University of Nairobi

Department of Computing and informatics

Information Technology Management

Research Project

FACTORS INFLUENCING CONSUMER ADOPTION OF MOBILE PAYMENTS AT EQUITY BANK

Submitted By

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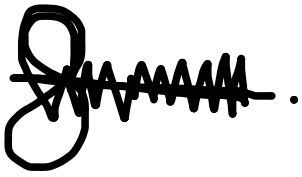
REG: P54/32804/2019

PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE IN INFORMATION TECHNOLOGY MANAGEMENT OF THE UNIVERSITY OF NAIROBI

July 2023

DECLARATION

This research project is my original work and to the best of my knowledge, this research work has not been submitted for any other award in any University.

Signature  Date: 16th August, 2023

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REG: P54/32804/2019

This research project has been submitted in partial fulfillment of the requirement of the Master of Science Degree in Information Technology Management of the University of Nairobi with my approval as the University supervisor.

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Name: PROF: TIMOTHY MWOLOLO WAEMA

ACKNOWLEDGMENT

I wish to extend my appreciation to my Supervisor, Professors and Lecturers and fellow students at the University of Nairobi for Learning ,guidance and advice they offered to me as I went through my education.

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ABSTRACT

Consumers often conduct financial transactions using mobile wallets, and mobile wallet companies use the most recent, highly secure encryption technology to safeguard consumer information. While consumers are assured that their transactions are secure by mobile payments, the trend toward mobile payments and security concerns continue to be of the utmost significance, and one could argue that consumer discomfort with the existing situation has hampered the widespread use of mobile wallets. The main aim of this study is to establish the factors influencing consumer adoption of mobile wallet payments. Specific objectives include identifying the effect of Performance Expectation, Effort Expectation, Social Influence, and Facilitating Conditions on consumer adoption of mobile wallet payments. This study employed a descriptive research design. The target market for this campaign was Equity Bank's mobile payment users. The researcher sampled 385 participants using Slovian's formula. Questionnaires were utilized in the study to collect data from the selected respondents. Both descriptive statistics and qualitative analysis were utilized to analyze the data. According to the study's findings, the independent variables (Performance Expectation, Effort Expectation) had a strong positive correlation while (Social Influence, and Facilitating Conditions) had a positive but weak relationship with and the dependent variable (Consumer Adoption of Mobile Wallet). In order to maintain their position as the leading suppliers of payment services, the research recommends banks to strike the right balance between innovation and trust and make a clear choice between being a leader or a fast follower.

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CHAPTER ONE

INTRODUCTION

1.1Background of the study

1.1.1 Mobile Wallet

A mobile wallet is a type of virtual wallet that stores information for credit cards, debit cards, and loyalty cards. Software that has been downloaded to a smartphone or tablet can be used to access it. Customers utilize mobile wallets to make payments while in stores than carrying cash or the credit cards to pay physically. Businesses that have registered with mobile service providers accept mobile wallet payments. Google Pay, Apple Pay, and Samsung Pay are the three most popular mobile wallets. Wallets are either pre-installed on mobile devices or can be acquired through app stores (Swain & Kesh, 2020).

A mobile wallet's encrypted data renders it impossible for hackers to utilize it for illicit reasons. Unlike conventional credit and debit cards, which may be stolen or copied, mobile wallets have encrypted keys that might not give any relevant information, making them more difficult to steal. After setting up a mobile wallet on a mobile device, the user must enter their credit card information, information from reward cards, and information from coupons. The information is then linked to a recognizable personal identifying format, such as a key or a smartphone-readable QR code. (Khan, 2021).

The smartphone app communicates with other devices when a customer makes an in-store transaction using Near-Field Communication (NFC) technology. The NFC executes the transaction at the payment terminal using a QR code, key, or another type of personal identification format. The

user must touch or wave the NPC-enabled device over the retailer's point-of-service terminal to initiate the action. (Ying & Mohamed, 2020). There are numerous types of mobile purses: Open wallets can be used by banks either directly or through intermediaries. Open wallets allow users to take cash deposits into their accounts out of their mobile wallets to pay for transactions. PayPal is an example of an open mobile wallet because it gives customers the choice to accept cash while also allowing them to make in-person and online purchases. Due to their affiliation with that one retailer, users of closed wallets are only able to utilize the funds to pay for purchases made with that specific retailer (Gurme,2019).

Users are not permitted to withdraw the funds as cash or use them to make purchases from other merchants or third-party service providers. Amazon Pay is a prime illustration of a secured wallet. As long as a contract between the merchant and the mobile wallet provider is in place, users with semi-closed mobile wallets can use the monies in their wallets to make purchases from a variety of merchants. People might choose to deposit money into a bank account. Users, however, are unable to remove currency from partially closed wallets (Gurme, 2019).

Choosing a mobile wallet and setting it up to make purchases are both simple processes. A user's initial step is to download mobile software to a smartphone, tablet, or other compatible device from an app store. The next step is to activate the app and begin entering the necessary data, including credit cards, debit cards, coupons, reward cards, and other items. Wallets can store the data for numerous cards, but only one will be chosen as the default payment method. Before making a purchase, a customer must alter the default card if they wish to use a different card. (Jose & Joseph, 2021).

A user must locate retailers who accept their preferred payment gateway if they wish to make an in-

store transaction. Stores that take mobile wallet payments generally feature a contactless payment indicator that can be used to find them (normally, this indicator looks like a sideways Wi-Fi sign). To make a payment, users must tap or wave their smartphone in front of an NFC-enabled terminal. After the transaction is finished, the merchant receives a notification regarding the money. The merchant must abide by the notification alert for the purpose of transferring funds from the client's account to the merchant's account (Islam & Sivananthan, 2022).

Consumers often conduct financial transactions using mobile wallets, and mobile wallet companies offer the most recent, highly secure encryption technology to safeguard user information. It gives users of mobile wallets a guarantee that their bank and credit card information is secure and that they will complete their commitment in the event of a future default. The most prevalent behaviors include not being aware of them, utilizing public WIFI, and exchanging OTP with others (Jose & Joseph, 2021).

Security for mobile wallets is made up of a number of components, including risk, safety, trust, and privacy. The mobile wallet applications offer a variety of biometric authentications for security so that users can feel secure using them for their financial activities. According to Jose & Joseph (2021) "trust" is an expectation based on consumers' perceptions of utilizing mobile wallet applications. Consumers feel that mobile wallet programs offer moral, safe, and encrypted database software to preserve their privacy in terms of privacy. Risk arises when the user believes the mobile wallet application forbids any unapproved financial transactions (Nambiar & Bolar, 2022).

1.1.2 Consumer Adoption of Mobile Payments

Consumer acceptability of mobile wallets varies widely between markets. While China and India are leading the world in the use of mobile wallets (65% and 61% of surveyed consumers used mobile wallets, respectively), Western countries like the UK and the USA are still in the early stages of adoption (16% in the UK and 12% in the USA) (Ystats, 2019). Given that the global market is expected to rise dramatically from a market size of 880 USD billion in 2017 to 9,352 USD billion by 2026 (Research and nations, 2018), there is a lot of value in attempting to boost the low levels of adoption in Western countries.

Recent market research on the UK mobile wallet market, the subject of the current study, revealed that users' apathy is the main obstacle to technology adoption in this nation. A consumer poll revealed that 39% of respondents considered the thought of using a phone to make a purchase unpleasant, 22.5% questioned if it offered any advantages over using cash or plastic cards, and 16.5% voiced security worries about payment information in the event that the mobile devise gets stolen or lost (Stats.com ,2019). The development of contactless credit and debit cards from credible service providers, which has overtaken the trend of mobile payments, is the main reason for the absence of an apparent comparative advantage (Fisher, 2019).

The Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Condition (FC) aspects are seen as direct indicators of user acceptance and usage behavior with reference to technology by the Unified Theory of Technology Acceptance and Use (UTAUT) model. The study is based on this theory. Age, gender, voluntarism, and experience are the main moderators of the constructions. Performance expectancy entails the extent of a person’s believes regarding

whether a technology will effectively work or not (Fisher, 2019).

Technology usability ease is referred to as effort expectation. The elements of effort expectations are perceived ease of use, complexity, and ease of use. Moderating variables include gender, age, and experience. A person's impressions of what other people think of them and their decision to accept and use a technology are referred to as social influence. Subjective norms, social forces, and images make up its components. The extent to which one thinks that the existing structures both organizational and technological support use of the proposed technology is called facilitating conditions. The four elements constitute the independent variables and specific objectives of the study.

1.2 Problem Statement

A mobile user survey carried out in 2015 among users of mobile payment systems indicated that security was a major concern in the choice, adoption and use of mobile payments. Respondents (20%) had the fear that other parties would intercept their transactions, information or data. An additional 13% were afraid of their mobile phones getting hacked. Another survey involving at least 900 security experts concluded that while mobile payments are built or robust security platforms, they offer no security (47%). The results from these surveys show that despite the call to adopt and use mobile payments, consumers still express discomfort and hence slow adoption of mobile payment applications. This could be an important factor limiting adoption of mobile wallet payments

The majority of current studies that are pertinent to this study have focused on consumer adoption of mobile payments up to this point. These studies have investigated the impacts of elements like perceived utility, usability, security, and societal influence (Schierz, Schilke, and Wirtz Citation

2010; Yang et al. Citation 2012). However, the mobile wallet's features go beyond just mobile purchases. Beyond the mobile payment option, its additional features such as safety, trust, privacy, and risk may give users more incentives to embrace it. Previous studies were also conducted in other countries where the adoption rate differs from those in Kenya. This study thus endeavors to establish the factors influencing consumer adoption of mobile payments.

1.3 Objectives

1.3.1 General Objective

Factors influencing consumer adoption of mobile wallet payments.

1.3.2 Specific Objectives

i. To identify the effect of performance expectation on consumer adoption of mobile wallet payments.

ii. To establish the effect of effort expectancy on consumer adoption of mobile wallet payments.

iii. To determine the effect of social influence on consumer adoption of mobile wallet payments.

iv. To assess the extent to which facilitating conditions affect consumer adoption of mobile wallet payments.

1.4 Hypothesis

$H_0$1: There is no significant relationship between performance expectations and consumer adoption of mobile wallet payments.

$H_0$2: There is no significant relationship between effort expectancy and consumer adoption of mobile payments.

$H_0$3: Social influence does not affect consumer adoption of mobile payments.

$H_0$4: Facilitating conditions have no significant influence on consumer adoption of mobile payments.

1.5 Justification of the study

Although adoption rates vary significantly, consumers use of mobile wallet payments is a common phenomenon today. Adoption rates and factors influencing adoption of mobile payment applications is a big concern to application developers. While users on one hand express security concerns while using the proposed mobile payment systems such as mobile wallets. This study makes a significant attempt to analyze the factors influencing adoption of mobile wallet payments.

1.6 Significance of the study

1.6.1 Customers

Due to the swiftly evolving information technology, a multitude of mobile payment providers have supplanted the mobile payment systems that banking institutions originally provided. Unified Theory of T Acceptance and Use of Technology (UTAUT) was used in this study to examine the adoption of mobile payment technologies in order to understand the issues associated with adoption among banking clients in Kenya. In the long run, it is projected that customer knowledge of the security considerations influencing the use of mobile wallets would increase. They will feel more secure knowing that service providers are ready to handle any problems that arise with the adoption of mobile wallets.

1.6.2 Mobile Wallet Service Providers

The findings could assist mobile wallet service providers in better understanding the causes of perceived risk and promote the creation of effective mitigation methods for consumer risk aversion toward mobile payments.

1.6.3 Researchers

Many studies undertaken focus on mobile banking and are in the context of microfinance institutions and overall economic development (Kigen, 2011; Blauw & Franses 2011; Erickson, 2010). Upon completion of this study, a copy shall be available at the library for other researchers to benefit in terms of reference. Those pursuing studies in line with mobile money transfer and small-scale vendors will be able to access areas for further research which shall be indicated in chapter five of this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

An analysis of the literature that relates to the study's theme is included in this chapter. It consists of theoretical literature, empirical literature, and conceptual foundation.

2.2 Theoretical literature review

2.2.1 Unified Theory of T Acceptance and Use of Technology (UTAUT)

The UTAUT theoretical paradigm contends that human technology use is governed by behavioral intention. Four key elements that directly affect how people perceive their likely to adopt the technology are performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003).

According to the UTAUT model, the dimensions of Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Condition are each viewed as independent, direct indications of user acceptability and usage behavior with reference to technology. Age, gender, voluntarism, and experience are the primary regulators of the constructions. Performance expectancy is the degree to which a person thinks that employing technology will enable him or her to work more productively. Some of the characteristics that affect PE are perceived usefulness, extrinsic motivation, work fit, relative advantage, and result expectancies (Maillet, Mathieu, & Sicotte, 2015).

The influence of PE on technological acceptance is moderated by age and gender. The term "effort expectation" describes how simple it is to use technology. The elements of effort expectations are perceived ease of use, complexity, and ease of use. According to Maillet, Mathieu, and Sicotte (2015), moderating variables include gender, age, and experience.

Social impact is the weight that a user of new technology has in other people's perceptions of that

user. Its constituents are subjective norms, social forces, and pictures. Age, gender, voluntariness, and experience have all been noted as factors that can lessen the influence of social factors. The degree to which one believes that the existence of organizational and technological infrastructure facilitates the application of technology is referred to as the facilitating condition. Compatibility, facilitating circumstances, and perceived behavioral control make up this factor. For facilitating situations, age and experience have been found as moderating variables (Abbad, 2021).

2.2.2 Innovation Diffusion Theory

In accordance with Rogers' Innovation Diffusion Theory (IDT), knowledge is shared and disseminated throughout social systems and people adapt and use new ideas, behaviors, or products. According to Rodgers, five innovation characteristics—relative advantage, compatibility, complexity, testability, and observability—can have an impact on the penetration of innovations. An innovation's relative advantage is initially determined by a person's evaluation of whether it is better than or worse than earlier comparable events.

According to Rogers (1995), people usually adopt innovations when they think they are better than ones that are currently in use. Second, compatibility is the evaluation of an invention's fit with a person's existing and prior concepts, knowledge, or experiences. When innovations suit or reflect a person's preexisting understanding, they are more likely to be accepted. Third, complexity is defined as a person's perception of how simple or complex innovation is to comprehend and use. Complexity appears to have a negative relationship with adoption rates. Fourth, testability offers the opportunity to try something new. If one can pinpoint the benefits of his or her innovation, the adoption rate will increase.

This idea states that five features of innovation characteristics influence decision-making. As social systems adopt technology, these include perceived utility, need appropriateness, complexity,

testability, and visibility. According to the hypothesis, adopters can be divided into several categories, including innovators and early banks. Furthermore, contrary to what the theory predicts, not all SMEs in Kenya have implemented Internet banking technology, and those that have not necessarily do so at the same time. Innovators, Quick Adopters, Early Mainstreams, Late Mainstreams, and Late Comers are the categories. It is employed to demonstrate or clarify the reasons why certain small businesses adopt online banking before others.

2.2.3 Technology Acceptance Model

In 1989, Davis proposed the Technology Acceptance Model (TAM). The author claims that the two main components that make up preparedness to use computer technology are utility and simplicity. According to this notion, IT recruiting practices are influenced by a person's propensity to use IT. Ease of use refers to how user-friendly a target system is perceived to be by a user, whereas utility assesses the user's perception of how likely it is that using a specific IT application will improve their ability to execute a task.

According to this paradigm, user-friendliness attitudes are the primary factors that determine whether users would like or dislike a system. Users think that a simple system makes it easier for them to do their jobs. TAM postulates that behavioral intentions are directly influenced by a person's attitudes and perceived usefulness. Although perceived usefulness can be influenced by perceived ease of use, perceived usefulness is the key variable between usability and intention. Usability and usefulness both have a major impact on intention.

The technology adoption paradigm suggests that external factors may mediate the relationship between behavioral intentions and actual use by influencing how utility and usability are viewed. It is generally acknowledged that users will adopt an IT system more rapidly if they believe it to be user-friendly. TAM has been shown to empirically outperform rival models like TRA because of its

parsimony, scale robustness, and high generalizability (Chuttur, 2009).

TAM was specifically investigated and applied in a technological setting. TAM has been used in several studies to foresee and understand system usage as well as user views of their propensity to embrace online systems, it can be used to understand the adoption of online banking (Lee, 2003). The study recommends adding TAM since it is the greatest tool currently available for building a more comprehensive model for online banking uptake and evaluation. Mobile wallets are criticized for being a technology that consumers must first accept to use, according to the technology acceptance paradigm.

2.3 Empirical Literature

Albastaki, Hamdans, Albastaki, and Bakir examine issues and identify factors that are most likely to have an impact on customers' approval of the deployment of e-payments in the Kingdom of Bahrain in their study from 2022. A quantitative study approach was used to examine the effects of e-payment data security, trust, usability, and accessibility on users' approval of the service. A questionnaire survey was electronically distributed to a purposive sample, and 531 replies were collected, providing the required sample size. The study's conclusions showed that the aforementioned elements had a big impact on whether customers in the Kingdom of Bahrain would accept electronic payments.

As a key first step in envisioning a cashless future, Mohd Thas Thaker, Subramaniam, Qoyum, and Iqbal (2022) explored the elements impacting e-wallet adoption intention in Malaysia. The findings showed that factors such as performance expectations, social influence, hedonic incentives, trust, enabling conditions, and habit constructions all had an effect on a person's behavioral intention to

constantly utilize an electronic payment system, or "e-wallet." The perceived security construct doesn't appear to have much of an impact, which is interesting because it suggests that customers are more likely to favor regulations.

In contrast to the M-payment mechanism, Chuchuen & Rittippant (2022) investigated the perception of security and trust in the service process of M-payment adoption. It concentrated on the interplay between security, trust, and customer satisfaction during the adoption of mobile payments as well as the variables affecting the variations among M-payment adopter phases. The outcome demonstrates that, in that order, adoption of M-payments, trust, and security have a substantial direct impact on M-payment satisfaction.

When analyzing the impact of hurdles on mobile payment non-adoption intention, Larson (2020) looked into the barriers that influence mobile payment non-adoption intention. 385 non-mobile payment consumers in Yangon were surveyed for primary data using a google form. The data are gathered using a straightforward random sampling technique. By ensuring that no one was using a mobile payment, the questionnaire was collected. On the data, multiple regression was used. Complexity, value, risk, inertia, and perceived cost are five barriers that are examined. According to the regression analysis, people's intentions to make non-mobile payments are significantly influenced by all four obstacles except the value barrier. Because respondents are concerned about losing their money, the risk barrier is the one that most strongly influences their propensity to make non-mobile payments.

In 2017, Moorthy et al. looked into the barriers to adopting mobile commerce. The results of this study showed that barriers related to usage, value, risk, tradition, and image significantly affect Generation X's adoption of mobile commerce in Malaysia. Yang, Liu, and Yu (2015) sought to

comprehend and quantify the relationship between a variety of uncertainties and perceived risk dimensions that restrict the acceptance of mobile payment (m-payment).While perceived performance risk, perceived financial risk, and perceived privacy risk were found to have strong negative effects on perceived value and acceptance intention, perceived information asymmetry, perceived technology uncertainty, perceived regulatory uncertainty, and perceived service intangibility are confirmed as the key determinants of perceived risk.

Haritha, P. H. (2022) looked at how perceived trust affected adoption readiness and desire to utilize fintech in India. The analysis's conclusions support the proposed model, making it simpler to comprehend how adoption readiness, trust, and intention to use digital payments interact. Zkan, Bindusara, and Hackney (2010) tried to identify the critical components that would ensure consumer adoption of these through theoretical frameworks (such as the theory of reasoned action and the technical acceptance model) and empirical study. The study revealed a relationship between security, trust, perceived benefit, assurance seals, perceived risk, and usability and perceived relevance of the fundamental elements.

The factors impacting consumers' adoption of mobile wallets as a cash alternative when making purchases of goods and services were researched by Madan & Yadav (2016). A survey included more than 210 users of mobile devices. The study included two additional elements—perceived regulatory support (PRS) and promotional benefits (PBs), as well as an integrated method for assessing the adoption of mobile wallets. Performance expectancy, social influence, facilitating conditions, perceived risk, perceived value, PRS, and PBs were found to be significant predictors of behavioral intentions to use mobile wallet solutions when the proposed relationships were analyzed using structural equation modeling.

Researchers Liébana, Sánchez, and F. Muoz-Leiva (2014) examined the potential moderating impact of users' prior use of technologies of a similar nature. According to the empirical findings, the proposed behavioral model (known as MPAM-VSN) is appropriately modified, demonstrating that prior usage enhances intention to use. In terms of network capacity and security, the study's findings had intriguing ramifications for the adoption of mobile payment systems.

The elements affecting customer acceptance and the actual implementation of mobile payment networks were examined empirically and incorporated by Yeh (2020). This study supported the critical link between cognition (intention to use) and behavior (actual use), even if technology and societal factors affect customers' intents to utilize mobile payment for transactions. The difference between the intention to accept mobile payments and its actual adoption is influenced by a number of factors, including service quality, service innovation, brand equity, switching costs, and public policy.

Sahi, Khalid, Abbas, and Khatib (2021) conducted a thorough evaluation of the pertinent literature that they had obtained from the Scopus and Web of Science databases. Methodologically, a final sample of 193 research publications was identified and evaluated. The results demonstrated that no one explanation could fully account for the complex nature of the adoption of electronic payments.

A number of factors, including facilitating factors like perceived transaction convenience, compatibility, relative advantage, and social influence, environmental factors like government support and additional value, inhibiting factors like perceived risk, and individual factors like absorptive capacity and personal innovation in IT (PIIT), can influence adoption intention in China, according to Chen & Chen (2019). Adoption intention is positively impacted by

perceived transaction convenience, compatibility, relative advantage, government backing, added value, absorptive capacity, affinity, and PIIT, while perceived danger negatively impacts adoption intention and social influence has no detectable influence. The three most important factors that affect adoption intentions are perceived transaction convenience, additional value, and absorptive capacity.

Yang, Mamun, Mohiuddin, Nawi, and Zainol (2021) used the unified theory of acceptance and use of technology (UTAUT) to examine the influences of perceived usefulness, perceived ease of use, social influence, facilitating conditions, lifestyle compatibility, and perceived trust on adults' intentions to use and adoption of e-wallets. In the interactions between predictors and e-wallet adoption, this study established the mediational impact of e-wallet usage intention. The influence of lifestyle compatibility on the respondents' tendency to use an e-wallet was lowered by their age and gender.

The impact of gender on attitudes toward security and the adoption of mobile payments was examined by Sleiman et al. in 2021. The results show that perceived risk significantly lowers perceived trust and client happiness. Customer satisfaction is a reliable predictor of client loyalty, and perceived trust is the most crucial factor in producing it. Gender discrepancies significantly restrict the use of the mobile payment service.

Using a sample of consumers that is representative of Indian users, Chawla and Joshi (2019) conducted an experimental analysis on the factors that affect a consumer's attitude toward and intention to use mobile wallets. The findings demonstrated that a number of factors, including perceived utility, perceived usability, trust, security, enabling conditions, and lifestyle fit, have a significant impact on how consumers feel about and intend to use mobile wallets.

2.4 Conceptual Framework

The Unified Theory of Acceptance and Use of Technology (UTAUT), which served as the foundation for the conceptual framework, was created. Four crucial factors—performance expectancy, effort expectancy, social influence, and facilitating conditions—affect whether and how technology is accepted and used. The model was selected because it offers a logical framework for comprehending the elements that affect how technical improvements are accepted and used. Using a mobile wallet to make payments is one such innovation.

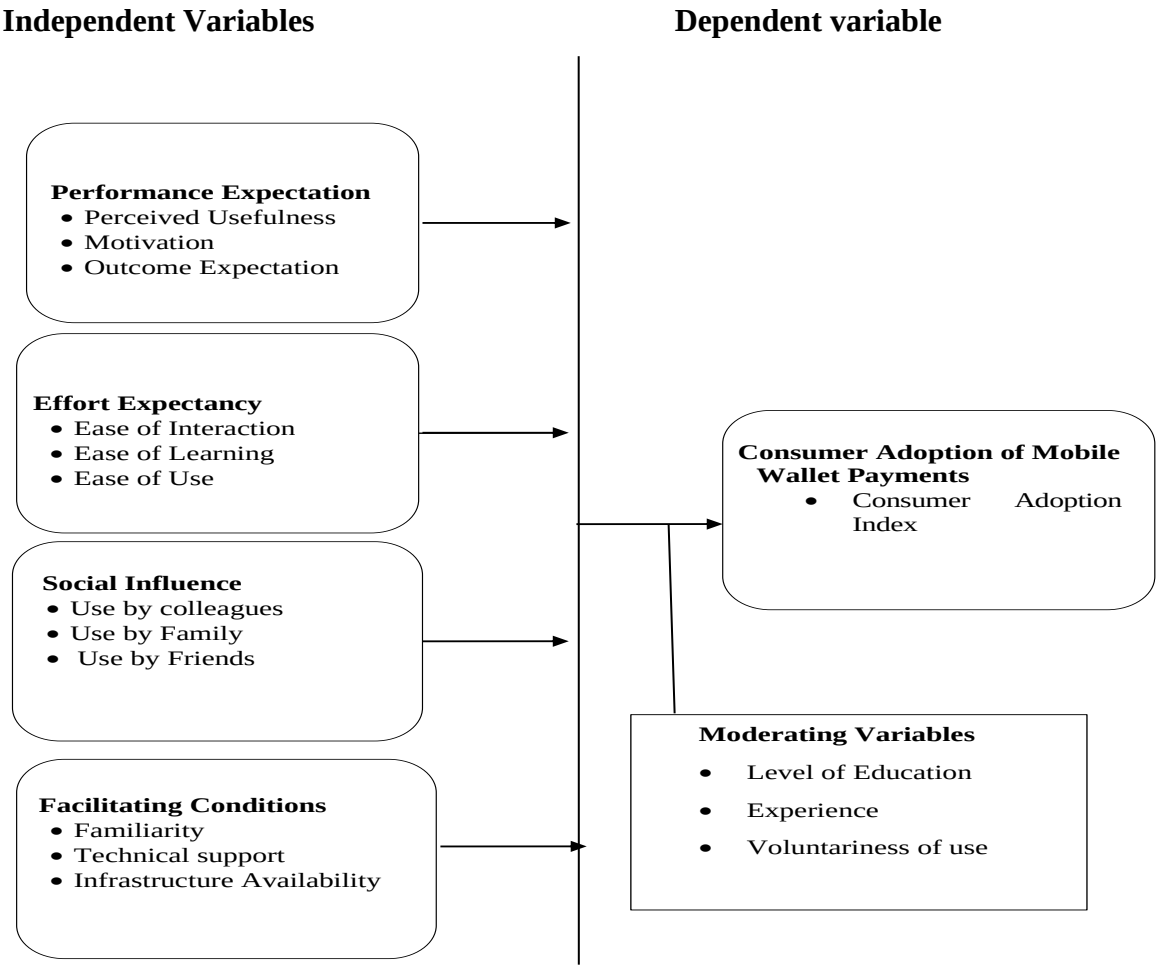


Figure 2.1 Conceptual Model

2.5 Operationalization

2.5.1 Performance Expectancy

The degree to which a person believes that using technology will help him or her function more efficiently is known as performance expectancy. It explains how user-friendly technology is. The three key sub-components are perceived usefulness, motivation, and outcome anticipation**.**

2.5.2 Effort Expectancy

Perceived ease of use, complexity, and ease of use are the components of effort expectations. The three fundamental components of performance expectancy are simplicity of use, simplicity of learning, and simplicity of engagement.

2.5.3 Social Influence

Social impact is the weight that a user of new technology has in other people's perceptions of that user. Its constituents are subjective norms, social forces, and pictures. Colleague use, family use, and friend use of technology are the essential elements.

2.5.4 Facilitating Conditions

The presence of organizational and technological infrastructure is referred to as one's belief that it facilitates the application of technology. Infrastructure Availability, Technical Support, and Familiarity are the three primary sub-variables.

2.5.5 Mediating Factors

The relationship between the independent variables and dependent variable (adoption of mobile wallet payments) is moderated by factors such as education, experience and voluntariness of use.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The research techniques that were employed to ensure the specified objectives were met are described in this section. The selection of the target population, the sampling technique, the sample size deemed appropriate for the target sample, and the research methodology employed in the study were the main areas of focus. The study's data collection and analysis are the only topics mentioned in this section. **3.2 Research Design**

Kothari (2014) asserts that a method used to address research problems is known as research design. This research employed purely investigative methods. The research endeavor will make use of both qualitative and quantitative data. The main objectives of the study were attained through the use of surveys to help answer the research questions. The surveys were used because they suit the pre-established study design and because they were used to gather descriptive data. Information on the subject was gathered with the help of the descriptive study design.

3.3 Target Population

A population is described as objects, individuals, events, or entities with a common characteristic that conforms to set criteria being studied or analyzed (Rattray & Jones, 2007). They are the cases or subjects that are ideal for the topic being analyzed in a research study. The target population was Equity Bank mobile banking customers.

3.4 Sample Size and Sampling Procedure

A sample is a subset of a population that serves as a proxy for the complete population under study

(Mugenda & Mugenda, 2003). The research's statistical findings are generalized using the sample size that was taken and examined. Sampling is frequently used to reduce the amount of money and time needed to carry out a study. A sample size should represent 10% to 20% of the whole population in order to be considered optimum.

The sample size was calculated using Slovin's formula from the population. When the underlying population size is known, this sample calculation is ideal (Abayo & Oloko, 2015).

. The formulas and parameters used are:

$= N / (1 + Ne^2)$

Where:

- n = Number of samples,
- N = Total population and
- e = Error tolerance level

With N being 10,000 mobile wallet users, the sample was derived as follows;

- $n = N / (1 + N e^2) =$
- $10,000 / (1 + 10000 * 0.05^2) = 285.714286$

10000/ (1+10000*0.0025)
10000/ (1+25) = 384.61
=385

3.5 Data Collection Techniques

Semi-structured questionnaires were distributed in order to collect primary data. It was feasible to collect both quantitative and qualitative data thanks to the usage of the questionnaires. A Likert scale was used to collect quantitative data for the closed-ended questions. From 1 (strongly disagree) to 5 (strongly agree), the Likert scale can be used. The construction of the questionnaire was based on the elements and sub-variables of the Unified Theory of Acceptance and Use of Technology (UTAUT). According to the UTAUT theoretical paradigm, behavioral intention controls how people use technology. Performance expectancy, effort expectancy, social influence, and facilitating conditions are the four main factors. The questionnaire is as in Appendix I.

According to Kothari (2014), a questionnaire is the best method for gathering information from a big population. It is time-efficient because a lot of information is gathered at once. The significance of the research was explained to the respondents, and assistance was given where necessary.

3.6 Reliability and Validity

Validity necessitates that the research can test the criteria it was intended to test, whereas reliability looks at how applicable the study is. The degree to which the results generated by the statistical tools employed are consistently similar can be used to assess the reliability of a research project. (Mauti, 2021). The study's results will come from a questionnaire approved by the university research supervisor. During the trial time, the questionnaires were re-administered to evaluate the accuracy of the respondents as well as the validity of the questionnaire being used to meet the reliability standards. The validity of the statistical tool is determined by the wording and formatting of the questionnaire. A selected pilot group received a pilot test and survey materials to gather input and modification suggestions. (Bryman,2019).

3.7 Data Analysis and Representation

To the greatest extent possible, mistakes, incompleteness, and information gaps were found in the obtained data and minimized. This was a significant project because it made sure the data was accurate and of high quality. The data was examined using SPSS version 25.0, Statistical Package for Social Scientists. The study employed both descriptive and inferential analysis. The variables were described using descriptive analysis, and their relationships were shown using inferential analysis. The association between the study variables was demonstrated using the regression model below.

$\mathbf{Y=\beta_0+\beta_1X_{1+}\ \beta_2X_{2+}\ \beta_3X_{3+}\ \varepsilon}$
Y= Consumer Adoption of Mobile Wallet
β_0 = Constant
$X_{1=}$ Performance Expectation
X_2 = Effort Expectancy
X_3 = Social Influence
X_4 = Facilitating Conditions

β_1- β_4 = The regression co-efficient.
ε is the random error term that accounts for other variables not included in the model.

3.8 Ethical Considerations

To ensure the respondents' anonymity, the questionnaires will not contain their names, and the data will be transformed into quantitative and qualitative data with any information that could identify specific people removed. (Bryman, 2016). Among the ethical considerations are individuals' anonymity, confidentiality, and refraining from presenting false data or information.

Before the research project begins, permission from the appropriate authorities will be sought and all data collection methods will be neutral. The study's goals were laid out in writing to ensure that every subject is aware of what the researchers plan to examine and lower the possibility of providing incorrect information. The research study also cited all the information from other academic works.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

4.0 Introduction

This chapter provides a detailed data analysis of the research's findings, starting with a response rate analysis and concluding with a diagnostic model analysis.

4.1 Response rate.

A total of 385 respondents were received. The responses returned were 265 at 69% while the responses were 120 at 31%. According to Bryman (2019), a response rate of 65% and above is a good response rate.

Table 4.1 Response Rate

		Frequency	Percent	Cumulative Percent
Valid	Response	265	69.0	69.0
	Nonresponse	120	31.0	100.0
	Total	385	100.0	

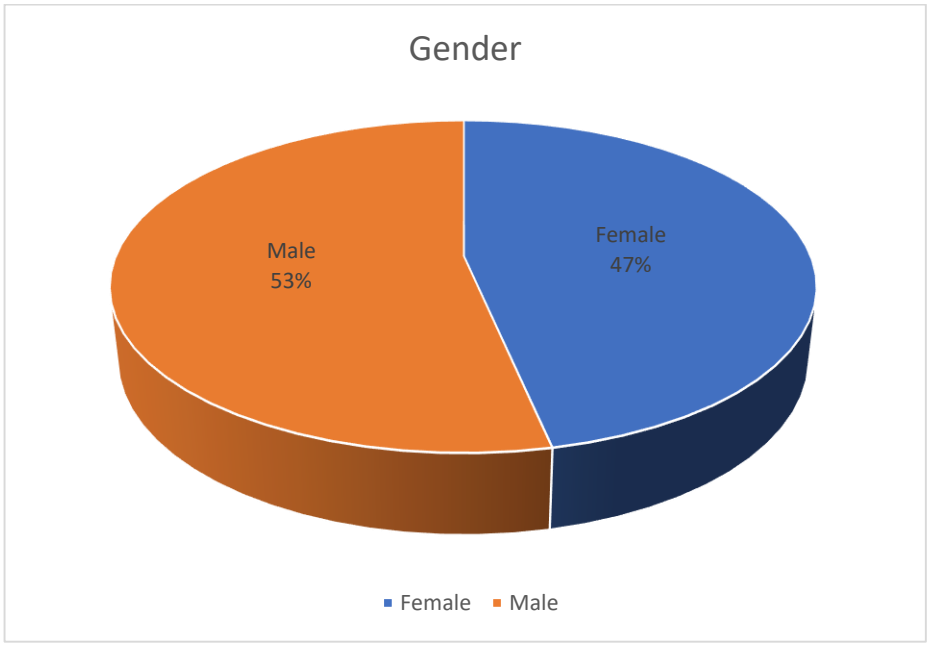
Source: Researcher (2023)

4.2 Analysis of Respondent's Background

4.2.1 Gender Distribution

According to responses by gender, 53% of respondents were men and 47% of respondents were women. The illustration below illustrates this.

Figure 4.1Gender Distribution

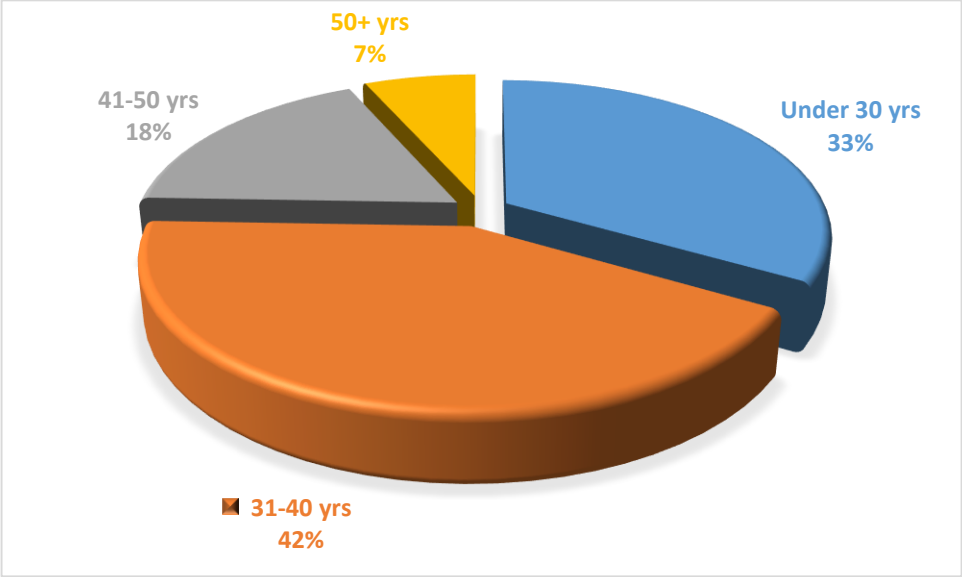


Source: Researcher (2023)

4.2.2 Distribution by Age Bracket

By age most of the respondents were 31-40 years at 42% followed by under 30 years at 33%,41-50 years at 18%, and above 50 years at 7%. The findings are displayed in Figure 4.2.

Figure 4.2 Age Bracket

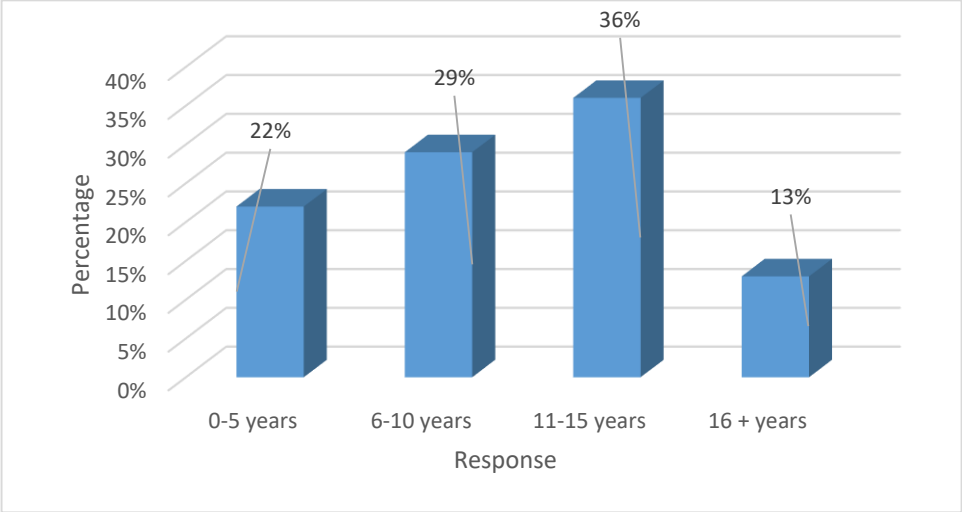


Source: Researcher (2023)

4.2.3 Use of Equity Bank Products and Services

The duration of respondents' use of bank products was a supplementary question posed by the researcher. According to the statistics, the majority of the respondents had been clients for 11-15 years at 36% followed by 6-10 years at 29%,0-5 years at 22%, and 16 years and above at 13%. The outcomes are displayed in the following figure.

Figure 4.3 Use of Equity Bank Products and Services



Source: Researcher (2023)

4.2.4 Respondent's Education Level

According to the data, most of the respondents, 38%, were diploma holders followed by degree holders at 27%, high school at 11%, Masters degree at 15%, others at %, and doctorate at 2%. The findings show that the majority of the respondents were educated and well-informed regarding consumer adoption of banking technologies such as mobile wallet payments. The respondent's educational backgrounds are displayed in the table below.

Table 4.2: Respondent Distribution by Highest Education Level

	Frequency	Percent
High School	29	11
Diploma	101	38
Degree	72	27
Others	18	7
Masters	39	15
Doctorate	6	2
Total	265	100.0

Source: Researcher (2023)

4.3 Measuring Consumer Adoption of Mobile Wallet

4.3.1 Frequency of Shopping at Supermarkets

How often mobile payment services are used can be determined depending on the frequency of shopping. From figure 4.4 the majority of the respondents at 42.9 % go shopping more than 3 times in a month followed by 36.6% who do shopping 2-3 times in a month, The remaining 15.2 and 5.4% do shopping once a month and less than once in a month respectively. The findings indicate a high frequency of shopping which can be associated with the greater need for secure and convenient payment systems. The responses are given in the subsequent figure.

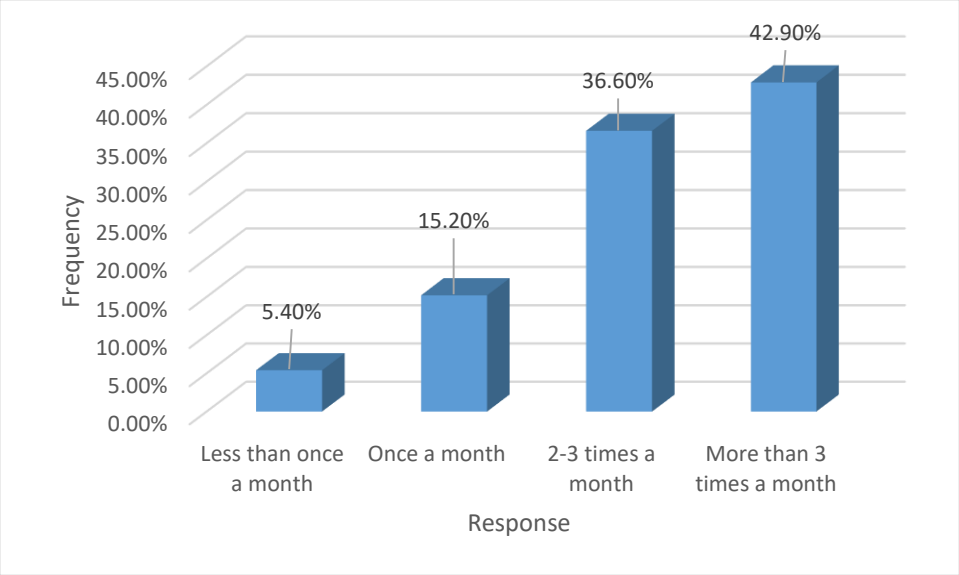


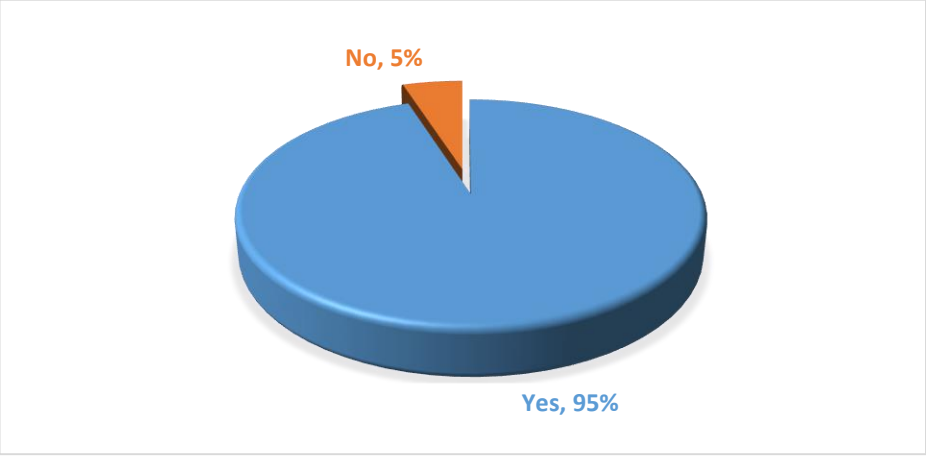
Figure 4.4 Frequency of Supermarket Shopping

Source: Researcher (2023)

4.3.2 Ever used Mobile Payments?

When asked whether they had used mobile money payment services, a great majority of 95% of respondents pointed out that they had used mobile payment services while 5% had not. The status could be attributed to the fact that most of the respondents go to shopping places regularly. They are also educated and informed on the mobile payment applications available. The findings in the subsequent figure relate to the respondents who had ever used mobile payments at the supermarkets during shopping.

Figure 4.5 Ever used Mobile payments



Source: Researcher (2023)

4.3.3 Types of Mobile Payments Used

Respondents were required to indicate the types of mobile payment applications used during payments. Mpesa was leading at 80% followed by Equittel at 10%, airtel money at 5%, T-cash at 2%, M-Co-op cash at 2%, and Loop at 1%. The responses were given in the figure below.

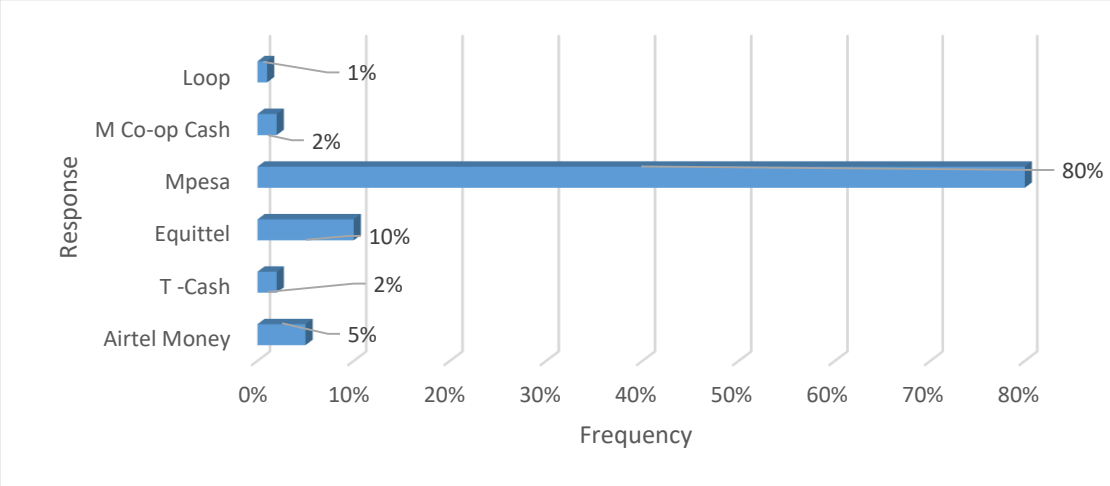


Figure 4.6 Types of Mobile Payments Used
Source: Researcher (2023)

4.3.4 Benefits of using Mobile payments

Various factors motivate consumers to use mobile payments. Respondents (55%) indicated that they use it for convenience,15% that mobile payments are quick and efficient,20% for enhanced security,8% for managing expenses and 2% used them to access discounts and offers. The responses are as in the figure below.

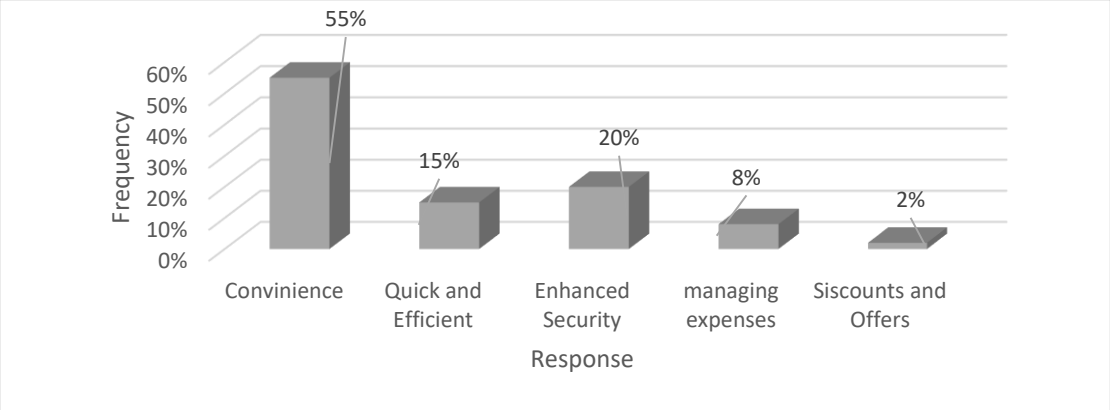


Figure 4.7 Benefits of using Mobile payments
Source: Researcher (2023)

4.3.5 Challenges with using Mobile payments

The findings in this section relate to the challenges faced by users when using mobile payments. Various challenges emerged strongly such as internet problems at 45%, lack of trust at 20%, apps not working at 11%, delays at 10%, money going to wrong persons at 5%, process not smooth at 3%, and low battery charge at 1%. The remaining 2% had no challenges with the payment systems.

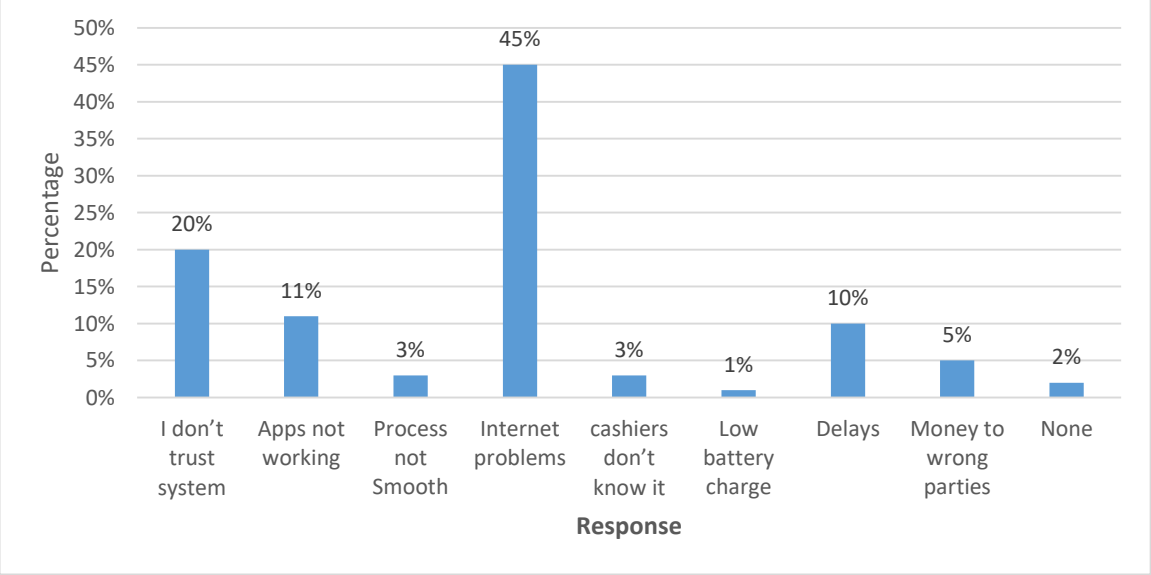


Figure 4.8 Challenges with using Mobile payments
Source: Researcher (2023)

.4.4 Determinants of Mobile Wallet Adoption

4.4.1 Performance Expectation

Performance expectation entails what consumers desire to gain from the technology in terms of performance. Respondents (M=3.78, SSD=0.823) at 66.3%) agreed that Mobile wallet adoption is determined by its perceived usefulness. Intrinsic and extrinsic factors determine the adoption of mobile wallets (M=3.75, SD=1.054) (59.8%) agree while Outcome expectations are key in consumer adoption of mobile wallets 75.0% agreed (M=3.92, SD=0.650) to view the bank report on the new management. The findings are in the figure below.

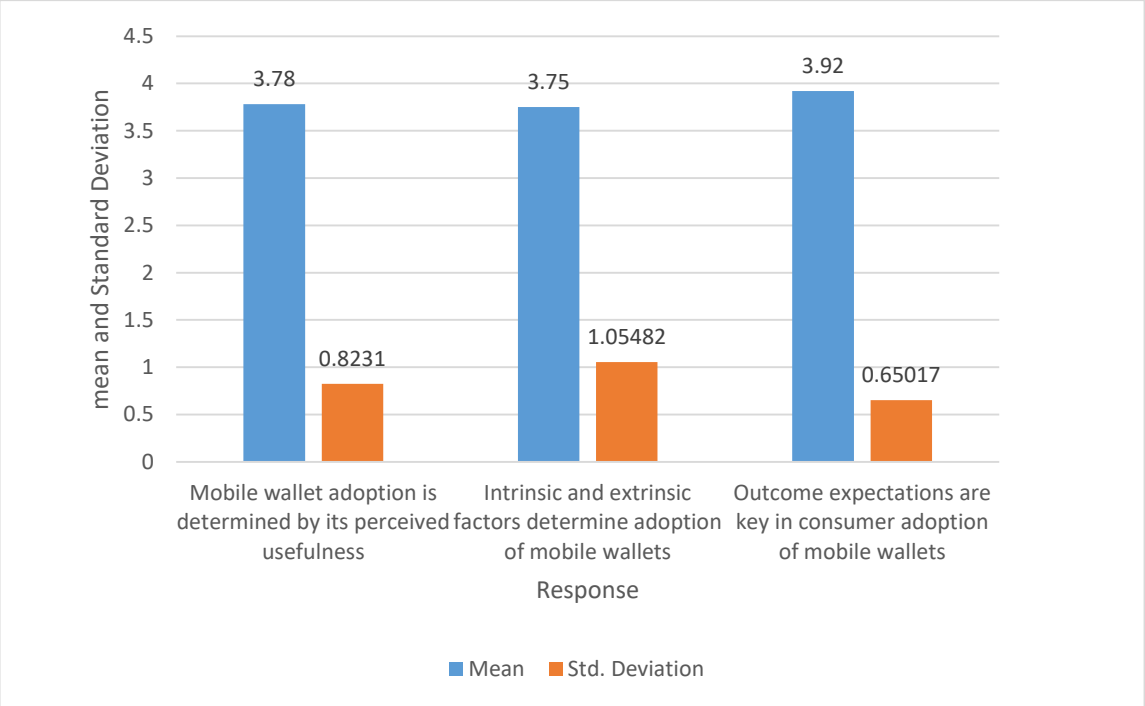


Figure 4.9 Performance Expectation Factors Influencing Mobile Wallet Adoption

Source: Researcher (2023)

4.4.2 Effort Expectancy

As the level of ease associated with using the system, effort expectation is defined. Effort Expectancy is created by perceived intricacy and ease of use. Respondents (26.1%) and (65.2%) with M = 4.16,

SD = 0.5981 strongly agreed or agreed that Consumers regard Ease of Interaction as an important aspect of mobile wallet adoption. Respondents strongly agreed with 15.2% and agreed with 65.2%, M = 3.82, SD = 0.9091. (M=3.82, SD=.90916) that consumer adoption of mobile wallet is influenced by ease of learning while respondents (72.8%) with (mean 4.17, standard deviation 4.32578) agreed that Mobile wallet technology can be adopted based on consumer ease of learning. The findings are in the figure below.

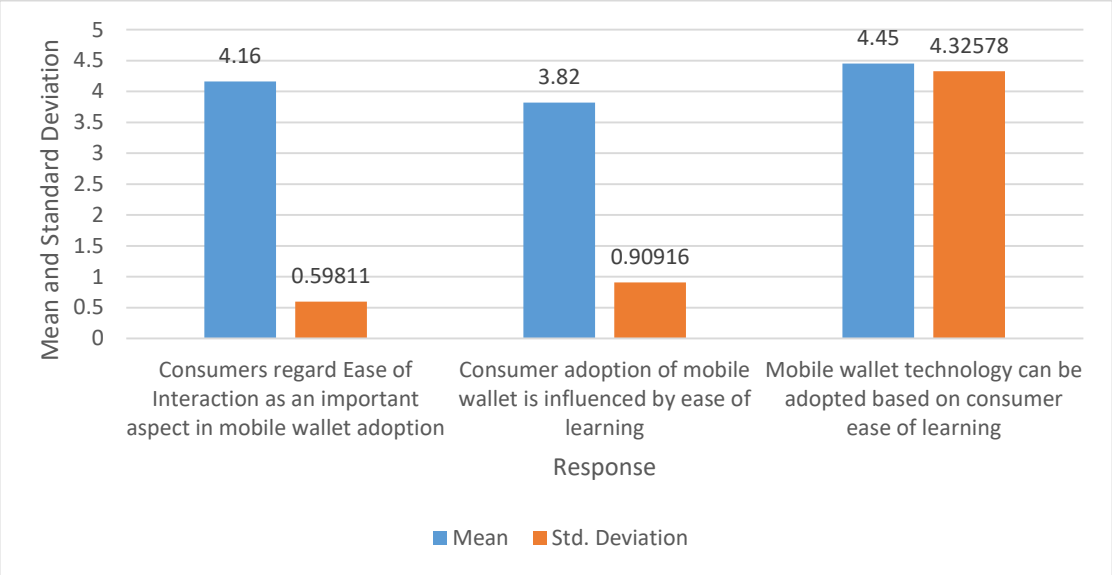


Figure 4.10 Performance Expectation Factors Influencing Mobile Wallet Adoption

Source: Researcher (2023)

4.4.3 Social Influence

The degree to which a person believes that significant individuals think they should use the new method is known as social influence. It is consistent with societal standards, subjective norms, and image constructions. M=4.02, SD=0.6458 respondents (73.9%) represent those who agreed that Consumers adopt mobile wallet technologies if colleagues have recommended them. Supporting the view that family influence is a determinant of mobile wallet adoption was in perfect agreement at 19.6% and 58.7% respectively, mean of 3.94 and a standard deviation of 0.7165. For Adoption by

friends is an important variable in mobile wallet adoption, 10.9%, and 65.2%, respectively, strongly agreed with a mean of 3.67 and a standard deviation of .6501 and a mean of 4.07. The findings are in the figure below.

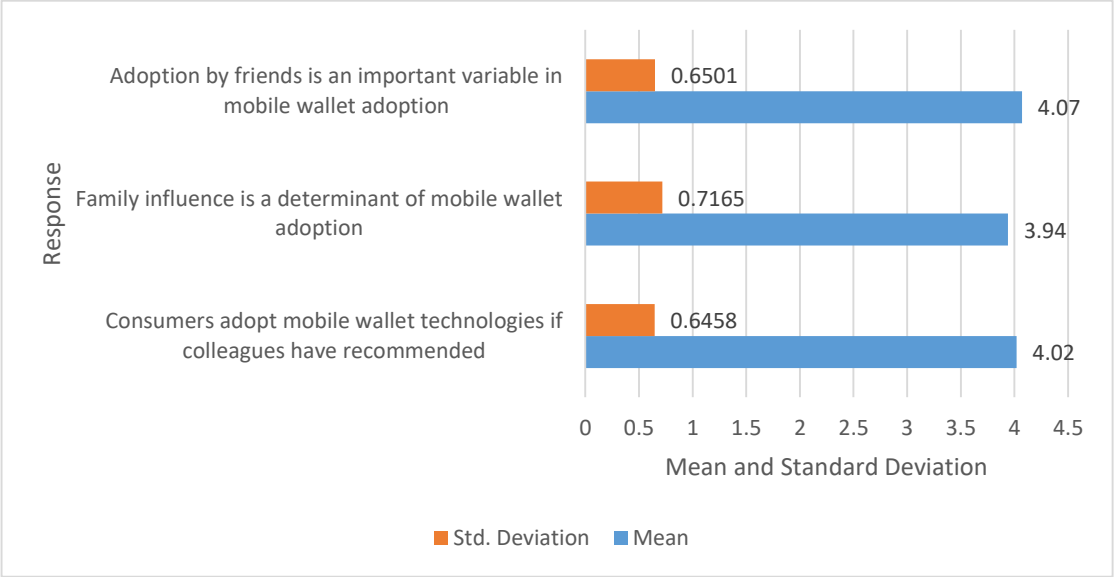


Figure 4.11 Social Influence factors Influencing Mobile wallet Adoption
Source: Researcher (2023)

4.4.3 Facilitating Conditions

The facilitation condition is the degree to which a person thinks that a technological infrastructure within an organization exists to support the use of the system. The facilitating conditions construct is created by combining the constructs of compatibility, perceived behavioral control, and enabling conditions. Consumer familiarity with mobile adoption will affect their adoption and use, according to respondents (67.6%), with a mean of 4.07 and a standard deviation of 1.007. Consumer adoption of mobile wallets is accelerated by the availability of technical support. With a mean of 3.67 and a standard deviation of 1.007, 65.2% of respondents concur. The majority of respondents (68.5%; M=3.95, SD=0.701) concurred that infrastructure accessibility is a crucial factor in consumers' acceptance of mobile wallets. The results are depicted in the figure below.

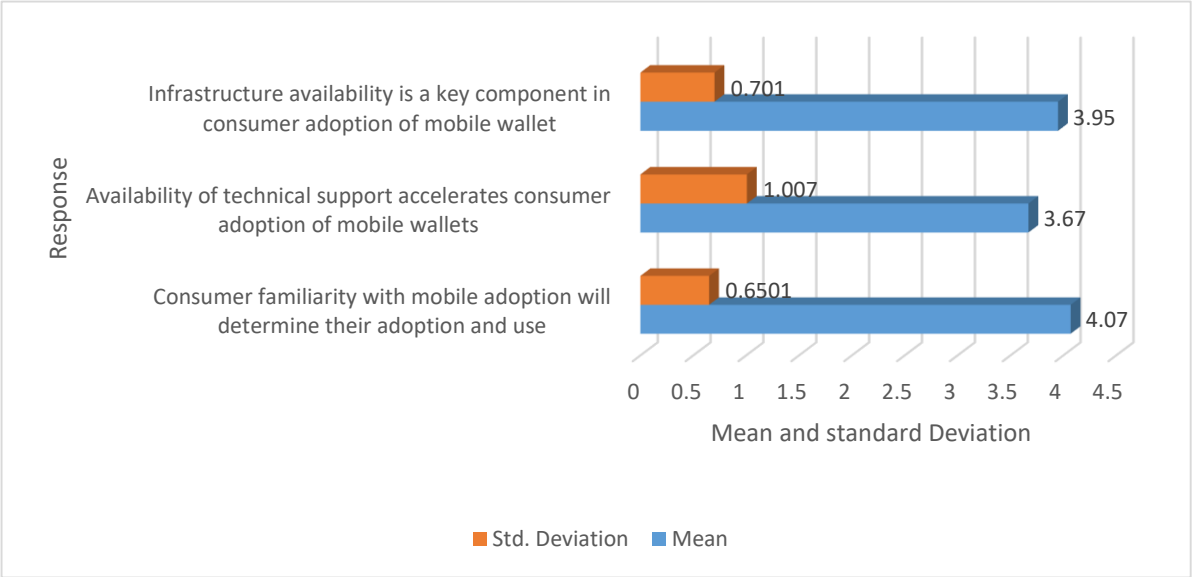


Figure 4.12 Facilitating Conditions influencing adoption of mobile wallets

Source: Researcher (2023)

4.5 Moderating variables in Adoption of Mobile Wallets

The researcher sought to establish the moderating role of education level, experience and voluntariness of use on adoption of mobile wallets. The responses were as in the figure below.

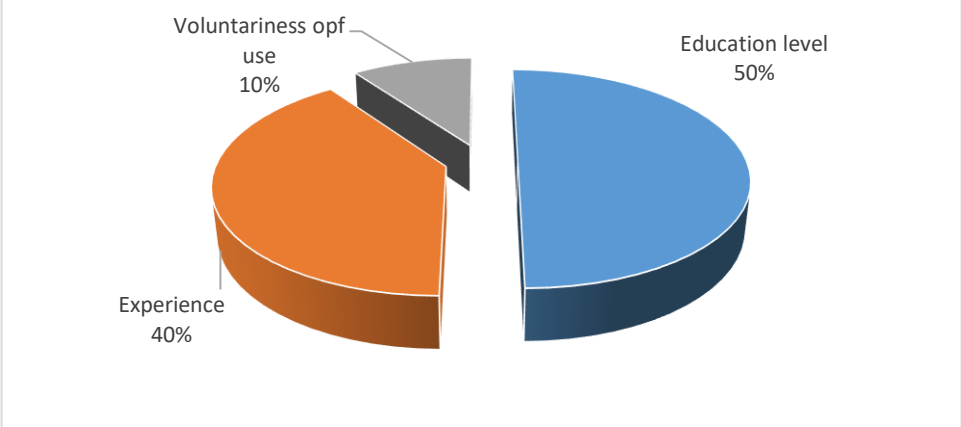


Figure 4.13 Moderating Factors

Source: Researcher (2023)

The three factors; education level, experience and voluntariness of use have a moderating role on the

effect of independent variables on adoption of mobile wallets. The effect of education is at 50%, experience at 40% and voluntariness of use at 10%.

4.6 Inferential Statistics

4.6.1 Correlation between PE, EE, SE, FC & CAMW

The findings show that Performance Expectancy (PE), Effort Expectancy (EE)Social Expectancy (SE) and Facilitating Conditions (FC) have a positive and significant relationship with Consumer adoption of mobile wallets (CAMW).PE has a stronger relationship with CAMW having a Pearson coefficient (r=.707,P=.000).This implies that PE is a determinant of CAMW. In the same manner EE has a positive significant relationship with CAMW at (r=.645, P=.000) meaning EE has a significant effect on CAMW.

On the other hand the other two variable SE and FC have a significant though weak relationship with CAMW.Social Expectancy (SE) has (r=.314,p=.000) meaning SE is a week determinant of CAMW.Similarly FC has (r=.342 ,P=..000) which means FC is also a weak determinant of Consumer Adoption of Mobile Wallets. The findings are in table 4.3

Table 4.3 Correlations

		PE	EE	SI	FC	CAMW
PE	Pearson Correlation	1				
	Sig. (2-tailed)		.			
EE	Pearson Correlation	.615*	1			
	Sig. (2-tailed)	.000		.		
SI	Pearson Correlation	.293	347*	1		
	Sig. (2-tailed)	.000	.000	.000		
FC	Pearson Correlation	.335	.440	.273	1	
	Sig. (2-tailed)	.000	.000	.000		
CAMW	Pearson Correlation	.707**	.645*	.175	.342	1
	Sig. (2-tailed)	.000	.000	.000	.000	

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

4.6.2 Multiple Regression

This Section entails. Multiple regression between PE, EE, SI, FC and CAMW.A larger R value means a larger correlation between the independent variables (Performance Expectancy, Effort Expectancy, Social Influence, Facilitating conditions) and the Dependent Variable (Consumer Adoption of Mobile Wallets).

R square is at 0.264 showing a positive correlation between the independent variables and the dependent variable. It means that the four independents put together account for 56.4% of the changes in the dependent variable (Consumer Adoption of Mobile Wallets). The findings are in table 4.4.

Table 4.4 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.758[a]	.574	.564	.18465

a. Predictors: (Constant) FC, SI, PE, EE

4.6.3 Analysis of variance

The F value is at 57.315 with a degree of freedom (df) at 4. The P value 0.000 is statistically significant being <0.005 level of significance. Therefore, the independent variables (Performance Expectancy, Effort Expectancy, Social Influence and facilitating conditions) influence the dependent variable (Consumer Adoption of Mobile Wallets).The results are in table 4.5.

Table 4.5 ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7.817	4	1.954	57.315	.000[b]
	Residual	5.796	260	.034		
	Total	13.613	264			

a. Dependent Variable: consumer adoption of mobile wallet
b. Predictors: (Constant), Performance Expectation, Effort Expectation, Social Influence, and Facilitating Conditions.

4.6.4 Regression Coefficients

Beta coefficient shows the extent of changes in dependent variable (consumer adoption of mobile wallets) as a result of changes in the independent variables. (Performance Expectation, Effort Expectation, Social Influence, and Facilitating Conditions.).The findings are in table 4.6

Table 4.6 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.004	.233		-4.3.05	.000
	PE	.594	.078	.491	7.651	.000
	EE	.448	.095	.318	4.700	.003
	SI	-.078	.076	-.056	1.030	.305
	FC	.013	.059	.012	.220	.826

a. Dependent Variable: Consumer Adoption of Mobile Wallet Payments

From table 4.6 PE had the greatest deviation at 0.594.It is followed by EE at 0.448,SI at 0.078 and FC at 0.13.basing on the significance level of 0.05 then, PE and EE are statistically significant at 0.00 <0.005 while SI and Fc are not. The equation is thus ;

$$\Upsilon = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

$Y = -1.004 + 0.594X_1 + 0.48X_2 - 0.078X_3 + 0.013X_4$

Where:

Υ=Consumer Adoption of Mobile Wallet

α= Constant term

β_1= Beta Coefficient

X_1= Performance Expectation

X_2 = Effort Expectation

X_3 = Social Influence

X_4 = Facilitating Conditions

ε= Error term

The findings of this study support the findings of Mohd Thas Thaker, Subramaniam, Qoyum & Iqbal (2022) who investigated the factors affecting e-wallet adoption intention in Malaysia. Their revealed that performance expectancy, social influence, hedonic motivation, trust, facilitating condition, and habit constructs influence the behavioral intention to continuously adopt a 'e-wallet' electronic payment system.

A part from the differences in the model applied, the findings also concur with Yang, Liu, & Yu, (2015) who sought to examine and quantify how various uncertainties result in different perceived risk dimensions that hinder mobile payment (m-payment) acceptance.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

Having collected and analyzed data in the previous chapter, this section discusses the research findings and the conclusion of the research study.

5.1 Conclusion

The study's objective was to pinpoint the factors influencing the adoption of mobile wallet payments. The UTAUT theoretical paradigm states that behavioral intention controls how people use technology. The adoption of mobile wallet payments is directly influenced by the following variables: performance expectations, effort expectations, social influence, and facilitative factors. PE had the greatest deviation at 0. 594.It is followed by EE at 0.448, SI at 0.078 and FC at 0.13.Basing on the significance level of 0.05 then, PE and EE are statistically significant at 0.00 <0.005 while SI and Fc are not.

It was discovered that consumer adoption of mobile wallet payments was positively and strongly connected with Performance Expectation. This shows that customer performance expectations have a big impact on whether or not consumers choose to use mobile wallet payments.

The effort expectation refers to the usefulness of the system. Perceptions of complexity and utility affect expectations of effort. Given that there is a substantial positive relationship between effort expectation and consumer adoption of mobile wallet payments it is likely that structures related to effort expectation, such as norms, standards, and imagery, have an effect on consumer adoption of

mobile wallet payments.

The social effect measures how much a person believes influential individuals should employ the novel strategy. It complies with social norms, arbitrary standards, and image-building. The relationship between social impact and customer acceptance of mobile wallet payments was found to be positive though weak This demonstrates that the acceptance of social elements like family, friends, and coworkers has a small impact on how consumers use mobile wallets.

The facilitation condition is the extent to which users perceive that a technological and organizational infrastructure exists to support their use of the system. The facilitating conditions construct combines the perception of behavioral control, compatibility, and enabling conditions. The enabling variables and consumer adoption of mobile wallet payments had a positive but weak correlation top consumer adoption of mobile wallets. The acceptability of mobile payments by consumers is least determined by facilitating scenario factors, such as infrastructure accessibility and technical support, among others.

5.2 Recommendations

5.2.1 Practitioners' Recommendation

Practitioners should check that performance expectation measures for mobile wallet payments, such as perceived usefulness matching outcome expectations, are met. If the results surpass the client's expectations, it would be more desirable. To draw in additional users, user awareness campaigns should focus on friends, family, and coworkers. Applications should be simple to use, learn, and comprehend. In order to guarantee user happiness, providers should guarantee the availability of

technical and end user assistance.

5.2.2 Policy Recommendations

According to the research, the ability to monitor spending online is one of the things that encourages people to utilize mobile payments. Policymakers ought to ensure the creation of mobile wallets with financial restrictions in light of this. Consumers are most drawn to bank-based digital wallets that emphasize financial control. Bank-focused digital wallets are enticing to customers because they offer more control over purchases and a better understanding of a person's spending and overall finances.

For instance, bank-based digital wallets can handle purchase receipts and give alerts when a balance is low. Consumers rank bill payment possibilities and bank-based financial controls as the second and third most crucial features of a digital wallet, respectively. This could serve as a competitive advantage for banks. To enable the government to provide mobile money solutions platforms to the general public, regulators and policy makers should develop regulations. Interoperability should be made possible by policy.

5.2.3 Recommendations for further research

The four main elements of the UTAUT theoretical paradigm—performance expectancy, effort expectancy, social effect, and facilitating factors—determine the expected likelihood of adopting mobile wallet payments, according to the study's findings. However, these are not the only factors that contribute to client acceptability. Research should be done to identify other factors that influence mobile wallet software. They might pursue additional payment options in addition to using mobile wallets because of the developments achieved by several financial institutions.

REFERENCES

Albastaki, T., Hamdan, A., Albastaki, Y., & Bakir, A. (2022). Factors affecting e-payment acceptance by customers: an empirical study in the Kingdom of Bahrain. *Competitiveness Review: An International Business Journal*, (ahead-of-print).

Chawla, D., & Joshi, H. (2019). Consumer attitude and intention to adopt mobile wallet in India–An empirical study. *International Journal of Bank Marketing*.

Chen, W. C., Chen, C. W., & Chen, W. K. (2019). Drivers of mobile payment acceptance in China: An empirical investigation. *Information*, *10*(12), 384.

Chuchuen, C., Chanvarasuth, P., & Rittippant, N. (2022). *Mobile payment (m-payment): an examination of factor influencing adoption in Thailand* (Doctoral dissertation, Thammasat University).

Gurme, V. M. (2019). An emperical study on customers adoption of e-wallet with special reference to pune city. *International Journal of Engineering Applied Sciences and Technology*, *4*(5), 195-198.

Haritha, P. H. (2022). Mobile payment service adoption: understanding customers for an application of emerging financial technology. *Information & Computer Security*, (ahead-of-print)

Islam, R., & Sivanantham, R. A. (2022). Selection of the best e-wallet in the Klang Valley, Malaysia: An application of the analytic hierarchy process. *Global Business Management Review (GBMR)*, *14*(2), 16-36.

Jose, J., & Joseph, S. T. (2021). Effects of digital payment system and its impact on saving of individual with special reference to Kaushambi during Covid-19.

Khan, M. A. (2021). Netizens' perspective towards electronic money and its essence in the virtual economy: an empirical analysis with special reference to Delhi-ncr, India. *Complexity*, *2021*, 1-18.

Larson, T. (2020). *Factors that Influence Adoption of Mobile Payment Systems: A Correlational Study* (Doctoral dissertation, Capella University).

Madan, K., & Yadav, R. (2016). Behavioural intention to adopt mobile wallet: a developing country perspective. *Journal of Indian Business Research*.

Mohd Thas Thaker, H., Subramaniam, N. R., Qoyum, A., & Iqbal Hussain, H. (2022). Cashless society, e-wallets and continuous adoption. *International Journal of Finance & Economics*.

Nambiar, B. K., & Bolar, K. (2022). Factors influencing customer preference of cardless technology over the card for cash withdrawals: An extended technology acceptance model. *Journal of Financial Services Marketing*, 1-16.

Özkan, S., Bindusara, G., & Hackney, R. (2010). Facilitating the adoption of e-payment systems: theoretical constructs and empirical analysis. *Journal of enterprise information management*.

Sahi, A. M., Khalid, H., Abbas, A. F., & Khatib, S. F. (2021). The evolving research of customer adoption of digital payment: Learning from content and statistical analysis of the literature. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(4), 230.

Slade, E. L., Dwivedi, Y. K., Piercy, N. C., & Williams, M. D. (2015). Modeling consumers' adoption intentions of remote mobile payments in the United Kingdom: extending UTAUT with innovativeness, risk, and trust. *Psychology & marketing*, *32*(8), 860-873.

Sleiman, K. A. A., Juanli, L., Lei, H., Liu, R., Ouyang, Y., & Rong, W. (2021). User trust levels and adoption of mobile payment systems in China: An empirical analysis. *Sage Open*, *11*(4), 21582440211056599.

Swain, S. C., & Kesh, S. (2020). Digital Modes of Payment: Usage of Plastic Money and Virtual Wallet in India. In *Smart Intelligent Computing and Applications: Proceedings of the Third International Conference on Smart Computing and Informatics, Volume 2* (pp. 123-133). Springer Singapore.

Yang, M., Mamun, A. A., Mohiuddin, M., Nawi, N. C., & Zainol, N. R. (2021). Cashless transactions: A study on intention and adoption of e-wallets. *Sustainability*, *13*(2), 831.

Yang, Y., Liu, Y., Li, H., & Yu, B. (2015). Understanding perceived risks in mobile payment acceptance. *Industrial Management & Data Systems*, *115*(2), 253-269.

Yeh, H. (2020). Factors in the ecosystem of mobile payment affecting its use: From the customers' perspective in Taiwan. *Journal of theoretical and applied electronic commerce research*, *15*(1), 13-29.

Ying, W. C., & Mohamed, M. I. K. P. (2020). Understanding the factors influences users continuous intention towards E-wallet in Malaysia: Identifying the gap. *Research in Management of Technology and Business*, *1*(1), 312-325.

APPENDIX I: INTRODUCTORY LETTER

Dear sir/ madam/Respondent

Re; Research questionnaire

In order to gather information for a Master's degree research project on the factors influencing consumer adoption of mobile wallet payments, this questionnaire was created. The study is only carried out for academic reasons. It is not intended to judge your viewpoint or in any way disparage your school. Your comment will be kept totally private in order to offer perspective on the problems being researched and potentially suggest solutions. Your responses will be handled in the strictest of confidence.

Due to this, I kindly ask that you complete the questionnaire that is included. Please be as honest and thorough as you can when answering the questions on the survey.

I'm grateful.

Yours faithful

Moses Khisa

APPENDIX II: QUESTIONNAIRE

SECTION A: BACKGROUND INFORMATION

If applicable, please check the box next to your responses to the questions in the area provided by checking the appropriate () box.

SECTION A: Respondents background.

1. Gender (Tick as applicable)
   a) Male [ ]
   b) Female [ ]

2. What is your age bracket (Tick as applicable)
   a) Under 30 years [ ]
   b) 31-40 years [ ]
   c) 41-50 years [ ]
   d) Over 50 years [ ]

3. How long have you used Equity Bank products /services?
   a) 0-5 years [ ]
   b) 6-10 years [ ]
   c) 11-15 years [ ]
   d) 16 and above [ ]

4. What is your highest academic qualification?
   a) Doctorate [ ]
   b) Masters [ ]
   c) Degree [ ]
   d) Diploma [ ]
   e) High school (Secondary) [ ]
   f) Others, specify [ ]

Section B; Adoption of Mobile Wallet Services

1. How frequently do you shop at supermarkets?

Less than once a month [ ]
Once a month [ ]
2-3 times a month [ ]
More than 3 times a month [ ]

2. Have you ever used mobile payments in a supermarket?

Yes [ ]
No [ ]

3. Which of the following Mobile Payment Methods have you used?

Airtel Money [ ]

T-cash [ ]

Equittel [ ]

Mpesa [ ]

MCo-op cash [ ]

Loop [ ]

Others [ ] ……

4.. Which of the following are the Benefits of using the Mobile Payment Methods?

Convenience [ ]

Quick and Efficient [ ]

Enhanced Security [ ]

Managing Expenses [ ]

Access to Discounts and Offers [ ]

Others [ ] ……

5. Which of the following challenges have you encountered with the use of mobile payment methods?
I don't trust the system [ ]

Apps not working	[ ]
Process not smooth	[ ]
Internet Problems	[ ]
Cashiers don't know how to accept	[ ]
Battery charge Low	[ ]
Delays	[ ]
Money might go to wrong person	[ ]
None	[ ]

Section C: Determinants of consumer adoption of mobile wallet

1. Please rank the following statements according to the extent to which the following factors affect consumer adoption of mobile wallets.

KEY: 5. Strongly Agree **(SA); 4.** Agree **(A); 3.** Fairly Agree **(FA); 2.** Disagree **(D) and: 1.** Strongly Disagree **(SD)**

	SA 5	**A 4**	**FA 3**	**D 2**	**SD 1**
Statements on components of mobile wallet adoption					
1. Performance Expectation					
Mobile wallet adoption is determined by its perceived usefulness					
Intrinsic and extrinsic factors determine adoption of mobile wallets					
Outcome expectations are key in consumer adoption of mobile wallets					
2. Effort Expectancy	**SA 5**	**A 4**	**FA 3**	**D 2**	**SD 1**
Consumers regard Ease of Interaction as an important aspect in mobile wallet adoption					
Consumer adoption of mobile wallets is influenced by the ease of learning					
Mobile wallet technology can be adopted based on consumer ease of learning					

3. Social Influence	**SA 5**	**A 4**	**FA 3**	**D 2**	**SD 1**
Consumers adopt mobile wallet technologies if colleagues have recommended					
Family influence is a determinant of mobile wallet adoption					
Adoption by friends is an important variable in mobile wallet adoption					
4. Facilitating Conditions	**SA 5**	**A 4**	**FA 3**	**D 2**	**SD 1**
Consumer familiarity with mobile adoption will determine their adoption and use					
Availability of technical support accelerates consumer adoption of mobile wallets					
Infrastructure availability is a key component in consumer adoption of mobile wallet					

Section D Moderating variables in adoption of Mobile payments

1. Indicate the extent to which you agree on the following factors that affect adoption of mobile wallet payments

	SA 5	**A 4**	**FA 3**	**D 2**	**SD 1**
Education Level					
Experience					
Voluntariness of use					

Thank you for your kind cooperation