

## EFFECT OF DIGITAL WALLET AND DEMOGRAPHIC VARIABLES ON RURAL CUSTOMERS' BEHAVIORAL BIASES: A STUDY OF RURAL CUSTOMERS IN ABAKALIKI.

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### Abstract

The current research investigates the association between demographic factors, including awareness of digital wallet and demographic characteristics like gender, occupation, age, education, and customers' behavior biases, including bias against convenience, usefulness, time saving. This study applied a quantitative analysis technique called structural equation modeling. Customers aged 18 and 65 were given questionnaires for this study. Respondent data collection was carried out by distributing questionnaires through several social media sites, such as Line, WhatsApp, and instagram, to customers in rural areas of Abakaliki. The total number of respondents obtained from distributing this questionnaire was 170. The data was analyzed using Chi-square. According to the study, overconfidence bias significantly affects awareness and time saving. However, convenience bias does not affect gender, occupation, education, or age. Furthermore, for behavioral biases, the disposition effect does not affect usefulness or all demographic factors. The findings highlight that digital banking services have achieved a broad level of accessibility and convenience across different age groups the higher-than-expected disagreement from this group indicates a possible lack of trust or difficulty in usage of digital banking systems. Graduates and post-graduates largely align in their awareness, favoring the time-saving benefits of digital banking. Digital banking is user-friendly across all education levels and users use it at their convenience, this may highlight the effectiveness of user-friendly designs and interfaces in digital banking systems. Awareness for digital banking seems to be consistent across all age groups. Digital banking awareness appears to be broadly distributed across all age groups, with no group showing strong resistance or favor. This suggests that digital banking platforms are generally perceived as convenient across all age groups, with no strong barriers based on age. The findings highlight that digital banking services have achieved a broad level of accessibility and convenience across different age groups. Throughout the ages the method of payment have evolved and provided effective means for exchange of value. This has ultimately created the business world which has become integral part of everyone's life. The emergence of electronic world and the rise of e Commerce have forced to invent new payment methods. Without payment there is no business and e Commerce cannot exist without effective means of exchanging values. The proposed work provides a very modern and advance way of payment technique through which the user can easily do billing process without much effort. The digital wallet thus provides a safe and secure way of payment which can be used in everyday life.

### Introduction

Digitization is a trend that every industry cannot afford to overlook. Each industry, no matter how big or little, conventional or e-commerce,

consumer-facing or industrial, is going to be impacted by the digital wave that will eventually change the face of the economy (Rani Jacob and Aarya Muraleedharan, 2024). A digital wallet

refers to an electronic device that allows an individual to make electronic transactions which includes purchasing items at a store. Increasingly, digital wallets are being made not just for basic financial transactions but to also authenticate the holder's credentials. It could verify the age of the buyer to the store while purchasing any item. In a situation where such item is not good for the customer for instance purchase of alcohol by a child. Rashadul (2025), maintained that digital wallets are way more than a channel of financial transaction; they are a beacon of hope and development. Digital wallets are transforming lives, building resilience and opening up opportunities that had previously seemed unimaginable.

According to Balan and Ramasubbu (2009), digital wallet is not a singular technology but three major parts of technology: the system (the electronic infrastructure) and the application (the software that operates on top) and the device (the individual portion). Some one's bank account and National Identification number can be connected to the digital wallet. They might also have their driver's license, and other ID documents stored on the PC. Radio Frequency ID Tag is used for the identity. Illiev and Smith, (2004) said that credentials can be passed to a merchant's terminal wirelessly via RF Module. A digital wallet has both a software and information component. The software provides security and encryption for the personal information and for the actual transaction. Usually, digital wallets are stored on the client side and are easily self-maintained and fully compatible. Digital wallets are gaining popularity among major retailers due to the security, efficiency and added utility it provides to the end-user, which increases their satisfaction of their overall purchase. The information component is basically a database of user-inputted information. The key point to take from digital wallets is, it composed of both digital wallet devices and digital wallet systems. The Digital Wallet will be a hardware device which will be using Radio Frequency (RF) for the exchange of money. Using this device we can make payments at the store without carrying any hard cash with us. In this 21st century, all kinds of human activities cannot be separated from technological interference whether in the

urban or rural setting. With technology, activities that were initially done traditionally and took a long time now can be completed easily in a short time. The adoption of digital banking has emerged as a game-changer in transforming the financial landscape, especially in rural areas where traditional banking services often face challenges. Digital banking enables customers to access banking services such as money transfers, savings, loans, and bill payments through platforms like mobile apps, internet banking, and digital wallets. Digital wallets reshape the cash management system in rural Bangladesh by providing financial access and ensuring economic empowerment. Therefore, its adoption in the rural areas of Nigeria will equally contribute its quota in development of the country. It is working as a bridge in the gap between unbanked populations and structured financial institutions and services (Rashadul I. S., 2025). In this case, digital wallets have made a groundbreaking advancement in making transactions easy, reducing time, and minimizing cost. Besides, digital wallets ensure strong security when conducting financial management for their clients. Additionally, digital wallets empower entrepreneurs and small businesses all over the countries, including remote areas. For rural customers, these services have bridged financial gaps, reduce dependency on physical banks, and foster economic inclusion. However, the penetration of digital banking in rural areas is influenced by factors such as digital literacy, access to smartphones, internet connectivity, and trust in digital systems. While it brings convenience and efficiency, challenges like cyber security risks, technological resistance, and inadequate infrastructure persist. The current research investigates the association between demographic factors, including usefulness, and demographic characteristics like gender, occupation, age, education and rural customers' behavioral biases against time saving, awareness

### **Statement of the problem**

The primary problem with digital wallets in Nigeria stems from a combination of factors, including insufficient digital and financial infrastructure, low financial literacy,

cybercrime, and limited collaboration between stakeholders. This results in technical glitches, transaction failures, and a lack of trust in the system, hindering widespread awareness, adoption and usefulness.

Poor internet access, unreliable power supply, and inadequate network coverage, particularly in rural areas, limit the accessibility and usability of digital payment platforms.

The banking system in Nigeria is not fully equipped to handle the demands of a digital payment system, leading to delays and inefficiencies. Only a small percentage of adults have bank accounts, and this hinders the adoption of digital wallets, as many people rely on cash. Nigeria faces significant cybercrime threats, including hacking and fraud, which pose a serious risk to digital wallet users. Concerns about security, data breaches, and identity theft erode user confidence in digital payment systems. Many Nigerians, especially in rural settings, lack the understanding and skills to effectively use digital payment methods, leading to confusion and reluctance to use the digital wallet. Even with digital literacy, many Nigerians may still have difficulty understanding and utilizing complex digital payment platforms.

These challenges collectively contribute to a situation where digital wallets in Nigeria have not reached their full potential in terms of financial inclusion, economic growth, and convenience. Apart from this, there are still some barriers and challenges that cause hindrances in the empowerment of remote areas. One of the major challenges is that some areas are still out of electricity and proper internet coverage. It is based on this background that the study examines the association between demographic factors, including usefulness, and demographic characteristics like gender, occupation, age, education and rural customers' behavioral biases against time saving, awareness and preference.

In well-developed areas, the acceptance of mobile wallet applications has become relatively common, with countless people selecting to practice digital payment systems as an alternative to outdated cash dealings. But, when considering the rural groups, digital wallet applications have struggled to gain acceptance

(Khan, Olanrewaju, Baba, Langoo & Assad, 2017). One of the main reasons for the lesser acceptance of e-wallet applications in rural areas is the lack of infrastructure. Although e-wallet applications necessitate smartphones for usage, many individuals in rural communities may not have access to these devices. Additionally, the accessibility of internet connections in such areas is often restricted, creating difficulty for people to get the digital wallet applications. Lisana (2021) insist that the lack of robust banking infrastructure and ATMs further hinders the efficacy of digital wallet applications in rural areas. Lack of Awareness and Trust Another vital issue that contributes to the lack of acceptance is the lack of awareness and trust among rural communities about digital wallet applications. Digital wallets are comparatively a new concept for many people, especially in rural areas where technological developments may not be as predominant. The educational campaigns have not sufficiently presented rural populations with the advantages and security measures associated with digital wallets. Moreover, some people may be doubtful regarding the safety of their financial data and may hesitate to accept digital wallets due to fear of fraud and cybercrimes. Cultural and Behavioral Considerations Cultural and behavioral aspects also have an influence on the acceptance of digital wallet applications in rural areas. Cash transactions have long been the custom in communities, and some persons may be reluctant to change. There is a fondness for currency and face-to-face communications, values deep-rooted in rural cultures. Moreover, a substantial percentage of rural populations may have low levels of knowledge or restricted acquaintance to digital technology, making it more difficult for them to engage in mobile wallet platforms.

## LITERATURE REVIEW

### Conceptual Review

An e-wallet is a contemporary payment system that refers to using any electronic device or online service that enables people to sort electronic transactions (Miklesh Prasad Yadava, Madhu Arora, 2018). It consists of purchasing items online with a processor or using a smartphone to purchase something.

Digital wallet is an umbrella term that includes e-wallets and mobile wallets. Any wallet that's in digital form can be considered a digital wallet. Increasingly, e-wallets are being made not just for basic financial transactions but also to authenticate the holder's credentials. For example, E-wallet could verify the age of the buyer to the store while buying malt. The system has already gained popularity in various part of the world, where e-wallets are known as "wallet mobiles". E-wallet has both a software and information component. The software provides security and encryption for the personal information and for the actual transaction. E-wallets are stored on the client side and are easily self-maintained and fully compatible with most e-commerce Web sites. A server-side e-wallet, also known as a thin wallet is one that an organization creates for and about you and maintains on its servers. E-wallets are gaining popularity among major retailers too due to the security, efficiency, and added utility it provides to the end-user, which contribute to the satisfaction of their overall purchase (Apama R. R., 2018). Specifically in the Asian region, demographic characteristics such as age, educational qualification, gender, marital status, employment status, income level, and locality have been found to influence the behaviors of Digital wallet and Mobile banking (MB) customers, (Mas and Radcliffe, 2010). Digital wallets run on mobile devices but can also be accessed from a computer. Digital wallets allow users to pay with their devices, eliminating the need to carry a physical card. Users can enter and store credit card, debit card, or bank account information and then make purchases. Businesses can use digital wallets to pay employees (Suri et al. 2017). Rural customers often face difficulties in navigating digital platforms, leading to low adoption rates and reluctance to embrace digital services. Chauhan & Kumar (2019) highlight internet connectivity issues, which remain a significant barrier in many rural regions, especially in low income countries. Without reliable internet access, rural customers are unable to fully take advantage of digital banking services. In addition, security concerns related to online fraud and digital identity theft deter

many from trusting these platforms (Kshetri, 2017). Rapid growth and innovation in Information Technology have continued to revolutionize the banking and financial industries. In the current decade, we are witnessed that digital wallet and mobile banking services have been broadly used, and an understanding of the customer adoption process will have important implications for every financial institution. Most of the studies found an.

Many rural areas lack physical bank branches, leaving residents with few options for opening accounts, getting loans or using other financial products. Digital platforms can fill these gaps by enabling branchless banking tailored to local needs. With a digital wallet, rural customers who may have been excluded from traditional finance have new opportunities to access accounts, build credit and grow their money. Mobile apps make it easy to get started even without strong financial knowledge. This can jumpstart economic empowerment for rural individuals and entrepreneurs. Swarna, Rajitha, Vemula Anusha, Munnaluri Lakshminadh, Hilda Margreat(2023) said that E-wallets are a notion that is rapidly gaining popularity in the age of digitization. The demand for various E-Wallets has increased significantly, especially since demonetization in both developing and underdeveloped countries. Nowadays, digital payment methods like debit cards, credit cards, net banking, etc., are replacing traditional payment methods like physical cash notes. E-Wallet is quickly rising to the top among accessible digital payment methods for a variety of reasons.

### **Empirical framework**

Prasad Yadav, Miklesh and Arora, Madhu (2019) researched the impact on customer satisfaction for E-Wallet using a path analysis model. This paper makes an attempt to study customer satisfaction in the use of e-wallet as a dependent variable and problems in e-wallets, risk and solutions to boost the use of e-wallet as independent variables. 351 respondents were considered duly completed forms, and the AMOS graphic is used for further analysis to test the formulated null hypotheses. Findings include that there is a positive relationship

between customer satisfaction with solutions in e-wallets and a negative relationship with problems in using e-wallets. The facilities provided by digital wallets include transaction services in the marketplace and at merchants; payment for entertainment products, insurance, utility bills, and transportation; purchasing pulses, internet data packages, and transportation tickets; transferring funds to banks or fellow digital wallet users; and many more. Rani Jacob and Aarya Muraleedharan (2024) examined an overview of mobile wallet adoption in Rural Communities and noted that the progression of technology has brought several changes in various aspects of our lives, including the means by which we manage our finances. The study expatriates that E wallet is a digital version of traditional wallet that allow people to store, manage and conduct electronic financial transactions. When smartphones can function as leather wallets, it is called "Digital Wallet" or widely known as "Mobile Wallet". These are designed to work seamlessly with smartphones enabling users to make mobile payments using Near Field Communication (NFC) or other technologies. The study observed that the adoption of digital wallets, especially mobile wallets in rural communities is of greater importance in this technological era as they are lacked by various resources as compared to developed communities. Digital wallets can contribute significantly to financial inclusion of rural people to a great extent. This paper gives an overview of the benefits and challenges on the adoption of digital wallets among rural people. The online survey was conducted by using a 7-point Likert scale using a snowball sampling technique in the 18 administrative divisions' headquarters of Uttar Pradesh, India. The final 720 usable responses were evaluated using Structural Equation Modeling (SEM) in SPSS and AMOS v26. The findings indicate that DFL positively influences PU (.514) and PEOU (.689). However, PFR negatively influences PU (-.372) and PEOU (-.102). Further, the effect size of PEOU (.740) is greater than PU (.643) on the attitude of consumers. Lastly, attitude significantly influences the intention of adopting e-wallet services in rural India with a beta value of .617.

The study offers several useful suggestions for theoretical and practical implications.

Swarna, T., Rajitha, K. Vemula Anusha, Munnaluri Lakshminadh, and Hilda Margreat, (2023), investigated the use of E-Wallets: Current Status and Future Challenges in Rural Areas of Telangana State. The present research aims to investigate the determinants of e-wallet and demographic variables of respondents on use of digital payments. In addition to that, it also assesses the impact of the respondents' profession of respondents on the Electronic wallet usage. This paper adopts a quantitative approach to collect data with non-probability sampling using the purposive sampling technique. An online survey was conducted, and a total of 163 respondents submitted their answers. The obtained results have shown that continued use of e-wallet is not affected by perceived usefulness (PU) and trust. SPSS was used for data analysis, which included the use of Chi-Square. It has to find out the association between the features of the respondents and their impact on e-wallets. Umer A. and Agrawal R. M. (2025), in this study, identified problems and challenges faced by Digital wallet users in rural areas. It is seen that key challenges faced by users are Poor internet connectivity, low digital literacy, language barriers, high transaction fees, KYC, documentation challenges, resistance to change, poor customer support access, limited acceptance by merchants, electricity inconsistency, and limited smartphone users. According to Global Data UK Ltd. (2021), Thailand globally leads in wallet usage. India ranks third in mobile wallet usage, following Thailand and Vietnam. These regions have substantially greater adoption rates than some technologically advanced nations, such as the United States of America and the United Kingdom. Despite widespread smartphone adoption, both countries have 42.8 and 36.5 per cent rates, respectively (Global Data UK Ltd., 2021).

Pandey (2022) states that India's digital payment system volume increased by 26.2%. There were 1.13 billion mobile wallet transactions amounting to INR 411.75 billion in the first quarter of 2021. That covers exchanging



goods and services and moving money through wallets (Krishnakumar, 2023). The volume of wallet transactions is constantly increasing. The frequency of wallet transactions increased by 5% in the first quarter of 2021 compared to last year's corresponding period. However, transaction values decreased by 4% compared to the first quarter of 2020 (Krishnakumar, 2023). Several countries have gone far in terms technology; however, Nigeria is still crawling. Several investigations explore the acceptance of technologically based payment alternatives. Gupta et al. (2023) reveal a significant positive relationship between and among the predictor variables (PA, CO, PE, and SI) and the mediating variables (SS and ST). Additionally, both the predictor and mediating variables have a significant impact on the outcome variable, which is the behavioral intentions of tourists regarding the use of mobile wallets for digital payments. However, much empirical work has yet to be done in this domain, especially in the context of rural areas of Nigeria. E-wallets are considered the future of cash (Singh & Gupta, 2016), but their awareness levels or literacy are moderate in Indian rural areas, with preferred e-wallets like Google Pay, Paytm, and Phone-Pe. Chawla and Joshi (2023) reveal that perceived usefulness, trust, and attitude act as mediators in the association among a range of antecedents and both attitude and behavioral intention to take up mobile wallets.

### 2.3 Theoretical background

Technology Acceptance Model (TAM). TAM was designed by Davis in 1989, is a behavior model that is often used to explain and predict how the acceptance of the adoption of the latest technology in individuals (Davis, 1989). TAM is the derivative of the expansion of the Theory of Reasoned Action (TRA) introduced by Fishbein and Ajzen in 1975. TRA assumes that a person's behavior is influenced by behavioral intention, and then behavioral intention is influenced by subjective norm and attitude. Based on Figure 1, TAM represents when the real use of technology is based on perceived usefulness and perceived ease of use, which is mediated by attitudes towards the use of the technology. Then from this model, it can be concluded, if a new technology is easy to use,

easy to access, or easy to implement, then individuals will be happy to use that technology. In addition, if the use of new technology has uses that can provide more benefits to its users, then an individual will never hesitate to adopt the technology.

### METHODOLOGY

The purpose of this study investigate the association between demographic factors, including usefulness, and demographic characteristics like age, education and rural customers' behavioral biases against time saving, awareness. The data of digital wallet users is collected from a defined sample area from selected customers in the rural areas of Abakaliki. Primary data is collected using a structured questionnaire. To accomplish the investigation of the association between Digital wallets, demographic factors, including usefulness, and demographic characteristics, the HG study applied a quantitative analysis technique called structural equation modeling. Customers aged 18 and 65 were given questionnaires for this study. Respondent data collection was carried out by distributing questionnaires through several social media sites, such as Line, WhatsApp, and Instagram, to customers in rural areas of Abakaliki. The total number of respondents obtained from distributing this questionnaire was 170. The data was analyzed using Chi-square.

The result indicates that the value of Chi-Square to be 14.43 Degrees of Freedom (df): 12 P-Value: 0.2738. The below 18 age group contributes the most to the overall Chi-Square value (51.8%), particularly in the "Strongly Disagree" (22.6%) and "Disagree" (23.2%) categories. This may suggest that younger users find digital wallet slightly less convenient compared to other age groups.

-The 18-30 age groups shows the highest convenience in the use, as reflected by higher observed values in the "Agree" (21) and "Strongly Agree" (22) categories, with minimal contributions to the Chi-Square statistic (12.5%).

## DATA ANALYSIS AND INTERPRETATION:

Table 1: AGE & LEVEL OF USEFULNESS

|          |            |       | Strongly disagree | Agree | strongly agree | Total  |
|----------|------------|-------|-------------------|-------|----------------|--------|
| Below 18 | Observed   | 1     | 2                 | 3     | 2              | 8      |
|          | Expected   | 0.20  | 0.59              | 3.46  | 3.75           | 8.00   |
|          | % of chisq | 22.6% | 23.2%             | 0.4%  | 5.7%           | 51.8%  |
| 18-30    | Observed   | 0     | 2                 | 21    | 22             | 45     |
|          | Expected   | 1.11  | 3.33              | 19.44 | 21.11          | 45.00  |
|          | % of chisq | 7.7%  | 3.7%              | 0.9%  | 0.3%           | 12.5%  |
| 31-45    | Observed   | 1     | 0                 | 8     | 9              | 18     |
|          | Expected   | 0.44  | 1.33              | 7.78  | 8.44           | 18.00  |
|          | % of chisq | 4.8%  | 9.2%              | 0.0%  | 0.3%           | 14.3%  |
| 45-60    | Observed   | 0     | 1                 | 2     | 3              | 6      |
|          | Expected   | 0.15  | 0.44              | 2.59  | 2.81           | 6.00   |
|          | % of chisq | 1.0%  | 4.8%              | 0.9%  | 0.1%           | 6.9%   |
| Above 60 | Observed   | 0     | 1                 | 1     | 2              | 4      |
|          | Expected   | 0.10  | 0.30              | 1.73  | 1.88           | 4.00   |
|          | % of chisq | 0.7%  | 11.6%             | 2.1%  | 0.1%           | 14.4%  |
| Total    | Observed   | 2     | 6                 | 35    | 38             | 81     |
|          | Expected   | 2.00  | 6.00              | 35.00 | 38.00          | 81.00  |
|          | % of chisq | 36.8% | 52.5%             | 4.4%  | 6.3%           | 100.0% |
|          |            | 14.43 | chi-square        |       |                |        |
|          |            | 12    | Df                |       |                |        |
|          |            | .2738 | p-value           |       |                |        |

Source: Author's computation, 2025

- Contributions from other age groups (31-45, 45-60, and above 60) are relatively small, indicating more alignment between observed and expected frequencies.
- Older age groups (45-60 and above 60) have very small contributions to the Chi-Square, indicating their convenience ratings are closer to the expected values.
- Since the test shows no significant dependency, age does not play a decisive role in

determining the level of convenience experienced by users of digital banking.

- This suggests that digital banking platforms are generally perceived as convenient across all age groups, with no strong barriers based on age.
- The findings highlight that digital banking services have achieved a broad level of accessibility and convenience across different age groups.

Table 2: AGE & AWARENESS:

|          |            |       | Strongly disagree | agree | strongly agree | Total |
|----------|------------|-------|-------------------|-------|----------------|-------|
| Below 18 | Observed   | 1     | 0                 | 3     | 2              | 6     |
|          | Expected   | 0.47  | 0.63              | 2.21  | 2.68           | 6.00  |
|          | % of chisq | 6.5%  | 7.1%              | 3.2%  | 2.0%           | 18.7% |
| 18-30    | Observed   | 1     | 5                 | 16    | 21             | 43    |
|          | Expected   | 3.39  | 4.53              | 15.84 | 19.24          | 43.00 |
|          | % of chisq | 18.9% | 0.6%              | 0.0%  | 1.8%           | 21.3% |
| 31-45    | Observed   | 3     | 2                 | 7     | 6              | 18    |
|          | Expected   | 1.42  | 1.89              | 6.63  | 8.05           | 18.00 |
|          | % of chisq | 19.6% | 0.1%              | 0.2%  | 5.9%           | 25.8% |
| 45-60    | Observed   | 1     | 1                 | 2     | 3              | 7     |

|          |            |       |            |       |       |        |
|----------|------------|-------|------------|-------|-------|--------|
|          | Expected   | 0.55  | 0.74       | 2.58  | 3.13  | 7.00   |
|          | % of chisq | 4.1%  | 1.1%       | 1.5%  | 0.1%  | 6.6%   |
| Above 60 | Observed   | 0     | 0          | 0     | 2     | 2      |
|          | Expected   | 0.16  | 0.21       | 0.74  | 0.89  | 2.00   |
|          | % of chisq | 1.8%  | 2.4%       | 8.2%  | 15.3% | 27.6%  |
| Total    | Observed   | 6     | 8          | 28    | 34    | 76     |
|          | Expected   | 6.00  | 8.00       | 28.00 | 34.00 | 76.00  |
|          | % of chisq | 50.9% | 11.1%      | 13.1% | 24.9% | 100.0% |
|          |            | 8.94  | chi-square |       |       |        |
|          |            | 12    | Df         |       |       |        |
|          |            | .7080 | p-value    |       |       |        |

Source: Author's computation, 2025

P-Value: 0.7080

The largest contributions to the Chi-Square value come from:

- Age group 31-45 (19.6%) in the "Strongly Disagree" category, suggesting a slightly higher-than-expected disagreement in this group.
- Age group >60 (15.3%) in the "Strongly Agree" category, reflecting a greater-than-expected preference for digital banking among this group.

- Despite these observations, the overall contributions remain small and do not indicate significant interdependence.

- The lack of significant association suggests that age does not strongly influence awareness for digital banking.

- Awareness for digital banking seems to be consistent across all age groups.

- Digital banking awareness appears to be broadly distributed across all age groups, with no group showing strong resistance or favor.

Table 3: EDUCATION & DIGITAL BANKING SERVICES EASE OF USE:

|                   |            | Strongly disagree | Disagree   | agree | strongly agree | Total  |
|-------------------|------------|-------------------|------------|-------|----------------|--------|
| Graduate          | Observed   | 0                 | 1          | 9     | 7              | 17     |
|                   | Expected   | 0.37              | 1.11       | 8.50  | 7.02           | 17.00  |
|                   | % of chisq | 38.3%             | 1.1%       | 3.1%  | 0.0%           | 42.5%  |
| Postgraduate      | Observed   | 1                 | 2          | 13    | 11             | 27     |
|                   | Expected   | 0.59              | 1.76       | 13.50 | 11.15          | 27.00  |
|                   | % of chisq | 30.2%             | 3.4%       | 1.9%  | 0.2%           | 35.7%  |
| Primary education | Observed   | 0                 | 0          | 1     | 1              | 2      |
|                   | Expected   | 0.04              | 0.13       | 1.00  | 0.83           | 2.00   |
|                   | % of chisq | 4.5%              | 13.5%      | 0.0%  | 3.8%           | 21.8%  |
| Total             | Observed   | 1                 | 3          | 23    | 19             | 46     |
|                   | Expected   | 1.00              | 3.00       | 23.00 | 19.00          | 46.00  |
|                   | % of chisq | 73.0%             | 18.0%      | 5.0%  | 4.0%           | 100.0% |
|                   |            | .96               | chi-square |       |                |        |
|                   |            | 6                 | Df         |       |                |        |
|                   |            | .9869             | p-value    |       |                |        |

Source: Author's computation, 2025

#### INTERPRETATION

Chi-Square Value: 0.96 Degrees of Freedom (df): 6 P-Value: 0.9869



- The Graduate group contributes the most to the Chi-Square statistic (42.5%), primarily from the "Strongly Disagree" category (38.3%).
- The post-graduate group contributes 35.7%, with slightly higher agreement ("Agree" and "Strongly Agree") than expected.
- The Primary education group contributes only 21.8% of the Chi-Square value, indicating close alignment between observed and expected values.
- This indicates that there is no statistically significant relationship between education level

and the convenience of digital banking being easier to use.

- The results suggest that education level does not significantly influence convenience of digital banking's ease of use
- Digital banking is user-friendly across all education levels and user use it at their convenience This may highlight the effectiveness of user-friendly designs and interfaces in digital banking systems.

Table 4: CONVENIENCE

|                   |            | Strongly disagree | Disagree   | agree | strongly agree | Total  |
|-------------------|------------|-------------------|------------|-------|----------------|--------|
| Graduate          | Observed   | 0                 | 1          | 9     | 11             | 21     |
|                   | Expected   | 0.41              | 2.47       | 7.41  | 10.71          | 21.00  |
|                   | % of chisq | 3.5%              | 7.5%       | 2.9%  | 0.1%           | 14.0%  |
| PostGraduate      | Observed   | 1                 | 3          | 8     | 15             | 27     |
|                   | Expected   | 0.53              | 3.18       | 9.53  | 13.76          | 27.00  |
|                   | % of chisq | 3.6%              | 0.1%       | 2.1%  | 0.9%           | 6.7%   |
| Primary education | Observed   | 0                 | 2          | 1     | 0              | 3      |
|                   | Expected   | 0.06              | 0.35       | 1.06  | 1.53           | 3.00   |
|                   | % of chisq | 0.5%              | 65.7%      | 0.0%  | 13.1%          | 79.3%  |
| Total             | Observed   | 1                 | 6          | 18    | 26             | 51     |
|                   | Expected   | 1.00              | 6.00       | 18.00 | 26.00          | 51.00  |
|                   | % of chisq | 7.6%              | 73.3%      | 5.0%  | 14.1%          | 100.0% |
|                   |            |                   |            |       |                |        |
|                   |            | 11.70             | chi-square |       |                |        |
|                   |            | 6                 | Df         |       |                |        |
|                   |            | 0691              | p-value    |       |                |        |

Source: Author's computation, 2025

Chi-Square Value:

11.70 Degrees of Freedom (df):

6 P-Value: 0.0691

- At a less strict threshold (e.g., 10%), the result may be considered marginally significant, suggesting a potential but weak association.
- Those with only Primary education are more likely to "Disagree," indicating a convenience gap for this group.
- The higher-than-expected disagreement from this group indicates a possible lack of trust or difficulty in usage of digital banking systems.
- Graduates and post-graduates largely align in their awareness, favoring the convenience benefits of digital banking.

## Conclusion

The higher-than-expected disagreement from this group indicates a possible lack of trust or difficulty in usage of digital banking systems. Graduates and post-graduates largely align in their awareness, favoring the time-saving benefits of digital banking. Digital banking is user-friendly across all education levels and user use it at their convenience. This may highlight the effectiveness of user-friendly designs and interfaces in digital banking systems. Awareness for digital banking seems to be consistent across all age groups. Digital banking awareness appear to be broadly distributed

across all age groups, with no group showing strong resistance or favor. This suggests that digital banking platforms are generally perceived as convenient across all age groups, with no strong barriers based on age. The findings highlight that digital banking services have achieved a broad level of accessibility and convenience across different age groups.

Insufficient cooperation between government agencies, financial institutions, and technology providers hampers the development and implementation of effective digital payment solutions.

The regulatory environment for digital payments in Nigeria is evolving, and there are ongoing debates about the appropriate balance between innovation and regulation. Besides that, digital literacy and awareness are also concerning issues for growing digital wallets in remote areas. Still, rural people lack knowledge and ability to use information and communication technologies. Now a day's different wireless payment method have been used. Mobile devices are generally integrated for the purpose of payment. The proposed digital wallet is for the purpose of payment which is highly secured using AES algorithm and fingerprint scanner. The fingerprint scanner makes it very easy for the user to make the payment. The required amount of bill is then automatically paid without any efforts. This method of payment makes the bill payment much easier.

Throughout the ages the method of payment have evolved and provided effective means for exchange of value. This has ultimately created the business world which has become integral part of everyone's life. The emergence of electronic world and the rise of e Commerce have forced to invent new payment methods. Without payment there is no business and e Commerce cannot exist without effective means of exchanging values. The proposed work provides a very modern and advance way of payment technique through which the user can easily do billing process without much effort. The digital wallet thus provides a safe and secure way of payment which can be used in everyday life.

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