



UNIVERSITY OF KWAZULU-NATAL

Acceptance of Mobile Money Technology by Retailers in Accra, Ghana

By

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**A dissertation submitted in partial fulfilment of the requirements for the degree of
Master of Commerce in Information Systems and Technology
College of Law and Management Studies,
School of Management, Information Technology and Governance**

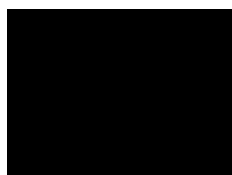
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DECLARATION

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Date: 2nd June 2022

DEDICATION

I dedicate this thesis to the giver of life God almighty, who is my source of strength and giver of wisdom, knowledge and understanding. Thank you for giving me the strength to go through this journey.

To my ever loving, caring and prayerful late mum for her support throughout this journey. You invested so much in this journey of mine but it is quite unfortunate that you are not here to witness this day. Thank you very much and may you continue living in the bosom of the lord.

To the greatest man on earth, that is my Dad. Thank you for all the spiritual, moral and financial support you gave me. God bless you.

Finally, to my beautiful wife who has been my rock since I started this journey. Thank you for everything and I love you so much. God bless you.

ACKNOWLEDGMENT

I would like to offer my heartfelt gratitude to the following individuals for their assistance and efforts that made this study possible:

My special thanks go to my family members and friends who were there for me throughout this study period. Elizabeth Adjirackor, Rose Aferibea, Fisayo Kaka, Kathleen Afful, Lawrence Abbiwu and mama Rose(osofo maame), you all will forever have a place in my heart.

To all my friends, colleagues and family members who continuously supported and backed this success of work with prayers, God bless you all

Lastly my sincere thanks go to my supervisor, Mr. Ashley Mudaray Marimuthu, whose criticism and contribution made me put so much effort into this research to come up with this final project. Thank you for guiding me and letting me have such an experience.

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ABSTRACT

Mobile Money technologies have become part and parcel of people's daily lives in developing countries, especially Africa. Much effort has been made in making Mobile Money technologies available, safe, reliable, and effective amongst people in Africa. One area where the technology seems to be gradually diffusing into is the business world. More and more businesses seem to be adopting the technology. However, little is known about the dynamics involved in retailers' acceptance and usage of Mobile Money. Hence, this study sought to explore the acceptance of Mobile Money in the retail business sector while also finding out factors that influence the acceptance.

The Unified Theory of Acceptance and Use of Technology (UTAUT2) was selected as a theoretical framework for this study. Using a quantitative survey approach, retailers in the business area of Accra, Ghana, were sampled using convenience sampling.

Findings revealed that all retail businesses were aware of Mobile Money supporting businesses. Most retail businesses are using Mobile Money in different ways to support their business. Basic transactions such as receiving payments from customers and payment payments or remittances were common. Factors such as performance expectancy, effort expectancy, price value, hedonic motivation, and habit were seen to impact the use of Mobile Money by retailers. Therefore, designers of Mobile Money services must consider these factors when developing these applications by ensuring it has functionality that is useful and easy to use. Furthermore, telecommunication companies that make Mobile Money services available to retailers and the government need to work together to decrease commission and transaction costs. These measures will results in increased acceptance of Mobile Money by retailers.

CHAPTER ONE: INTRODUCTION

1.1 INTRODUCTION

Mobile phones have contributed massively and in diverse ways to the advancement of many countries, particularly in sub-Saharan Africa. Although the utilization of mobile phones was once seen as a luxury, its recent ascent and worldwide penetration have been momentous. In the world that we live in, the number of clients of mobile phones is way beyond the number of individuals who claim they own bank accounts (Owusu Kwateng et al., 2019). Mobile Money is a system which allows mobile owners to deposit, transfer and withdraw money from a digital account without having a bank account (Suri, 2017). Museba et al. (2021, p. 2) states that “Mobile Money can be defined as money that can be accessed and used via mobile phone.” Moreover, Mobile Money appears to have taken some load off the banking sector by giving them an alternative option to outsource cash deposit, settlement and payout transactions (Suri, 2017). When banks outsource such transaction handling, they give room for staff to focus more on value addition and dedicate more time to more complicated tasks such as risk management advisory services (Muthiora, 2015). The Mobile Money transfer service is part of a broader idea that is evolving in the banking and electronic payments industries and is known as Mobile Money (Suri, 2017). It involves all the different initiatives like remote remittance, micropayments, and informal airtime abuse schemes to deliver money-related services to the unbanked through mobile innovation (Owusu Kwateng et al., 2019). Mobile Money service was first presented in Ghana in 2007. Since then, four out of the six mobile operators in Ghana are currently operating this service, namely Tigo, Airtel, MTN, and Vodafone. These providers administer these services under the brand names Tigo cash (Tigo), MTN Mobile Money (MTN), Airtel Money (Airtel), and Vodafone cash (Vodafone).

These operators offer similar services like depositing money, withdrawing at a substantial charge, transferring money without going to the bank, paying bills, and purchasing airtime. One advantage Mobile Money has is that its subscribers can carry out transactions just as if they are in a traditional bank. Clients may keep money in their Mobile Money accounts, save it for later use, and withdraw or transfer it to an agent (Piper, 2020). Agents also register customers and are frequently compensated with commissions for their efforts (Maurer et al., 2018). Apart from cash in, making transfers, buying airtime and withdrawing money, a

registered user has access to registering and making Personal Identification Number (PIN) changes (Gutierrez & Choi, 2014; MTNGhana, 2022).

1.2 BACKGROUND OF THE STUDY

Mobile phones are regarded as an essential tool for carrying out personal and business tasks (Harris & Cooper, 2019). Peer-to-peer payments are gradually taking shape towards the next generation of electronic payments. One prominent innovation is “Mobile Money”. Mobile Money, at its most basic, is the provision of financial services via a mobile device (Andersson-Manjang, 2021; Steve Worthington & Welch, 2011). The use of Mobile Money can change the lives of most people who have access to cell phones but not a bank. This is because with access to mobile phones, one can use Mobile Money services for financial transactions just as if one was dealing with a bank. For example, in 2007, an operator in Kenya, Safaricom, formalized this technique with the launch of M-PESA. This SMS-based money transfer system enables people to deposit, send, and withdraw funds through the utilization of their mobile phones (Islam & Salma, 2016; Vodafone, 2020).

1.3 PROBLEM STATEMENT

Ghana is gradually moving away from the use of cash to pay for goods and services to a n electronic money system. This helps in preventing the risks involved in moving around with lots of physical cash. Telecommunications companies are investing much money in infrastructure and awareness creation for people to understand the use of Mobile Money. Mobile Money is a way of changing the lives of numerous people who have access to a cell phone but not a bank. Currently, the telco's involved in Mobile Money are Airteltigo (Airteltigo Money), MTN (MTN Mobile Money), and Vodafone (VodafoneCash) (Murphy, 2016; Twum, 2022).

For most Mobile Money activities, cash is withdrawn using an agent, to be spent on assorted products and ventures. This progression does not urge users to keep cash in their accounts, which can be promptly accessible to pay traders and retailers specifically without withdrawing it first. This implies that for people to have the capacity to pay to utilize a mobile wallet, shop proprietors must have a mobile wallet themselves. The increasing number of Mobile Money customers would also prefer to deal with retailers by purchasing goods directly from shops without withdrawing cash from an agent first. Hence for customers to gain the most significant benefit from Mobile Money, it is essential that retailers also adopt this technology. Therefore,

it is essential to understand the extent of Mobile Money usage by retailers and the factors that affect the acceptance of Mobile Money by retailers.

A study conducted by (Glavee-Geo et al., 2019) focused on the key factors influencing Ghanaian consumers to accept Mobile Money using the Technology Acceptance Model (TAM) and Diffusion of Innovation (DOI) theories. The study only focused on how some key factors that can influence Ghanaian consumers into accepting Mobile Money. Another study used the UTAUT model to study factors that affect nonusers' intentions to adopt remote mobile payments (Slade, Dwivedi, Piercy, & Williams, 2015). Most of the above-stated studies do not focus on retailers, for this reason, the study intends to study retailers' acceptance of Mobile Money using the UTAUT2 framework.

1.4 RESEARCH QUESTIONS

The research questions are as follows:

- To what extent are retailers aware of Mobile Money Technology for business operations?
- To what extent do retailers adopt Mobile Money Technology for business operations?
- What are the UTAUT2 factors that impact the acceptance of Mobile Money Technology by retail businesses?

1.5 RESEARCH OBJECTIVES

The main objectives of this study are:

- To determine the extent of awareness of Mobile Money Technology by retailers.
- To determine the extent of acceptance of Mobile Money Technology by retailers.
- To determine the factors that impacts the acceptance of Mobile Money Technology by retailers.

1.6 SIGNIFICANCE OF THE STUDY

Apart from sending, receiving, and purchasing airtime, Mobile Money consumers should be able to transact businesses directly with retail businesses without having to withdraw money from agents and merchants. This study will help delve into details and necessary actions to accelerate the popularity of the service among retailers by identifying the factors that affect the acceptance of Mobile Money. Designers of Mobile Money applications can use these factors to enhance the functionality and usability of these applications to be more readily used by

retailers and other customers. Furthermore, this study will add to the literature on Mobile Money in developing countries.

1.7 OVERVIEW OF THE STUDY

This research includes five chapters, and it is as follows:

- **Chapter One:** This chapter provides an overview of Mobile Money acceptance in the Republic of Ghana, the background on mobile money, problem statement, the study's goal addressing the research objectives and research questions, an overview of the study, significance of the study and its conclusion.
- **Chapter Two:** This chapter analyses the relevant literature that was used in the research. It presents an overview of telecommunications in Africa, telecommunications in Ghana, the Banking Sector in Ghana, payments systems in Ghana, emergence of Mobile Money, factors affecting Mobile Money acceptance, theoretical framework and background, the theory underpinning the study and its conclusion.
- **Chapter Three:** This chapter explains the various research methods used in the research. It goes over the research design, research approach, the data collection strategy, survey distribution strategy, ethical considerations, data reliability and validity, data analysis and summary.
- **Chapter Four:** This chapter presents demographic profile of survey respondents, analysis of measurement scales, responses for measurements scales, factor analysis, reliability analysis, multiple regression analysis, hypothesis testing and summary.
- **Chapter Five:** This chapter discusses about mobile money awareness and usage in Ghana, factors affecting mobile money acceptance, recommendations, limitation of study, future research and conclusion.

1.8 CONCLUSION

The study's scope was summarized in this chapter, focusing on Mobile Money Technology acceptance in Ghana. The research problem's background was examined, and the study's research goals and concerns were outlined. Chapter 2 addresses and summarizes literature in relevance to Mobile Money.

CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviews the current literature related to the acceptance of Mobile Money services. It presents the theories and models created and used to clarify, predict, and understand people's perceptions and the way people adopt new information systems and technologies. A general outline of the Mobile Money concepts and its application in everyday business exchanges will be examined. The chosen theoretical framework, the second variant of the Unified Theory of Acceptance and Use of Technology (UTAUT2), will also be discussed.

2.2 GHANA'S TELECOMMUNICATION INDUSTRY

Following the deregulation of Ghana's media industry in 1994, the government of Ghana initiated a five-year Accelerated Development Programme (ADP) which was aimed at enhancing quality, dependability, and availability of expanding the coverage of mobile services and enhancing competition within the telecommunication sector (Nimako, 2012).

According to Nimako (2012), the programme was aimed at

- Providing access to pay telephone services in rural and urban areas
- Mobile services expansion
- Promoting Ghanaian possession and control of the telecommunication company

Ghana has six telecommunications operators, namely MTN, Tigo, Vodafone, Airtel, Espresso, and Glo (NCA, 2018). These are privately owned organisations being regulated by the National Communication Authority and the Ministry of Communications, Ghana. The main aim of the NCA is to give licenses and authorization for the operation of telecommunication services (NCA, 2018). In so doing, the NCA guarantees fair competition among licensees. The NCA also created and monitored the quality of service indicators for operators.

According to NCA's findings, as at the end of 2017, the number of mobile phone subscribers in Ghana had reached 37,445,048, representing a penetration rate of around 130.91% (NCA, 2017). By July 2018, subscribers had risen to 40,089,004, representing a penetration rate of 137.38 percent (NCA, 2018). As at the start of 2022, the number of mobile phone subscribers in Ghana had reached 44,900,000. This indicates that the number of subscribers increased by 2.6 million (+6.2%) from the year 2021 (Kemp, 2022).

Even though the number of subscribers has increased massively in Ghana, it does not imply that customers are offered the best of service or are happy with the service quality delivered. With the introduction of some innovative services like internet facilities, teleconferencing

facilities, international roaming, and Mobile Money, telecommunications organizations seem to be introducing more innovative measures to ensure the total satisfaction of their clients.

2.3 BANKING SECTOR LANDSCAPE IN GHANA

According to BankofGhana (2018a) there are thirty-one licensed banks in Ghana. There is also a range of several community banks brought up to mobilize rural savings. Association of Rural Banks (ARB) Apex Bank is an example of a community bank that supervises rural community banks, and there are 484 such banks under it. According to CGAP (2015) 409 microfinance institutions are operating in Ghana. As of the end of August 2018, BankofGhana (2018b) makes us aware that, 484 microfinance institutions were operating. To help improve branchless banking, the Bank of Ghana has set policies that empower banks to conduct Mobile banking. Mobile Banking is a way that is recommended to existing customers, which gives them the chance to use their mobile handsets to access their banking services (BankOfGhana, 2019; Mauree, 2013). Services from mobile banking are either transactional or informational. With transactional services, a customer can do transactions like utility payments and money transfers, while informational services deal with checking statements and balance inquiries (Gencer, 2011). MTNGhana (2022) , traditional banking has limitations regarding the number of people they can give physical service to. However, mobile banking bridges the gap on services rendered to a customer because there are no limitations, and one is not required to be physically present at the bank (Oliveira et al., 2016). One can use the service anywhere they are, and location is not an issue when it comes to mobile banking. Therefore, it is an added advantage over traditional banking (Aboelmaged & Gebba, 2013; Wayne, 2017).

Akturan and Tezcan (2012, p. 2) also characterized portable (mobile) banking as “A channel whereby the consumer interacts with a bank via a mobile device, such as a mobile phone or personal digital assistant. In that sense, it is a subset of electronic banking and an extension of internet banking with its own unique characteristics”. More people most at times get frustrated with joining long queues when they deposit or withdraw from a bank. With these long queues, they waste productive time at the bank. Given this, many Ghanaian banks integrate their mobile banking operations with Mobile Money service providers to guarantee enhanced financial inclusion for the unbanked (Porteous, 2007).

2.4 OVERVIEW OF PAYMENTS SYSTEMS IN GHANA

Like other payment systems, Ghana's national payment framework involves instruments like money, cheques, payment cards, Mobile Money, and several types of electronic funds transfer.

In Ghana, the most common mode of transaction is done with physical cash. Physical cash gives individuals instant purchasing power and requires no validation, thereby contributing partly to its reliance. (BankOfGhana, 2019; Haruna, 2012, p. 88) states that “As a result of this unpleasant experience traders go through before withdrawing money or making payments, many people prefer carrying huge amounts of money outside the banking system.” An annual report by BankofGhana (2015) showed that cash as a means of payment continues to play an important role in the country's economy, though its role is decreasing gradually as non-cash alternatives spring up.

Market (2021) defines mobile payments as “Payments for goods, services, and bills with a mobile device (such as a mobile phone, smart-phone, or personal digital assistant (PDA)) by taking advantage of wireless and other communication technologies.” With this definition, mobile payment can be summarized as a payment service using a mobile device. Therefore, Mobile Money is a typical example of a mobile payment system. Bowers et al. (2017) cites that “services that provide the ability to store value and make payments through mobile phones are often called mobile money services”. These financial services are sometimes referred to as Mobile Financial Services (MFS). Ahmad (2020); (Jenkins, 2008a) also made us aware that “collectively, Mobile Network operators (MNOs), payment of services, financial institutions, airtime sales agents, retailers, regulators and even civil society organizations all play a role in this market”. Under Mobile Money services, there are several types of payments. Firstly, the C2B or customer-to-business links the mobile service user (customer) and the service provider's account management system. Customers can also seek the services of third parties for payment of utility bills using Mobile Money services (McGrath & Lonie, 2013; MTNGhana, 2022). Secondly, P2P (person to person) is a transaction between two individuals (Mauree & Kohli, 2013). Thirdly B2B or business-to-business involve payments between businesses to reduce cash in the supply chain (Gencer, 2011). Lastly, B/G2C represents salary payments made by a company or government to its workers and government benefits and pension payments made to persons (Gencer, 2011). The Bank of Ghana regulates and licenses all types of these services using the branchless banking policy. In the article “10 Ways to Accelerate Mobile Money”, Mobile Money is described as being capable of changing the lives of 1.8 billion people who do not have a bank account but have access to a mobile phone (Alliance, 2012). For Mobile Money to achieve its potential purpose fully, all ecosystem participants need coordinated action. It should not be left for the government, private sector, or donor community to do it alone (Alliance, 2012). (Jenkins, 2008b; Naghavi, 2020) identifies the following major stakeholders and their primary roles in the Mobile Money ecosystem.

Players	Roles
Banks	<ul style="list-style-type: none"> • Offer banking services via mobile • Hold accounts in customers' names • Handle cross-border transactions while managing foreign exchange risk • Ensure compliance with regulation
Merchants/ Agents	<ul style="list-style-type: none"> • Perform cash-in and cash-out functions • Handle account opening procedures, including customer due diligence • Report suspicious transactions in accordance with AML/CFT requirements.
Regulators	<ul style="list-style-type: none"> • Provide enabling environments for Mobile Money • Protect stability of financial system • Demonstrate leadership to encourage and protect change
Consumers	<ul style="list-style-type: none"> • Use money to improve their lives

Figure 2. 1 Key Players and their Roles in Mobile Money Source: (Jenkins, 2008)

With the continuous implementation of new policies by the Bank of Ghana (BoG), new regulations were formulated under the Banking Act, 2004 (Act 673) in July, 2015. This should give the Mobile Money agents of the telecommunications providers a certain independence from their banking partners in order to further increase the enthusiasm or interest of the consumers. This will result in the development of modern, resilient and efficient market infrastructure to serve the need of the economy and the financial market (BankofGhana, 2011). A Mobile Money agent is a person or company hired to facilitate transactions for users (GSMA, 2010). In many cases, agents also register new Mobile Money users. For providing these services, agents are typically compensated by commissions (Association, 2010; Naghavi, 2020). They also often provide frontline customer support, such as training new customers to conduct telephone transactions (Association, 2010). The most significant of all the transactions are cash-in and cash-out (i.e., loading value into the Mobile Money system and then converting it back out again).

Usually, agents have shops provided by the service provider or own shops of their own and brand it with their services. These agents deposit and withdraw money for Mobile Money subscribers (Balasubramanian & Drake, 2015). Figure 2.1 and Figure 2.2 are examples of Mobile Money agents in Ghana.



Figure 2. 2 Mobile Money agents (Ghana, 2020)



Figure 2. 3 Vodafone and Tigocash agent 1 (Blay, 2017)

2.5 EMERGENCE OF MOBILE MONEY IN AFRICA

E-money refers to virtual money deposited over telecommunication networks such as the internet to aid payments through point of sale terminals or transfers between networks (Alampay & Bala, 2010; ECB, 2022).

According to (Ssonko & George, 2010), Mobile Money differs across the industry as it covers a vast extent of overlapping applications that permit electronic money transactions over a cell phone. (Andersson-Manjang, 2021), (Maurer, 2012, p. 1) states that “Mobile Money means mobile phone-enabled systems for value transfer and storage, primarily in the developing world, which are heralded as signal interventions in the effort to broaden financial inclusion and bank the ‘unbanked’ ”. A more straightforward definition by (Jenkins, 2008a) makes us aware that it is simply the accessing of money through a mobile phone. M-PESA is the first mobile application for the unbanked in Africa. M-PESA was created in March 2007 (Monks, 2017) by a network operator known as Safaricom, part of the Vodafone Group (Hughes & Lonie, 2007). “Pesa” is a Swahili word for Cash and the “M” is for Mobile (Hughes & Lonie, 2007). Hughes and Lonie (2007, p. 63) states that “an M-PESA user can use his mobile device to transfer money quickly, securely and across great distances, directly to another mobile phone user”. On 11th October 2005, the M-PESA piloting started in Kenya under Safaricom. It had eight agent stores who were given free M-PESA phones for transaction purposes and repeated training sessions (Hughes & Lonie, 2007). Almost 500 clients were selected, given telephones, and taught to utilize M-PESA to repay their loans. Their motivation was a free phone and a couple of dollars in their M-PESA accounts (Hughes & Lonie, 2007). In the piloting process, there were some challenges identified, with Consumer training being the biggest challenge. These challenges include:

- *Familiarity with phones:* There was an incredible division between individuals who knew about cell phones and individuals who were not familiar with them (Hughes & Lonie, 2007). The former would generally understand M-PESA rapidly, but for the latter groups, they had training sessions to teach them the concept of a menu, showing them how to find M-PESA in their menu and even showing them how to locate it their SMS inbox (Hughes & Lonie, 2007).
- *Training environment:* (Hughes & Lonie, 2007) makes it known that due to the vast number of clients during training days made it very difficult for most clients to get a clear understanding of whatever was being taught.
- *Gap in the market:* There was an absence of potential agents to help in the day-to-day transactions of Mobile Money. This, therefore, made accessing Mobile Money rare and

difficult to come by (Hughes & Lonie, 2007).

According to Demombynes and Thegeya (2012), by encouraging improved connectivity or communication, mobile phone penetration positively affects the lives of many Africans. The mobile phone is increasingly becoming a medium for accessing essential financial resources. It further adds to the availability of standard financial services and creates more market practices that can ultimately benefit the lives of many individuals (Demombynes & Thegeya, 2012).

Smartphone ownership is on the rise in most developing countries, including sub-Saharan Africa. For example, 34 percent of Senegalese adults now have a smartphone, compared to 13 percent in 2013. Smartphone ownership rose dramatically in Ghana, South Africa, Nigeria, and Kenya between 2013 and 2017 (Silver & Johnson, 2018). With the acceptance and improvement of mobile phone coverage in developing countries, network operators found it wise to make available financial services through mobile phone use. Gone are the days when students used to use recharge vouchers as payments or gifts (Victor, 2014). There has been a progression from standard recharge cards to other financial resources such as utility bill payments, credit purchases, local and international remittances, and payment of public transports (MTNGhana, 2022; Sekantsi & Motelle, 2016). Any person or client purchases a subscriber identity module (SIM) card to perform a transaction, puts it into a mobile phone, then registers with a service provider. After registration, in M-banking, the customer is issued an electronic money account connected to his/her phone number or bank account (MTNGhana, 2022; Wanyonyi & Bwisa, 2013).

2.5.1 Overview of Mobile Money in Ghana

Ghana is gradually moving away from the use of cash to pay for goods and services to a cashless electronic money system (Murphy, 2016). This helps in preventing the risks involved in moving around with lots of physical cash. Telecommunications companies are investing much money in infrastructure and awareness creation for people to understand the use of Mobile Money. Currently, the telecommunication companies involved in Mobile Money are Millicom Ghana (TigoCash), Airtel(Airtel Money), MTN(MTN Mobile Money), and Vodafone (VodafoneCash) (Murphy, 2016). Listed below are the services offered by the various telecommunications providers:

- **Transferring of cash to family and companions without heading off to the bank. (remittances).**

“Mobile Money holds great potential as a policy strategy for stimulating financial

inclusion since it offers a hands-on and cost-effective way to spread financial services to many currently unbanked people” (Jack & Suri, 2014, p. 183).

(Hughes & Lonie, 2007) suggested that services such as paying utility bills, wages, and domestic and foreign transfers be incorporated into Mobile Money. Key drivers of Mobile Money deployment in developing countries were the increase in local and international remittance services and the provision of financial services to rural unbanked citizens (Jack & Suri, 2011). Like most developing countries, Ghana has many households which rely on remittances. Increasing urbanization in city centers and constant migration in Ghana made the need for money transfer services indispensable. (Tobbin & Kuwornu, 2011). In Ghana, it is known that there are various difficulties and challenges when it comes to informal methods of sending funds to families and relatives. Sending remittances to relatives and loved ones, especially in rural areas, has become easy to do with the introduction of this service. Due to the service being able to aid users in sending remittances, long-distance travelling to deliver cash has drastically reduced. One does not need a middle man for transactions to family members (Alleman & Rappoport, 2010). Mobile Money has made it less of a headache to transfer money to loved ones or family members without going to their location.

- **Payment of bills and services (merchants and utilities)**

The retailers and utility providers give a further justification for embracing and using Mobile Money services. Merchants include retail stores, online retailers, casinos, lotteries, and general suppliers of products and services that follow the Mobile Money network as a way of collecting customer payments (Bampoe, 2015). For instance, M-PESA in Kenya and ZAP in Ghana are used to pay the most popular pay-per-view TV services in Africa (DSTV). The merchant's customers buy e-value from an agent and use it to pay the merchant by passing the e-value onto the merchant's account. Mobile Money allows consumers to make payments using the e-value on their cell phones rather than waiting hours in lines to pay service providers and utility providers. This gives the merchant and its customers convenience, speed, and security. The availability of merchants and utility providers increases the Mobile Money ecosystem's user base and thus serves as a catalyst in promoting the services (Bampoe, 2015). Using Mobile Money would therefore reduce the cost of receiving and handling the payments. It will also improve payment timelines and provide greater convenience for the customers.

- **Using money deposited in the wallet to buy airtime**

Money that is deposited in the Mobile Money Wallet can also be used to purchase Airtime. This is the same process when paying bills. (Bampoe, 2015). One can access his/her wallet and buy airtime for himself or buy for another person.

One advantage of Mobile Money is that its subscribers can carry out transactions just as they are in a traditional bank. Clients can store funds in their Mobile Money accounts, save them for later use, and take out or transfer them to an agent (Must & Ludewig, 2010). Subscribers must go to the closest Mobile Money approved vendor or agent with an accepted identity card to register for the service. The individual's details are then stored in a database, after which a private Personal Identification Number (PIN) is issued to be utilised to carry out subsequent transactions (Murphy, 2016).

Until recently, the primary way of remittance in the country is through a “coach or bus driver.” To get their package delivered, people used to visit a bus station and with a little token (a monetary gift given to the driver to make sure he delivers the package successfully), they hand over the package to the driver for delivery. The driver then sends it to the village or town of the sender’s relatives or friends. Sometimes drivers deliver the packages, and other times they come up with stories or excuses as to why they could not deliver the package. This is where Mobile Money transfer comes in to make things easier and convenient (Jack & Suri, 2014, p. 183). As at the end of July 2018, the National Communications Authority of Ghana stated that the total number of mobile subscribers was 40,089,004 (NCA, 2018). This means the potential of people adopting and using Mobile Money was high. When one registers as a Mobile Money user, he/she can access the instructions available on the service. One is expected to deposit money into their MoMo (Mobile Money) account before they can utilize the activities under the service. The agents usually have a merchant SIM that they use to send a message to transfer e-cash from their merchants account to that of the customer. Once everything is set and successful, the customer receives a notification confirming a successful cash deposit, and their balance is also displayed (Balasubramanian & Drake, 2015). Figure 2.3 is an example of a cash deposit message.

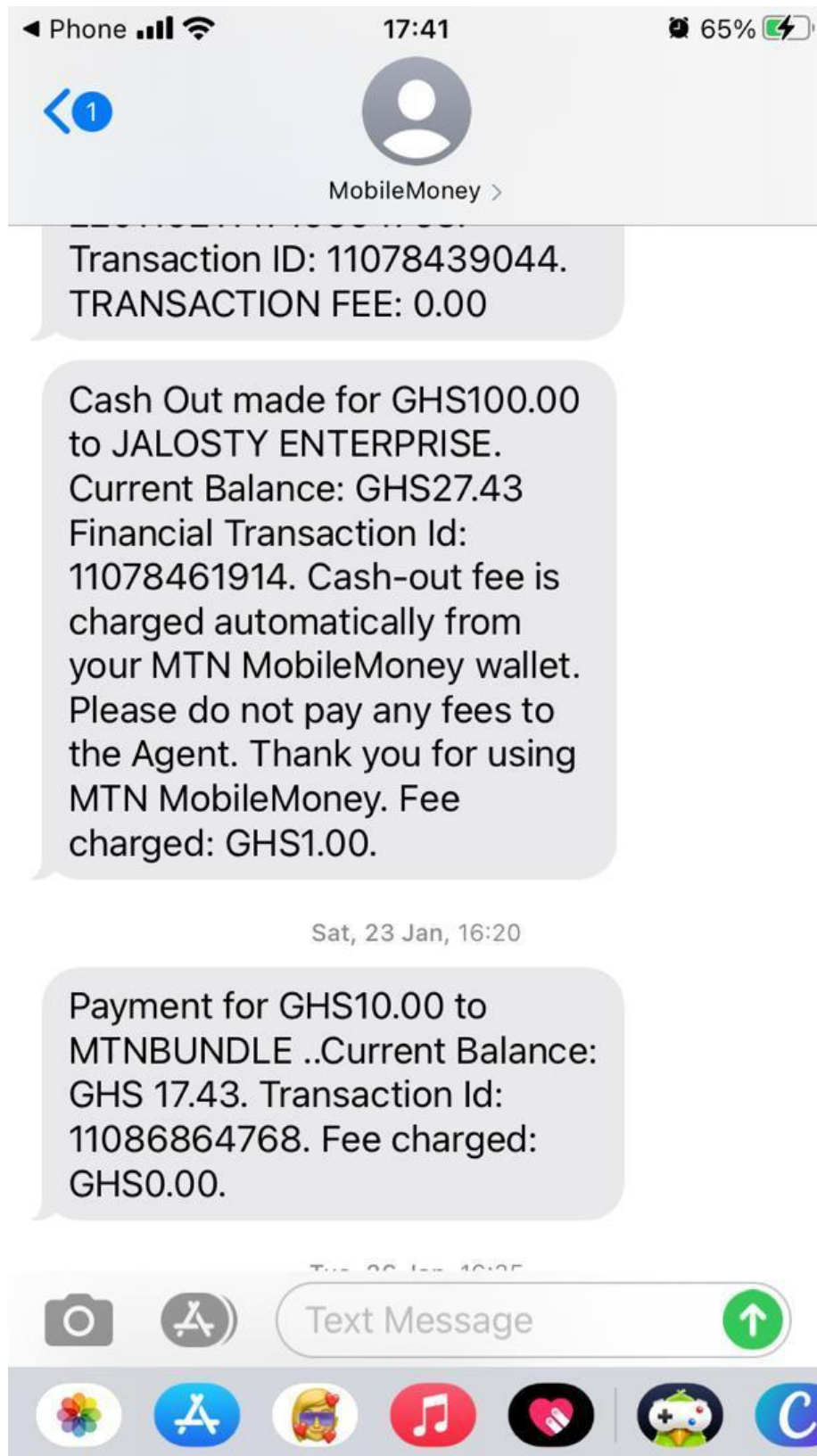


Figure 2. 4 Transaction payment details (by Author)

2.5.2 Benefits of Mobile Money

Aside from making it conceivable to transfer funds and pay for products and enterprises flexibly, this also provides an opportunity for saving and helps create jobs for the unemployed.

1. Easy to Use for money transfer:

The use of Mobile Money makes it easier to transfer cash from any location that one finds itself if there is network connectivity. The risk of having large sums of money on oneself to travel is limited and also, individuals who stay in remote areas can send money to family and friends with ease (Must & Ludewig, 2010).

2. Reduces the risk of theft

There are various advantages managed by the diminished need to manage money. **Some** vendors suggest that keeping cash electronically with clear records of every transaction is vital to limit the risk of employee theft and misappropriation. (Kendall et al., 2011).

3. It makes banking faster and safer

In developing countries majority of the people have cell phones than bank accounts. For example, 75% of Bangladesh population have cell phones whereas only 31% have bank accounts. In rural Kenyans, the closest bank office requires at least half an hour drive time, with the danger of being robbed while travelling. Getting to the bank is also costly. Hence with Mobile Money, one does not need to travel a long distance just to go to a bank (Coulibaly, 2021).

4. Promotes financial inclusion

Opare (2018) has deduced that the surge in Mobile Money utilization demonstrates that telecommunication services play a critical role in accomplishing the Bank of Ghana's cashless economy plan. It additionally guarantees that a vast number of Ghanaians are offered financial inclusion. Also, stakeholders believe that Mobile Money will help millions of Ghanaians perform financial transactions securely and at a relatively cheap cost even though they are excluded from formal financial systems. (Marimuthu & Mathan, 2015, p. 106) defines financial inclusion “as the delivery of financial services at affordable costs to sections of disadvantaged and low-income segments of society, in contrast to financial exclusion where those services are not available or affordable.”

5. Employment opportunity

With Mobile Money you can send and receive money even without a mobile phone using the services of nationally authorized dealers and agents (Opare, 2018). Lal and Sachdev (2015) makes us aware that Mobile Money invigorates financial development beyond budgetary inclusivity and serves as an avenue for diminishing joblessness by offering people the chance to work with service providers as merchants or agents.

6. Safety

“Safety is one of the most notable benefits of M-money services” (Maitrot & Foster, 2012). Ahmad (2020) Security and safety-wise, going around having large stacks of cash on you is not safe, therefore with the introduction of Mobile Money services, we do have a cashless system now (Maitrot & Foster, 2012). The tracking of the movement of cash is transparent due to the involvement of agents. Therefore this gives the user hope and limits the dangers of money losses (Maitrot & Foster, 2012).

2.5.3 Challenges Facing Mobile Money Growth

Challenges facing Mobile Money services include the low level of financial literacy and poor liquidity management by agents. Inferior liquidity is damaging to the acceptance of the services because it brings about a loss of trust from customers (Mpaki, 2016). Another issue is that most of the agents are in urban areas and not rural areas because the majority of the rural dwellers are not literate in financial matters (Sekantsi & Motelle, 2016).

1. User Adaptability:

The essential components to make Mobile Money successful are convenience and reliability. Lots of work still should be done to promote customer acknowledgment and acceptance of the service. Mobile operators, banks, and payment suppliers have struggled to persuade customers that the new services are superior to those being used today. Senso and Venkatakrisnan (2013) observes that people who did not use the services knew about its existence but had only a basic understanding of its benefits and usage.

2. The unavailability of agents:

Service usage always has difficulty, mainly when agents are not situated in the same area as customers. When this happens, it does not encourage customers to patronize the service (Senso & Venkatakrisnan, 2011). Also, those in rural areas find it challenging to access agents who

have sufficient funds for withdrawal (Andersson-Manjang, 2021; Senso & Venkatakrishnan, 2011).

3. Network Lapses and unreliable service:

This system needs infrastructure support from service providers, which means if there was any interruption in the mobile reception, payments could not be made (Otieno et al., 2016). Even severe weather could cause a break in reception, slowing payments (Otieno et al., 2016). Unreliable services can be a significant factor in hindering a large population of customers patronizing the service (Senso & Venkatakrishnan, 2011).

2.6 FACTORS AFFECTING MOBILE MONEY ACCEPTANCE

Lema (2017, p. 39) cites that “they observed that factors affecting the acceptance of mobile financial services among the rural under banked are, lack of trust; low technology readiness and perceived financial cost were significant barriers to mobile financial acceptance in rural unbanked population.” Even though the study was conducted in India, an environment different from Ghana, it can still be applied because both countries are developing countries. (Tobbin & Kuwornu, 2011) researched on the introduction of Mobile Money transfer technology geared towards the key factors that influence consumer conduct towards the acceptance and utilization of Mobile Money transfer in Ghana. In this research, a combined aspect of TAM, which includes Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) and aspects of Diffusion of Innovation Theory (DOI), to determine users behavioural intention towards usage of Mobile Money (Tobbin & Kuwornu, 2011). The same study indicates that Mobile Money depends on consumers' perception of trust and risk for Mobile Money to flourish. Another factor to consider is security and literacy rate. With the exceptional value provided by Mobile Money services to customers, (Mtaho, 2015) observes that the way to gain a customer's trust in this service is through security because most of them are worried about how secure the service would be. Having a personal identification number and password is the go-to method for everyone. However, with this kind of security, everyone knows it can easily be forged or copied, making them a less secure way of security verification (Mtaho, 2015).

Another factor to consider is the benefits that come with using mobile money technology. Under UTAUT model, performance expectancy deals in people's belief that using the system to do various tasks boosts job performance (Venkatesh et al., 2003b). People will use mobile payment systems if they see the system as beneficial to their transaction or financial needs (Nur & Panggabean, 2021). Performance expectancy is critical in conveying the intention to use

mobile payment (Nur & Panggabean, 2021). Also, to consider the effortlessness of using the technology, with effort expectancy, there is a feel from people that using information technology system should be effortless (Nur & Panggabean, 2021). This statement is compatible with TAM, in which perceived ease of use is a major predictor of individuals' acceptance of new technology (Fred, 1989). Several studies have found that Effort Expectancy has a considerable influence on an individual's desire to adopt a given technology (Oliveira et al., 2016; Peša & Brajković, 2016; Slade et al., 2015). The subjective norm on Theory of Reasoned Action is comparable to Social Influences (TRA). The UTAUT model recognises the significance of incorporating a social component into the model, such as the opinions of friends and relatives (Nur & Panggabean, 2021). According to this idea, social influences become greater at an early stage when people utilise a particular technology. Individuals appear to be more attentive to the perspectives of others. Social Influences persuade people to utilise mobile payment systems if other people see the technology's relevance as advantageous to their decision to embrace and use mobile payment systems (Nur & Panggabean, 2021). Several studies have found that social influences have a substantial impact on behavioural intentions to adopt new technology in learning management systems (Alshehri et al., 2019); mobile learning (Slade et al., 2015); and mobile payment (Al-Okaily et al., 2020; Oliveira et al., 2016). Facilitating Conditions are People's impressions of all available resources and support for specific behaviours (Venkatesh et al., 2003a). Individual believes that technology infrastructure exists to facilitate system acceptance (Nur & Panggabean, 2021). The presence of a supporting infrastructure will boost people's willingness to accept new technology (Oliveira et al., 2016). Several studies have found that Facilitating Conditions have a substantial impact on the Behavioral Intention to Use a specific technology (K. P. Gupta et al., 2019; Mensah et al., 2020; Patil et al., 2020).

Donovan (2012), also emphasizes that in digital space, authentication methods can be put into three types namely; those based on the knowledge of user such as passwords and personal identification number, the second one is related to what the user has like credit cards and master card and the last one is based on your identity (biometric authentication). Even though Mobile Money makes it easier to receive and send money, most people are concerned about how safe their details are being kept online. Given this, there have been technological solutions for security concerns which include the use of security protocols like secure socket layer (SSL) and wireless transport layer security (WTLS) for the keeping of a customer's information secured (Chogo & Sedoyeka, 2014).

2.7 THEORETICAL FRAMEWORK AND BACKGROUND

This chapter elaborates on the theories that are important to the research study. As Mobile Money evolves, it enhances the way customers trade cash and transact with business entities. Aside from sending and receiving cash to be withdrawn, consumers ought to have the capacity to utilize Mobile Money to buy food and household products from local retail locations. Mobile Money helps make day-to-day payment benefits clear and provides more use of the service. Depending on related issues like network problems, cashout fees, and transaction fees, users can accept or reject Mobile Money. Along these lines, administrators of this innovation can anticipate the factors hindering technology acceptance and having the ability to understand and anticipate the conditions that would lead to acceptance. Most theories and models have already explained the usage and acceptance of technology. These include; Theory of Reasoned Action (TRA), Technology Acceptance Model, Theory of Planned Behaviour, Combined TAM – TPB, Model of PC utilization, Innovation Diffusion Theory, Social Cognitive Theory. Unified Theory of Acceptance and Use of Technology (UTAUT). Unified Theory of Acceptance and Use of Technology (UTAUT 2) framework was chosen for this research. A study by (Zhou, 2008) that focuses on the factors influencing user acceptance of mobile commerce based on UTAUT concluded that constructs like performance expectancy, facilitating conditions, social influence, and a contextual offering substantially impacted the usage intention. Among the factors significantly influencing usage intention, the effect of performance expectancy is relatively large (Zhou, 2008). This implies that customers consider the advantages presented by mobile commerce, such as effective communication, convenience, time, and cost reduction. Also, research by (Tobbin & Kuwornu, 2011) on the key factors that assist Ghanaian consumers' acceptance and use of Mobile Money transfer technology with the use of crucial constructs from Technology Acceptance Model (TAM) and Diffusion of innovation (DOI) theory. Theories like diffusion of innovation theory(DOI), technology acceptance model(TAM), the theory of planned behaviour have been used for a long time by most researchers to explain possible consumer behaviour concerning acceptance and acceptance patterns of new technologies and innovations (Tobbin & Kuwornu, 2011). Various models explain how the acceptance of modern technologies can work concerning electronic payment and mobile payment. Some theories that have been proposed to explain the behaviours of consumers towards innovation and modern technologies are: Technology Acceptance Model, (TAM) (Venkatesh & Davis, 2000), Unified Theory of Acceptance and use of Technology (Venkatesh et al., 2003) and Theory of Planned Behaviour, TPB (Ajzen, 2002). As far as this study is concerned, the UTAUT2 will be used due. It will be suitable for assessing Mobile

Money acceptance by retail businesses because it expands previous studies by having new constructs (Hedonic Motivation, Price Value, and Habits). The hedonic motivation will help the researcher focus on how a particular practice or behaviour influences retailers to utilize Mobile Money for a business.

Price value focuses on the positive impacts of using technology to gain something greater other than focusing only on the monetary gain, and Habit also focuses on the day-to-day activities of retailers' which can affect technology use (Huang & Kao, 2015). Therefore, these additional constructs for UTAUT2 will help the researcher understand how retailers' can accept and use Mobile Money. (Venkatesh et al., 2003a) created UTAUT to research individual acknowledgment of information technology into a broad unified theoretical model by solidifying the structure of eight models used in the previous study to clarify its usage behaviour. These eight models are; Technology Acceptance Model (TAM) (Fred D & Davis, 2000), Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 2011), Motivational Model (MM) (Igbaria et al., 1996), Theory of Planned Behaviour (TPB) (Ajzen, 1991), combined theory of planned behaviour/technology acceptance model (C-TPM-TAM) (Taylor & Todd, 1995), Model of PC Utilization (MPCU) (Thompson et al., 1991), Innovation of Diffusion Theory (DOI) (Rogers Everett, 1995) and Social Cognitive Theory (SCT) (Wood & Bandura, 1989). (Venkatesh et al., 2012) created the UTAUT as an all-inclusive and incorporated model for consumers to better understand acceptance towards modern technology or system.

2.7.1 Theory of Reasoned Action (TRA)

TRA was based on the premise that people are smart and use available facts to take systemic action. People weigh the consequences of their decisions before deciding whether or not to exhibit certain behaviour (Fishbein & Ajzen, 2011). The Theory of Reasoned Action (TRA) has its origins in the field of cognitive science. The theory suggests three broad constructs: "behavioural intention (BI), attitude (A), and subjective norm (SN)"(Sharma & Mishra, 2014). In TRA, attitude and subjective norm are key structures that decide an individual's purpose to execute actions. Furthermore, a person's desire is likely to turn to behaviour if the intention to behave in a certain way is strong enough.

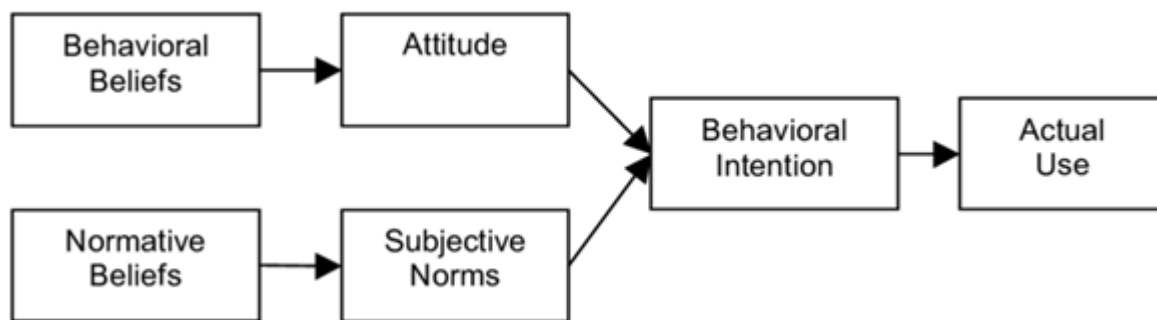


Figure 2. 5 Theory of Reasoned Action (Fishbein, 1979)

2.7.2 Technology Acceptance Model

In a further augmentation, (Davis, 1985) came about with a technology acceptance model, which represented people's acceptance of information technology. This model has two major behavioural factors that affect the user intentions about using new technology. (Fred, 1989) makes it known that the two most important considerations under this model are perceived ease of use (PEOU) and perceived usefulness (PU). The model's strength lies in its simplicity. It has only two constructs for forecasting the extent of implementing emerging technology at the individual level, namely "perceived usefulness" and "perceived ease of use". (Sharma & Mishra, 2014) and (Zhang et al., 2012) explains Perceived Use (PU) as “the degree to which a person believes that using a particular system would enhance his or her job performance and Perceived ease of use (PEOU) as the degree to which a person believes that using a particular system would be free of effort”.

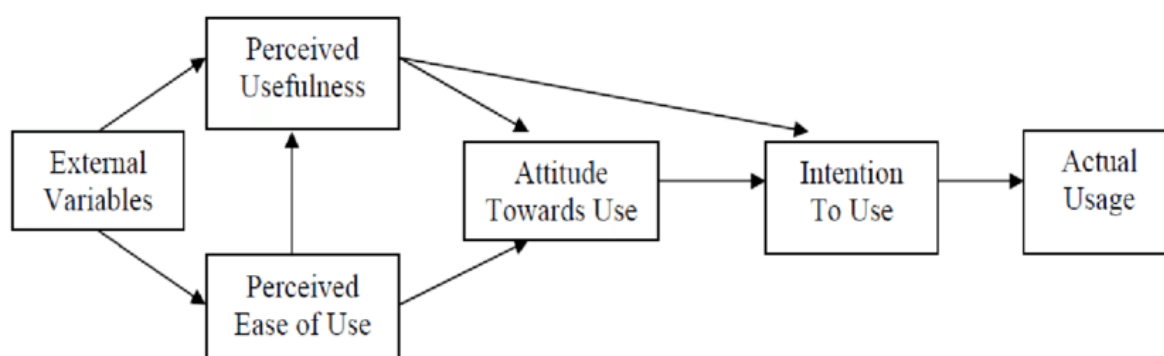


Figure 2. 6 Technology Acceptance Model (Davis, 1985)

2.7.3 Theory of Planned Behaviour

Ajzen (1991) came up with the idea of the theory of planned behaviour. The theory of planned behaviour is an expansion of the theory of reasoned action. As in the first theory of reasoned action, the focal factor of the theory of planned behaviour is the person's aim to play out given conduct. The principle of Perceived Behavioural Control (PBC) is added to the constructs behaviours and subjective norms that comprise the TRA. Perceived behavioural control is described as "people's understanding of the ease or complexity of performing the desired behaviour" (Sharma & Mishra, 2014). Demeanor (attitude), abstract standard (subjective norm), and perceived behavioural control are the key constructs. Above all, self-efficacy is the most significant determinant of behavioural improvement because it contributes to the development of coping behaviour (Sharma & Mishra, 2014).

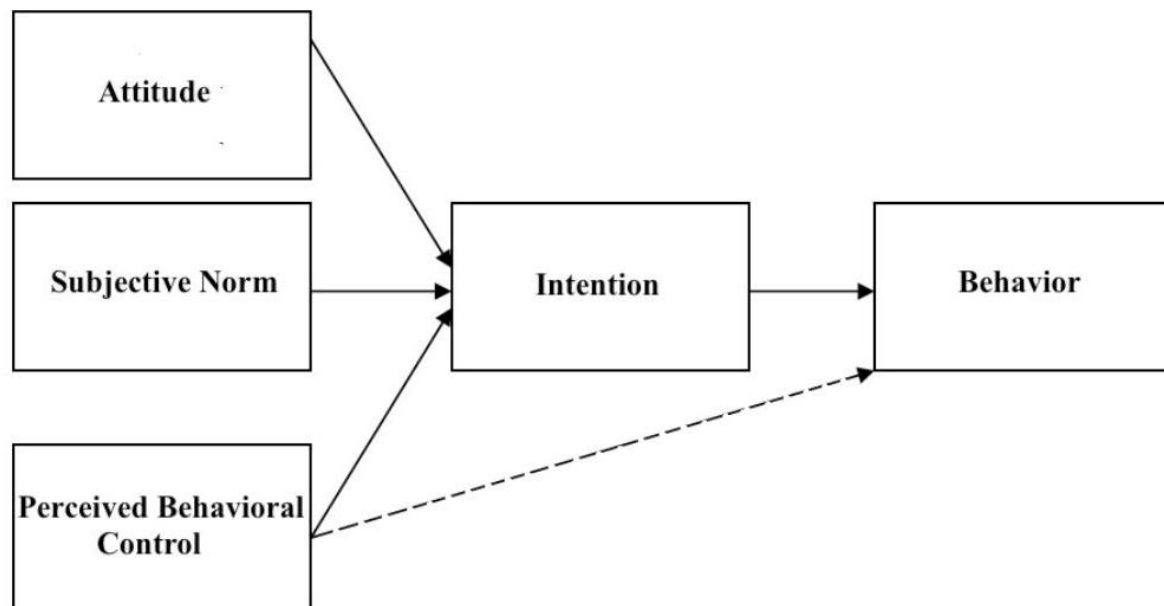


Figure 2. 7 Theory of Planned Behaviour (Ajzen, 1991)

2.7.4 Combined TAM - TPB

Taylor and Todd (1995) created this model in 1995 by combining the theory of planned behaviour (TPB) predictors with technology acceptance model (TAM) constructs of perceived usefulness and ease of use (Surendran, 2012; Taylor & Todd, 1995). Lau (2011, p. 3) states that "it is also known as 'decomposed' theory of planned behaviour because the belief structure is decomposed in this model".

Thus, perceived usefulness (relative advantage), ease of use (complexity), and compatibility influence attitude. Peer and superior authority both affect the normative belief structure. Self-

efficacy and facilitating factors influence the control belief structure (Taylor & Todd, 1995).

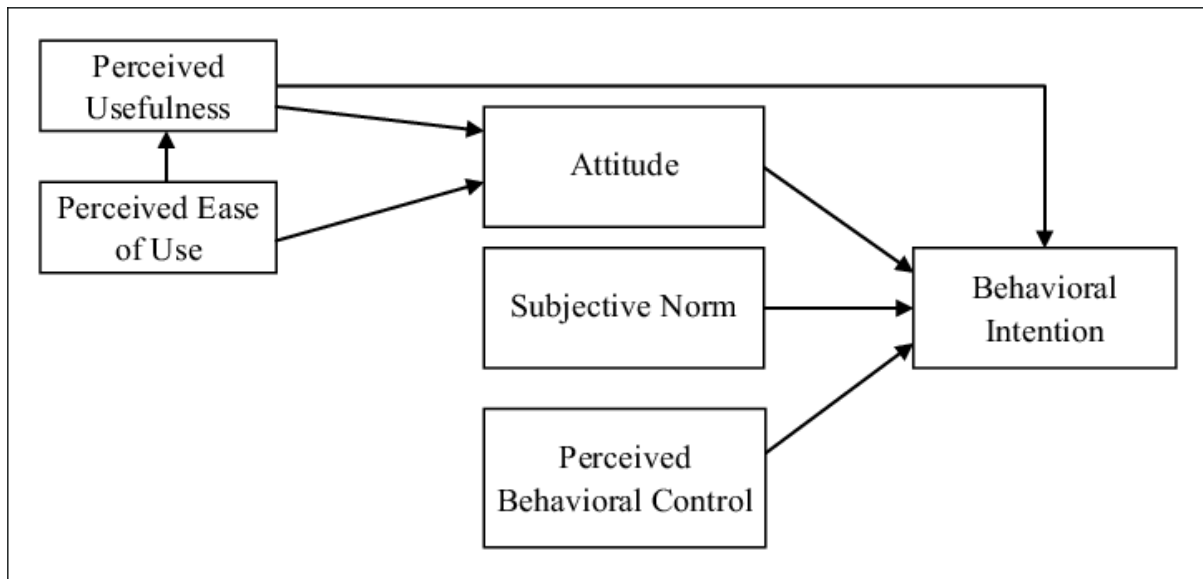


Figure 2. 8 Combined TAM - TPB (Taylor & Todd, 1995)

2.7.5 Model of PC utilization

Thompson et al. (1991) created this model, and according to them, “Behaviour is determined by what people would like to do (attitudes), what they think they should do (social norms), what they have usually done (habits), and by the expected consequences of their behaviour”. This model outlined six determinants of technology acceptance: work fit, difficulty, long-term consequences, affect against usage, social factor, and facilitating circumstances.

Triandis (1977) forms the foundation of the MPCU, which recognizes human behaviour philosophy in connection to technology acceptance. His theory of attitudes and behaviour is a competing viewpoint to the TRA and TPB.

The explanations of each construct as proposed by MPCU ((Thompson et al., 1991) are:

- Job fit is the degree to which a person feels that embracing technology would improve his or her work performance (Thompson et al., 1991, p. 129).
- The complexity of PC Use is the degree to which an innovation is difficult to grasp and use (Thompson et al., 1991, p. 128).
- Long- Term results have a future pay-off (Thompson et al., 1991, p. 129).
- Affect towards use is the sensations of joy, exhilaration, pleasure, despair, disgust, dissatisfaction, or hatred associated with an individual with a specific deed (Thompson et al., 1991, p. 127).
- Social factors are the internalization of the subjective culture of the reference group by

the individual and the special interpersonal agreements that are made with others in a given social environment. (Thompson et al., 1991, p. 126).

- Facilitating Conditions are objective environmental variables that observers agree to make an act easy to perform. In the context of information systems, assisting PC users may be some kind of trigger condition that may affect the use of the system (Thompson et al., 1991, p. 129).

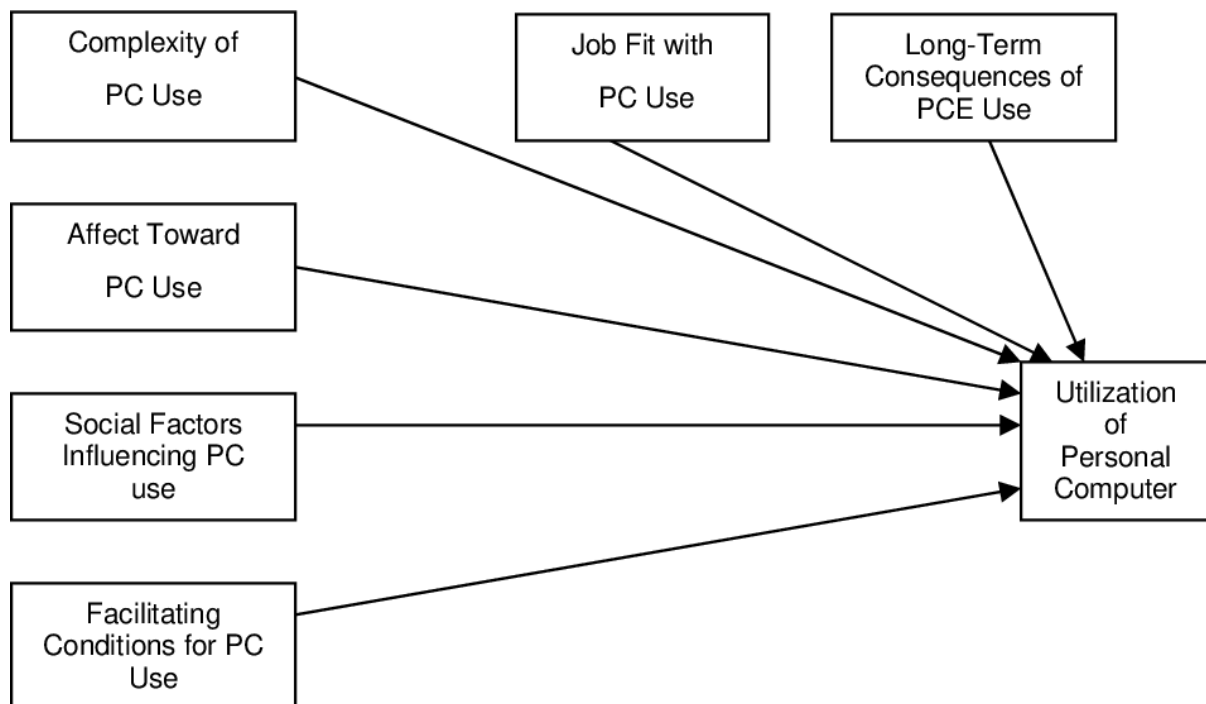


Figure 2. 9 Model of PC utilization (Thompson et al., 1991)

2.7.6 Innovation of Diffusion Theory

This theory was created in 1995 by Rogers (Rogers Everett, 1995). Diffusion is the mechanism by which a new concept, process, entity, or procedure enters the social system, and innovation is the process by which it emerges (Rogers Everett, 1995). This theory is regarded as the permanent theory of recognition of innovation and is applicable in both a human and organizational setting (Yusuf & Derus, 2013). The theory's central premise is that four factors affect spreading a new concept: communication channel, time, social system, and innovation (Sharma & Mishra, 2014). The diffusion process has five determinants in which the pace of innovation affects acceptance and acceptance behaviour. These innovations will have an increased rate if one perceives that the innovation can: 1) can be tested on a restricted scale

before acceptance (trialability); 2) provides measurable outcomes (observability); 3) Has a competitive edge over other inventions (relative advantage); 4) is not difficult (complexity); 5) Is it congruent with current practices and values (compatibility) (Ling, 2008).

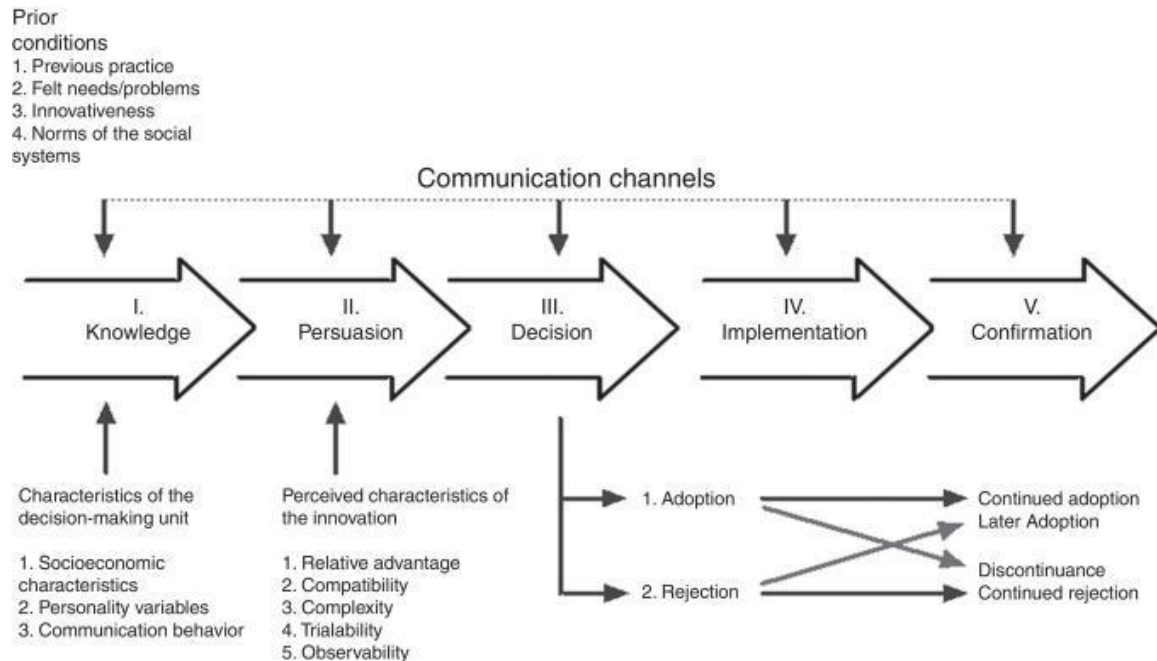


Figure 2. 10 Innovation Diffusion theory (Rogers Everett, 1995)

2.7.7 Social Cognitive Theory

Human conduct is perceived as a connection between personal factors, conduct, and surroundings (Wood & Bandura, 1989). This proposes that users learn and sustain behaviour while considering the social environment in which the behaviour is developed (Alomary & Woollard, 2015). The theory of planned behaviour (TPB), the technology acceptance model (TAM), and the innovation diffusion theory conclude that their models' main variables have only unidirectional causal relationships. On the other hand, the social cognitive hypothesis argues that external factors, personal factors, and behaviours are mutually influenced (Wood & Bandura, 1989). It emphasizes the idea of self-consciousness (Compeau et al., 1999). Social cognitive theory gives a system for comprehension, anticipating, and changing human conduct. Personal determinants or self-efficacy believe in one's capacity to utilize technology to complete a specific job or task (Ling, 2008). Behavioural Determinants are how individuals respond to different cues from their social and physical surroundings (i.e., self-regulation) (Quit, 2002). Environmental determinants are any physically external thing that can influence an individual's conduct. Social factors make up the environment (i.e., family, friends, observational learning), and physical factors (i.e., weather, availability of tobacco products,

etc.) (Quit, 2002).

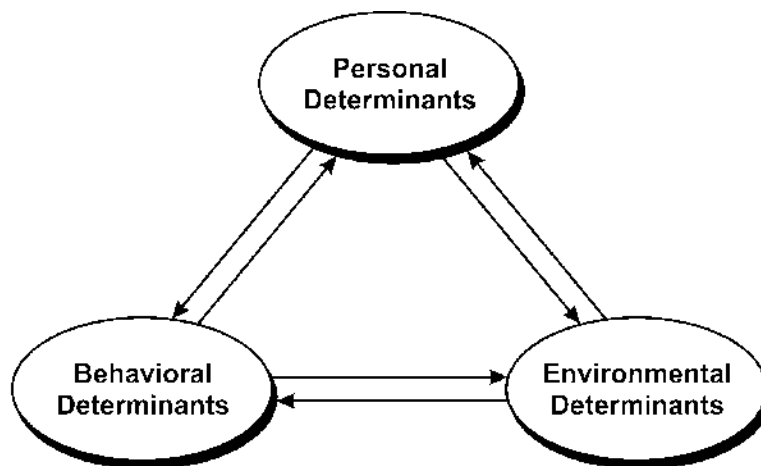


Figure 2. 11 Social Cognitive Theory (Wood & Bandura, 1989)

2.7.8 Unified Theory of Acceptance and Use of Technology (UTAUT)

The articulation of this model created by (Venkatesh et al., 2003) focused on modifying previous models to overcome the limitations of previous models. Most researchers have used the unified theory of acceptance and use of technology (UTAUT) for a long time to explain possible consumer behaviour concerning the acceptance and acceptance pattern of new technologies and innovations (Tobbin & Kuwornu, 2011). Under UTAUT, performance expectancy, effort expectancy, social influence, and facilitating condition are primary constructs that influence behavioural intention to use a technology (Singh & Matsui, 2017).

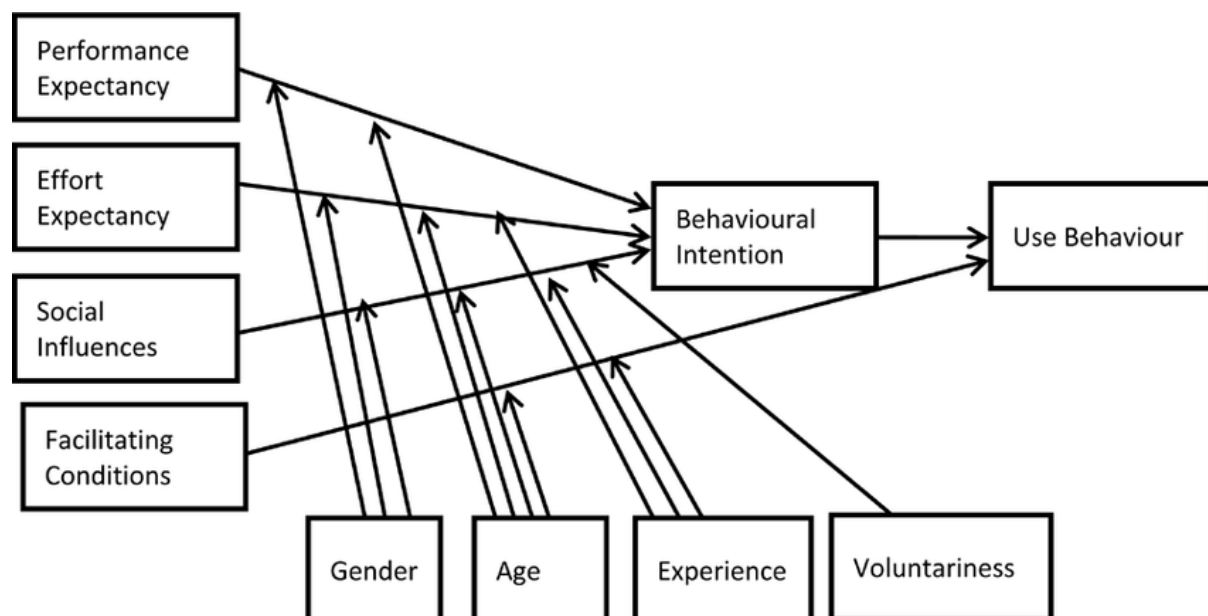


Figure 2. 12 Unified theory of acceptance and use of technology (Venkatesh et al., 2003)

2.7.9 *Modified version of Unified Theory of Acceptance and Use of Technology(UTAUT2)* (Venkatesh et al., 2003a) state that the UTAUT model is based on four constructs: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions. The difference between UTAUT and UTAUT2 is that with UTAUT2 there are three new constructs: Hedonic Motivation, Price Value, and Habit (Figure 2.13). UTAUT2 is the preferred model for this study and will be discussed in the next section.

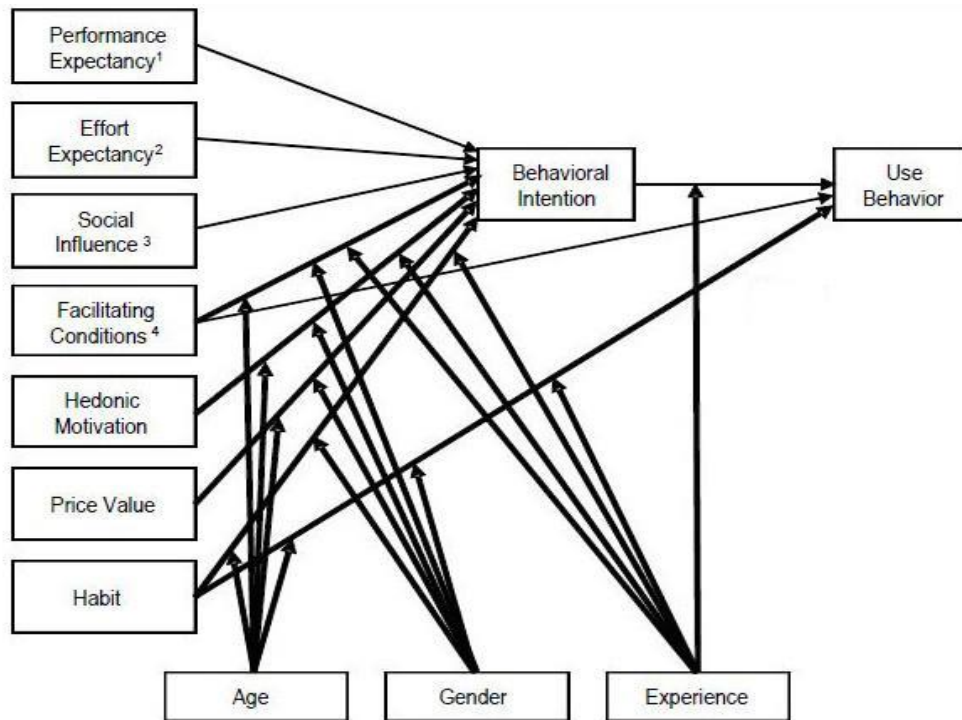


Figure 2. 13 Unified Theory of Acceptance and Use of Technology (UTAUT2)
(Venkatesh et al., 2012)

2.8. THE THEORY UNDERPINNING THIS STUDY

Even though UTAUT is relatively more youthful than the various models surveyed, it may account for 70% deviation compared to 40% of other models (Venkatesh et al., 2003). UTAUT has been developed in the hierarchical setting, where acknowledging and utilizing technology can be compulsory (Venkatesh et al., 2003). In comparison to the original UTAUT, the extension contained in the UTAUT2 lead to a significant improvement in variance, as evidenced by consumers' intentions to adopt (56–74 %) and actual usage behaviour (40–52 %) (Malarvizhi et al., 2022; Tandon et al., 2016). Nevertheless, there is not an authoritative order for consumers, and along these lines, most consumer practices are totally voluntary. As needs be, UTAUT2 is proposed as a valuable model to comprehend consumer utilization of

technology in general. The main difference between UTAUT and UTAUT2 is adding three constructs (Hedonic motivation, Price Value, and Habit). According to (Venkatesh et al., 2003), UTAUT has four main factors that influence the intended use and use of information technology. Its four main factors are performance expectancy, effort expectancy, facilitating conditions, and social influence. The argument for selecting or adopting UTAUT2 theory for the study is that it is the most appropriate theory for predicting technology uptake and use of technology from the consumer's perspective and gives superior prediction accuracy (Yeh & Tseng, 2017). Despite its widespread acceptance, (Venkatesh et al., 2003) added three more constructs into UTAUT and named it UTAUT2.

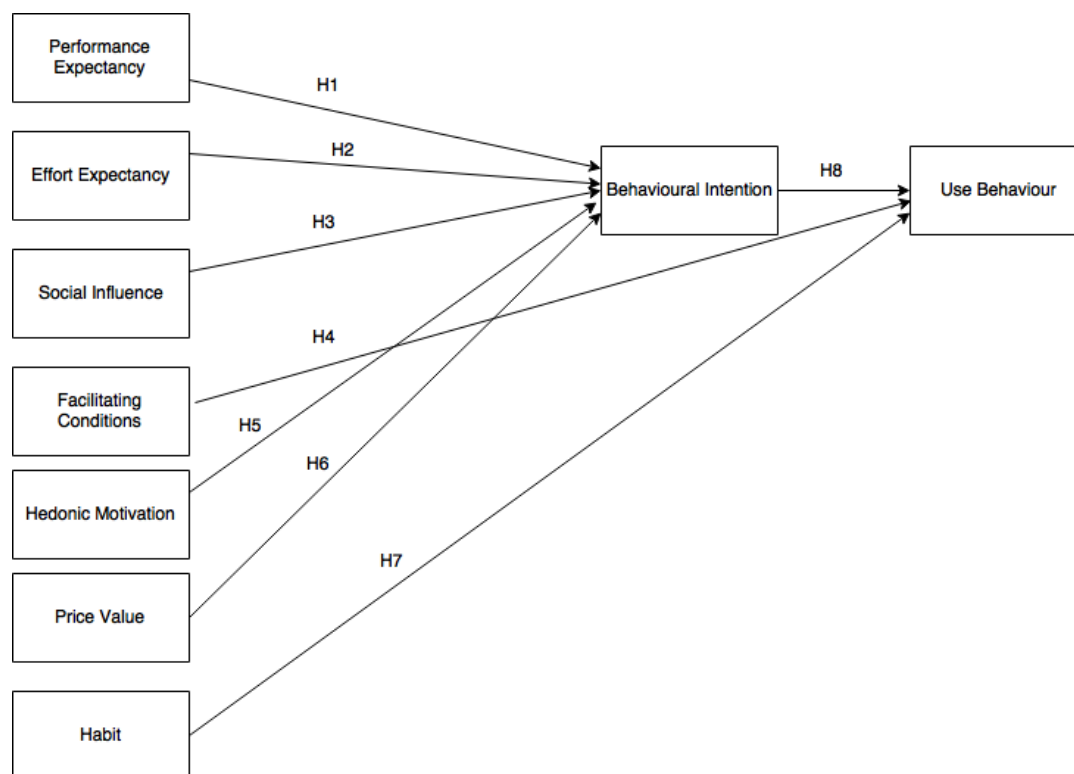


Figure 2. 14 Adopted UTAUT2 framework

2.8.1 Performance Expectancy

This is the degree to which people are confident that applying the established principles of the framework can improve their job performance, or the degree to which utilizing another innovation or item can give customers the advantages in performing specific activities (Hamzat, 2018; Venkatesh et al., 2003a). (Venkatesh et al., 2003a; Venkatesh et al., 2012) in the UTAUT models decided to consolidate few factors like perceived usefulness (TAM/TAM2), relative advantage (IDT), extrinsic motivation drawn from the motivation mode (MM), job fit derived from model of PC utilization (MPCU) and outcome expectations

social cognitive theory (SCT) to form performance expectancy. Performance expectancy influences users' behavioural intention to adopt technologies (Sair & Danish, 2018).

H₀₁: Performance expectancy does not impact retailers' behavioural intention to use Mobile Money for business.

H₁: Performance expectancy significantly impacts retailers' behavioural intention to use Mobile Money for business.

2.8.2 Effort Expectancy

Fred (1989, p. 320) makes us aware that “even if potential users believe that a given application is useful, they may, at the same time, believe that the system is too hard to use and that the performance benefits of usage are out-weighed by the effort of using the application.” This is the ease of use or the extent to which one can use technology or a new product quickly. The degree to which customers anticipate that new technology will be simple to use, quick to understand, and require little effort is referred to as effort expectancy (Blaise et al., 2018). Effort expectancy is founded on the concept that there are correlations between the amount of effort put in at work, the results of that effort, and the rewards obtained from that effort (Ghalandari, 2012). Effort expectancy will have significant influence on the behavioural intentions of users when implementing technologies. (Chao, 2019).

H₀₂: Effort expectancy does not impact retailers' behavioural intention to use Mobile Money for business

H₂: Effort expectancy significantly impacts retailers' behavioural intention to use Mobile Money for business

2.8.3 Social Influence

Social influence was utilised to represent the abstract standard in TRA, TAM2, TPB/Decompose theory of planned behaviour (DTPB), and combined TAM-TPB (CTAM-TPB), social factors in MPCU, and image in IDT (Venkatesh et al., 2003). (Venkatesh et al., 2003a, p. 451) states that “social influence is the extent or degree to which a person perceives that others believe a technology or technology product should be used”. (Huang & Kao, 2015) researched some factors that affect individuals in adopting mobile banking using UTAUT model. This resulted in findings that makes it clear that social influence has the greatest impact on people's intention to use mobile banking.

H₀₃: Social influence does not impact retailers' behavioural intention to use Mobile Money for business

H3: Social influence significantly impacts retailers' behavioural intention to use Mobile Money for business

2.8.4 Facilitating Conditions

Venkatesh et al. (2003a) defined facilitating condition as a way in which a specialized framework exist to help the usage of innovation. Yeh and Tseng (2017) recognizes that the enabling conditions should be prioritized since the better the facilitating conditions, the easier it is for customers to use the technology. A. Gupta and Dogra (2017) argue that the UTAUT model alludes to the fact that a user's perception of enabling conditions has a major influence on the acceptance of new technology because the environment either supports or restricts technological acceptance.

H₀₄: Facilitating conditions does not impact retailers' use of Mobile Money for business

H4: Facilitating conditions significantly impacts retailers' use of Mobile Money for business

2.8.5 Hedonic Motivation

This can be defined as the inspiration to accomplish something because of the fulfillment picked up from the use of technology. This has a part to play in the general acknowledgment and utilization of technology (Huang & Kao, 2015). This is identified with a person's psychological and emotional encounters, which is picked up from following up on specific practices that came about because of esthetic and passionate sentiments.

H₀₅: Hedonic motivation does not impact retailers' behavioural intention to use Mobile Money for business.

H5: Hedonic motivation significantly impacts retailers' behavioural intention to use Mobile Money for business.

2.8.6 Price Value

This is generally viewed as an essential indicator in forecasting the purchase behaviour of an individual and how it can impact an organization's competitive advantage (Chang & Tseng, 2013; Shakti, 2019). This construct was derived from perceived value and it becomes beneficial

when the benefits of using the technology are found to be greater than the monetary costs, the price value positively impacts on intentions.

H₀₆: Price value does not impact retailers' behavioural intention to use Mobile Money for business

H₆: Price value significantly impacts retailers' behavioural intention to use Mobile Money for business

2.8.7 Habit

Venkatesh et al. (2012) defined this as “The degree to which consumers tend to perform the usage of technologies or the products automatically because of learning”. This construct consists of three criteria, namely past behaviour, reflex behaviour, and individual experience. The past behaviour is portrayed as users' earlier practices. The reflex behaviour refers to users' conduct arrangement or traditions, which are customary parts of day-to-day life. Limayem et al. (2007) states that such encounters diminished the requirements for discussions, coordination, or meaningful decision-making. Webb et al. (2009) it also makes us understand that habit is a strong predictor of the use of technology to change behaviour.

H₀₇: Habit does not impact retailers' use of Mobile Money for business

H₇: Habit significantly impacts retailers' use of Mobile Money for business

2.8.8 Behavioural Intentions

This is the eighth construct that was considered and this construct refers to the extent to which an individual comes up with specific plans to perform or not to perform some specified behaviours (Venkatesh et al., 2003a; Venkatesh et al., 2012). Abubakar and Ahmad (2013) suggests that user intention is the most important element influencing user acceptance and technology usage. Oliveira et al. (2016) states that when a new technology fits into a consumer's lifestyle, their behavioural intention to utilize it increases.

H₀₈: Behavioural intention does not impact retailers' use behaviour of Mobile Money for business

H₈: Behavioural intention significantly impacts retailers' use behaviour of Mobile Money for business

2.9 CONCLUSION

In this chapter, it was noted that Mobile Money could change the lives of numerous people

who have cell phones but without a bank account. Be that as it may, its acceptance by retail organizations is somewhat on the low, even though by and large, the take-up of the service by the people is improving each day. In conclusion, the need for this research with the chosen methodology is to determine factors that influence retailers' use of Mobile Money. In this chapter, the concept of Mobile Money was explained. The literature review looked at prevailing aspects of the technology from the viewpoint of various researchers. Also, the UTAUT2 model was reviewed alongside other theoretical models popularly used to research acceptance factors of information systems and technologies. The adapted UTAUT2 model has been justified for this research and will be the basis of the remainder of the work.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter explains the research methods implemented for the study. Goundar (2013, p. 10) states that “research methodology is a systematic way to solve a problem. It is a science of studying how research is to be carried out. Essentially, the procedures by which researchers describe, explain and predict phenomena are called research methodology. It is also defined as the study of methods by which knowledge is gained. It aims to give the work plan of research.”. Thus, research methodology includes the methods and approaches chosen by the researcher in accomplishing the research objectives. Focused areas that will be described in this chapter are data collection methods, data analysis, research philosophy, research approach and design, and the limitation of the study.

3.2. RESEARCH APPROACH

Creswell (2014, p. 31) defines research approaches “as plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation”. There are two major research approaches, quantitative and qualitative (Moissenko, Braicu, Tomuleasa, & Berindan-Neagoe, 2016). Qualitative research approaches are used for phenomenological, ethnographic, historical, case studies, grounded theory instances of research (Moissenko et al., 2016). Rhodes (2014, p. 1) states that “Qualitative is an examination of variable or phenomenon in a deep comprehensive manner. In the otherwise, quantitative analysis information gathering focuses on describing a phenomenon across a larger number of participants thereby providing the possibility of summarizing characteristics across groups or relationships”. Quantitative research involves the collection of data that can be presented numerically to describe and explain the phenomena that those observations reflect (Sukamolson, 2007).

Similarly, Creswell (2014, p. 32) explains, “quantitative research is an approach for testing objective theories by examining the relationship among variables and these variables, in turn, can be measured, typically on instruments, so that numbered data can be analysed using statistical procedures”. This definition infers that quantitative studies require the collecting of numerical data from a large population. This study focuses solely on obtaining and studying

data related to a retailers' acceptance of money by using existing theories and establishing relationships between factors in these theories. Thus to achieve this, a quantitative research approach was adopted.

3.3 RESEARCH DESIGN

As in everything one does, to be successful, you must lay down the principles to follow. The same holds when one is conducting research. The research design is a plan that guides the study's path. (Labaree, 2009, p. 1); McCombes. (2021) states that "The research design refers to the overall strategy that you choose to integrate the different components of the study in a coherent and logical way, thereby, ensuring you will effectively address the research problem; it constitutes the blueprint for the collection, measurement, and analysis of data. Note that your research problem determines the type of design you should use, not the other way around!"

There are four major types of quantitative designs, namely: 1) survey design, 2) correlational research, 3) experimental research, and 4) causal-comparative research (McCombes., 2021; Sukamolson, 2007). Survey research uses scientific sampling and questionnaire design to measure the characteristics of the population with statistical precision (Sukamolson, 2007). A survey thus offers the opportunity to study the impact of various variables on a phenomenon. (Mathers, Fox, & Hunn, 2007) further explains that surveys are useful for descriptive non-experimental designs which attempt to represent reality. The correlation researcher examines one or more characteristics of a group to find out how the characteristics vary together (Simon & Goes, 2011). Correlational studies display the relationships among variables by such techniques as cross-tabulation and correlations, and thus this is usually ideal for studies considering relationships between variables (Bhandari, 2021). Experimental research looks at intentionally setting factors into play to observe the impact or outcome of those factors on a subject. This is usually not directed at a cross-section of a target populace but instead carried out in a closed environment (Simon & Goes, 2011). Causal-comparative research is similar to correlational research but focuses on one variable causing a phenomenon rather than studying the two variables reciprocally. Since this study aimed to analyze the impact of variables on Mobile Money acceptance among retailers in Ghana, a survey research design was used.

3.4 RESEARCH METHODS

Walliman (2017, p. 29) alludes that "Research methods are the practical techniques used to carry out research. They are the 'tools of the trade' that make it possible to collect information

and to analyse it". Since this research used a quantitative approach with a survey design, the following topics discuss the research methods aligned to this approach and design.

3.4.1 Study site and research population

For the most part, a research population is a complete arrangement of people or objects that have some common attributes and the focal point of a scientific query (McDaniel & Gates, 2006). For this research, the population are retailers in the Central Business District of Accra, Ghana. According to Statistics (2019) (Appendix G), there are 135,471 registered businesses in the Greater Accra Region. This population was selected because they are the most likely group to adopt Mobile Money for their business transactions (Majid, 2018).

3.4.2. Sampling techniques

Ideally, to collect data for any research, all retailers in the central business district should participate in the study. But it will be challenging, costly and time-wasting to target everyone. To help overcome challenges with time and cost, a sample was selected because it saves time, saves money, and human resources (Engelhardt & Kumar, 2011; McCombes, 2019)

The sample is a sub-section of a larger population (Albertyn-Burton & Scheepers, 2017). Different sampling techniques are grouped into two categories, probability and non-probability (Taherdoost, 2016). Acharya et al. (2013) explains that probabilistic sampling involves generally selecting samples without bias towards a particular preference or attribute, while non-probabilistic sampling involves the selecting of a sample purposively aimed at studying subjects with preferred attributes. Taherdoost (2016, p. 20) cites that "probability sampling means that every item in the population has an equal chance of being included in the sample". The probability sampling technique is seen as one of the distinguishing characteristics of quantitative research involving collecting random samples of subjects from a given population (Gray, 2014). Each participant in the population has a known non-zero probability of being included in the sample. Under probability sampling, there are simple random, systematic random, stratified random, cluster and multi-stage (Taherdoost, 2016).

The systematic selection of every 'nth' member of the population is systematic sampling. With random sampling, each element in the sample frame has an equal chance of sampling. Stratified random sampling is the stratification method by a random collection of sample from strata. In contrast, cluster sampling is the aggregation of the population in groups (clusters) and then the random collection from the cluster (Uma Sekaran & Bougie, 2016). The probability sampling

technique provides the most accurate representation of the population as a whole (Walliman, 2017).

Non-probability sampling is sampling where the likelihood is that a subject selected is unknown and results in bias in research collection (Acharya et al., 2013). It also is divided into four groups, namely 'quota sampling, judgement sampling, haphazard (convenience) sampling, and volunteer (snowball and self-selection) sampling' (Saunders, 2012).

Quota sampling is a sampling procedure that provides a representation of a specific characteristic of a sample of the population. For example, a population can be divided by gender, income level, education status, etc. (Acharya et al., 2013). Convenience sampling is a technique that samples respondents readily available (Acharya et al., 2013). Judgment sampling is identified based on the participant's qualities, and snowball sampling is used to find people of a scarce population based on the referral process (Struwig & Stead, 2001).

A convenience sampling method was chosen for this study. The convenience sampling method was selected because it was convenient for the researcher due to the population's accessibility, availability, and geographical closeness (Etikan et al., 2016). Also, the difficulty in obtaining a sampling frame made it difficult to use a random sampling approach.

3.4.3 Sample size

Obtaining data regarding businesses in Ghana was difficult, and thus the researcher decided to focus on Greater Accra which is the capital city of Ghana. Greater Accra is mainly an administrative territory, although most researchers conceptualize urban Accra as a built-up city (Grant, 2009). Since it was problematic to differentiate the retail businesses from other registered businesses in the Accra region (Appendix G), it was therefore difficult to obtain the population size of retailers, hence making it difficult to obtain a sampling frame. However, to ensure the results and conclusions are reliable, an appropriate sample size was determined.

Roscoe (1975), cited by (Uma, 2009), proposes that most quantitative studies need a sample size of at least 30 but no more than 500. They further state for regression analysis, the sample size should be 10 times the number of variables in the study. This study has 9 factors and when using (Roscoe, 1975) of 10 times the number of variables, therefore an acceptable minimum sample size for this study was 90 per group (adopters and non-adopters).

3.4.4 Survey design and layout

The research questionnaire used in the survey has three major sections. The first section involved questions to understand the demographic profile of the respondents involved. It also involved some fundamental questions related to Mobile Money usage in Ghana. The second section was designed with the constructs of the theoretical framework in mind for adopters of Mobile Money. The third section was designed with the constructs of the theoretical framework in mind for non-adopters of Mobile Money. Both these sections had a five-point Likert scale approach to obtain relevant data from respondents.

Table 3. 1 Survey design and layout				
Section	Topic	Items	Question Type	Intended participant
Section A	Biographical Data	8	Dichotomous scale Check boxes	All participants
Section B	Construct PE: 4, EE: 4, SI: 4, FC: 4, HM: 3, PV: 4, H: 4 BI: 3, USE: 4	34	5-point Likert Scale from “strongly disagree” to “strongly agree”	Retailers (Adopters)
Section C	Construct PE: 4, EE: 4, SI: 4, FC: 4, HM: 3, PV: 4, H: 4 BI: 3, USE: 4	34	5-point Likert Scale from “strongly disagree” to “strongly agree”	Retailers (Non-Adopters)

Figure 3. 1 Survey design and layout

3.4.5 Survey distribution strategy

The distribution of surveys can be done in different ways. By postal delivery, e-mail, or send weblinks (online) and face to face. Questionnaire administration through postal delivery is used when the researcher requires that the survey cover a wide geographic area (Mathers et al., 2007; Melcher, 2018). This has the benefit of ease that the participants will answer the questionnaire at their speed and at the same time have a limited response rate cap as some of the questions cannot be answered by the participants due to difficulty in understanding it (Sekaran & Bougie, 2016). With online questionnaire distribution, it is easy, cheap, and fast. This kind of method is used when you have a lengthy questionnaire and it requires much time to be completed. Online distribution has similar disadvantages to postal distribution. With this kind of

distribution, the respondent must be computer literate and understand the questions on the questionnaire. If they do not understand it, accurate information on the research will not be achieved. Due to all this, self-administration of the questionnaire was considered for this research.

When questionnaires are more focused on local areas, face-to-face (self-administered) distribution is appropriate. Face-to-face distribution can aid in motivating participants because it gives them the chance to ask firsthand questions when they do not understand something. Sekaran and Bougie (2010) also makes us understand that the physical distribution of questionnaires by the researcher aids in the use of less time than the mailing of questionnaires. It allows the researcher to address pending issues and clear all doubts based on the respondents' questions.

Closed-ended questionnaires were distributed face to face to 200 retailers at the central business district (CBD). The questionnaire that was administered explained the purpose of the research, had the researcher name on it, and had an ethical letter attached to it.

3.5 DATA ANALYSIS

Completed questionnaires from respondents were examined with Statistical Package for Social Sciences (SPSS). Relevant descriptive analyses were carried out. Patel (2009, p. 3) states that “Descriptive analysis are often used to describe variables. Calzon (2022) Also, they are performed by analyzing one variable at a time”. This will consist of frequency tables (absolute frequency, relative frequency, cumulative frequency, clustered charts and cross tabulations), measures of central tendencies, measures of variability, a summary of central tendencies and variability, correlation etc. This study used frequencies and mean to document the descriptive analysis. These were presented using graphs and tables. Also, some inferential statistics were made mainly on the theoretical framework to analyse the dependent and independent variables. Principle component analysis was carried out to reduce the number of items that may not be measuring the construct under study. Reliability testing was done to test the consistency of the data. After that, regression analysis was performed to test for a significant relationship between dependent and independent variables. Multiple regression was utilised to create a standard model that may be used to predict behavioural intention to use Mobile Money services. This was accomplished with the assistance of the SPSS software and lastly SPSS was used to perform a simple linear regression study between two independent and dependent constructs.

Linear regression analyses were performed in SPSS to determine the factors that influence people's acceptance of Mobile Money services.

3.6 DATA RELIABILITY AND VALIDITY

Rigour is very important to any research project. According to (Heale & Twycross, 2015, p. 1), “rigour refers to the extent to which the researchers worked to enhance the quality of the studies”. Central to achieving rigour are the concepts of reliability and validity.

3.6.1 Validity

According to (Anastasi & Urbina, 1997), validity refers to how well the research instrument measures the variables under study. If validity is achieved, it will make the findings more legitimate (Institute, 2018; Senso & Venkatakrishnan, 2013).

Validity in the study was achieved by using questions from a validated questionnaire, ensuring that the questions aligned to the constructs of the study. These questions were then rephrased to meet the domain of this study. To further ensure content validity, the researcher also carried out a pilot study. Hassan et al. (2006) defines a pilot study as a “small study to test research protocols, data collection instruments, sample recruitment strategies and other techniques in preparation for a larger study”. In this case, a pilot study was done to determine the feasibility and testing the measurement instrument for the study. A pilot administration was carried out on five random retailers selected by the researcher from Accra. These retailers were not part of the final study. Inputs made by the respondents were considered and adjustments were made to the original questionnaire. The wording for some items on the questionnaire was reviewed to make for easier understanding by the retailers.

3.6.2 Reliability

Sekaran and Bougie (2019, p. 203) defined reliability as “the extent to which the measure is error free and hence ensures consistent measurement across time and across the various items in the research instrument”. This study measured reliability by measuring the internal consistency of items in a construct. Internal consistency measures the extent to which items in a questionnaire measure the same construct. This is done by calculating Cronbach’s alpha. A value of 0.7 and over is deemed acceptable.

3.7 ETHICAL CONSIDERATIONS

Ethics could be described as the systems or procedures that characterizes good moral practices. Ethics in research help and monitor the researcher's ethical practices while conducting the

research (Resnik, 2011) so that the confidentiality, anonymity, and privacy of the respondents are preserved during the study. Keeping in mind the end goal is to guarantee the respondents that all moral practices would be maintained, an letter of informed consent is signed by the researcher and the respondent before the questionnaire was completed. This will serve as evidence that respondents were made aware of the objectives and motives of the research before data is collected and to ensure that their decision to participate was entirely voluntary and without coercion or force. For confidentiality and privacy reasons, respondents are made aware that they have the right to keep any information they wish to keep undisclosed. For anonymity, respondents' identities will be withheld when presenting the final findings (Pritha, 2021). Ethical approval was sought and granted by the University of KwaZulu-Natal Humanities and Social Sciences Research Ethics Committee (HSSREC) – Appendix I.

3.8 SUMMARY

This section presented the data-gathering strategies used in directing the research methodology. The research approach and design, which fuses surveys, ethical considerations, and data analysis. A quantitative approach was adopted, and questionnaires was carried out through self-administration. Ethical considerations were carefully considered and observed while the questionnaire was being administered to Mobile Money users in the central business district. The collection of data technique such as questionnaires, which falls under the primary source of data for this research, was also elaborated.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND DISCUSSIONS

4.1 INTRODUCTION

This chapter focuses on presenting relevant data gathered during the research survey. It first looks at the demographic profile of the respondents as well as some basic information regarding the acceptance of Mobile Money technologies. Data in this regard consists of frequency values and descriptive statistics. The second section of this chapter focuses on more advanced statistical computations based on the conceptual framework adopted for this research.

4.2 DEMOGRAPHIC PROFILE OF SURVEY RESPONDENTS

As indicated in the methodology chapter, close-ended questionnaires were administered to a sample of respondents drawn from the CBD in Accra, Ghana. The demographic profile covers attributes of these respondents, such as their gender of respondents, their age groups, and their educational qualifications.

4.2.1 Gender, Age and Educational Level of Respondents

From the 200 questionnaires that were distributed, 100 were returned, giving a response rate of 50%. Ninety-five respondents were adopters and five were non-adopters. Table 4.1 contains a summary of information based on the demographic attributes of the respondents. For the Adopters, the table indicates that 31 (33%) of the respondents were males while 63 (67%) were females. One respondent did not provide input in this regard.

In terms of age groupings of the adopters, 6 (6.3%) were between ages 18 and 30, 21 (22.1%) were between ages 31 and 40, 24 (25.3%) were between ages 41 and 50, 35 (36.8%) were between ages 51 and 60, and 9 (9.8%) were over 60 years.

Table 4. 1 Demographic profile of respondents

		Adopters		Non-Adopters	
		Frequency	Valid Percent	Frequency	Valid Percent
Gender of respondents	Male	31	33.0	5	100.00
	Female	63	67.0	0	0.0
	Missing	1	0.00		
	Total	95	100.0	5	100.0
Age group of respondents	18-30	6	6.3	1	20.0
	31-40	21	22.1	1	20.0
	41-50	24	25.3	1	20.0
	51-60	35	36.8	1	20.0
	61 and above	9	9.8	1	20.0
	Total	95	100.0	5	100.0
Educational level of respondents	High school	38	40.0	2	40.0
	BSc / HND(Tertiary)	28	29.5	2	40.0
	Post graduate	26	27.4	1	20.0
	Other	3	3.2	0	0.0
	Total	95	100.0	5	100.0

In Table 4.2, information about the responses on essential Mobile Money technology awareness and usage is shown. From the table, it can be seen that all respondents are aware of the existence of Mobile Money services across the various networks. Of these, 95 percent rely on Mobile Money services in one way or another, while 5 percent claim not to. Therefore 95% served as the adopters while 5% represented the Non-Adopters.

Table 4. 2 Awareness and usage of Mobile Money Services

		Frequency	Valid Percent
Are you aware of Mobile Money services	Yes	100	100
	No	0	0
	Total	100	100.0
		Frequency	Valid Percent
Do you use Mobile Money services	Yes	95	95
	No	5	5
	Total	100	100.0

Table 4.3 further indicates what those who claim to use Mobile Money services use them for. From the table, 69 (75%) of the respondents indicated that they used the technologies for transferring money to other individuals. Eighty (87%) indicated that they use Mobile Money technology to receive payments for goods and services, while 76 (83%) use such services to pay for goods and services. It is important to note that these items are not mutually exclusive, and a respondent can select more than one service.

Table 4. 3 Purpose of Use of Mobile Money Services

Purpose of use	Responses	Percentage of cases
Do you use Mobile Money for money transfers?	69	75.0%
Do you use Mobile Money to receive payments?	80	87%
Do you use Mobile Money to pay for goods and services?	76	82.6%
a. Dichotomy group counted on value 1. 1 means "Yes" to the variable.		

Data was also sought on the choice of the service provider in order to obtain insights into the most preferred networks. Information concerning this is shown on Table 4.4. Seventy-seven respondents representing 81% of the respondents indicated that they use MTN Mobile Money services. Twenty-seven respondents representing 28% indicated that they use Tigo Cash services. Thirty-three respondents representing 35% patronize Vodafone Cash while ten respondents representing 11% rely on Airtel Money services. It is also important to note that some respondents have multiple mobile devices registered with separate network providers.

Table 4. 4 Preferred Mobile Money provider

		Responses	Percentage of Cases
Preferred Money Provider	MTN	77	81.1%
	Tigo	27	28.4%
	Airtel	10	10.5%
	Vodafone	33	34.7%
a. Dichotomy group counted on value 1. 1 means "Yes" to the variable.			

Table 4.5 is a cross-tabulation of information regarding the choice of network service provider and the purpose of use of the services they provide. It can be seen that a large percentage of

respondents preferred MTN Mobile Money platforms for all three categories of services. TigoCash and Vodafone Cash were not doing so poorly in terms of patronage. For TigoCash, 27.5% of the respondents relied on the network for transferring money, 25% used the network to receive payments, while 23.7% used the network to pay for goods and services. For Vodafone, 36.2% relied on the network to transfer monies, 30% used it to receive payments, while 35.5 used the service to pay for goods and services. For Airtel Money, however, patronage was not encouraging even though they provided similar categories of services. Only 10% relied on the network to transfer monies, while 8.8% used it to receive payments and 13.2% used it to pay for goods and services.

Furthermore, a mean value of 4.26 was obtained for usage behaviour, indicating that most of the adopter respondents indicated “often to always” regarding how often they used Mobile Money.

Table 4. 5 Cross tabulation PurposeOfUse* PreferredNetwork Cross tabulation

		Choice of service provider				Total
		Tigo Cash	MTN Money	Airtel Money	Vodafone Cash	
Purpose of use of Mobile Money	For money transfers	19 (27.5%)	57 (82.6%)	7 (10.1%)	25 (36.2%)	69
	To receive payments	20 (25%)	71 (88.8%)	7 (8.8%)	24 (30.0%)	80
	To pay for goods and services	18 (23.7%)	58 (76.3%)	10 (13.2%)	27 (35.5%)	76
Total		26	75	10	33	92

4.3 ANALYSIS OF MEASUREMENT SCALES

This section of the dissertation covers sections of the survey questionnaire relating to the UTAUT2 model adopted for the study. Thirty questions in all were formulated under various categories relating to the research model. Their responses required five-point Likert scale inputs from the respondents. The research items used in the questionnaire are indicated on Table 4.6. Due to the low number of non-adopters completing the survey, all further analyses will be presented for the section completed by adopters of Mobile Money only.

Table 4. 6 Research constructs item descriptions

Construct	Item Code	Questionnaire description
Performance Expectancy (PE)	PE1	Receiving Mobile Money payment from customers improves my business performance
	PE2	Receiving Mobile Money payment from customers saves time
	PE3	Receiving Mobile Money payment from customers enables me to accomplish my task more quickly
	PE4	I find Mobile Money useful
Effort Expectancy (EE)	EE1	Learning to use Mobile Money is easy for me
	EE2	Becoming skillful at using Mobile Money is easy for me
	EE3	Interaction with Mobile Money is easy for me
	EE4	I would find Mobile Money easy to use
Facilitating Condition (FC)	FC1	My living environment supports me to use Mobile Money
	FC2	I have the resources necessary to use Mobile Money
	FC3	Using Mobile Money is entirely within my control
	FC4	Help is available when I get problem in using Mobile Money
Social Influence (SI)	SI1	Customers who are important to me think that I should use Mobile Money
	SI2	Customers who influence my behaviour think that I should use Mobile Money
	SI3	Customers who are familiar with me think that I should use Mobile Money
	SI4	Most businesses surrounding me use Mobile Money
Hedonic Motivation (HM)	HM1	Using Mobile Money is very educative
	HM2	Using Mobile Money helps overcome difficult challenges
	HM3	Using Mobile Money is satisfying
Price Value (PV)	PV1	The cost of using Mobile Money is higher than using other banking channels
	PV2	The Commission fee is expensive when using Mobile Money
	PV3	Transaction process of Mobile Money involves a slight amount of time and effort

Habit (H)	PV4	Using Mobile Money services is cost burden to me
	H1	The use of Mobile Money has become a habit for me
	H2	The use of Mobile Money has become part of my daily activities
	H3	Using Mobile Money has become regular to me
	H4	Using Mobile Money is something I do without fear
Behavioural Intention (BI)	BI1	I prefer to use Mobile Money
	BI2	I intend to continue using Mobile Money in the future
	BI3	I will recommend Mobile Money to others

4.4 RESPONSES FOR MEASUREMENT SCALES

As shown in Table 4.6, each construct had a set of questions that formed part of the survey. The responses for each construct and their related items are discussed in this section.

4.4.1 Performance Expectancy

From Figure 4.1, 5.5% of the respondents strongly agreed that Mobile Money services are useful, while 51.6% agreed. Most of the respondents indicated positive responses toward the speed of business transactions with the customer via Mobile Money, with 30.8% strongly agreeing and 39.6% also agreeing. Over twenty-six percent strongly agreed that Mobile Money saves time, while 42.9% also agreed with this. Around half (50.5%) of the respondents agreed with the statement that Mobile Money helps to improve their business in general, while 25.3% strongly agreed with this. The mean value for this construct was 3.84, indicating that most of the respondents agreed that Mobile Money enabled their business to be more efficient and effective.

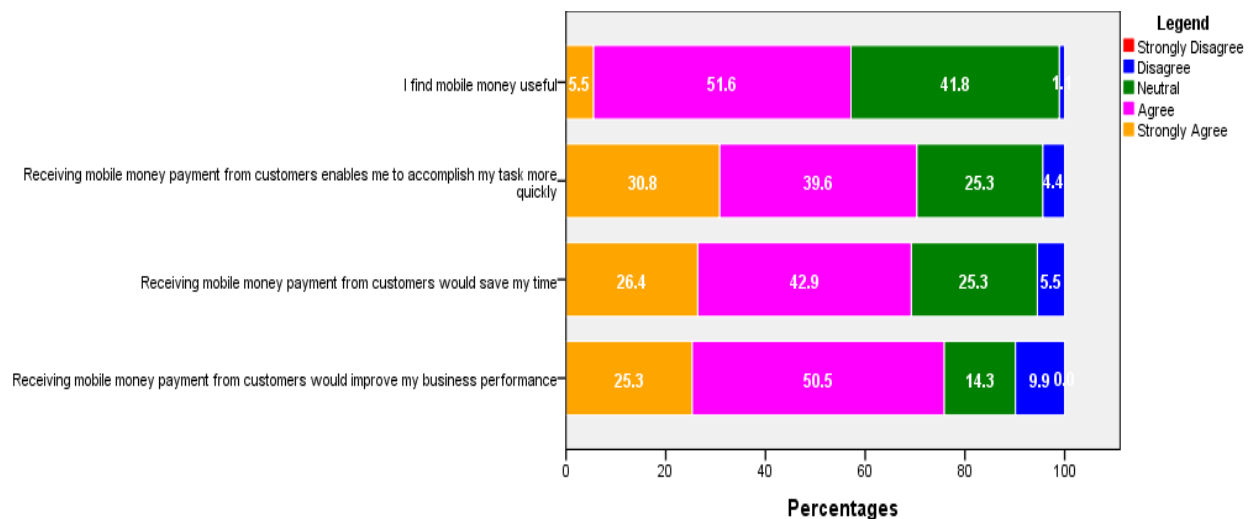


Figure 4. 1 Responses to Performance Expectancy survey items

4.4.2 Effort Expectancy

From Figure 4.2, 53.8% percent of the respondents agree that Mobile Money technologies are easy to use, while 29.7% strongly agree. Indeed, a similar outcome can be observed for the ease of interaction of such systems as perceived by the users. 48.4% agree that such systems are easy to interact with, while 25.3% strongly agree. Most of the respondents representing 58.2%, indicated that they could quickly become adept with Mobile Money systems, while 24.2% strongly agreed. Many respondents indicated that learning how to use such systems is easy, with 20.9% strongly agreeing. The mean value for this construct was 3.95, indicating that most of the respondents agreed that the use of mobile is without effort.

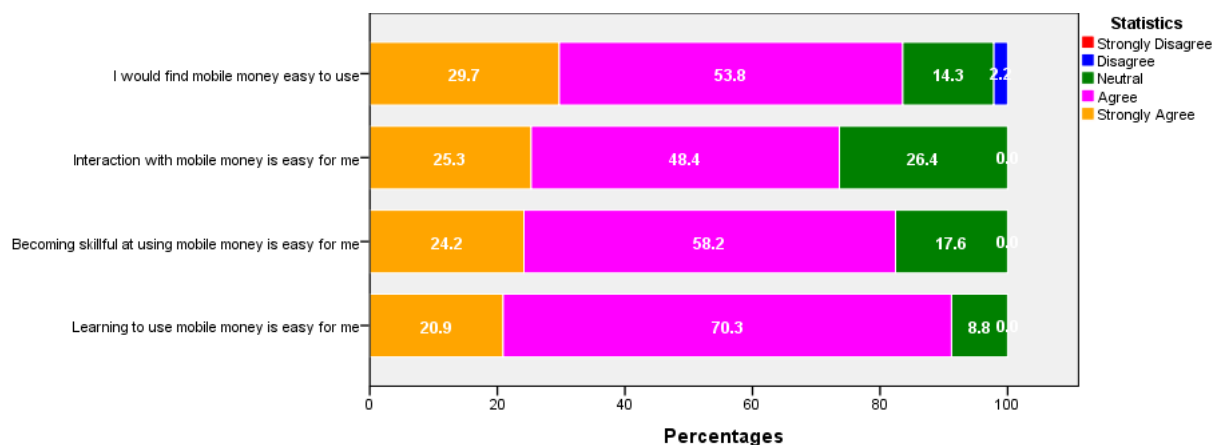


Figure 4. 2 Responses to Effort Expectancy survey items

4.4.3 Facilitating Conditions

Figure 4.3 shows the responses for the FC items as used during the survey. It can be observed that 22% of the respondents agreed that they could get assistance when needed in Mobile Money services, while 11% strongly agreed. However, 23.1% disagreed that they have help available when needed. 44% of the respondents were undecided on this. On the perception of controlling one's usage, around half of the respondents representing 49.5%, indicated that the process is entirely under their control, while 7.7% strongly agreed with this. Forty-four percent of the respondents indicated that they had the resources needed to carry out Mobile Money transactions, while 19.8% strongly agreed. From the Figure, it can be observed that 48.4% of the respondents agreed that their living environments supported the use of Mobile Money technologies, while 24.2% strongly agreed with this. Interestingly, 15.4% of the respondents disagreed with this. The mean value for this construct was 3.58, indicating that most of the respondents agreed that they had the necessary assistance and access resources to use Mobile Money.

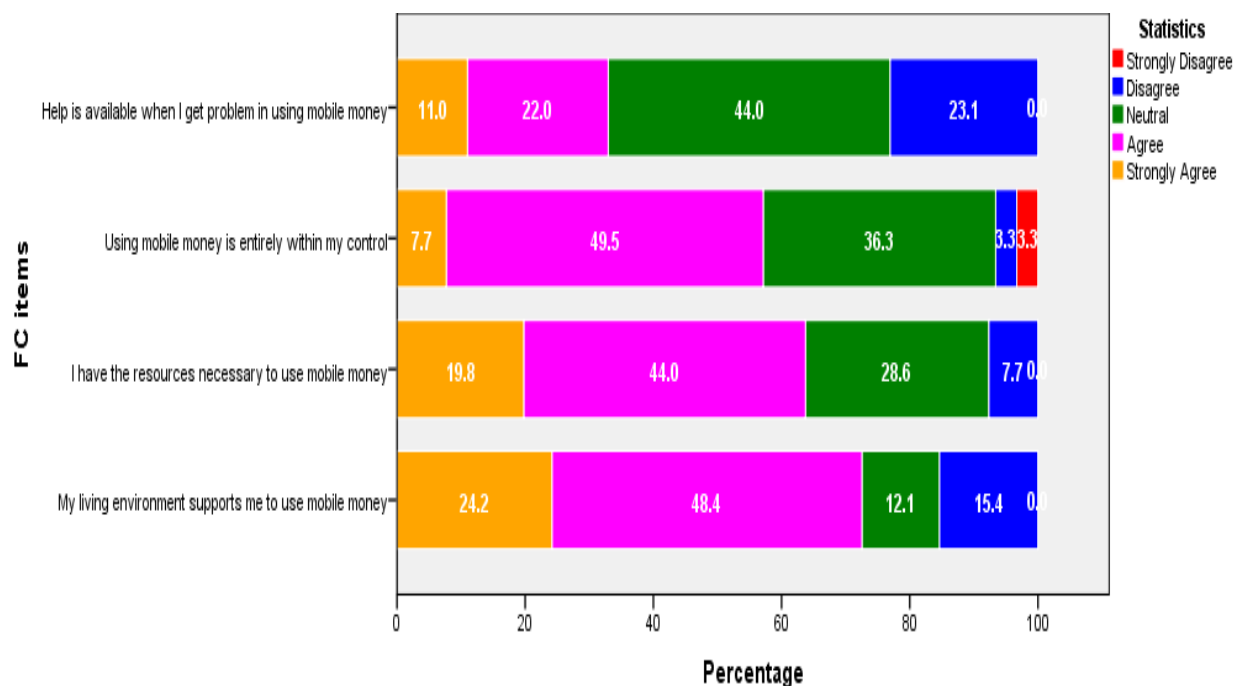


Figure 4. 3 Responses to Facilitating Conditions survey items

4.4.4 Social Influence

There were four items considered under the Social Influence construct. From Figure 4.4, it can be observed that 34.1% of the respondents agreed that most businesses are adopting the use of Mobile Money technologies, while 26.4% strongly agree with this. Most respondents indicated that their customers who know of such services urge them to adopt its use. 49.5% of the respondents alluded to this, while 22% strongly agreed. Most respondents representing 45.1%, indicated that their customers influence them on the use of Mobile Money technologies, while 30.8% strongly agreed to this. Also, 54.9% of respondents expressed that their essential customers positively influence them in Mobile Money technologies, while 20.9% strongly agree with this. The mean value for this construct was 3.88, indicating that most respondents agreed that social influence played a positive role in their use of Mobile Money.

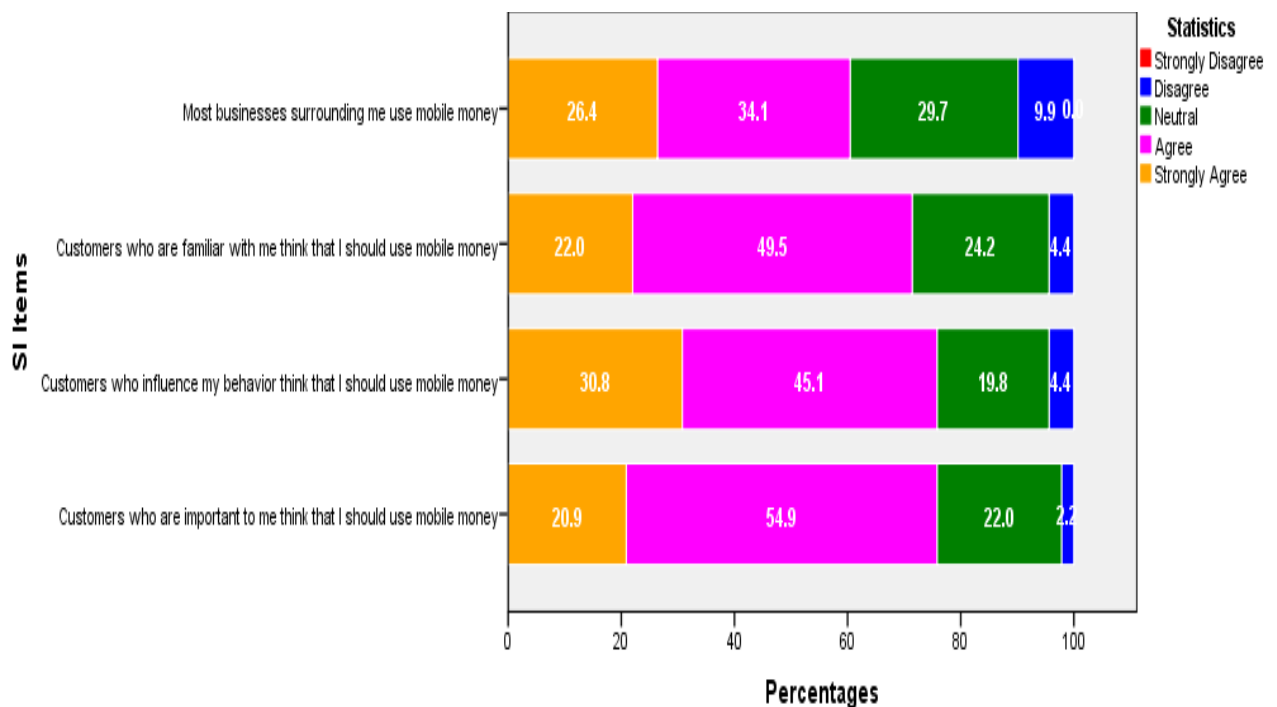


Figure 4. 4 Responses to Social Influence survey items

4.4.5 Hedonic Motivation

The Hedonic Motivation construct had three items considered during the survey. From Figure 4.5, it can be observed that 37.4% of the respondents agreed that Mobile Money services are satisfying, while 33% strongly agreed to this hedonic factor. Most of the respondents representing 61.5%, agreed that the use of Mobile Money technologies helps them overcome complex challenges, while 29.7% also strongly agreed to this. In terms of education, 51.6% of

the respondents agreed to its educative nature, while 35.2 strongly agreed. The mean value for this construct was 3.93, indicating that most of the respondents agreed that they were satisfied with using Mobile Money. This will lead to increased motivation to continue using Mobile Money.

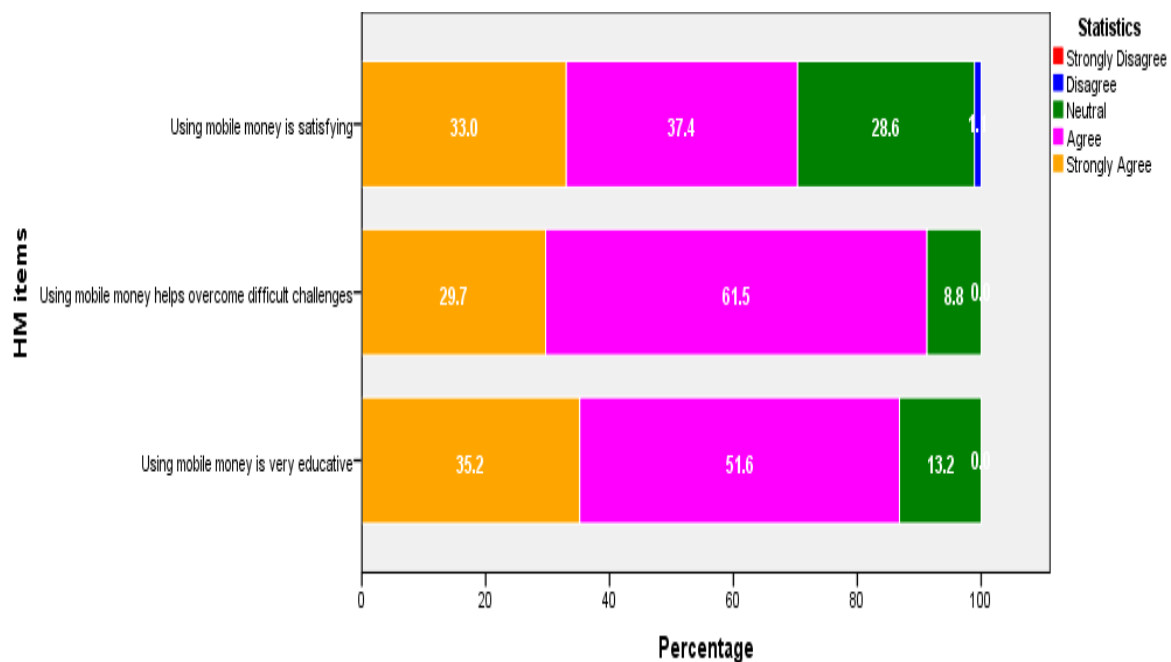


Figure 4. 5 Responses to Hedonic Motivation survey items

4.4.6 Price Value

There were four items under the Price Value construct during the survey. From Figure 4.6, 46.7% of the respondents agreed that Mobile Money usage incurred a cost burden, while 33.3% strongly agreed with this cost burden factor. 62.2% of the respondents indicated that the use of Mobile Money involved a slight amount of time and effort to complete, while 21.1% also strongly agree that the transactions of Mobile Money involve time and effort. 60% of the respondents expressed a strong perception that commission fees on Mobile Money were expensive. 46.7% of the respondents also believe the charges are higher than traditional banking charges, while 31.1 strongly agreed. The mean value for this construct was 4.20, indicating that most of the respondents agreed that Mobile Money is expensive and maybe a burden to their continued use.

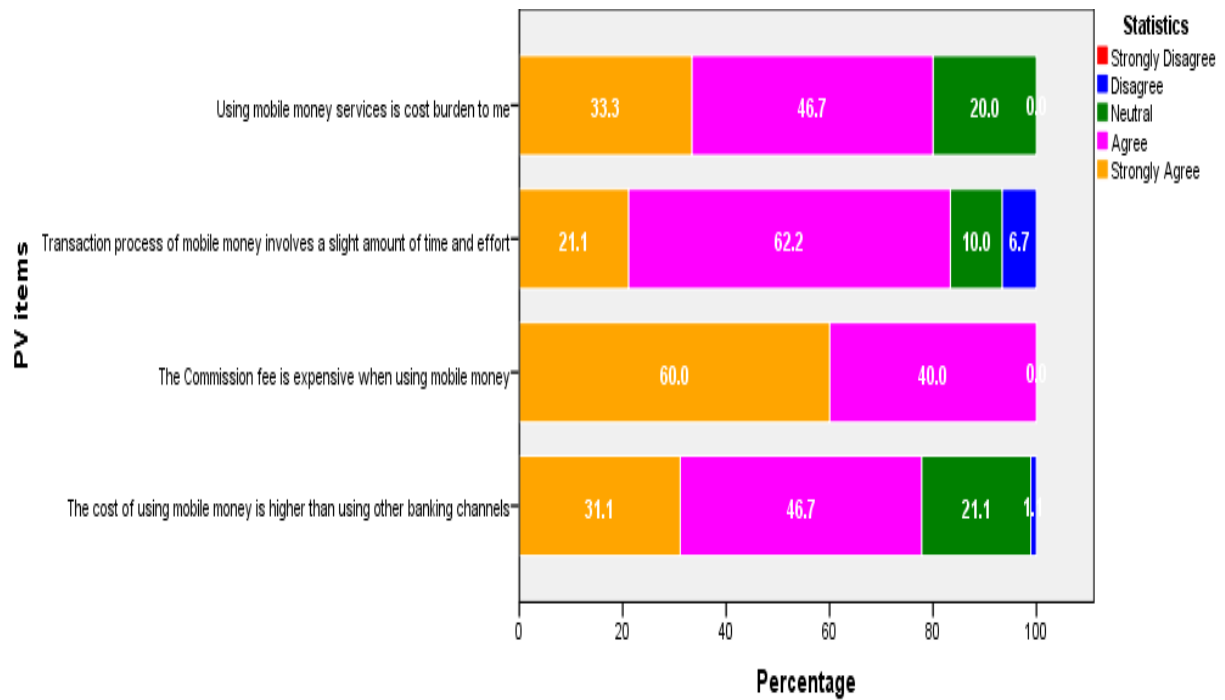


Figure 4. 6 Responses to Price Value survey items

4.4.7 Habit

There were four items considered for the Habit construct in the survey. From Figure 4.7, a large portion of the respondents representing 77.8%, agreed to the perception that they were not afraid to use Mobile Money technologies, while 11.1% strongly agreed to this. 60% agreed that they use Mobile Money regularly from the responses, while 31.1% strongly agreed. As a habit, 36.7% of the respondents indicated that they use Mobile Money to support regular daily activities, while 51.1% strongly agreed. Indeed, most of the respondents representing 78.9% agreed that Mobile Money usage has become a habit. The mean value for this construct was 3.93, indicating that most of the respondents agreed that the use of mobile could become a habit that may lead to their continued use.

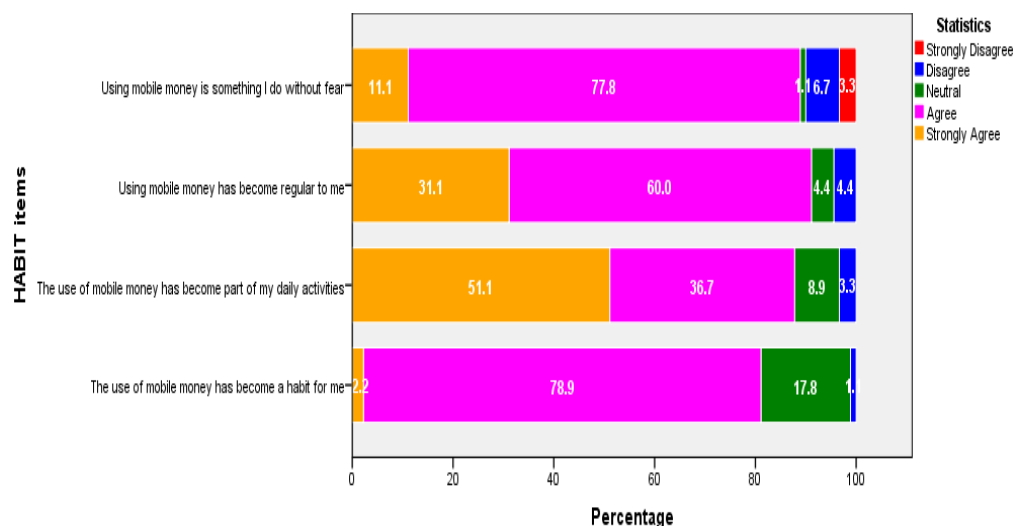


Figure 4. 7 Responses to Habit survey items

4.4.8 Behavioural Intention

The Behavioural Intention factor had three items as used in the survey. From Figure 4.8, 38.9% of the respondents agreed that they will recommend Mobile Money services to others, while 35.6% strongly expressed they will. Most of the respondents representing 66.7%, indicated that they will use Mobile Money services in the future, while 18.9% indicated a strong will to do so in the future. Indeed, a large portion of the respondents representing 54.4% of the respondents expressed a preference for such services while 28.9% strongly preferred Mobile Money services. The mean value for this construct was 4.09, indicating that most of the respondents agreed with the intention to continue using Mobile Money.

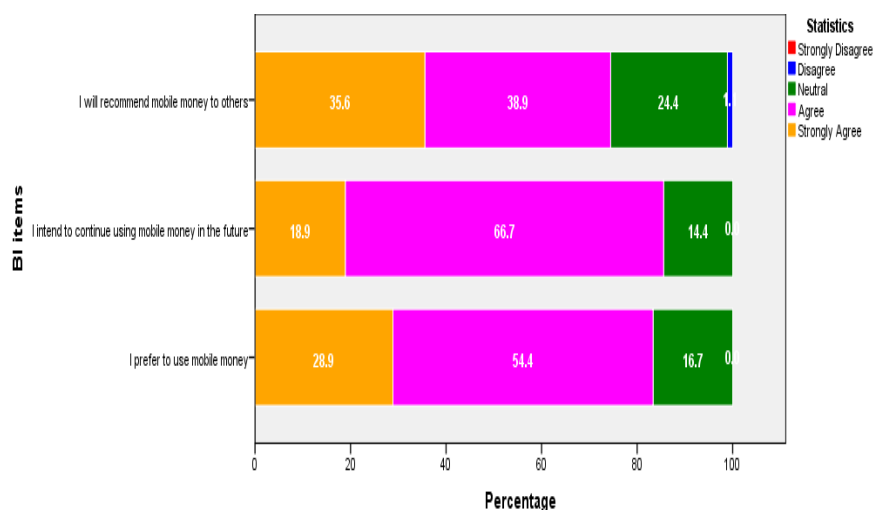


Figure 4. 8 Responses to Behavioural Intention survey items

4.5 Principle Component Analysis

Costello and Osborne (2005) cited that the principal component analysis (PCA) technique adequately analyzes survey questions. This section of the study analyses the data obtained from the questions related to the research constructs. PCA is also supported by (Field, 2009), who indicates that the factor a technique uses the correlation between questionnaire items to explain their variance.

The first step in this process is to check whether a sample size is adequate to support the analysis of the study. (Field, 2009) proposes using the Kaiser-Meyer-Okin (KMO) measure of sampling adequacy to show variance in the underlying factors. A KMO measure was conducted for this study, as seen in Table 4.7. The KMO analysis provides an important statistic/value that helps indicate the sample's adequacy for the study. In this table, it can be seen that KMO derived was 0.662, which translates with a 0.000 significance value. This means the KMO value of 0.662 does a good job at helping to analyze variance of the factors chosen with the sample. In other words, it means there is over 60 percent likelihood that the results will support the correlation between the individual construct items. Indeed (Field, 2009) indicates that the closer a KMO value is to 1.00, the stronger its ability to help extract factors for further analysis. He also indicates that values between 0.7 and 0.8 are very strong. However, this study produced a KMO of 0.7 (approximated), which is adequate to explain the variances between constructs.

Table 4. 7 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			.623
Bartlett's Test of Sphericity	Approx.	Chi-	1403.72
	Square		3
	df		561
	Sig.		0.000

The KMO test was carried out using SPSS and afterwards, another test known as the PCA was conducted to find out if there were any individual variables/items that did not have a strong correlational influence on the collective variables. All 32 variables/items were considered using a Varimax Rotation of the Factor Analysis method in SPSS. From the analysis, SPSS extracted 12 components to test how each of the variables loaded onto it. These components are used by SPSS in an aggregated manner by considering all the correlations between the variables to see how well strongly (or poorly) each individual item influences the general outcome of others.

A strong loading of the variable on the extracted component indicates a good reliance on the variable to explain variances. The extracted items were selected based on their Eigen values greater than 1. Those less than 1, were discarded because they were not strong enough to explain the variances. The selected items formed part of the influence of the factors on the 12 extracted components. Those items that were discarded, as a result, are shown in Table 4.8. They were dropped from further analyses.

Table 4. 8 Items dropped

Item code	Description
PE3	Receiving Mobile Money payment from customers enables me to accomplish my task more quickly
PE4	I find Mobile Money useful
FC3	Using Mobile Money is entirely within my control
PV1	The cost of using Mobile Money is higher than using other banking channels
B12	I intend to continue using Mobile Money in the future

Table 4.9 shows the relevant values for the Rotated Components using the Varimax Rotation method. Values from the items that displayed approximately 0.6 were retained as having loaded strongly enough on the extracted factor components. This benchmark of 0.6 was suggested by (Guadagnoli & Velicer, 1988) as being adequate to explain the variance of the variables/items involved. Items that did not load at least an approximated value of 0.6 formed part of the items shown in Table 4.8.

Table 4. 9 Rotated Component Matrix

	Components											
	1	2	3	4	5	6	7	8	9	10	11	12
EE1	.874											
EE2	.923											
EE3	.905											
EE4	.648											
H1		.601										
H2		.877										
H3		.841										
PE1			.776									
PE2			.851									
PV2				.570								
PV4				.750								
SI1					.729							
SI2					.856							
SI3					.734							
FC1						.602						
FC2						.900						
FC4							.728					
PV3							.610					
H4							.808					
HM1								.840				
HM3								.734				
HM2									.800			
BI1										.740		
SI4											.737	
BI3												.790

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 18 iterations.

4.6 RELIABILITY ANALYSIS

Reliability testing was carried out to test for internal consistency between the responses obtained from the respondents. (Field, 2009) describes reliability analysis as a way to check if responses tend to follow a particular pattern rather than widely deviating in a random manner. This lets the researcher know whether the phenomena under study are based on identified trends in the line of the formulated theory or not. Cronbach's Alpha is preferred for most researchers to test for internal consistency. Researchers such as (Maghnati et al., 2012) sighted that a Cronbach's Alpha score of 0.7 or greater for a set of constructs signifies that the responses are reliable. The SPSS software was used to code all responses from the survey and then analysed based on accepted values from the factor reduction analysis performed earlier. The reliability testing results using the Cronbach Alpha technique are shown in Table 4.10. Most of the constructs showed adequate reliability when approximated. Price Value and Behavioural Intention fell short even though they showed positive Cronbach Alpha values.

Table 4. 10 Reliability Test

Item category	Number of items in construct	Number of items used	Cronbach Alpha
PE	4	2	0.801
EE	4	4	0.963
SI	4	3	0.776
FC	4	3	0.763
HM	3	3	0.812
PV	4	3	0.652
HA	4	4	0.783
BI	3	3	0.602

4.7 MULTIPLE REGRESSION ANALYSIS

In the earlier sections, a model was formulated after aligning this study with relevant literature. The model consists of a set of independent variables formulated to predict usage of Mobile Money amongst people. The model was created by adapting the UTAUT2 model to suit this study. This section of the study shows how statistical computations were made to help generate a standard model that may be used to predict the behavioural Intention to use Mobile Money services. This was done with the help of the SPSS software. The linear model contains all constructs and their coefficients, indicating the weight they carry to help influence the outcome.

Table 4.11 shows the ANOVA summary created during the generation of the linear model in SPSS. The predicted/dependent construct is the BI (Behavioural Intention), while the independent constructs are the PE, EE, SI, HM, and PV. An F-value of **1.294** was obtained with an accompanying significant value of **0.274**. It was not significant because it was greater than 0.05 since a 95 percent confidence interval was adopted. This infers that the independent constructs collectively do not significantly influence the outcome of the Behavioural Intention construct.

Table 4. 11 ANOVA Summary for Regression Analysis on BI

Model		Sum of Square	df	Mean Square	F	Sig.
1	Regression	1.264	5	.253	1.294	.274 ^b
	Residual	16.416	84	.195		
	Total	17.680	89			

a. Dependent Variable: BI

b. Predictors: (Constant), PV, HM, SI, EE, PE

Table 4.12 shows details of the regression analysis that was done to see how the individual components played a part in the interaction process. PE had a t-value of 1.351 and a significance value of 0.180. This meant that it did not significantly impact the Behavioural Intention of users to use Mobile Money systems. Effort Expectancy (EE) showed a t-value of 1.902 and a corresponding significance value of 0.037. This meant that EE impacted significantly on the Behavioural Intention of users to use Mobile Money systems. Social Influence (SI) had a t-value of 0.472 and corresponding sig value of 0.638 while Hedonic Motivation (HM) had a t-value of 0.496 and its sig value of 0.621. Price Value (PV) had a t-value of -1.680 corresponding sig values of 0.047, indicating that it impacted significantly on Behavioural Intention to use Mobile Money systems.

Table 4. 12 Coefficients a for Regression Analysis on BI

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.819	.666		7.239	.000
	PE	-.186	.138	.216	1.351	.180
	EE	.090	.100	.309	1.902	.037
	SI	.039	.083	.051	.472	.638
	HM	.061	.122	.071	.496	.621
	PV	-.182	.109	-.185	-1.680	.047
a. Dependent Variable: BI						

4.7.1 The Linear Regression Equation to Predict Behavioural Intention

A linear equation was formulated based on the beta values obtained in the linear regression to help create a model for predicting the Behavioural Intention of users to use Mobile Money services.

$$\mathbf{BI} = 0.216\mathbf{PE} + 0.309\mathbf{EE} + 0.051\mathbf{SI} + 0.071\mathbf{HM} - 0.185\mathbf{PV} + \varepsilon_i$$

Where

BI = Behavioural Intention to use Mobile Money

PE = Performance Expectancy

EE = Effort Expectancy

SI = Social Influence

HM = Hedonic Motivation

PV = Price Value

ε_i = Error term

A further test was carried out to ascertain the how independent variables such as the Behavioural Intention (BI), Facilitating Conditions (FC) and Habit (H) could have on the actual

Use Behaviour towards Mobile Money systems. Table 4.13 shows the ANOVA summary that was also generated during the generation of the linear model in SPSS.

Table 4. 13 ANOVA Summary for Regression Analysis on USE

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.170	3	.390	1.307	.277b
	Residual	25.358	85	.298		
	Total	26.528	88			
a. Dependent Variable: USE						
b. Predictors: (Constant), HA, FC, BI						

Table 4.14 shows details of the regression analysis that was done to see how the individual components played a part in the interaction process. BI had a t-value of -1.611 and significance value of 0.111. This meant that it did not significantly impact users' Use Behaviour to use Mobile Money systems. Facilitating Conditions (FC) showed a t-value of 0.381 and a corresponding sig value of 0.704. This was greater than 0.05, thus it did not impact significantly on the USE behaviour. Habit (HA) showed a t-value of -0.838 and a corresponding sig value of 0.404, indicating that it did not significantly impact the USE behaviour towards the Mobile Money systems.

Table 4. 14 Coefficients for Regression Analysis on BI

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.368	.758		7.081	.000
	BI	-.211	.131	-.172	-1.611	.111
	FC	.038	.100	.041	.381	.704
	HA	-.095	.113	-.090	-.838	.404
a. Dependent Variable: USE						

4.7.2 The Linear Regression Equation to Predict Use Behaviour

A linear equation was formulated based on the beta values obtained in the linear regression to help create a model for predicting the Use Behaviour towards Mobile Money services.

$$\text{USE} = -0.172\text{BI} + 0.041\text{FC} - 0.090\text{HA} + \varepsilon_i$$

Where

USE = Use Behaviour

BI = Behavioural Intention

FC = Facilitating Conditions

HA = Habit

ε_i = Error term

4.8 HYPOTHESIS TESTING

This section of the dissertation looks at the analysis of the research model as adapted for this study. After considering the relevant relations/interactions between independent and dependent modules in the UTAUT2 model, various hypotheses were formulated. SPSS was again employed to carry out a simple linear regression analysis between independent and dependent constructs pairs. Table 4.13 summarizes the set of linear regression analyses carried out in SPSS to establish the factors that influence the acceptance of Mobile Money services amongst people.

Table 4. 15 Summary of hypothesis test results

Hypothesis	Independent Variable	Dependent Variable	Beta	Sig	Decision (Sig < 0.05)
H1	PE	BI	0.441	0.000	Reject null
H2	EE	BI	0.449	0.000	Reject null
H3	SI	BI	0.026	0.809	Fail to reject null
H4	FC	USE	0.062	0.559	Fail to reject null
H5	HM	BI	0.277	0.008	Reject null
H6	PV	BI	0.218	0.037	Reject null
H7	H	USE	0.615	0.000	Reject null
H8	BI	USE	0.200	0.038	Reject null

4.8.1 Impact of Performance Expectancy on Behavioural Intention to use Mobile Money Services

Performance Expectancy (PE) refers to the extent to which a person believes that using an information system /technology will help them improve the performance of their jobs. In this vane, a hypothesis was formulated to test whether PE significantly impacts the Behavioural Intention to use a system such as Mobile Money services.

H₀₁: Performance expectancy does not impact retailers' behavioural intention to use Mobile Money for business.

H₁: Performance expectancy significantly impacts retailers' behavioural intention to use Mobile Money for business.

The results found that PE on BI had a beta value of 0.140, and a sig-value of 0.000. The sig-value was not less than 0.05 and deemed significant at 95 percent confidence interval. It inferred that there was an impact of PE on BI, and it was significant. Thus, hypothesis H1 is supported in this study.

4.8.2 Impact of Effort Expectancy on Behavioural Intention to use Mobile Money Services

The next hypothesis covered the impact of Effort Expectancy (EE) on the Behavioural Intention to use Mobile Money systems. A hypothesis was formulated in this regard to test this notion.

H₀₂: Effort expectancy does not impact retailers' behavioural intention to use Mobile Money for business.

H₂: Effort expectancy significantly impacts retailers' behavioural intention to use Mobile Money for business

From the regression analysis results of EE on BI, a beta of 0.449 and a sig-value of 0.000, were obtained. This was less than the 0.05 mark and thus the null was rejected. This inferred that the Effort Expectancy construct had a significant impact on the Behavioural Intention to use Mobile Money services. Thus, H2 was supported.

4.8.3 Impact of Social Influence on Behavioural Intention to use Mobile Money Services

Social influence refers to how other individuals in a society can cause a person to adopt or use an information system with the help of SPSS. The hypothesis formulated to test the construct's impact on BI was:

H₀₃: Social influence does not impact retailers' behavioural intention to use Mobile Money for business.

H₃: Social influence significantly impacts retailers' behavioural intention to use Mobile Money for business

From Table 4.13 it can be seen that a beta value of 0.026 and a sig-value of 0.809 were recorded. The sig-value was greater than 0.05, and we can conclude that the impact on the Behavioural Intention was not significant. H₃ is therefore not supported and therefore null hypothesis will stand.

4.8.4 Impact of Facilitating Conditions on Use Behaviour to use Mobile Money Services

Facilitating Condition refers to how a person believes that technical requirements exist to support the usage of a technology (Venkatesh et al., 2003). This was also tested using the following hypothesis:

H₀₄: Facilitating conditions do not impact retailers' behavioural intention to use Mobile Money for business.

H₄: Facilitating conditions significantly impacts retailers' use of Mobile Money for business

From the regression analysis, a beta value of 0.062 was obtained. A sig-value of 0.559 was obtained for FC on Use Behaviour. The sig-value is not less than the 0.05 mark, and therefore we can conclude that the impact of Facilitating Conditions on Use Behaviour was not significant. H₄ is therefore not supported and therefore null hypothesis will stand.

4.8.5 Impact of Hedonic Motivation on Behavioural Intention to use Mobile Money Services

Hedonic Motivation is a construct that is part of modifying the UTAUT into the UTAUT2 to help measure the motivational factor of information systems. A hypothesis was formulated in this regard.

H₀₅: Hedonic motivation does not impact retailers' behavioural intention to use Mobile Money for business.

H₅: Hedonic motivation significantly impacts retailers' behavioural intention to use Mobile Money for business.

Results of this test using the regression analysis are shown as part of the summarized information in Table 4.13. A beta value of 0.277 and a sig-value of 0.008 were obtained. The sig-value was less than 0.05, and thus we conclude that the impact of HM on BI is significant. Thus, H5 is supported in this study.

4.8.6 Impact of Price Value on Behavioural Intention to use Mobile Money Services

Price Value was a new construct added to the fundamental UTAUT model as part of modifications to form the UTAUT2 model. Price Value (PV) refers to an individual's behaviour in which they feel they obtain a cost advantage by using an information system or technology. A hypothesis was formulated to test this as follows:

H₀6: Price value does not impact retailers' behavioural intention to use Mobile Money for business.

H6: Price value significantly impacts retailers' behavioural intention to use Mobile Money for business

From Table 4.13, the test on Price Value (PV) on Behaviour Intention (BI) indicated a beta value of 0.218 while a sig-value of 0.037 was obtained. The sig-value is less than the 95 percent confidence interval value of 0.05 and therefore, we can conclude that the impact of Price Value on Behavioural Intention to use Mobile Money services is significant. H6 is therefore supported.

4.8.7 Impact of Habit the use of Mobile Money Services

Habit refers to the extent to which individuals rely on the use of information systems/technologies because of positive experience that causes them to keep using the system. This construct was also tested on use behaviour by formulating a hypothesis and testing it using regression analysis. The formulated hypothesis is as follows:

H₀7: Habit does not impact retailers' behavioural intention to use Mobile Money for business.

H7: Habit significantly impacts retailers' use of Mobile Money for business

A beta value of 0.615 was obtained. This corresponded to a sig-value of 0.000. The sig-value of 0.000 was less than 0.05 and this meant that the impact of an individual's habit of using Mobile Money systems was significant. The hypothesis H7 was thus supported.

4.8.8 Impact of Behavioural Intention of Use Behaviour of Retailers to use Mobile Money Services

A hypothesis was created to help test for the impact of Behavioural Intention on the actual Use Behaviour. This was the ultimate test to see whether there was a positive impact on the use of Mobile Money systems. A hypothesis was also formulated in this regard as.

H₀₈: Behavioural intention does not impact retailers' behavioural intention to use Mobile Money for business.

H₈: Behavioural intention significantly impacts retailers' use behaviour of Mobile Money for business

After a regression analysis was performed, a beta value of 0.2 was obtained as well as a sig-value of 0.038. The sig-value of 0.038 is less than 0.05. This means that there was a significant impact of Behavioural Intention on the actual Use Behaviour towards Mobile Money systems.

4.9 CHAPTER SUMMARY

This chapter covered the presentation of results obtained from the analysis of survey data. The first section covered the examination of the demographic data of respondents to better understand the nature of the research population. After this, results on the basic usage of Mobile Money services was obtained and presented. A Factor Reduction was carried out to determine if any survey items did not interact strongly enough with the wholly-derived components. Some items were discarded from subsequent analysis based on how lowly they loaded on the consolidated components. Reliability testing using Cronbach's Alpha was conducted to test for internal consistency in responses for each construct. Regression analysis was carried out to establish a model involving all the constructs to help predict Mobile Money systems' Use behaviour. After this, a series of hypothesis tests were carried out to determine if the independent variables for each hypothesis had a significant influence on the outcome of the dependent variables. All hypotheses apart from two were proven to impact the dependent outcomes. The constructs of Social Influence and Facilitating Conditions did not significantly impact the Behavioural Intention to use Mobile Money systems. The hypothesis testing also saw the Behavioural Intention impact significantly on the Use Behaviour towards Mobile Money systems.

CHAPTER FIVE: DISCUSSION AND RECOMMENDATIONS

5.0 INTRODUCTION

This study aimed to determine the factors influencing behavioural intent to use Mobile Money. For this to be accomplished, literature on the benefits of Mobile Money in Ghana, an overview of Mobile Money, challenges facing the growth of Mobile Money and factors that impede Mobile Money were evaluated. The results of the research model were presented in the previous chapter. This chapter will discuss the results and provide recommendations based on these findings.

5.1 MOBILE MONEY AWARENESS AND USAGE IN GHANA

The first research questions formulated for this study sought to gain insights into the nature of Mobile Money usage in Ghana. This section discusses the results obtained from the survey in that regard. The items considered involve awareness and usage of Mobile Money, purposes for the use of Mobile Money technologies, and choice of networks.

5.1.1 Awareness of Mobile Money services

All respondents to the survey said they are aware of Mobile Money technologies and services. This could be because the technology has become immensely popular as a means of transactions for businesses in Ghana. Also, because of sensitization by the services providers over the years, service providers have done very well in instilling this new alternative mode of transacting into the Ghanaian markets within a relatively short time. One must also bear in mind that the Ghanaian economy did not have any mobile electronic platform for widespread electronic payment methods before the emergence of Mobile Money technologies. Thus, service providers have done a tremendous job at creating awareness while allaying fears to establish a method that is as good and safe as using physical cash. One can also cite an enabling environment created by the regulatory bodies such as the Bank of Ghana and the National Communications Authorities as the supporting forces behind the service's popularity.

5.1.2 Usage of Mobile Money services

Ninety-five percent of the respondents indicated that they use Mobile Money services. One may have argued that knowledge of the service's existence as an alternative mode of payment does not necessarily reflect actual usage. However, this finding further indicates that businesses are using Mobile Money services as means of payment. This again reflects that the services

providers are doing well in providing and maintaining the technology. It also infers that people are enjoying the use of the service.

5.1.3 Purpose of Use of Mobile Money services

In finding out what people generally use Mobile Money services for, seventy-five percent of the respondents indicated that they used the service to transfer money. Eighty-seven percent rely on the platforms to receive payments as business entities, while eighty-two percent use the platform to pay for goods and services. These are relatively high percentages for an economy that has relied on cash for so long.

A large number of users rely on the service to transfer money. Transfer of money was primarily the reserve of banking institutions over the years. If one had to send money or remittances to another within Ghana, it had to be done through the banks. An alternative was to rely on unsafe informal courier services, which attracted high charges. With Mobile Money services now, it is easy to transfer such money from one's own home without going to a bank or through an intermediary. One can infer that the safety and convenience of Mobile Money usage have made it a popular alternative in the transfer of money. However, one limitation is the daily threshold placed on the transfer of money. It does not make the system an overarching technology for money transfer. Thus, people may still have to visit banks when more considerable sums of money need to be transferred. The service providers and the regulatory bodies may still have to consider this limitation.

Businesses are gradually beginning to accept Mobile Money payments from customers, as seen from the survey findings. In Ghana, most businesses have accepted only physical cash for goods and services they provide over the years. However, with the popularity of Mobile Money technologies, some businesses are gradually accepting Mobile Money payments. In the early years of the emergence of Mobile Money, business entities had a problem with the acceptance of Mobile Money. They perceived that the steps one took to receive Mobile Money for payment were lengthy. Recently the emergence of Mobile Money QR-code scanning payment systems could be seen to be less cumbersome. One could thus argue that the service providers have realised the problem and have reacted positively (Nseir et al., 2013). This seems to be making Mobile Money a gradually accepted mode of payment for goods and services. Indeed, those making the payments also indicate a gradual inclination towards the services to make payments.

5.2 FACTORS AFFECTING MOBILE MONEY TECHNOLOGY ACCEPTANCE

Part of the set objectives for this study was to determine the factors that influence the acceptance and use of Mobile Money technology by adopters using the UTAUT2 model. After a survey was conducted on one hundred users, data obtained was analyzed to help ascertain the factors influencing the acceptance of Mobile Money Technology. In this section, discussions on findings from the tested hypotheses shed light on the significant factors impacting Mobile Money technologies' acceptance.

5.2.1 Impact of Performance Expectancy on Behavioural Intention to use Mobile Money Services

This study has found that performance expectancy significantly impacts retailers' behavioural intention to use Mobile Money. This influence was based on improving business performance, saving time, accomplishing tasks quickly, and the overall usefulness of Mobile Money. This was further substantiated by descriptive results for this construct that further indicated that most respondents agree and strongly agree that receiving Mobile Money payment from customers saves time, improves business performance, helps accomplish tasks quickly, and is useful. Therefore, this implies that retailers see the acceptance of Mobile Money to be very useful because it saves time, allows you to multi-task, and is very convenient. These findings are similar to other studies like (Miladinovic & Hong, 2016; Thusi, 2018).

5.2.2 Impact of Effort Expectancy on Behavioural Intention to use Mobile Money Services

Effort expectancy under this study refers to how easy it is to use Mobile Money by retailers. In this study, effort expectancy significantly impacts retailers' behavioural intention to use Mobile Money for business, suggesting that retailers recognized that Mobile Money is easy to use, understand, engage with, and becoming skillful at using it is an easy task. This can be attributed to the interactive nature of the Mobile Money application. This was supported by findings for this concept which shows that most respondents strongly agree that they find it easy to use Mobile Money, becoming skillful at using Mobile Money is easy for them, and it is easy to learn and interact with Mobile Money. Therefore, the result agrees with (Mugambe, 2017) who suggests that ease-of-use should be the main focus of retailers who want to use Mobile Money.

5.2.3 Impact of Hedonic Motivation on Behavioural Intention to use Mobile Money Services

According to (Huang & Kao, 2015), Hedonic Motivation can be defined as the inspiration to accomplish something because of the fulfilment picked up from Mobile Money technology.

Hedonic Motivation (HM) significantly impacts retailer's behavioural intention to use Mobile Money for business. Therefore, this shows that from the descriptive analysis, retailers see the acceptance of Mobile Money as very important because it helps overcome complex challenges and is satisfying. This can be compared to findings from (Lee, 2009).

5.2.4 Impact of Price Value on Behavioural Intention to use Mobile Money Services

Indeed, for a monetary system like Mobile Money, one expects to obtain some monetary benefits. In this study, retail businesses surveyed indicated that Price Value had a significant impact on retailer's behavioural intention to use Mobile Money. Furthermore, in this study, the majority of the respondents agreed that using Mobile Money is a cost burden, the commission fee is high, and the cost of using Mobile Money is higher than other banking channels. (Chang & Tseng, 2013) explain that if the monetary benefits outweigh the monetary costs, then Price Value could positively influence the acceptance and use of Mobile Money systems. This link between price value and behavioural intention is validated by (Wei et al., 2009).

5.2.5 Impact of Habit on the use of Mobile Money Services

This study indicates that Habit significantly impacts retailers' use of Mobile Money for business. Retailers agreed that Mobile Money has become part of their daily activities. Using Mobile Money has become a regular thing for retailers and using Mobile Money is something retailers do without fear. The study implies that retailers have habitual behaviour in adopting Mobile Money, and this study supports findings from (Hew et al., 2015; Liao et al., 2006). Therefore, Mobile Money designers must ensure that there are adequate functions that meet the need of retailers and their customers; it is easy to use and error-free so that adopters will continue to use the service so that eventually it becomes a habit (BankOfGhana, 2019).

5.2.6 Impact of Behavioural Intention of Use Behaviour of Retailers to use Mobile Money Services

Behavioural Intention refers to the extent to which an individual comes up with specific plans to perform or not to perform some specified behaviour (Venkatesh et al., 2012). Behavioural intention significantly impacts retailers' use behaviour of Mobile Money. This implies that retailers acknowledge that they prefer to use Mobile Money, intend to continue using Mobile Money in the future, and recommend Mobile Money to others. This study is in line with the findings of other studies (Martins et al., 2014; Sripalawat et al., 2011).

5.3 RECOMMENDATIONS

Developers of Mobile Money applications must improve the functionality of these applications, for example, the quality and reliability of the functionalities in the Mobile Money applications need to be improved, allowing for quicker processing time and greater availability of services.

Thirdly there should be frequent training for retailers to become skilled in the technology and telecommunications should also introduce a user-friendly menu to make navigation easy and when a new functionality is added to Mobile Money applications, it must be easy for the user to interact with these functions.

Fourthly the designers of Mobile Money application should ensure that the application is engaging, fun to use and have different forms of interactions so that retailers are motivated to use them. Also to achieve the acceptance of Mobile Money Technology, service providers must do more in making the Mobile Money channels more attractive by lowering commission demands. Lastly the government needs to create policies to cap the amount Mobile Money vendors can charge as commission so that new retailers can adopt the technology and existing adopters do not stop using the service.

5.4 LIMITATION OF THE STUDY

The study comes with various limitations and below are some of the listed limitations;

- The study was on non-adopters and adopters of Mobile Money, but because of poor response from non-adopters, this study was not able to study the non-adopters' perception of Mobile Money.
- Since this was solely focused on the central business district in Accra, results cannot be generalized for the entire country.

5.5 FUTURE RESEARCH

Since telecommunications provide Mobile Money services, this is subject to technological and human changes. Therefore, there is a need for further research in the areas below:

- Future studies can be done on non-adopters to understand their perception of Mobile Money. This will provide an understanding of why they do not adopt Mobile Money.
- This study can be expanded to other geographical regions in Ghana so that the findings are more generalizable.

- A qualitative study can be carried out to establish further factors affecting Mobile Money acceptance.

5.6 CONCLUSION

The aim of this study was to identify awareness and usage of Mobile Money services in Ghana and the factors influencing its acceptance. Results indicated that most of the retailers that participated in the study were aware of Mobile Money services and that most of them adopt this technology. Factors that were found to affect Mobile Money acceptance were performance expectancy, effort expectancy, hedonic motivation, price value and habit. These factors impact behavioural intention of retailers to use Mobile Money. Hence the designers and policy makers involved in Mobile Money must consider these factors during the designing and implementation of Mobile Money services. When these factors are taken into consideration, it will result in Mobile Money services enhancing the daily performance of retailers, being more user friendly, have reduced commission charges, and not have a limit on the number of daily transactions. This will result in increased acceptance of Mobile Money services.

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7 APPENDICES

7.1 APPENDIX A: INFORMED CONSENT

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE (HSSREC)

APPLICATION FOR ETHICS APPROVAL

For research with human participants

Information Sheet and Consent to Participate in Research

Date:

Greetings,

My name is Valentine Nii Lante Cato a Masters of Commerce student from the discipline of Information Systems and Technology, School of Management, IT and Governance of University of KwaZulu-Natal. My contacts are; Cell - +233(0)244651040 and +277603962805 and my email address is 217077629@stu.ukzn.ac.za.

You are hereby invited to participate in my research project titled: Acceptance of Mobile Money by Retailers in Ghana. The aim and purpose of this research is to examine which factors influences retailers in accepting Mobile Money for business transactions.

The study is expected to include 100 respondents in total, from the central business district of Accra, Ghana. It will involve selecting the sample using convenience sampling technique to locate the respondents from the population. The duration of your participation if you choose to participate in the study is expected to be about 15 minutes.

The study will take approximately 15 minutes to complete. The study will provide no direct benefits to participants but will highlight your importance and influence on the society and the Ghanaian economy. The participation in the study is optional and you are free to withdraw at any time.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee with the approval number: **HSS/1300/018m**.

In the event of any problems or concerns/questions you may contact the researcher on; Cell: +233(0)244651040 and +277603962805 or E-mail: 217077629@stu.ukzn.ac.za or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

Mrs. Mariette Snyman

Humanities and Social Science Ethics (HSSREC) Research Office,
Govan Mbeki Building, Westville Campus, Private Bag X54001, DURBAN 4000

Tel: 031 260 8350 Snymanm@ukzn.ac.za

Researcher: Valentine Nii Lante Cato (+233(0)244651040 and +27603962805)

Supervisor: Ashley Marimuthu (+27731 260 7444)

Your participation in the study is voluntary and by participating, you are granting the researcher permission to use your responses. You may refuse to participate or withdraw from the study at any time with no negative consequence. There will be no monetary gain from participating in the study. Your anonymity will be maintained by the researcher and the School of

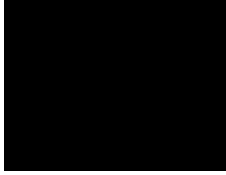
Management, I.T. & Governance and your responses will not be used for any purposes outside of this study.

All data, both electronic and hard copy, will be securely stored during the study and archived for 5 years. After this time, all data will be destroyed.

If you have any questions or concerns about participating in the study, please contact me or my research supervisor at the numbers listed above.

Sincerely

Valentine Nii Lante Cato



7.2 APPENDIX B: CONSENT TO PARTICIPATE

CONSENT TO PARTICIPATE

I have been informed about the study entitled Acceptance of Mobile Money by Retailers in Ghana by Valentine Cato.

I understand the purpose and procedures of the study. I have been given an opportunity to ask questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher on Cell: +233(0)244651040 and +277603962805 or E-mail: 217077629@stu.ukzn.ac.za.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

Mrs Mariette Snyman
Humanities and Social Science Ethics (HSSREC) Research Office,
Govan Mbeki Building, Westville Campus, Private Bag X54001, DURBAN 4000
Tel: 031 260 8350 Snymanm@ukzn.ac.za
Researcher: Name Valentine Nii Lante Cato (+233(0)244651040 and +27603962805)
Supervisor: Ashley Marimuthu (+27 31 260 7444)

Signature of Participant

Date

Signature of Witness
(Where applicable)

Date

Signature of Translator
(Where applicable)

Date

CONSENT TO PARTICIPATE

I have been informed about the study entitled Acceptance of Mobile Money by Retailers in Ghana by Valentine Cato.

I understand the purpose and procedures of the study. I have been given an opportunity to ask questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher on Cell: +233(0)244651040 and +277603962805 or E-mail: 217077629@stu.ukzn.ac.za.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

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Tel: 031 260 8350 Snymanm@ukzn.ac.za

Researcher: Name Valentine Nii Lante Cato (+233(0)244651040 and +27603962805)

Supervisor: Ashley Marimuthu (+27 31 260 7444)

Signature of Participant

Date

**Signature of Witness
(Where applicable)**

Date

**Signature of Translator
(Where applicable)**

Date

7.3 APPENDIX C: RESEARCH INSTRUMENT (QUESTIONNAIRE)

Questionnaire

Section A: Biographical Data

1. Please indicate your Gender?

Male

Female

2. Please indicate your age range?

18-30 years

31-40 years

41-50 years

51-60 years

3. What is your highest qualification?

High school

BSc / HND(Tertiary)

Post graduate

Others

4. Are you aware of Mobile Money?

Yes

No

5. Do you use Mobile Money?

Yes

No

If you answered **Yes** to the above question, please complete Question 6, 7, 8 and Section B.

If you answered **No** to the above question, please complete Section C only.

6. What type of Mobile Money service do you use in your business. (Please select as many as applied)

Transfer Money

Receive Payment

Pay for goods and services

7. Which mobile network do you use for this service?

MTN

Vodafone

Tigo

Airtel

8. How often do you use Mobile Money?

Never	
Seldom	
Sometimes	
Often	
Always	

Section B

In this section, you will be required to rate your level of agreement by ticking one of the options provided. The rate will be on the scale of 1-5. Where

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Questions		1	2	3	4	5
Performance Expectancy	Receiving Mobile Money payment from customer improves my business performance					

	Receiving Mobile Money payment from customers saves time.
	Receiving Mobile Money payment from customers enables me to accomplish my task more quickly
	I find Mobile Money useful
Effort	Learning to use Mobile Money is easy for me
Expectancy	Becoming skilful at using Mobile Money is easy for me
	Interaction with Mobile Money is easy for me
	I find Mobile Money easy to use
Social Influence	Customers who influence my behaviour think that I should use Mobile Money
	Customers who are important to me think that I should use Mobile Money
	Customers who are familiar with me think that I should use Mobile Money
	Most businesses surrounding me use Mobile Money
Facilitating Conditions	My living environment supports me to use Mobile Money
	I have the resources necessary to use Mobile Money
	Using Mobile Money is entirely within my control
	Help is always available when I have problems using Mobile Money
Hedonic Motivation	Using Mobile Money is satisfying
	Using Mobile Money helps overcome difficult challenges.
	Using Mobile Money is very educative

Price Value	Using Mobile Money services is cost burden to me. Transaction process of Mobile Money involves a slight amount of time and effort. The commission fee is expensive when using Mobile Money The cost of using Mobile Money services is higher than using other banking channels.
Habit	Using Mobile Money is something I do without fear Using Mobile Money has become regular to me The use of Mobile Money has become part of my daily activities The use of Mobile Money has become a habit for me I will recommend Mobile Money to others
Behavioural Intention	I intend to continue using Mobile Money in the future I prefer to use Mobile Money

Thank you for your time!

Section C

In this section, you will be required to rate your level of agreement by ticking one of the options provided. The rate will be on the scale of 1-5. Where

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

	Questions	1	2	3	4	5
Performance Expectancy	Receiving Mobile Money payment from customers would improve my business performance					

	Receiving Mobile Money payment from customers would save my time.
	Receiving Mobile Money payment from customers would enable me to accomplish my task more quickly
	I would find Mobile Money useful
Effort	Learning to use Mobile Money would be easy for me
Expectancy	Becoming skilful at using Mobile Money would be easy for me
	Interaction with Mobile Money would be easy for me
	I would find Mobile Money easy to use
Social Influence	Customers who influence my behaviour think that I should use Mobile Money
	Customers who are important to me think that I should use Mobile Money
	Customers who are familiar with me think that I should use Mobile Money
	Most businesses surrounding me would prefer I use Mobile Money
Facilitating Conditions	My living environment would support me to use Mobile Money
	I have the resources necessary to use Mobile Money
	Using Mobile Money would entirely be within my control
	Help would always be available when I have problems using Mobile Money
Hedonic Motivation	Using Mobile Money would be satisfying
	Using Mobile Money would help overcome difficult challenges.
	Using Mobile Money would be very educative

Price Value	<p>Using Mobile Money services would be a cost burden to me.</p> <p>Transaction process of Mobile Money would involve a slight amount of time and effort.</p> <p>The commission fee would be expensive when using Mobile Money</p> <p>The cost of using Mobile Money services would be higher than using other banking channels.</p>
Habit	<p>Using Mobile Money is something I would do without fear</p> <p>Using Mobile Money would become regular to me</p> <p>The use of Mobile Money would become part of my daily activities</p> <p>The use of Mobile Money would become a habit for me</p>
Behavioural	<p>I would recommend Mobile Money to others</p>
Intention	<p>I would intend to continue using Mobile Money in the future</p> <p>I would prefer to use Mobile Money</p>

Thank you for your time!

7.4 APPENDIX D: DESCRIPTIVE STATISTICS FOR CONSTRUCTS

Descriptives				
			Statistic	Std. Error
PE	Mean		3.84	.054
	95% Confidence Interval for Mean	Lower Bound	3.74	
		Upper Bound	3.95	
	5% Trimmed Mean		3.87	
	Median		4.00	
	Variance		.266	
	Std. Deviation		.516	
	Minimum		2	
	Maximum		5	
	Range		3	
	Interquartile Range		1	
	Skewness		-.618	.254
	Kurtosis		.560	.503
EE	Mean		3.95	.056
	95% Confidence Interval for Mean	Lower Bound	3.83	
		Upper Bound	4.06	
	5% Trimmed Mean		3.95	
	Median		4.00	
	Variance		.287	
	Std. Deviation		.536	
	Minimum		2	
	Maximum		5	
	Range		3	

	Interquartile Range		1	
	Skewness		-.342	.254
	Kurtosis		.391	.503
SI	Mean		3.88	.061
	95% Confidence Interval for Mean	Lower Bound	3.76	
		Upper Bound	4.01	
	5% Trimmed Mean		3.90	
	Median		4.00	
	Variance		.340	
	Std. Deviation		.583	
	Minimum		3	
	Maximum		5	
	Range		3	
	Interquartile Range		1	
	Skewness		-.301	.254
	Kurtosis		-.396	.503
FC	Mean		3.58	.062
	95% Confidence Interval for Mean	Lower Bound	3.46	
		Upper Bound	3.70	
	5% Trimmed Mean		3.59	
	Median		3.75	
	Variance		.342	
	Std. Deviation		.585	
	Minimum		2	
	Maximum		5	
	Range		3	

	Interquartile Range		1	
	Skewness		-.270	.254
	Kurtosis		.107	.503
HM	Mean		3.93	.055
	95% Confidence Interval for Mean	Lower Bound	3.82	
		Upper Bound	4.04	
	5% Trimmed Mean		3.93	
	Median		4.00	
	Variance		.272	
	Std. Deviation		.522	
	Minimum		3	
	Maximum		5	
	Range		3	
	Interquartile Range		1	
	Skewness		-.092	.254
	Kurtosis		-.040	.503
PV	Mean		4.20	.048
	95% Confidence Interval for Mean	Lower Bound	4.10	
		Upper Bound	4.29	
	5% Trimmed Mean		4.20	
	Median		4.13	
	Variance		.204	
	Std. Deviation		.452	
	Minimum		3	
	Maximum		5	
	Range		2	

	Interquartile Range		1	
	Skewness		.008	.254
	Kurtosis		.180	.503
HA	Mean		3.93	.055
	95% Confidence Interval for Mean	Lower Bound	3.82	
		Upper Bound	4.04	
	5% Trimmed Mean		3.93	
	Median		4.00	
	Variance		.270	
	Std. Deviation		.520	
	Minimum		2	
	Maximum		5	
	Range		3	
	Interquartile Range		1	
	Skewness		-.088	.254
	Kurtosis		.582	.503
BI	Mean		4.09	.047
	95% Confidence Interval for Mean	Lower Bound	3.99	
		Upper Bound	4.18	
	5% Trimmed Mean		4.11	
	Median		4.00	
	Variance		.202	
	Std. Deviation		.449	
	Minimum		3	
	Maximum		5	
	Range		2	

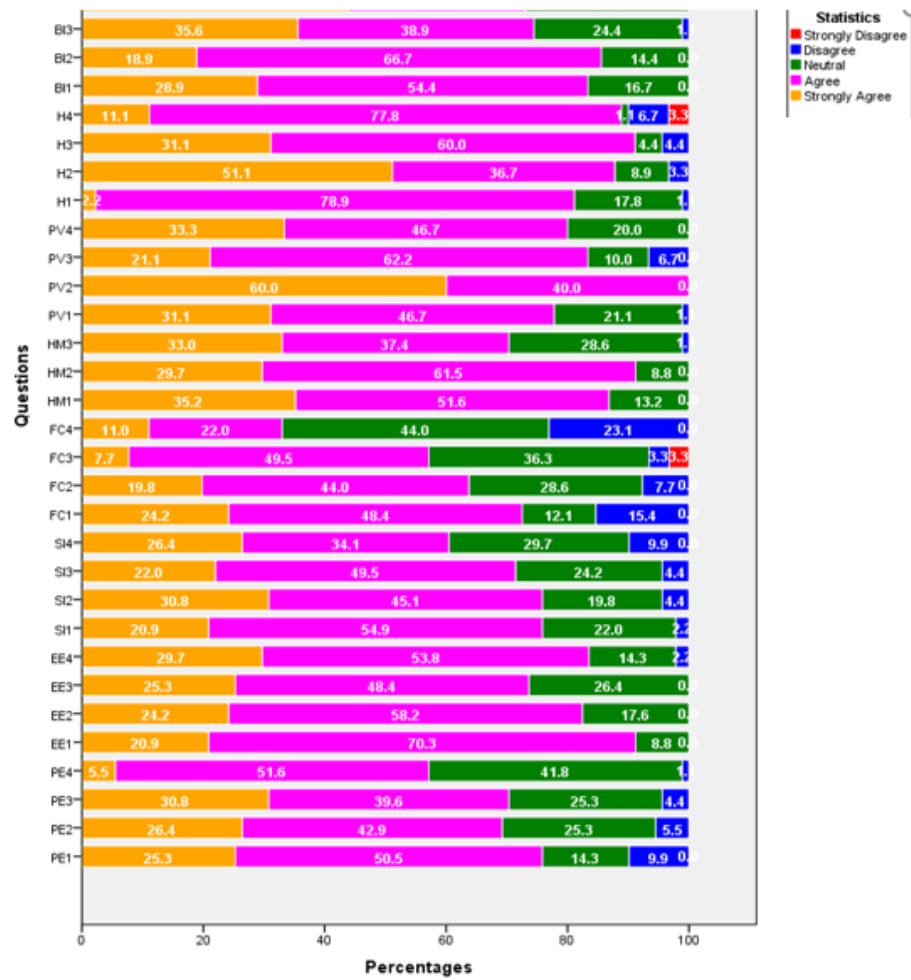
	Interquartile Range		
	Skewness	-.531	.254
	Kurtosis	.101	.503

7.6 APPENDIX E: Likert Scale Responses for construct items

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
PE1	0.0%	9.9%	14.3%	50.5%	25.3%
PE2	0.0%	5.5%	25.3%	42.9%	26.4%
PE3	0.0%	4.4%	25.3%	39.6%	30.8%
PE4	0.0%	1.1%	41.8%	51.6%	5.5%
EE1	0.0%	0.0%	8.8%	70.3%	20.9%
EE2	0.0%	0.0%	17.6%	58.2%	24.2%
EE3	0.0%	0.0%	26.4%	48.4%	25.3%
EE4	0.0%	2.2%	14.3%	53.8%	29.7%
SI1	0.0%	2.2%	22.0%	54.9%	20.9%
SI2	0.0%	4.4%	19.8%	45.1%	30.8%
SI3	0.0%	4.4%	24.2%	49.5%	22.0%
SI4	0.0%	9.9%	29.7%	34.1%	26.4%
FC1	0.0%	15.4%	12.1%	48.4%	24.2%
FC2	0.0%	7.7%	28.6%	44.0%	19.8%
FC3	3.3%	3.3%	36.3%	49.5%	7.7%
FC4	0.0%	23.1%	44.0%	22.0%	11.0%
HM1	0.0%	0.0%	13.2%	51.6%	35.2%
HM2	0.0%	0.0%	8.8%	61.5%	29.7%
HM3	0.0%	1.1%	28.6%	37.4%	33.0%
PV1	0.0%	1.1%	21.1%	46.7%	31.1%
PV2	0.0%	0.0%	0.0%	40.0%	60.0%
PV3	0.0%	6.7%	10.0%	62.2%	21.1%
PV4	0.0%	0.0%	20.0%	46.7%	33.3%

H1	0.0%	1.1%	17.8%	78.9%	2.2%
H2	0.0%	3.3%	8.9%	36.7%	51.1%
H3	0.0%	4.4%	4.4%	60.0%	31.1%
H4	3.3%	6.7%	1.1%	77.8%	11.1%
BI1	0.0%	0.0%	16.7%	54.4%	28.9%
BI2	0.0%	0.0%	14.4%	66.7%	18.9%
BI3	0.0%	1.1%	24.4%	38.9%	35.6%

7.7 APPENDIX F: Stacked Bar graphs for Likert Scale responses



7.8 APPENDIX G: OPERATING COST IN GREATER ACCRA REGION

Table A.7: Purchase and other operating cost in the industry sector in Greater Accra region

Sector	No. of Establishments	Total GH¢	Material and Supplies GH¢	Goods Purchased for Resale GH¢
ALL SECTORS - Greater Accra Region	135,471	112,118,855,535	59,388,153,940	5,303,442,319
Industry	23,976	23,835,409,503	15,455,298,272	1,447,296,781
Mining and quarrying	82	2,829,621,440	329,653,561	59,033,427
Mining of metal ores	12	84,586,654	23,712,953	0
Other mining and quarrying	21	343,280,640	45,989,553	8,927,439
Mining support service activities	48	2,401,754,146	259,951,055	50,105,987
Manufacturing	21,956	12,767,584,926	10,097,240,881	843,415,996
Manufacture of food products	1,658	2,880,114,024	2,451,022,792	27,904,026
Manufacture of beverages	238	848,906,521	450,739,736	12,580,574
Manufacture of textiles	136	180,084,754	123,077,910	3,163,750
Manufacture of wearing apparel	13,048	103,599,208	59,953,716	11,507,866
Manufacture of leather and related products	334	5,770,435	3,590,402	559,500
Manufacture of wood and of products of wood and cork, except furniture;	200	27,283,856	16,322,942	2,546,552
Manufacture of paper and paper products	171	223,733,773	174,191,249	15,471,501
Printing and reproduction of recorded media	609	147,410,930	110,849,236	857,270
Manufacture of coke and refined petroleum products	9	1,137,769,774	896,269,772	0
Manufacture of chemicals and chemical products	149	666,846,616	609,025,641	1,430,977
Manufacture of pharmaceuticals, medicinal chemical and botanical products	37	115,601,921	88,955,252	312,197
Manufacture of rubber and plastics products	153	603,888,023	478,439,152	3,858,473

7.9 APPENDIX I: ETHICAL APPROVAL



20 September 2018

Mr Valentine Cato (217077629)
School of Management, IT & Governance
Westville Campus

Dear Mr Cato,

Protocol reference number: HSS/1300/018M
Project title: Acceptance of Mobile Money by Retailers in Ghana

Approval Notification – Expedited Application

In response to your application received 27 August 2018, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully



Professor Shenuka Singh (Chair)

/ms

Cc Supervisor: Mr Ahsley Marimuthu
Cc Academic Leader Research: Professor Isabel Martins
Cc School Administrator: Ms Angela Pearce

Humanities & Social Sciences Research Ethics Committee

Professor Shenuka Singh (Chair)






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