2017). *The Future of Finance: FinTech, Tech Disruption, and Orchestrating Innovation*, Equity Markets in Transition, 473–486,
5. Cai, J. (2018) *Syndication, interconnectedness, and systemic risk* Journal of Financial Stability, 34(C), 105–120.
6. CFA Institute (2016) *FinTech Survey Report*
7. Christensen, C., Raynor, M., & McDonald, R. (2015). *What is disruptive innovation?* Harv. Bus. Rev., 93(12), pp. 44–53
8. *Global FinTech Report (2017)* PwC. URL: <https://www.pwc.com/jg/en/publications/pwc-global-fintech-report-2017.pdf>
9. Gubler, Z. (2011). 'The Financial Innovation Process: Theory and Application. Delaware Journal of Corporate Law (DJCL), 36(1),
10. Guo, Jianfeng, Pan, Jiaofeng, Guo, Jianxin, Gu, Fu, Kuusisto, and Jari (2019). *Measurement framework for assessing disruptive innovations*. Technological Forecasting and Social Change, 139, 250–265.
11. Hochstein, M. (2015). *BankThink Fintech (the Word, That Is) Evolves*. American Banker website. Accessible at: <https://www.americanbanker.com/opinion/fintech-the-word-that-is-evolves>
12. Karimi, J., and Walter, Z. (2015) *The role of dynamic capabilities in responding to digital disruption: A factor-based study of the Newspaper industry* Journal of Management Information Systems, 32(1), 39–81.
13. Lucas, H. C., and Goh, J. M. (2009) *How Kodak missed the digital photography revolution* Journal of Strategic Information Systems, 18(1), 46–55
14. Mollick, E. (2014) *The dynamics of crowdfunding: An exploratory study* Journal of Business Venturing, 29, 1–16
15. Philippon, T. (2016). *The FinTech Opportunity* NBER Working Papers, 22476.
16. Schwienbacher, A., and Larralde, B. (2012). *Crowdfunding of Small Entrepreneurial ventures* In: Cumming, D., Ed., *The Oxford Handbook of Entrepreneurial Finance*, Chapter 13, OUP, Oxford.
17. Siek, M., & Sutanto, A. (2019). *Impact Analysis of Fintech on the Banking Industry* Publisher: IEEE Conference Paper. Available at: <https://ieeexplore.ieee.org/document/8843778>
18. Tammam, D., Brunetta, F., Vincentini, F., & Graziano, E. (2019). 'Facing Disruptive Innovation: Strategic and Managerial Challenges', *Handbook of Research on Managerial Thinking in Global Economics*, p. 14. DOI: 10.4018/978-1-5225-7180-3.ch011
19. Techcabal (2023). *Digital finance is here to stay in Nigeria's fintech sector*. Fin Tech: Nigeria (*mondaq.com*)
20. Weil, P., and Woerner, L. (2015). *Thriving in an increasingly digital ecosystem* MIT Sloan Management Review, Summer Research Feature