

**UNIVERSITY OF EDUCATION, WINNEBA**

**FACTORS THAT INFLUENCE THE ADOPTION OF MOBILE MONEY  
TRANSACTIONS: A CASE OF UEW STUDENTS**

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**MASTER OF BUSINESS ADMINISTRATION**

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**A dissertation in the Department of Accounting,  
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**NOVEMBER, 2021**

## DECLARATION

### Student's Declaration

I, Anthony Paintsil, declare that this dissertation with the exception of quotations and references contained in published works which have all been identified and duly acknowledged is entirely my original work, and it has not been submitted either in part or whole for another degree elsewhere.

**Signature**.....

**Date** .....

### Supervisor's Declaration

I hereby declare that the preparation and presentation of this dissertation work were supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Education Winneba.

**Supervisor's Name:** Dr. Philip Siaw Kissi

**Signature**.....

**Date** .....

## **DEDICATION**

To my loving wife Jennifer Aboagye, my Mother and siblings.



## ACKNOWLEDGEMENTS

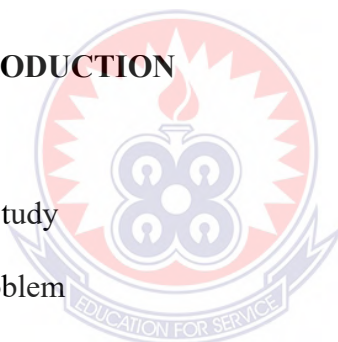
My sincere gratitude to my family who have supported me through this journey. I must also express my profound gratitude and appreciation to the man who has offered so much support to me, my friend and supervisor, Dr. Philip Siaw Kissi for his patience in making a thorough and critical review of the pages, comments and suggestions of all the chapters and through whose supervision this research project was compiled. I am really grateful. My gratitude also goes to the lecturers whose lectures and guidance enable me to have insight into research analysis. I extend my regards to Mr. Samuel Gadzo, Dr. B. B. B. Bingab, Dr. Richard Oduro, Dr. Mawuko Dza, Dr. Emmanuel Yamoah and the other lecturers in the School of Business at the University of Education, Winneba.

I am also grateful to all students who took time out of their busy schedule to respond to my questionnaires. And finally to the many others who have not been explicitly mentioned here but who have helped me in diverse ways to complete this work I am most grateful.

To God be the glory.

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## ABBREVIATIONS

AML	Anti – Money Laundering
AVE	Average Variance Extracted
CDMA	Code Division Multiple Access
CR	Compact Reliability
EE	Effort Expectancy
FATF	Financial Action Task Force
FC	Facilitating Condition
GHIPSS	Ghana Interbank Payment and Settlement System
GSM	Global System for Mobile
GSMA	Global System Mobile Association
ICT	Information Communication Technology
IDT	Innovation Diffusion Theory
LTE	Long Term Evolution
MMT	Mobile Money Transfer
MNO	Mobile Network Operator
MTN	Mobile Telecommunication Network
NCA	National Communication Authority
PE	Performance Expectancy
SEM	Structural Equation Modeling
SI	Social Influence

SPSS	Statistical Package for Social Science
TAM	Technology Acceptance Model
TNS	Trust of Network Service
TPB	Theory of Planned Behavior
TSP	Trust of Service Provider
UTAUT	Unified Theory of Acceptance and Use of Technology
4G	4 <sup>th</sup> Generation



## ABSTRACT

The study was conducted to investigate university students' acceptance of mobile money transactions using students from University of Education, Winneba. The study added trust of service providers, and network services into UTAUT model to investigate the acceptance of mobile money transactions. The study employed survey research design with quantitative approach of data collection. A total number of 536 students from University of Education, Winneba were used for the study. The quantitative data were analyzed using multiple linear regression. The research instrument used in the study were adopted from previous studies. The findings revealed that: trust of service providers, network services, performance expectancy, effort expectancy, facilitating condition factors have influence on university students' acceptance of mobile money transactions. Surprisingly, social influence has no influence on the students' acceptance and trust of service providers, network services were also found to have positive influence on performance expectancy. The findings of this study could inform policy makers of money service customers about readiness to use transaction which might lead to a review of the current transaction provided to students or customers.



## CHAPTER ONE

### INTRODUCTION

#### 1.0 Overview

The chapter highlights the study background, problem statement, purpose of the study, the research objectives, research questions, research questions that guide the study. The chapter further explains limitation, delimitation and ended by outlining the organizational plan of the study.

#### 1.1 Background to the Study

Information technology has enhanced the use of mobile phones to a high level. In this 21st century, with internet support, mobile phone users are able to access several applications and social media sites that enable them to stay connected with families and friends. Mobile phones have become widespread in the whole world, both in developed and developing countries, which provide easy communication (Sarraute, Blanc & Burrioni, 2014). The invention and adoption of mobile phones have been the fastest so far among other technologies (Jack & Suri, 2011; Iheanachor, David-West & Umukoro, 2021).

Late 2015 witnessed 46% of the African population subscribed to mobile services and could increase to 725 million unique subscribers by 2020 across the region (Group Mobile Association, 2015). Group Mobile Association reported that out of 7.6 billion connections, representing 4.7 billion subscribers in the worldwide for mobile telephony services, achievement of 43% penetration rate are found in sub-Saharan Africa (Group Mobile Association, 2015). The growth of the Telecommunication Industry largely depends on information receive from the global system for mobile (GSM) and the Code division multiple access (CDMA) (Tobin, 2013). Moreover, the

4th Generation (4G) Long Term Evolution (LTE), mobile broadband and mobile internet inventions are key actors in the enlarged popularity of mobile phones in Sub-Saharan Africa (George et al., 2016). The last ten years have seen unprecedented advancement in the services offered by Mobile Network Operators to grow their network coverage to the underprivileged living in the countryside (Duncombe & Boateng, 2009; Jha & Saha, 2021).

Mobile technology has been tagged as a game changer and salvation for countries in the West African, with people in both urban and rural locations acceptance. In Ghana, the penetration of mobile phone rate rose to 127.63 % with the country users base go up to over 35 million in 2015 (Laary, 2016). The advancements in cellular technologies and mobile phones have brought some inventions in the telecom industry which has helped to increase the digital financial inclusion. These inventions have helped unbanked and underserved to be financially included on the mobile money platform.

Mobile money is a comparatively new occurrence in Ghana. It was initially announced by the telecommunication company called Mobile Telecommunications Network (MTN) from South Africa about 15 years ago. MTN Mobile Money now partners with more than 17 banks. Presently, in excess of 9.8 million Ghanaians are actively registered on MTN mobile money. Vodafone, another telecommunication also offers mobile money transactions as well as AirtelTigo which offers AirtelTigo cash. As the usage of mobile money increases so is the volume of transactions increasing in Ghana with mobile money outstripping cheques and other forms of traditional payment systems as a means of effecting easy payments.

An approximation of 80% of Ghanaians is “unbanked” which indicates that most mobile money transactions are conducted outside the banking sector with no financial

services support (myjoyonline, 2010). Mobile money totally depends on a mobile phone to make mobile money transactions such as cash payment, transfer money and deposit of cash deposits in the users' wallet. Mobile money enhances secure and safe money transfers independent of bank account, which could have a major influence on the number of people who do not save in banks. The payment through the mobile platforms provides financial services to consumers, merchants, money agents, among others. These financial services and or mobile money transaction include bill payments, purchases at a point of sale and over the internet, payment of salary and school fees, domestic or international remittances and the likes.

The increase of digital payment systems using the mobile phone through mobile money usage is a step towards reducing cash delivery that requires expensive logistics. For instances, distance and security of transporting money. Furthermore, the platform of mobile phone payment permits customers to pay and transfer money and provide access to other financial services, such as savings and insurance. Comparatively, the use of mobile money transactions is perceived as sleek, less effort to manage and flexible to conduct the transaction. In support stressed that transfer component of mobile money has reduced costs of distribution and transportation of cash. The government of Ghana have embraced mobile money transfers as part of social policy particular for vulnerable populations (Fitzbein et al., 2009). The circulation of mobile money can be a stepping stone to design suitable financial services (Cull et al., 2014).

Previous studies suggested several models that describe users' intention to accept and use a technology. Theories such as the Technology Acceptance Model (Davis, 1985), theory of Technology Innovation Diffusion (Rogers, 2003) and theory of reasoned



action (Ajzen & Fishbein, 1980), and Unified Theory of Acceptance and Use of Technology (Vankatesh et al., 2003) have added to the knowledge of how a particular technology is adopted by people.

The rationale behind the acceptance and usage of technologies have been considered as important ideas in the fields of information systems, marketing and sociology despite distinct area of study (Gelderblom et al., 2010). Most literature pertaining to information systems are mostly concerned with factors that influence the acceptance of technologies (Chitungo & Munungo, 2013; Etim, 2014; Gosavi, 2015).

## **1.2 Statement of the Problem**

The connection between acceptance and what accounts for the continuous usage of technology by users remains a problem. The acceptance of money transfers using mobile phone has been widely adopted. Acceptance of a mobile money can be seen as the continued use of its services (Chitungo & Munungo, 2013). Mobile money has been widely accepted to predict a user's intention to use new technologies but little is known in literature for explaining total adoption (Donner & Tellez, 2008; Chitungo & Munungo, 2013).

Additionally, transaction has been employed under financial regulation in Sub-Saharan Africa to perform mobile money transactions using a mobile device. Some countries have recorded success stories in the acceptance and usage of the mobile money technology (Waweru, 2017). However, little is known about the success of its acceptance in Ghana after fifteen years since it was launched by Mobile Telephone Network (MTN). Furthermore, there are limited studies which explain mobile money acceptance in Africa (Evans & Pirchio, 2014; Van der Boor, Oliveira, & Veloso, 2014). Therefore, it is important to examine underlying factors that significantly

affect citizen's decision to accept and continue to use the services of mobile money in Ghana.

### **1.3 Purpose of the Study**

The study investigated the mobile money adoption in Ghana using extended Unified Theory of Acceptance and Use of Technology (Venkatesh et al, 2003) by adding with trust in the service provider (TSP) and trust of network service (TNS) to other factors: Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SE) and Facilitating Conditions (FC) integrate with trust in the service provider (TSP) and trust of network service (TNS).

Trust is considered as one of the most significant factors that influence service customers' decision, which require the trustworthiness of service providers (Liu et al., 2013). Trust offered by service providers enables the services between vendor and user (Tan & Theon, 2001). Therefore, it is imperative to include trust in the service providers and trust of network service as a factor that may influence mobile money acceptance.

### **1.4 Objectives of the Study**

The specific objectives are to:

1. determine if performance expectation has positive influence on users' adoption of mobile money transaction.
2. explore whether effort expectancy has a positive influence on users' adoption of mobile money transaction.
3. examine whether social influence has a positive influence on users' adoption of mobile money transaction

4. assess whether users of mobile money trust the network services rendered by the service provides or not.
5. determine whether users of mobile money trust the services rendered by the service provides or not.

### **1.5 Research Questions**

1. Is performance expectancy influence the adoption of mobile money transactions?
2. Does effort expectancy influence the adoption of mobile money transactions?
3. Does social influence have a role in the adoption of mobile money transactions?
4. Do mobile money users trust the network services rendered by the service providers?

### **1.6 Hypothesis of the Study**

The present study seeks to establish that UTAUT influences the adoption of mobile money transactions. Hence, the following hypothesis is set:

H<sub>1</sub>: Performance expectancy has a positive impact on behavioral intention to use transaction.

H<sub>2</sub>: Effort expectancy has a positive effect on behavioral intention to use transaction.

H<sub>3</sub>: Social influence has a positive impact on behavioral intention to use transaction.

H<sub>4</sub>: Facilitating condition has a positive influence on behavioral intention to use transaction.

H<sub>5</sub>: Trust of service provider has a positive influence on behavioral intention to use transaction.

H<sub>6</sub>: Trust of network service has a positive influence on behavioral intention to use.

H<sub>7</sub>: Trust of service provider has a positive influence on performance expectancy.

H<sub>8</sub>: Trust of network service has a positive influence on performance expectancy.

### **1.7 Significance of the Study**

This study seeks to determine the factors that influence the adoption of mobile money transactions. The study also seeks to determine whether performance expectancy, effort expectancy and social expectancy influences the adoption of mobile money transactions. The researcher hopes that the findings from the study will add to the limited literature on factors that influences mobile money transaction adoption.

To network providers such as MTN, Vodafone and AirtelTigo, the findings will help them to expand their customer base after knowing the main factors that influences users to adopt mobile money transactions. The findings will also help financial institutions which use mobile money as another form of internet banking to develop strategic policies for their customers to feel comfortable in their operations.

However, to achieve the ultimate aim of mobile money transactions it is extremely important that we fully comprehend what motivates acceptance and use of this technology. Moreover, understanding a subscriber's intention towards mobile money could influence how the mobile money operators' services increase its acceptance and usage. Additionally, it believes that the findings of this research will guide mobile network operators using mobile money platform and policymakers in enlightening and promoting mobile money transactions by revealing the subscribers' priorities regarding mobile money transaction in Ghana.

### **1.8 Delimitation of the Study**

The adoption of mobile money by users as another way of business transaction has become very important in our world of economy especially in Ghana. The acceptance of mobile money by users in Ghana after fifteen years has proof to be successful and this was first introduced by Mobile Telephone Network (MTN). However, there are limited studies which explain the mobile money acceptance in Africa (Evans & Pirchio, 2014; Van der Boor, Oliveira, & Veloso, 2014).

### **1.9 Limitation of the Study**

We are examining the acceptance of mobile money transactions among university students in Ghana. Therefore, the results of the study are strictly applicable to University of Education, Winneba and similar students in Africa. However, a broader sample size that covers more than one university is recommended for further studies in order to throw more light on students' acceptance of mobile money transaction.

### **1.10 Scope of the Study**

The study investigates the factors influence the adoption of mobile money transactions; a case study of University of Education, Winneba students. The researcher deal with five hundred and thirty-six students. The researcher believes that majority of people who uses mobile money transactions are the youth group, therefore using students is more appropriate.

### **1.11 Organization of the Study**

This research was systematically organized in five different chapters. Chapters one includes the background of the study, problem statement, purpose of the study, objectives of the study, research hypothesis, and significance of the study, delimitation, limitations of the study and the structure or organization of the study. The Chapter two

carefully presented theoretical framework and literature available on transactions and the hypothetical structure that forms the underlying basis of the study. Chapter three described the general research design, methodology and further discusses the blueprint that will be used to answer the research hypothesis. The Chapter four included data analysis, results and discussion. The Chapter five entailed the summary of main findings, the conclusion of the study and its market implications, recommendations, and suggested areas for further study.



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Overview

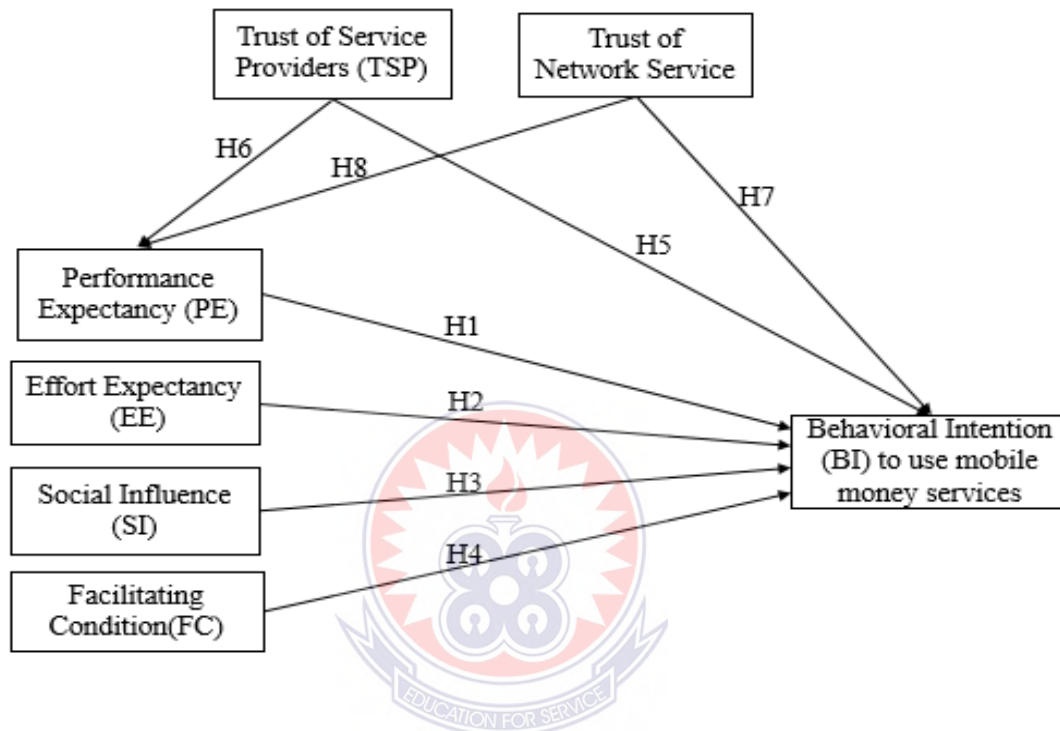
The literature discusses issues related to the history of mobile money transfers, how mobile money is done, benefits, challenges and related studies of mobile money transfers. The chapter further deliberates on Unified Theory of Acceptance and Use of Technology (UTAUT). In addition, the literature emphasises how perceived fraud activities affect mobile money transfer in Ghana.

#### 2.1 Research Hypothesis

Unified Theory of Acceptance and Use of Technology (UTAUT) was introduced by Venkatesh et al., (2003). According to them, the acceptance of technology depends on four main factors namely performance expectation, effort expectation, facilitation condition and social influence. There has been much consideration of trust in different research areas such as philosophy, economics, sociology, management science, computer science but little is known between costumers and technology acceptance in the context of mobile money transaction. According to Ozaa et al., (2006), there is no general accepted definition of trust. Generally, trust refer as an act confidence, belief, faith, and reliance in something which is anticipated to perform or provide a certain promised (Khaled & Qutaibah, 2010). Furthermore, trust is a customer's self-confidence or willingness to depend on a service provider's ability and consistency (Moorman et al., 1992; Rempel et al., 1985). Trust is generated from gathered knowledge that allows individual to make predictions based on some level of confidence and assurance such that partner (service providers) will meet their

responsibilities (Johnson & Grayson, 2005). It is therefore important to consider trust in acceptance of mobile phone usage.

This study integrated trust of service providers and trust network services into the four main factors of UTAUT model as indicated in Figure 2.1 Based on this, the following hypothesis that guided the study.



**Figure 2.1 Research hypothesis**

### **2.2.1 Performance Expectancy (PE)**

In the perspective of this study, performance expectancy can be defined as the extent to which students believe that mobile money transactions will improve their work productivity. Baptista & Oliveira (2015) investigated the factors affecting the acceptance and influencing individual behaviour in mobile banking. They revealed that performance expectancy is the key factor of behavioral intention. Mohammadyari & Singh (2015) examined users' intentions of using Web 2.0 tools. The findings concluded that performance expectations have significantly influence on individual intentions. From this logic, it was hypothesized that:



*H1: Performance expectancy has a positive impact on behavioral intention to use mobile money transactions.*

### **2.2.2 Effort expectancy (EE)**

The study of effort expectancy was explained as the degree to which students perceived mobile money transactions as easy to use. Martins et al., (2014) examined users' intention to use Internet banking. The findings suggested that effort expectancy is a stronger determinant of behavioral intention. Furthermore, Thakur (2013) in their study discovered that effort expectancy has a significant influence on consumer's mobile payment services. Therefore, it was proposed that:

*H2: Effort expectancy has a positive effect on behavioral intention to use mobile money transactions.*

### **2.2.3 Social influence (SI)**

Social influence can be explained as the extent to which students perceive that others believe they should use a mobile money transaction. Wills et al., (2008) investigated the acceptance of electronic medical record by registered nurses. They concluded that social influence has a strong influence of the nurses' behavioral intention. Additionally, Escobar-Rodríguez and Carvajal-Trujillo (2014) examined the factors that positively influence the purchasing of online flight ticket from a website. In their findings, they conclude that social influence has a strong positive effect on customer's intention. Hence, it was suggested that:

*H3: Social influence has a positive impact on behavioral intention to use mobile money transactions.*

#### **2.2.4 Facilitating condition (FC)**

The study of facilitating condition can be defined as the extent in which students believe that organizational and technical structures exist to enable the use of mobile money transaction. The use of mobile money transaction requires some support such as service providers, mobile phone or computer usage, and knowledge of mobile money transaction. Students with these skills and support could have a higher intention to use the mobile services. From this reasoning, it was suggested that:

*H4: Facilitating condition has a positive influence on behavioral intention to use mobile money transactions.*

#### **2.2.5 Trust of service provider (TSP) and Trust of network service (TNS)**

Several studies have suggested that trust factor has strong positive influence on service providers (e.g., Manuel, 2015; Fan and Perros, 2014; Johnson & Grayson, 2005; Coulter & Coulter, 2002) and network services (Quach, Thaichon & Jebarajakirthy 2016; Thaichon & Quach, 2015; Liu et al., 2014; Thaichon et al., 2014). In the context of this study, trust of service provider is explained as the belief and confidence that an individual has in Telecommunications Company or vendor (an individuals or business that is contracted to assist mobile money transactions for subscribers) which provides the mobile money transaction regarding accurate and secure mobile money transaction. Additionally, trust of network services is defined as individual perception pertaining to reliability of network services that support “cash in” (The process of crediting mobile money account with cash.) and “cash out” (The process deducting or withdrawing cash from mobile money account).

According to Luhmann (1979) trust promotes the achievement of business, the success of transaction and reduce social hesitations that would be otherwise unbearable to deal with under normally consideration. However, lack of trust in a system or particular service delivery can turn to be a possible obstacle to the extensive use of that technical system or services (Dahlberg et al., 2003; Bélanger & Carter, 2008). The reliability of mobile network is an important aspect of a mobile payment service. For instance, customer may have not the patience to wait for transaction challenges intended for financial mobile money transaction. In support, asserted that network flows such as network unavailability and interruption appears to be greatest challenges to the operation mobile money transaction. Therefore, mobile network reliability and accessibility offered by telecommunication companies to mobile money operators is very critical since it could affect customers' intention use mobile money transaction. From this logic, the trust of services providers and network services could be found to be determinant of students' behavioral intention to adopt mobile money transaction. Therefore, it was anticipated that:

*H5: Trust of service provider has a positive influence on behavioral intention to use mobile money transaction*

*H6: Trust of service provider has a positive influence on performance expectancy*

*H7: Trust of network service has a positive influence on behavioral intention to use mobile money transaction.*

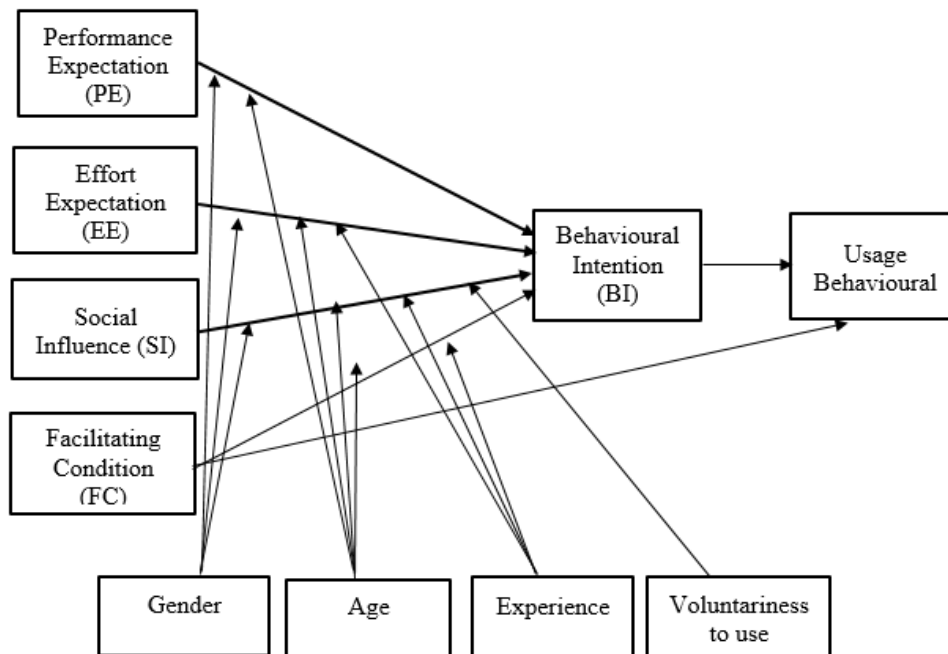
*H8: Trust of network service has a positive influence on performance expectancy*

### **2.3 Theoretical Framework**

For quite a while, the Technology Acceptance Model (TAM) has become overwhelming model of choice, however different models, for example, the motivation theory, joined together TAM, Theory of Planned Behaviour (TPB) and the

Model of PC Utilization (MPCU) to formed expansions of the TAM. The Unified Theory of Acceptance and Use of Technology (UTAUT) was introduced by Venkatesh et al. (2003). The UTAUT model is more recent model that combined TAM; the Theory of Reasoned Action (TRA); the motivational model (MM); the TPB; the merged TAM and the TPB model; the MPCU; the innovation diffusion theory (IDT); and the social cognition theory which appears to address the flaws of the previous models. This theory disclosed individual's intentions to accept and continue to use a particular technology.

The UTAUT consist four main construct namely performance expectation, effort expectation, social influence and facilitating condition as displayed in Figure 2.2. These four key constructs are independent factors which influence, behavior intention and usage (dependent variable). Some other factor such as gender, age, experience, and volunteers of system use have indirectly impact on the behavioral intention together with four main construct. Behavioral intention is identified as an important determinant of technology use (Venkatesh et al., 2003). Even though the UTAUT model has been disapproved as not applicable. The UTAUT model was tested and found to have an  $R^2$  of 70%, suggesting that the model explains 70% of the variance in individual intentions to use information technology (Venkatesh et al., 2003).



**Figure 2.2: UTAUT model (Venkatesh et al. 2003)**

#### 2.4 Mobile money transaction in Ghana

In Ghana, about 80 % of the population do not save in the bank (Ahiabenu, 2010). This suggests that they conduct their financial mobile money transactions outside the banking sector. The use of transactions gives people using mobile phone the capability to transfer money, make payments and other financial mobile money transaction with their phone.

Mobile money transactions were a relatively new phenomenon in Ghana. The services were first launched by the biggest telecommunication company in Ghana called MTN in 2008. The MTN partners with nine banks in Ghana to operate the mobile money transaction with more than 2 million Ghanaians subscribed to the services (Ahiabenu, 2010). In 2010, the second telecommunication operators, then Zain mobile network introduced mobile money transactions called Zap, in partnership with three banks.

These services reduced the transaction costs and saves the cost of travel and time spent visiting the nearest town to access financial services. In Ghana mobile money transaction has incorporated sending and receiving cash, paying installments and administration installments for taxi transports called dropping. Likewise, it is utilized for the most part as a reserve funds stage by clients and other protection administrations.

Ghana Commercial banks have been credited with driving mobile money as 48% of grown-ups matured more than 15 had a ledger (Vilasenor et al., 2015). The investigation appraises that 20% of grown-up Ghanaians had dynamic mobile money accounts which they utilized for exchanging cash and paying bills. It has been broadly recognized as being able to increment money related incorporation particularly in less created nations and country ranges of the sub-Saharan area and the Asia's (GSMA, 2015 and Aker and Wilson, 2013). The report sets that versatile cash is presently accessible in 93 nations averaging 33 million exchanges every day. The exchanges incorporate individual to individual exchanges and utility installments.

## **2.5 Financial Institutions**

In several countries, banks are in control of the retail payment systems. The primary function of the bank is to gather deposits money for loan disbursement and other permitted investments (Tobbin, 2013; Demircuc-Kunt et al., 2015; Fang et al., 2014; Ky & Rugemintwari, 2014). Mobile financial services in most developing countries are slow to offer this services. The financial institutions have the chance to increase value to customer depository services together with mobile technology in order to benefit from customer retention (Tobbin, 2013). The Financial institutions are the

best to utilized risk management programs that guarantee regulatory compliance for laundering of money and other associated risks.

### **2.5.1 Bank account operator**

Accounts where monies are deposited through transaction account are regulated for some reasons. In some situations, where the mobile money transaction operators are not banks, a controlled bank is employed as a regulating body to hold keep subscribers' funds. These funds deposited by transaction subscribers cannot be immediately accessed by the mobile money operator or the banks, and also distant from the liquidation of the operators of the mobile money (Donovan, 2012). However, there are deposit insurance protections for such services which varies from country to country.

### **2.5.2 Liquidity Management**

Liquidity Management refers to guaranteeing that the elements (e.g. operators) in charge of dealing with handling cash out and cash in transactions have sufficient physical money and electronic assets ("e-glide") to encourage the customers exchanges they have to perform (Jenkins, 2008). In an average mobile money cash framework, agents buy e-float from the mobile money operators by conveying physical money to the operators. At that point, when customers wish to cash out, they give the agent physical money, and the operator thus exchanges a relating measure of e-float from their record to the customers' accounts.

## **2.6 Mobile Money Operations in Ghana**

Bank of Ghana is a central bank in charge of formulating and implementing monetary policy in Ghana. The bank is responsible to regulate, supervise and direct the other banking sectors and credit system to guarantee the smooth operation of the mobile

money transactions. National Communication Authority (NCA) is accountable for cellular mobile licensing, guarantee fair competition among licensees, monitor service quality indicators for service providers, and operators (Entwistle & Cavassini, 2005).

### **2.6.1 Subscriber rules**

The operators of transactions require not less than one party to perform a transaction (i.e. they should have an account with the operators). However, the services differ in terms of the operators and customers. For instance, whether a customer can send a P2P transfer to a non-subscribers of mobile money transaction (Hughes & Lonie, 2007).

### **2.6.2 Enabling cash-in or cash-out**

This refer to the capacity of clients to effectively save money into a mobile money wallet (i.e. depositing customers' physical money into mobile wallet) and to withdrawing funds from the services (i.e. withdrawing money from customers' wallet) (Merritt, 2011).

### **2.6.3 Services offered**

The following are subset provided by mobile money transaction. These are remittances both domestic and / or international, Peer to Peer money transfers (P2P), payment of bills, disbursement of salary, retail payments, and saving of money. Among these P2P is seen as the most common used. Moreover, mobile money transactions where physical cash are deposited into electronic funds in a customer's mobile money account is called "cash-in" and methods for withdrawing physical cash money from the mobile money account is called "cash-out" (Entwistle & Cavassini, 2005).

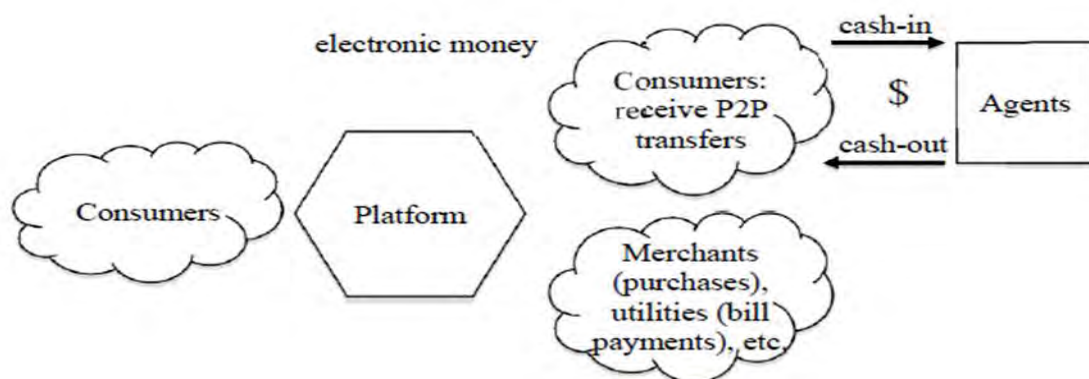


#### 2.6.4 Service delivery approach

There are two ways of transaction delivery, namely transaction through Over-the-counter (OTC) and customers' mobile phone. The transaction delivery through a customer's phone require the subscribers to put cash into their mobile money account where they can make payments and transfers money through their own phone. Services delivered through the use of OTC require the customer to visit the transaction vendors physically, where the customer or the subscriber provides cash for transaction to the vendor representative for mobile money transaction where the mobile phone of the vendor and money account are used to effect the money transaction. (Kendall et al., 2011).

#### 2.6.5 Mobile Payment Platforms

A transaction payment stage enables two users to make financial transaction by means of mobile. That is, on one side, is the customer and the other side is for the P2P transfers and/or merchants (for buying, bill payments, etc.). Another group of users includes agents who enable customers to change over money into electronic cash (both cash in and cash out) as displayed in Figure 2.3. Payment of mobile money platform with agent of cash is normally called mobile money platform.



**Figure 2.3: Platform of Mobile money payment (adopted from Bourreau & Valletti, 2015).**

It is helpful to take note of that, on a basic level, agents can likewise be dealers themselves. Nonetheless, it bodes well to keep them isolate in the resulting investigation as their business models are unique, and they likewise cater for various requirements as per the level of money related development of a specific nation (Bourreau & Valletti, 2015). Agents are normally small retailers, and are paid a commission for providing the services. This is as opposed to dealers that by and large do not encourage these trades, however essentially acknowledge electronic payment in return for the products or services they offer (Crowe et al., 2010)

## **2.7 Empirical Review**

The surviving writing has featured the capacity of the cell phone to store esteem or cash that can be utilized for different monetary exchanges (Tobbin, 2013; Demirguc-Kunt et al., 2015; Fang et al., 2014; Ky and Rugemintwari, 2014). In spite of the fact that in most developing nations individuals have dynamic bank and portable cash accounts, they pay their service bills and kids' expenses utilizing cash which has a tendency to lessen the level of monetary consideration in such economies (Demirguc-Kunt et al., 2015). Mobile money (mobile cash) has been credited with gigantic diminishment in the level of unbanked in sub Saharan Africa in light of its capacity to exchange esteem and the level of infiltration that cell phones have accomplished in the landmass (Duncombe & Boateng, 2009; Jack & Suri, 2011).

Koenig-Lewis et al. (2015) studied mobile money as a money payment framework that included monetary exchanges utilizing the remote and pervasive ability of a cell phone. Jack and Suri (2011) just characterizes mobile money as the utilization of PDAs to lead money related exchanges in the everyday lives of individuals whiles Diniz et al., (2011) in their efficient audit of mobile money view it as an archive of

cash electronically in light of versatile handsets that permit exchanges between individuals. A few different creators have characterized versatile cash however the accepted definition fixates on the utilization of cell phones in sending and getting cash (Sayid et al., 2012; Potnis, 2014; Evans & Pirchio, 2015; Ky & Rugemintwari, 2014). In Ghana portable cash administrations has created to incorporate sending and getting cash, pay installments and administration installments for taxi transports called dropping. Likewise utilized for the most part as a reserve funds stage by clients and other protection administrations.

Van der Boor et al., (2014) investigated the level to which subscribers of transaction in developing countries are transformed, they conducted an empirical study into the improvements of financial services provided by mobile phones. The findings indicated that 85% of the innovations of mobile money transaction invented in developing countries. They concluded that less than 50% of all mobile money financial services were established by subscribers, nearly 45% by manufacturers, and the remaining were together developed by subscribers and manufacturers. The key determinant adding to this improvement to happen in creating nations are the abnormal amounts of need, the presence of adaptable stages, in mix with expanded access to data and correspondence innovation. Furthermore, administrations created by clients diffused at more than twofold the rate of maker advancements. At last, we watch that 75% of the developments that started in non-OECD nations have officially diffused to OECD nations, and that the (client) advancements are thusly all around important. This investigation proposes that the conventional North-to-South dissemination system neglects to clarify these new wellsprings of advancement and may require reevaluation.

Cudjoe et al. (2015) in their study examined the factors of mobile banking usage among bank user in Ghana, with reference to Access Bank. The study used theoretical frameworks which was originated from existing literatures on usage of transaction. The study employed one hundred and fifty (150) customers in Access Bank were sampled to examined the factors of mobile banking acceptance in the banks in Ghana. In their finding it was shown that perceived credibility and perceived financial cost factors had a significant impact on consumer intention to accept and use mobile banking services that are provided by Access Bank. They therefore, recommended that banks in Ghana must make more awareness by personal interaction with customers, develop quality of customer confidence and review the cost of their mobile for the services

Yan and Yang (2015) investigated critical factors that influences users' intention to accept mobile payment from the context of a trust. The findings based on questionnaire survey sample from 193 participants using SmartPLS2.0 indicate that perceived ease of use, perceived usefulness, structure assurance and ubiquity have strong positive influence on users' trust and continues usage. The recommended that mobile service providers should concentrate of building customers trust to foster acceptance and usage of mobile money payment services.

Aker and Wilson (2013) focused on that 54% of family units in northern Ghana have no less than one part either in the diaspora or in the urban areas working for better expectations for everyday comforts. The study goes ahead to uncover that these individuals are in charge of sending settlements back to these country regions which already was expensive and hazardous as well. Roads like transports, companions, postal administrations, western-union and MoneyGram has in the past been utilized to

send settlements back home yet at an impressive cost and danger of misfortune on account of transports and companions (Aker & Wilson, 2013).

Chauhan (2015) examined the acceptance of transaction among target population in poverty, using the technology acceptance model (TAM). They indicated that mobile service is a key initiative that enhance the delivery of low-cost and increase the speed of money disbursement through the use of mobile phones. A survey questionnaires were administered to 225 participants. Survey data were analyzed using partial least square method. In their finding indicated that the main constructs of TAM, in particular, perceived usefulness, trust and attitude positively influencing the user intention to accept mobile money transaction.

Tagoe (2016) in his studies to find out whether the Bank of Ghana has come out with much stronger and legislative framework on transaction and compares and analyses the legislative frameworks of some Africa countries such as Nigeria, Kenya and Tanzania. He recommended on regulating the mobile money operations of Telco's Ghana with the rest of the world in the advancement of technological. Furthermore, he suggested that mobile phones in Ghana have other functions apart from the phone calls and text messaging. He stressed that currently the mobile network operators have more interest in rendering financial services other than the normal role to provide telecommunication services. He concluded that mobile money operations by the Telco's in Ghana has turned into an apparatus to assemble and support reserve funds for the generally unbanked masses of Ghana, and again as vehicle towards a definitive point of moving the economy into a cashless economy. However, he stressed that there are classless ramifications if these exercises of the Telco's are not emphatically directed by the suitable regulation bodies. He further suggested that

Telecommunication exercises in Ghana are ordinarily controlled by the National Communications Authority (NCA), and obviously the monetary financial activities of Telco's are past the domain of NCA and normally falls inside the order of the Bank of Ghana

Koker and Louis (2013) in their study explained that, mobile money holds financial inclusion, yet in addition postures budgetary trustworthiness challenges. The Financial Action Task Force (FATF) the intergovernmental worldwide against illegal tax avoidance (AML) and counter-psychological oppressor financing (CTF) standard-setting body communicated bolster for monetary incorporation and versatile cash as a way to diminish the utilization of non-straightforward trade out many creating nations. In February 2012, FATF embraced another amended arrangement of guidelines. In their paper, they considered the effect of these new measures on mobile money standard and features parts of the new gauges that would encourage creative mobile money transaction, yet in addition focuses to inquiries and difficulties. They further explained that the new measures are by and large more facilitative of new money related administrations models for the unbanked and underbanked, however various key innovative mobile money models, but also points to questions and challenges. The new standards are generally more facilitative of new financial services models for the unbanked and underbanked, but a number of key questions.

Micheni et al. (2013) investigated the influence of facilitating condition and transaction cost on the acceptance of mobile money transaction in Kenya. A survey questionnaire was conducted to collect. SPSS version 16 was used to analyzed the collected data. confirmatory factor analysis and structural equation modeling was used to analyzed the research model. Three main constructs were used in the research

model which include transaction cost, facilitating conditions and adoption. The results indicated that facilitating conditions has positive impact on adoption of mobile money transaction and demonstrate influence continues usage of mobile money transaction.

Tobbin (2010) explored the factors that affect customers in Ghana to acceptance and use of mobile money transfer with extension of Technology Acceptance Model (TAM). They analyzed the data using Structural Equation Modeling (SEM) to examine the impact of the relationship between the constructs. The results from their study supported main construct of TAM. In support, the suggested perceived usefulness and perceived ease of use have strong positive impact on customer intention to used mobile money transfer.

Ssonko (2010) examined the impact of mobile money transaction in enhancing financial inclusion. The examination was inspired by the expansion of cell phones among low salary workers, the prepaid charging framework touchy to clients' salaries, grasp of ICT by government and the private division that has improved web based business status of Uganda, and also the dispatch of three Mobile money transaction in the nation. They study employed qualitative analysis of the web content, using three transaction providers. The content analysis was focused on charges of transaction; number of total number of registered customers; mobile money transaction volumes; stakeholders; interface and security of user; relationships of institution; regulation and policy; and suitability of the presents business model(s). The findings revealed that transaction have several potential to improve enhancing financial inclusion but need plan business model that includes all stakeholders to institute a better national result. Moreover, the initial mobile money contribution to financial inclusion has improve money transfer by reducing the cost of transaction. It was recommended that the

regulatory authorities require to institute a legal framework which not prevent innovation but warrants safety of customers' savings.

Mensah et al. (2012a) assessed Ghana MTN transaction plan as a means to introduce cashless economy. This was done by reviewing the currents usage and challenges of the using MTN Transaction in Ghana. He also compared the level of MTN Mobile Money usage as to mobile money transaction of banks such as ATM and e-ZWICH. Based on the questionnaire survey he conducted using users and agents of MTN Mobile Money, it was released that females with ages ranging from 18 to 25 years used mobile money transaction more often than men. He also found that network instability, absence and delay of network is the greatest challenges to the MTN Mobile money transaction operations in Ghana.





## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.0 Overview

This chapter discusses all the philosophical and methodological issues that relate to this study. It includes the research design, the population of the study, the sampling size and sampling techniques to be used for the study. It deliberates on the data collection techniques, data analysis method and research procedure to be used in this study.

#### 3.1 Research Design

The study employed survey research design with quantitative data collection approach. Fraenkel & Wallem (2000) explained that survey research design involves gathering information at a specific point in time from a sample that has been collected from a determined population by administering survey questionnaire in order to test an individual to obtain a specific characteristic from him or her. The questionnaire survey design enabled objective measurement of acceptance of mobile money usage among participating university students in Ghana. This intent enabled the testing of research hypotheses.

Thomas (2003) suggested that the method for educational research does not solely depend on the basis of theoretical promises but other important considerations such as the certain intent of the research and the pragmatism of various approaches must not be overlooked. This current study basically sought to examine the acceptance of transaction. Therefore, there was the need to find out factors that influence of students' acceptance of transaction. To achieve this, it was important to gather data from participants to determine the extent to which these factors influence them. It

therefore important to use appropriately designed questionnaire. This is because the intent of research is to use questionnaires to collect data on these factors. Furthermore, the survey research design makes it easy to generalize results (Fraenkel & Wallem 2000; Muijs, 2004).

### **3.2 Population of the Study**

The population for this study were students from the University of education, Winneba. The target population was Faculty of Social Science and College of Humanities with nine departments, namely Geography and Rural Development, History, Religious Studies, Political Science, Culture and tourism Sociology, Social Work, Economics, and Modern Languages. The two faculties have a total number of eight hundred and twenty-six (826) students.

### **3.3 Sampling Technique and Determination**

Sampling is defined as the process of selecting a section of the population to represent the total population (Fraenkel & Wallem, 2000; Muijs, 2004; Alhassan, 2006). In the perspective of this study, purposive sampling technique was employed to sample five hundred and thirty-six (536) students. Purposive sampling begins with intent in mind to select people or participants possessing common interest or characteristics (Fraenkel & Wallem 2000). Because the study seeks to examine the acceptance of mobile money transaction, it was imperative to obtain information of a section of the population who mostly used the service. As a result, the choice of the students as the sample for the study was based on the fact that most of the university students have experienced the usage of mobile money transactions.

Sample size (n) calculation formula was adapted from Yamane (1967).

$$n = \frac{N}{1 + N(e)^2}$$

Where n is the sample size = 536

N for population size = 826

e, is the level of precision 95%

Confidence level and e = 0.03 were assumed.

In substituting N = 826 and other parameters in the above formula,

$$n = \frac{826}{1 + 826(0.03)^2}$$

$$n = \frac{826}{1 + 0.7434} = 473.787$$

Since a minimum sample size of 473 should be employed for the study, five hundred and thirty-six (536) participants were used for the study.

### 3.4 Data Collection Instrument

The study employed questionnaire instruments to obtain information from the participants of the study. The questionnaire items consisted of two parts. The first part drew participants' demographic data which involved gender, and their usage of mobile phone. The second part consists of twenty-two (20) observed items which were used to measure 7 latent variables or construct, namely trust of service providers, the trust network services, performance expectancy, effort expectancy, social influence, facilitating conditions and behavioral intention. The questionnaire items were adopted from previous studies (Kurfali *et al.* 2017; Khasawneh, Wafa'a & Abu-Shanab, 2013; Venkatesh *et al.*, 2003). Survey questionnaire was found to be suitable for the study because the research used a survey design (Fraenkel & Wallem,

2000). It is also appearing to be the most common data collection instrument used in educational research (Muijs, 2004).

The questionnaire consists of two (2) main parts (1-2). Part 1 requested for background information of the participants. The demographic information was gender, age, years of using mobile phones and departments. Part 2 consist of six (7) constructs that elicit information on (1) trust of service providers, (2) trust of network services, (3) performance expectancy, (4) effort expectancy (5) facilitating condition, (5) social influence (6) behavioral intention to adopt transaction in Ghana. Total of 20 questionnaire item was used. Each constructs have two or more questionnaire items.

#### **3.4.1 Scoring of the Instrument**

A Likert scale with seven options with rating scale: Strongly Disagree (SD = 1), Disagree (D = 2), Somewhat Disagree (SwhatD = 3), Undecided (U = 4), Somewhat Agree (SwhatA = 5), Agree (A = 6) and Strongly Agree (SA = 7). The motive behind the selection of, likert scale is because it looks interesting to participants and they often enjoy using it (Muijs, 2004). Moreover, it is easier to construct, explain and provide stress-free way to do descriptive statistics such frequency, percentages mean and standard deviation. Additionally, it allows simple approach to conduct inference statistics such as Analysis of Variance (ANOVA), T-test and multiple linear regression analysis (Fraenkel & Wallem, 2000; Muijs, 2004).

#### **3.5 Reliability and Validity**

The questions of reliability and validity are critical in research since the integrity of a research be determined by the reliability of the data, procedure of collecting data and the validity of the findings (Lecompte & Preissle, 1994; Seale, 1999; Cohen, Manion,

& Morrison, 2000). Fraenkel & Wallem (2000) warned that it is promising for designing a questionnaire that is reliable since the participant are likely to consistent.

The validity of research instrument is the degree to which the items found in research instrument measure what they are intended to measure. But reliability is the degree to which items of research instrument ensure consistent responses for several trials with different participants in the same background or situation (Miles & Huberman, 1994; Lecompte & Preissle, 1994; Seale, 1999; Cohen, Manion & Morrison, 2000; Fraenkel & Wallem, 2000). Two (2) specialists who are senior lecturers in the field of information system at the Department of Management Information Systems assessed the survey questionnaire for content, construct and face validity. To find out the reliability of the survey questionnaires a pilot study was conducted.

### **3.5.1 Pilot Study**

Wilson and MacLean (1994) indicated that pilot study helps to confirm the reliability, validity and achievability of the survey questionnaire. In view of this a pilot study was conducted to confirm not only the reliability of the survey questionnaire, but also to recognize error in the questionnaire items. Eighty-six (86) students in the Business School of the University of Ghana were used to conduct the pilot studies. The reliability scales (Cronbach's Alpha values) for the survey questionnaire was 0.930 which suggested excellent reliability of the questionnaire items (Fraenkel & Wallem, 2000).

### **3.6 Data Collection Procedure**

Permission granted by the Heads of the department and students enabled the administering of the questionnaire. The questionnaire was administered with the assistance of some students in the faculties improve the collection and response rate.

The survey questionnaire was collected immediately after it was completed by the participants in order to prevent communication between participants. This was done to avoid influences of participant personal view

### **3.7 Method of Data Analysis**

The participants' response on the questionnaire items were coded and analyzed using Statistical Package for Social Science (SPSS) version 20. The data entries were rechecked to ensure accuracy. However, Microsoft excel was used to draw diagrams such as Bar graphs and Pie charts. Descriptive statistics such as frequency, percentages were calculated to analyzed participant demography. Evaluation of reliability and convergent validity of the construct were done using Cronbach alpha, factor loading, Average variance extracted (AVE), and Compact reliability (CR). Linear multiple regression technique was used to assess the relationships of the independent factors (Trust of service providers, Trust of network services, performance expectancy, effort expectancy Social influence, facilitating condition) with the dependent factor (Behavioral Intention).

### **3.8 Evaluation of Reliability and Validity**

The reliability of the construct was examined using Cronbach's alpha. The construct reliability should exceed 0.7 to meet the acceptance level (Fraenkel, & Wallen 2000). The reliability of the construct of this study ranged from 0.782 to 0.810 which indicated high reliable construct as shown in Table 3.1

**Table 3.1. Result of reliability analysis**

<b>Construct</b>	<b>Number of Items</b>	<b>Cronbach alpha(<math>\alpha</math>)</b>	<b>Type</b>
Trust of Service Provider	2	0.800	High
Trust of Network Service	4	0.786	High
Performance Expectancy	3	0.782	High
Effort Expectancy	3	0.803	High
Social Influence	3	0.810	High
Facilitating Condition	2	0.805	High
Behavioral Intention	3	0.791	High

**Source: Authors construct (2021)**

### **3.8.1 Convergent validity**

Convergent validity was tested based on the acceptance guideline. The test was done using three measurement scale: factor loadings greater than 0.7; the average variance extracted (AVE) exceeding 0.50; composite reliabilities (CR) more than 0.7 (Fornell, Larcker 1981). The factor loading, the AVE, CR and Cronbach's alpha values of all the constructs exceeded the recommended threshold values as demonstrated in Table 3. 2. In general, all the constructs were considered reliable and significant for the study.

**Table 3.2: Result of convergent validity**

<b>Construct</b>	<b>CR</b>	<b>AVE</b>
TSP	0.696	0.534
TNS	0.828	0.561
PE	0.814	0.594
EE	0.799	0.571
SI	0.834	0.628
FC	0.828	0.707
BI	0.826	0.613

Source: Authors Construct (2021)

AVE: Average Variance Extracted =  $\sum \rho^2 / n$

CR: Composite Reliability =  $(\sum(\rho)^2) / (\sum(\rho)^2 + (\sum a), a = 1 - \rho^2$

Factor Loadings < .500 were omitted

Varimax with Kaiser Normalization

### 3.8.2 Discriminant validity

Discriminant validity was evaluated based on the relationship between the square root of AVE and correlations of the construct. For discriminant validity testing, the square root of the AVR average should exceed its correction value of the construct (Fornell, Larcker 1981). As shown in Table 3.3, the square root of AVE value in bold of the construct is consistently greater than it respective correlations values, suggesting acceptance discriminant validity among constructs.



**Table 3.3. Discriminant Analysis of factors**

Construct	TSP	TNS	PE	EE	SI	FC	BI
TSP	<b>0.730</b>						
TNS	0.579	<b>0.748</b>					
PE	0.390	0.485	<b>0.771</b>				
EE	0.312	0.371	0.444	<b>0.755</b>			
SI	0.337	0.341	0.425	0.321	<b>0.792</b>		
FC	0.317	0.375	0.436	0.399	0.307	<b>0.841</b>	
BI	0.416	0.478	0.527	0.393	0.347	0.390	<b>0.782</b>

Source : Authors construct(2021)

### 3.8.3 Collinearity statistics

From Table 3.4, the value of Tolerance ranges from 0.565 to 0.762 which are all more than 0.1. Furthermore, values of variance inflation factor (VIF) range from 1.312 to 1.770 were significantly less than 10. As a result, the predictor factors are weakly correlated. Since the values of VIF are less than 10 and the values Tolerance exceed 0.1, this suggest no perfect multicollinearity among the predictor factors. Therefore, there is no multicollinearity problem (O'brien, 2007).

**Table 3.4 Collinearity statistics**

<b>Dependent variable</b>	<b>Independent variables</b>	<b>Tolerance</b>	<b>VIF</b>
BI	PE	0.631	1.586
	EE	0.565	1.770
	SI	0.606	1.651
	FC	0.762	1.312
	TSP	0.728	1.374
	TNS	0.722	1.384

**Source: Authors Construct (2021)**



## CHAPTER FOUR

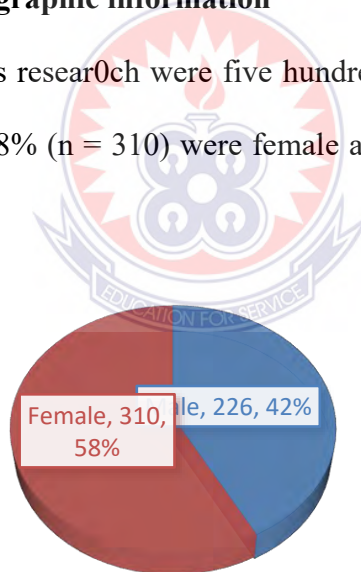
### RESULTS AND DISCUSSION

#### 4.0 Overview

In this chapter, the data analysis from the examination into the acceptance of mobile money are presented and discussed in relation to the six research hypothesis. The research hypotheses are discussed based on survey questionnaire collected. The findings of the study are discussed under three sections: (a) participant demographic information (b) findings associated to the research hypotheses and (c) discussion of results

#### 4.1 Participant demographic information

The participants for this research were five hundred and thirty-six students. Out of the 536 participant, 57.8% (n = 310) were female and 42.2% (n = 226) were male as displayed in Figure 4.1.



**Figure 4.1: Gender of participants**

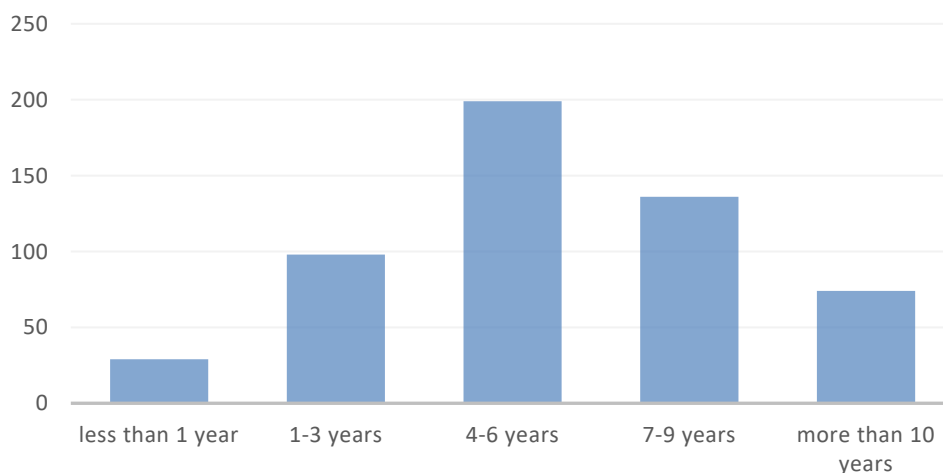
The age of the participants below 25 years was 463 representing 86.4%. 50 of the participants age ranges from 25-39 indicating 9.3%. 18 of the participants reported their ages from 40-49, suggesting 3.4%. Five of the participants were in the age above 50 years indicating 0.9 %. Table 4.1 shown the summary of the participants ages.

**Table 4.1: Frequency distribution of participants' age**

Age	Frequency	Percent (%)
Below 25	463	86.4
From 25 – 39	50	9.3
From 40 – 49	18	3.4
Above 50	5	0.9

Source: Authors Construct (2021)

Participants were asked to state their number of years of using mobile phones. Out of the 536 participants who reported the number of years of using mobile phone, majority (37.1%, n = 199) of the participants had 4 to 6 years of experience, 25.4% (n= 136) had used the mobile phone from 7 to 9 years, 18.3% (n = 98) had 1 to 3 years of experience, 13.8% (n = 74) had more than 10 years of experience and 5.4% (n= 29) had less than 1-year experience of using mobile phone. The summary is indicated in the Figure 4.2.

**Figure 4.2: Frequency distribution of participants' mobile phone usage**

## 4.2 Findings Related to the Research Questions

The study sought to examine the mobile money acceptance by university students in Ghana. The aim was to find out some of the factors that contribute to the acceptance of mobile money in Ghana, based on UTAUT model integrated with trust of service providers and trust of network services.

The research hypothesis that guided the current study are:

- H1: Performance expectancy (PE) has a positive impact on students' acceptance of mobile money transaction.
- H2: Effort expectancy (EE) has a positive effect on students' acceptance of mobile money transaction.
- H3: Social influence (SC) has a positive impact on students' adoption of mobile money transaction.
- H4: Trust of service provider has a positive influence on students' performance expectancy and behavioral intention to use mobile money transaction
- H5: Trust of network service has a positive influence on students' performance expectancy and behavioral intention to use transaction.

### 4.2.1 Descriptive statistics for the variables

The performance expectancy, effort expectancy, social influence, facilitating condition, trust of service providers and trust of network services were used as independent variable for the multiple regression while the behavioral intention was employed as dependent variables. A Likert's scale of seven point items were administered. A score level between 4 and 7 is considered as agreement or high level score. The score between 1 to 4 is also considered as disagreement or low level of acceptance of each questionnaire items. The aggregate of the scores for the both the

independent and dependent variable were employed in the analysis of the multiple regression. Table 4.2 displays the descriptive statistics of the independent variable and the dependent variable used multiple regression statistics.

**Table 4.2: Descriptive Statistics of variables**

<b>Construct</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Variance</b>
Trust of service providers (TSP)	536	4.462	1.700	2.889
Trust of network services (TNS)	536	4.503	1.406	1.976
Performance expectancy (PE)	536	4.822	1.601	2.564
Effort expectancy (EE)	536	4.937	1.357	1.840
Social influence (SI)	536	4.141	1.553	2.412
Facilitating Condition (FC)	536	5.009	1.586	2.516
Behavioral intention (BI)	536	4.856	1.375	1.82

Source : Authors Construct (2021)

The trust of service providers mean score was 4.462 (SD = 1.700) and trust of network services had a mean of 4.503 (SD = 1.406) which suggest that participants of the research consider trust of service providers and trust of network service as critical factors in mobile money transaction. This finding is in line with a study conducted by Park and Lee (2014) when they suggested that trust play a vital role in improving and keeping the relationship user and service provider. Furthermore, performance expectancy had an average of 4.822 (SD = 1.601) and effort expectancy average of 4.937 (SD = 1.357) which indicates that: (1) the participants believe that using transaction will enable them to increase their job performance (2) participants agreed that, using mobile money transaction with ease. Additionally, social influence and facilitating condition had a mean score of 4.141 (SD = 1.553) and effort expectancy average of 5.009 (SD = 1.586) which suggest that: (1) the participant perceives that

some people encourage them to use transaction (2) the participants have the believe that the exitance of organisational support and technical support will enable them to use the mobile money transaction. The behavioral intention had a mean score of 4.856 (SD = 1.375) which shows that the participants have some intention to use the mobile money transaction.

Table 4.3 displayed the bivariate correlations among the variables. Performance expectancy had a very strong positive correlation ( $r = 0.527$ ) with the behavioral intention (dependent factor) followed by trust of service providers with  $r = 0.478$ , trust of network services with  $r = 0.416$ , facilitating condition with  $r = 0.393$ , social influence with  $r = 0.390$  and effort expectancy with  $r = 0.347$ .

This finding suggests that performance expectancy (PE) has a significantly high positive influence ( $r = 0.527$ ) on the participants' behavioral intention to use mobile money transaction in their future financial transaction. Furthermore, the moderately high positive correlation of participant's trust of service providers ( $r = 0.416$ ) on participants' behavioral intention to use mobile money transaction, the moderately high positive correlation of participant's trust of network services ( $r = 0.478$ ) on participant's behavioral intention to use mobile money transaction, the moderately high positive correlation of participant's effort expectancy ( $r = 0.347$ ) on participant's behavioral intention to use mobile money transaction, the moderately high positive correlation of participant's social influence ( $r = 0.390$ ) on participant's behavioral intention to use mobile money transaction and the moderately high positive correlation of participant's facilitating condition ( $r = 0.393$ ) on participant's behavioral intention to use mobile money transaction. Additionally, all the independent variables: trust of network services ( $r = 0.478$ ), trust of service providers

( $r = 0.416$ ), facilitating condition ( $r = 0.393$ ), social influence ( $r = 0.390$ ) and effort expectancy ( $r = 0.347$ ) are correlated positive among themselves as the behavioral intention (dependent variable).

**Table 4.3: Bivariate correlation of regression variables**

	BI	TSP	TNS	PE	EE	SI	FC
BI	1.000						
TSP	0.416	1.000					
TNS	0.478	0.579	1.000				
PE	0.527	0.390	0.485	1.000			
EE	0.347	0.337	0.341	0.425	1.000		
SI	0.390	0.317	0.375	0.436	0.321	1.000	
FC	0.393	0.312	0.371	0.444	0.399	0.307	1.000

Source: Authors Construct (2021)

### 4.3 Testing of Hypotheses

Research hypothesis seeks to examine the relationship of the following variables:

Variable 1: Trust of service providers (TSP)

Variable 2: Trust of network services (TNS),

Variable 3: Performance expectancy (PE),

Variable 4: Effort expectancy (EE),

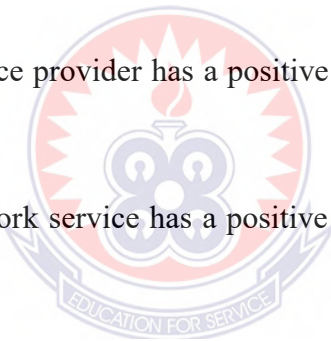
Variable 5: Social influence (SI),

Variable 6: Facilitating condition (FC) with the Behavioral intention (BI) using a multiple regression technique at 5% significance level ( $\alpha = 0.05$ ).



The following research hypothesis was answered using multiple regression analysis:

- (a)  $H_{0A}$ :  $R = 0$ , that is the linear combination of independent variables significantly relate to the behavioral intention to use transaction.  
 $H_{AA}$ :  $R \neq 0$ , that is the linear combination of independent variables does not significantly relate to the behavioral intention to use transaction.
- (b)  $H_{01}$ : Performance expectancy has a positive impact on behavioral intention to use transaction.
- (c)  $H_{02}$ : Effort expectancy has a positive effect on behavioral intention to use transaction.
- (d)  $H_{03}$ : Social influence has a positive impact on behavioral intention to use transaction.
- (e)  $H_{05}$ : Trust of service provider has a positive influence on behavioral intention to use transaction
- (f)  $H_{06}$ : Trust of network service has a positive influence on behavioral intention to use transaction.



Hypothesis (a) to Hypothesis (g) was used to test the significance of the combined variables of the regression model, significance of individual factors and significance of the reduced model.

#### **4.3.1 Test of the significance of combined factors**

The standard regression analysis was employed to investigate the association between the predictor variables (Variable 1- 6) with the behavioral intention (dependent variable) using the research hypothesis:

- (a)  $H_{0A}$ :  $R = 0$ , that is the linear combination of independent variables significantly relate to the behavioral intention to use transaction.

$H_{AA}$ :  $R \neq 0$ , that is the linear combination of independent variables does not significantly relate to the behavioral intention to use transaction.

Table 4.4. displayed the summary of the standard regression model with the value of the multiple correlation ( $R = 0.619$ ). This suggested that all combined independent variable (Trust of service provider, trust of network service, performance expectancy effort expectancy, social influence and facilitating condition) relate with the dependent variable (behavioral intention). Furthermore, the Adjusted  $R^2 = 0.383$  indicates that all the variables combine contributed to 38.3% of the variances in the behavioral intention (dependent variable)

**Table 4.4: Summary of Standard Regression Model**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.619	.383	.376	1.08632	.383	54.753	6	529	.000	1.971

a. Predictors: (Constant), Trust of service provider, Trust of network service, Performance expectancy, Effort expectancy, Social influence and Facilitating conditions

b. Dependent Variable: Behavioral intention

Table 4.5 indicates the summary of ANOVA (Analysis of Variance) test of statistical significance of regression model. From the Table 4.6,  $F = 54.743$  and  $p = .000 (< 0.05)$  which suggests that the model test was statistically significant. Hence, the null hypothesis ( $H_{AA}$ ) was rejected. This means that the combination of all the independent variables (Trust of service provider, Trust of network service, performance expectancy effort expectancy, social influence and facilitating condition) significantly relate to behavioral intention ( $H_{OA}$ ).

**Table 4.5: Regression Significance**

Model	ANOVA	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	387.683	6	64.614	54.753	.000 <sup>a</sup>
	Residual	624.270	529	1.180		
	Total	1011.954	535			

a. Predictors: (Constant), Trust of service provider, Trust network services, Performance expectancy, Effort expectancy, Social influence, Facilitating condition

b. Dependent Variable: behavioral intention

### 4.3.2 Testing for the significance of individual variables

Table 4.7 shows the significance of the individual regression coefficient (Beta weights) used for the hypothesis testing:

#### 4.3.2.1 Testing Hypothesis 1 (H1)

(b) H<sub>01</sub>: Performance expectancy has a positive impact on behavioral intention to use transaction.

H<sub>A1</sub>: Performance expectancy has no positive impact on behavioral intention to use transaction.

From Table 4.6, independent variable, Performance expectancy was statistically significant ( $\beta = 0.277$ ,  $t = 6.304$ ;  $p = 0.000 < 0.05$ ). Therefore, the null hypothesis was rejected (H<sub>A1</sub>) that independent variable (performance expectancy) has a positive impact on behavioral intention (dependent variable) to use transaction.

#### 4.3.2.2 Testing Hypothesis 2 (H<sub>2</sub>)

(c) H<sub>02</sub>: Effort expectancy has a positive effect on behavioral intention to use transaction.

H<sub>A2</sub>: Effort expectancy has a no positive effect on behavioral intention to use transaction

As shown in Table 4.7, independent variable (Effort expectancy) was statistically significant ( $\beta = 0.106$ ,  $t = 2.609$ ;  $p = .0009$  ( $< 0.05$ )). Therefore, the null hypothesis (H<sub>A2</sub>) was rejected. This suggested that independent variable (Effort expectancy) Effort expectancy has a positive effect on behavioral intention (dependent variable) to use transaction.

#### 4.3.2.3 Testing Hypothesis 3 (H<sub>3</sub>)

(d) H<sub>03</sub>: Social influence has a positive impact on behavioral intention to use transaction.

H<sub>A3</sub>: Social influence has no positive impact on behavioral intention to use mobile money service.

As indicated in Table 4.6, independent variable (Social influence) was not statistically significant ( $\beta = 0.063$ ,  $t = 1.609$ ;  $p = 0.108$  ( $> 0.05$ )). Therefore, the null hypothesis (H<sub>A3</sub>) was not rejected. This suggested that independent variable (social influence) has no positive impact on behavioral intention (dependent variable) of the participant to adopt the mobile money transaction.

#### 4.3.2.4 Testing Hypothesis 4 (H<sub>4</sub>)

(e) H<sub>04</sub>: Facilitating condition has a positive influence on behavioral intention to use transaction.

H<sub>A4</sub>: Facilitating condition has no positive influence on behavioral intention to use transaction.

In Table 4.7, the independent variable (Facilitating condition) was statistically significant ( $\beta = 0.105$ ,  $t = 2.612$ ;  $p = 0.009$  ( $< 0.05$ )). Therefore, the null hypothesis (H<sub>A4</sub>) was rejected. This indicated that independent variable (Facilitating condition) has positive influence on behavioral intention to use transaction.

#### 4.3.2.5 Testing Hypothesis 5 (H<sub>5</sub>)

(f) H<sub>05</sub>: Trust of service provider has a positive influence on behavioral intention to use transaction

H<sub>A5</sub>: Trust of service provider has no positive influence on behavioral intention to use transaction.

As shown in Table 4.6, the independent variable (Trust of services provider) was statistically significant ( $\beta = 0.120$ ,  $t = 2.788$ ;  $p = 0.006$  ( $< 0.05$ )). Hence, the null hypothesis (H<sub>A5</sub>) was rejected. This suggested that independent variable (Trust of service provider) has a positive influence on behavioral intention to use transaction.

#### 4.3.2.6 Testing Hypothesis 6

(g) H<sub>06</sub>: Trust of network service has a positive influence on behavioral intention to use transaction.

H<sub>A6</sub>: Trust of network service has no positive influence on behavioral intention to use transaction.

From Table 4.7, the independent variable (Trust of network services) was statistically significant ( $\beta = 0.174$ ,  $t = 3.832$ ;  $p = 0.000$  ( $< 0.05$ )). Therefore, the null hypothesis

(H<sub>A6</sub>) was rejected. This indicated that independent variable (Trust of network services) has a positive influence on behavioral intention to use transaction.

**Table 4.7: Regression Coefficient of the Standard Regression Model**

Model		Unstandardized Coefficients		Standardized Coefficients		95% Confidence Interval for B		
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	1.294	0.216		5.988	0.000*	0.870	1.719
	TSP	0.097	0.035	0.120	2.788	0.006	0.029	0.165
	TNS	0.170	0.044	0.174	3.832	0.000	0.083	0.258
	PE	0.238	0.038	0.277	6.304	0.000	0.164	0.312
	EE	0.108	0.041	0.106	2.609	0.009	0.028	0.188
	SI	0.056	0.035	0.063	1.609	0.108	0.012	0.124
	FC	0.091	0.035	0.105	2.612	0.009	0.022	0.159

a. Dependent Variable: behavioral intention \*  $p < 0.05$



**Table 4.8: Regression Coefficient of three Standard Regression Models**

Model		Unstandardized Coefficients		Standardized Coefficients		95% Confidence Interval for B		
		B	Std. Error	Beta	T	Sig.	Lower Bound	Upper Bound
1	(Constant)	3.354	0.152		2.062	0.000	3.055	3.653
	TSP	0.337	0.032	0.416	10.570	0.000	0.274	0.399
2	(Constant)	2.529	0.179		14.130	0.000	2.177	2.880
	TSP	0.169	0.037	0.209	4.574	0.000	0.097	0.242
	TNS	0.349	0.045	0.356	7.785	0.000	0.261	0.437
3	(Constant)	1.861	0.182		10.211	0.000	1.503	2.219
	TSP	0.121	0.035	0.150	3.473	0.000	0.053	0.190
	TNS	0.209	0.044	0.214	4.702	0.000	0.122	0.297
	PE	0.314	0.035	0.365	9.071	0.000	0.246	0.381
4	(Constant)	1.504	0.207		7.249	0.000	1.097	1.912
	TSP	0.111	0.035	0.137	3.203	0.001	0.043	0.179
	TNS	0.188	0.044	0.192	4.237	0.000	0.101	0.276
	PE	0.275	0.036	0.320	7.628	0.000	0.204	0.345
	EE	0.139	0.040	0.137	0.060	0.001	0.060	0.217
5	(Constant)	1.352	0.214		6.333	0.000	0.933	1.772
	TSP	0.104	0.035	0.129	3.012	0.003	0.036	0.172
	TNS	0.174	0.044	0.178	3.923	0.000	0.087	0.262
	EE	0.257	0.037	0.293	6.837	0.000	0.179	0.324
	PE	0.114	0.041	0.113	2.818	0.005	0.035	0.194
	FC	0.095	0.035	0.110	2.751	0.005	0.027	0.163

a. Dependent Variable: Behavioral Intention

Since there are no other significant combined variables better than the full-model 5, the Model 5 (Table 4.9) was used for the final regression equation for the unstandardized  $\beta$ - coefficients:

Behavioral intention = 0.129\* Trust of service provider + 0.178\*Trust of network service + 0.293\*Performance expectancy + 0.113\*Effort expectancy+0.110\*Facilitating condition

#### 4.5 Comparative importance of the Variables

Table 4.9 displayed the compares the impact ( $\beta$ -values) of the independent variables: Trust of service provider, trust of network service, performance expectancy, effort expectancy, social influence and facilitating condition on the behavioral intention (dependent variable). Performance expectancy was the most significant variable ( $\beta = 0.277$ ,  $p = .000(< .05)$ ) contribution to the participant behavioral intention to use mobile money transaction. The second most significant variable was Trust of network services with  $\beta = 0.174$  and  $p = .000(< .05)$ . The third impact variable was Trust of service provider ( $\beta = 0.120$ ,  $p = 0.006(< .05)$ ) followed by effort expectancy ( $\beta = 0.106$ ,  $p = 0.006(< .05)$ ) and facilitating condition ( $\beta = 0.105$ ,  $p = 0.009(< .05)$ ). However, social influence ( $\beta = 0.063$ ,  $p = 1.08(> .05)$ ). did not make any statistically significant contribution to participants' behavioral intention to used mobile money transaction.

**Table 4.9: Beta values- comparative importance of variables**

Variables	Beta	t- statistic	Sig.
Trust of service provider	0.120	2.788	0.006
Trust of network service	0.174	3.832	0.000
Performance expectancy	0.277	6.304	0.000
Effort expectancy	0.106	2.609	0.009
Social Influence	0.063	1.609	0.108
Facilitating condition	0.105	2.612	0.009

Source: Authors Construct (2021)

a. Dependent Variable: Behavioral Intention \*  $p < 0.05$



#### 4.6 Research hypothesis 6 and 8

The study further investigated the impact of trust of service provider and trust of network service on participant behavioral intention to use mobile money transaction. The following hypotheses were started to guide the investigation using multiple regression:

*H7: Trust of service provider has a positive influence on performance expectancy*

*H8: Trust of network service has a positive influence on performance expectancy*

##### 4.6.1 Hypothesis testing

As shown in Table 4.10. the summary of the standard regression model with the value of the multiple correlation ( $R = 0.503$ ). This suggested that independent variable (Trust of service provider, Trust of network services) relate with the dependent variable (performance expectancy). Moreover, the Adjusted  $R^2 = 0.253$  suggested that Trust of service provider, Trust of network services contributed to 25.3% of the variances in the performance expectancy (dependent variable).

**Table 4.10: Summary of Standard Regression Model**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			Durbin-Watson		
					R Square Change	F Change	Sig. F Change			
1	0.503 <sup>a</sup>	0.253	0.251	1.38617	0.253	90.443	2	533	0.000	1.722

Source : Authors Construct (2021)

a. Predictors: (Constant), TSP, TNS

b. Dependent Variable: PE

Table 4.11 indicates the summary of ANOVA (Analysis of Variance) test of statistical significance of regression model. From the Table 4.12,  $F = 90.443$  and  $p = .000(<$

0.05) which suggests that the model test was statistically significant. therefore, the independent variables (Trust of service provider, Trust of network service) significantly relate to performance expectancy (dependent variable).

**Table 4.11: Analysis of variance (ANOVA)**

		<b>Sum of</b>		<b>Mean</b>		
	<b>Model</b>	<b>Squares</b>	<b>Df</b>	<b>Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	347.568	2	173.784	90.443	0.000 <sup>a</sup>
	Residual	1024.142	533	1.921		
	Total	1371.711	535			

a. Predictors: (Constant), TSP, TNS

b. Dependent Variable: PE

From Table 4.11, the independent variable (Trust of services provider) was statistically significant ( $\beta = 0.163$ ,  $t = 3.553$ ;  $p = 0.000$  ( $< 0.05$ )). Therefore, Trust of service providers has a positive influence on performance expectancy. Additionally, the independent variable (Trust of network services) was statistically significant ( $\beta = 0.391$ ,  $t = 8.514$ ;  $p = 0.000$  ( $< 0.05$ )). Hence, Trust of network services has a positive influence on performance expectancy.

**Table 4.12: Regression Coefficient of the Standard Regression Model**

Model		Unstandardized		Standardized		95% Confidence		
		Coefficients		Coefficients		Interval for B		
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	2.131	0.209		10.198	0.000*	1.720	2.541
	TSP	0.154	0.043	0.163	3.553	0.000	0.069	0.239
	TNS	0.445	0.052	0.391	8.514	0.000	0.343	0.548

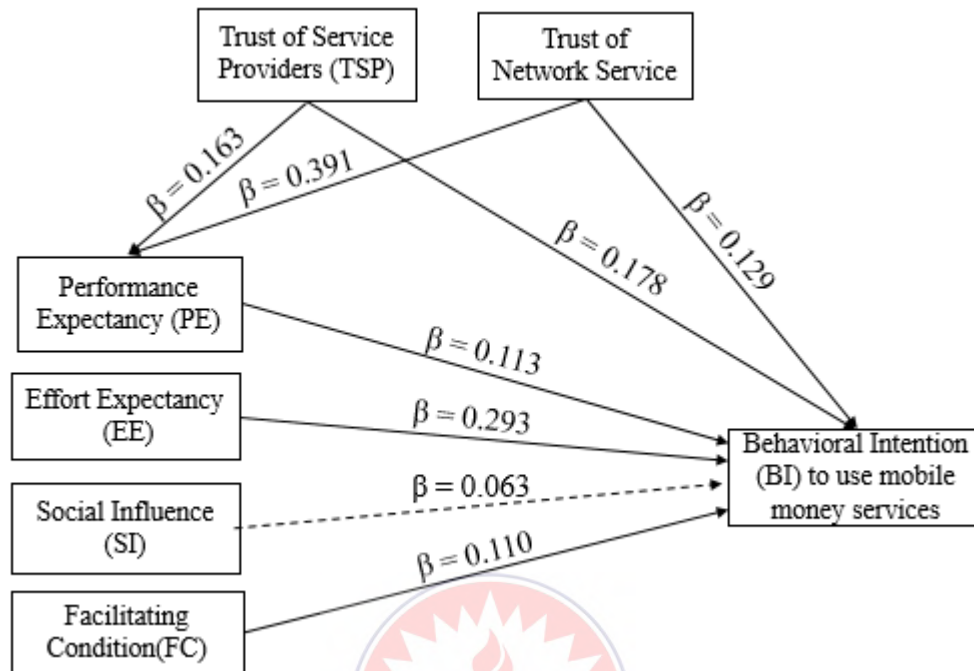
Source : Authors Construct (2021)

a. Dependent Variable: PE, \*  $p < .05$ **Table 4.13 Results summary**

Hypothesis	Results
H1: Performance expectancy has a positive impact on behavioral intention to use transaction.	Fail to Reject
H2: Effort expectancy has a positive effect on behavioral intention to use transaction.	Fail to Reject
H3: Social influence has a positive impact on behavioral intention to use transaction.	Rejected
H4: Facilitating condition has a positive influence on behavioral intention to use transaction.	Fail to Reject
H5: Trust of service provider has a positive influence on behavioral intention to use transaction	Fail to Reject
H6: Trust of network service has a positive influence on behavioral intention to use transaction.	Fail to Reject
H7: Trust of service provider has a positive influence on performance expectancy	Fail to Reject
H8: Trust of network service has a positive influence on performance expectancy	Fail to Reject

Source : Authors Construct (2021)

Figure 4.3 illustrates the summary of the comparative importance of significant factors in the regression model.



Source : Authors Construct (2021)

**Figure 4.3: Comparative importance of significant factors in the regression model**

#### 4.7 Discussion of Results

The participant demographic information in the study indicated there was fair distribution of gender where female students were 310 (58%) and male 226 (48 %) in this study. This finding is in agreement with previous studies (i.e., Mann & DiPrete, 2013; Adetunde & Akensina, 2008; UNESCO (1998) which concluded that in higher education, female students are mostly found in social sciences programs such as Arts, Humanities, and Languages.

Research hypothesis 1 was accepted: The finding reveals that performance expectancy has a positive impact on behavioral intention to use transaction. This finding is consistent with study conducted by Sinha (2016) when he suggested relative advantage have positive influence on user acceptance of mobile wallet. The result of this findings indicated participants would adopt the use of mobile money transaction when they are assured that the services has many advantages as compare to other money transaction services. People would continue to subscribed if they believe in the presence of a positive transaction outcome performance.

Research hypothesis 2 was accepted: Effort expectancy has a positive effect on behavioral intention to use transaction. In support, Sinha (2016) suggests that most customers have adopted mobile wallet because of it easy of use. In general, this point out that it is important that mobile money transaction user friendly.

Research hypothesis 3 was not accepted: Social influence has no positive impact on behavioral intention to use transaction. The idea that some people who are important to the individual believe he or she should use mobile money transaction. It is believed that the extent to which system is used perceived to enhance by individual position in the society. Sincerely, many experimental research on the intention of people to accept and continue to use mobile money transaction have revealed that social influences have a significant role in the dissemination process. Study conducted by Song (2014) indicated that interpersonal influences have positive influence on the social improvements in order to increase the behavioral intention to adopt mobile money transaction. In support, other study established a positive impact of the users' intention to adopt mobile money transaction.

However, in agreement with the finding of this presents research, Oliveira, Faria, Thomas, & Popovič (2014) investigated mobile banking usage using extension of UTAUT and realized that social influence had no significant influence on individual intention to adopt mobile banking. This because mobile banking services are personal and sensitive, which call for some privacy and security and as a results prevent any social influence.

Research hypothesis 4 was accepted: Facilitating condition has a positive influence on behavioral intention to use transaction. This is agreement with (Venkatesh *et al.* 2003) suggestion that facilitating conditions as “degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system” (p. 433). An increased of education of a system’s easiness improve self-efficacy, personal control in using such system, and finally increase the inherent motivation to use the system or technology. Similarly, if the use of a system services perceived as effortless, it turns out to be more instrumental for the individual, allowing him or her to accomplish more work with less effort.

Research hypothesis 5 was accepted: Trust of service provider has a positive influence on students’ performance expectancy and behavioral intention to use transaction. In support Liu *et al.*, (2013) asserted that trust is considered as one of the most significant factors in that influence service customers’ decision, which require the trustworthiness of service providers. In addition, trust offered by service providers enables the services between vendor and user (Tan & Theon, 2001).

Research hypothesis 6 was accepted: Trust of network service has a positive influence on behavioral intention to use transaction. This means that mobile money transaction subscribers would adopt the services when they are convinced that the network

services are more reliable. The Intent to use the mobile money transaction would increase if the subscribers trust network service provided by services providers (Jack & Suri 2009).

Research hypothesis 7 was accepted: Trust of service providers has a positive influence on performance expectancy. The finding in the study indicated that improvement of network services is expected to increase university students believe that the mobile money transaction would support their job performance in Ghana (Bendapudi & Berry, 1997).

Research hypothesis 8 was accepted: Trust of network service has a positive influence on performance expectancy. The finding in the study shown that the increase of trust that university students have in the quality of network service are more likely to increase their believe that the mobile money transaction would enable them to perform their job in Ghana. This finding is consistent with the study conducted by (Mas & Morawczynski, 2009), when they stressed that quality of network service is important for mobile money transaction.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.0 Overview

This study investigated the acceptance of mobile money transaction among university students in Ghana. The study employed descriptive survey research design with mixed quantitative data. Multiple linear regression analysis was conducted to investigate the influence of performance expectancy, effort expectancy, and social influence, facilitating condition, trust service providers and trust network providers on university student intention to adopt mobile money transaction.

The study was based one theoretical framework: The Unified Theory of Acceptance and Use of Technology (Venkatesh et al, 2003). The study investigated the adoption of MTN mobile money in Ghana using extended UTAUT by adding with trust in the service provider (TSP) and trust of network service (TNS) to other factors: Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SE) and Facilitating Conditions (FC) integrate with trust in the service provider (TSP) and trust of network service (TNS).

The study was guided by this following research questions:

1. Performance expectancy (PE) has a positive impact on students' acceptance of transaction.
2. Effort expectancy (EE) has a positive effect on students' acceptance of transaction.
3. Social influence (SC) has a positive impact on students' adoption of transaction.



4. Facilitating condition (FC) has a positive influence on students' acceptance of transaction.
5. Trust of service provider has a positive influence on students' performance expectancy and behavioral intention to use transaction
6. Trust of network service has a positive influence on students' performance expectancy and behavioral intention to use transaction.
7. Trust of service provider has a positive influence on performance expectancy
8. Trust of network service has a positive influence on performance expectancy

The population for this study was students from the University of education, Winneba. The target population was Faculty of Social Science and College of Humanities with nine departments, namely Geography and Rural Development, History, Religious Studies, Political Science, Culture and tourism Sociology, Social Work, Economics, and Modern Languages. The two faculties have a total number of eight hundred and twenty-six (826) students. Because the study seeks to examine the acceptance of mobile money transaction, it was imperative to obtain information of a section of the population who mostly used the service. As a result, the choice of the students as the sample for the study was based on the fact that most of the university students have experience the usage of mobile money transaction.

Yamane (1967) sample size formula was adapted to calculate the sample size. A total of five hundred and thirty-six (536) participants were used for the study. The instrument used in this study was adopted from previous studies (Kurfalı *et al.* 2017; Khasawneh, Wafa'a & Abu-Shanab, 2013; Venkatesh *et al.*, 2003).

## 5.1 Summary of Key Findings

Performance expectancy (PE) has a positive impact on students' acceptance of transaction. It was found in this study that performance expectancy has a positive impact on students' acceptance of transaction. This suggested that: Participants (University students) are more likely to adopt mobile money transaction when they believe that the system would enable them to perform their job. Performance expectancy predicts the acceptance of mobile money transaction in Ghana.

Effort expectancy (EE) has a positive effect on students' acceptance of transaction. The finding in the study indicated that, effort expectancy has influence on behavioral intention to adopt mobile money transaction among university students. Can predict students' acceptance of transaction in university students in Ghana.

Social influence has a positive impact on students' adoption of transaction. The finding in research hypothesis 3 indicated that, Participants saw that social influence has a no positive impact on students' adoption of transaction. Participants perceived society perceptions about mobile money transaction have no impact on whether to use it or not.

Facilitating condition (FC) has a positive influence on students' acceptance of mobile money transaction. The finding in the study revealed that: facilitating condition has positive impact on students' adoption of transaction. University students believes that an organizational and technical infrastructure exists to support use of mobile money transaction.

Trust of service provider has a positive influence on behavioral intention to use transaction. The finding in the study indicated that: Trust of service provider has a positive influence on behavioral intention to use transaction. The trust that university students have in service providers can enhance their usage in transaction.

Trust of network service has a positive influence on behavioral intention to use transaction. The finding in the study shown that trust of network service predicts behavioral intention of university students to use transaction. The trust that university students have in the quality of network service can increase usage in mobile money transaction in Ghana.



Trust of service provider has a positive influence on performance expectancy.

The finding in the study shown that: Trust of service provider positive influence on performance expectancy. The increase of trust that university students have in the quality of service providers are more likely to increase them believe that the mobile money transaction would enable them to perform their job in Ghana.

Trust of network service has a positive influence on performance expectancy

The finding in the study indicated that: Trust of network service has a positive influence on performance expectancy. The improvement of network services is expected to increase university students believe that the mobile money transaction would support their job performance in Ghana.

The multiple linear regressions revealed that:

- Trust of service provider, Trust of network service, Performance expectancy, Effort expectancy, Social influence and Facilitating conditions combined contributed 61.9% of the variances in university students' intention to use mobile money transaction.
- The first most important factor for determining university student's behavioral intention to adopt transaction was performance expectancy ( $\beta = 0.277$ ).
- Trust of network services ( $\beta = 0.174$ ) was found to be the second factor that predict the university students' intention to adopt mobile money transaction in Ghana.
- The third factor that influence university students' intention to use mobile money was found to trust of service providers with  $\beta = 0.12$ .
- The four most significant factor that determine university intention to adopt mobile money transaction was effort expectancy, which has  $\beta = 0.106$ .

- The least influence factor that has positive impact on university student's decision to use mobile money transaction was facilitating condition with ( $\beta = 0.105$ ).
- Trust of service provider, Trust of network service combined contributed 50.3% of the variances in performance expectancy. That is, both trust of service providers and network service have 50.3% on university students believe that the transaction would enable them to perform their work.

## 5.2 Conclusion

The main purpose of the study was to examine the acceptance of mobile money transactions among University students in Ghana. It was found in this study that performance expectancy has a positive impact on students' acceptance of transaction.

The study also revealed that effort expectancy (EE) has a positive effect on students' acceptance of transaction. The findings in the study indicated that, effort expectancy has influence on behavioral intention to adopt mobile money transaction among university students.

The research hypothesis 3 indicated that, Participants saw that social influence has no positive impact on students' adoption of transaction.

The finding in the study show that trust of network service predicts behavioral intention of university students to use transaction.

It was revealed that University students in University of Education, Winneba have high behavioral intention to use mobile money transaction because of its usefulness in their daily transaction, less effort to use, trust of service and network providers. Therefore, transaction providers should include more service of mobile money usage,

increase quality of service and make it more user friendly. This would enhance its usage retention and increase its usage.

### **5.3 Recommendations**

From the summary of the major findings of this study, it is recommended that

- Transaction providers should put in place a scheme that will address these factors. This will help to retain and increase the number of customers Kithinji (2014).
- Even though social influence generally did not show any impact on the customers' preference to use mobile money transaction. However, increase in education could increase understanding and the ability regarding mobile money transactions and reduce perceptions of the mistrust of the service usage.

### **5.4 Managerial Implication**

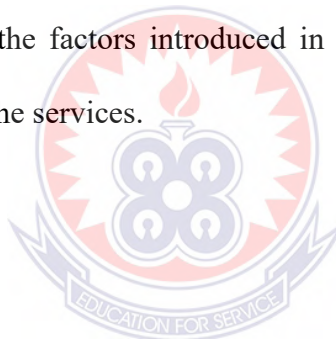
Findings suggest trust of service provider influence the intention to use mobile money transaction. Trust is a key factor in the establishment of long-term relationships between service representatives and their customers. Therefore, service providers should provide quality services to win the trust of customers to increase the use of mobile money transaction. Moreover, it was found that trust of network service has influence on the intention to use mobile money transactions. A network failure affecting these systems can be catastrophic and have a profound effect on customer. Unlike the financial sector a failure here could result in significant loss of customers. Management of mobile money transaction should recognize, identify and priorities incidents in accordance with customer business requirements, organisational policies

and operational impact. Also, management should provide timely response to all outages and categorizing issues for escalation to appropriate technical teams.

### **5.5 Suggestions for Further Studies**

The implications of the findings of this study calls for further research in the area of acceptance of mobile money transactions. The following are recommended for further research:

- It is suggested that this study could be replicated for students in other institutions. This would provide a basis for more generalization of conclusions to be arrived at about the students' acceptance of mobile money transaction.
- Similar study should be conducted using other to investigate the acceptance of transaction since the factors introduced in this study contributed 38% to of their adoption of the services.



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## APPENDIX 1:

### Questionnaire

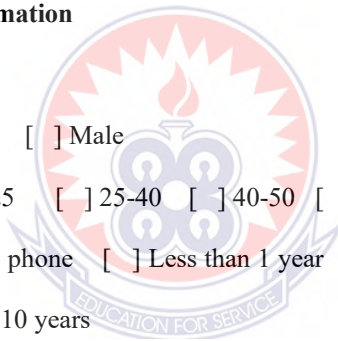
#### INSTRUCTIONS

Thank you for taking time to complete this questionnaire. Please answer each question to the best of your knowledge. Your thoughtful and truthful responses will be greatly appreciated. Data will be used for research purpose only. Your responses will be kept completely **confidential**. Please read the following statements and kindly provide the information required

Please, tick [] the option that best reflects how you associate with each of the following statements.

#### PART 1 – Background Information

1. Gender [  ] Female [  ] Male
2. Age [  ] Below 25 [  ] 25-40 [  ] 40-50 [  ] Above 50
3. Years of using mobile phone [  ] Less than 1 year [  ] 1-3 years [  ] 4-6 years [  ] 7-9 years [  ] More than 10 years
4. Faculty..... Department.....



Rating Scale: Strongly Disagree (SD = 1), Disagree (D = 2), Somewhat Disagree ( $S_{whatD}=3$ ), Undecided (U= 4), Somewhat Agree ( $S_{whatA} = 5$ ), Agree (A = 6) and Strongly Agree (SA = 7)							
Item	SD	D	$S_{whatD}$	U	$S_{whatA}$	A	SA
<b>Trust of Service Provider (TSP)</b>							
1. I trust service providers							
2. I trust service providers abilities to provide MMS effectively and securely							
<b>Trust of Network Service (TNS)</b>							
3. I trust MMS through the network services							
4. I think that the MMS technical and legal infrastructure protects enough personal information and data							
5. In general, network service is trusted tool that I can use to interact with MMS							
6. I trust network security and protection protocols, which increase my willingness to use MMS							
<b>Performance expectancy (PE)</b>							
7. I find the MMS useful in my daily life							
8. Using the MMS enables me to accomplish tasks more quickly							
9. Using the MMS increase my productivity							
<b>Effort expectancy (EE)</b>							
10. My interaction with the MMS would be clear and understandable							
11. It would be easy for me to become skillful at using the MMS							
12. I would find the MMS easy to use							
<b>Social Influence (SI)</b>							
13. People who influence my behaviour think that I should use the MMS							
14. People who are important to me think that I should use the MMS							
15. The senior management of this business has been helpful in the use of the MMS							

<b>Facilitating conditions (FC)</b>							
16. I have the resources necessary to use the MMS							
17. I have the knowledge necessary to use the MMS							
<b>Behavioural Intention (BI)</b>							
18. I plan to use the MMS in a short time							
19. I intend to use MMS in the future							
20. I would like to use MMS							

