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Factors Affecting Tele Birr Adoption Using Technology Acceptance Model: A Case Study of ETHIO-TELECOM, ETHIOPIA

By

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DECLARATION

I, Natnael Shegaw, hereby certifies that the project work titled "An Empirical Study of Tele Birr Adoption Using the Technology Acceptance Model: A Case Study of ETHIO-TELECOM, Ethiopia" is the result of my own work, and all references used in the study have been properly credited. With the exception of the research adviser's advice and supervision, I completely developed this research on my own. As a course option, it is available through the project management master's degree.

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Abstract

The technology acceptance model (TAM) has been considered a viable model for conceptualizing mobile money adoption. Mobile Money is a key factor of revolutionized financial service delivery and thereby enhancing access to finance in emerging economies, especially in East African countries including Ethiopia. Recently, Ethio-Telecom has launched Tele Birr services to the customers, as an alternative means of mobile based payment in Ethiopia though a dearth of research on understanding and conceptualizing the adoption factors. Thus, this study aimed to model Tele Birr Adoption using TAM. An empirical survey among 400 convenient active tele birr users in Addis Ababa between March 25 and May 25 Data was gathered using a standardized questionnaire, and SPSS version 23 was used for analysis. In particular, mean and standard deviation scores, Pearson coefficient, and multiple regression models were employed to analyze the data. The result reveals that awareness, perceived ease of use, and perceived usefulness were found a positive and significant effect on tele birr adoption, but perceived risk and trust were not statistically significant despite having a positive influence on users' behavioral intention to adopt and use tele birr services. Therefore, tele birr is more likely to be adopted by customers who are already familiar with and comfortable using the services; and it needs to be useful, easily to use, trusted, and involves less risk to use the services. The findings provide useful implications to Ethio-telecom to promote and create awareness about the usefulness and develop appropriate policies and regulations to build trust and minimize the risks associated with the use of tele birr services.

Keywords: *Tele Birr Adoption, Technology Acceptance Model, Perceived usefulness, perceived ease of use, perceived trust, perceived risk, and awareness*

Contents

CHAPTER ONE

1. INTRODUCTION

1.1 Background of the study

M-banking, m-payments, m-transfers, and m-finance are all terms that refer to the use of mobile phones to perform financial transactions. This can include anything from checking your bank balance to transferring money to someone else. According to Donner and Tellez (2008), M-finance can be utilized to access products for credit or insurance. Customers can conduct straightforward banking operations and transactions in complete security thanks to mobile money's brand-new, cutting-edge system.M-banking, in the opinion of Gitau and Nzuki (2014) and Tarasewich et al. (2002), refers to all operations, including possible business transactions, carried out through a wireless network using mobile devices. The term "telebirr" is used broadly in this thesis to refer to actions like purchases and transfers made via mobile devices that have direct or indirect commercial advantages (Omonedo & Bocij, 2017).

Mobile Money involves monetary transactions (Yadav & Madan, 2016; Omonedo & Bocij, 2017). Key features of m-banking are mobility, comfort, spontaneity, instant connectivity, ubiquity, localisation, immediacy, and simple authentication procedures (Alfahl et al., 2017; Chong, 2013; Du & Li, 2019). According to Upadhyay and Jahanyan (2016), mobile money technology (MMT) involves financial innovation that uses SMS technology to pay commissions to bank service providers. Remittance transfers, airtime purchases, utility bill payments, school fee payments, savings, and mobile banking are just a few of the financial and banking operations that can be carried out using MMT (IFC, 2011). MMT (mobile money transfer) offers financial services to unbanked users in rural and remote areas using unconventional banking instruments. Due to the electronic nature of mobile money transfers, they go more quickly (Morawczynski, 2009). The widespread use of MMT has made it easier for people to access markets, prices, and weather data (Trendov et al., 2019). It has also made it easier for people to access financial services, even if they are not banked. MMT services make it possible to send and receive money from distant locations. They are frequently created, especially to make payments between distant parties easier. In developing countries, domestic transfers are frequently performed from urban to rural areas. There is evidence that suggests mobile money has raised rural household incomes in African nations, particularly in rural areas, through remittances from urban areas (Kikulwe et al., 2014). This is because mobile money is

a convenient and affordable way to send and receive money, and it is often more secure than traditional methods of money transfer. Additionally, mobile money can be used to save money, which can help rural households to build up their assets and improve their financial security (Jack & Suri, 2011; Kikulwe et al., 2014). The effects of increasing mobile technology and coverage of wireless network is caused operators to undertake to provide MMT in emerging countries including Ethiopia.Despite these businesses, MMT implementation cannot be deemed to be 70% prevalent (Obgonna, 2013). This level of acceptance has been seen in part due to a lack of confidence, sensitization, training, experience, and fear of inconsistent internet connectivity services (Uduma, 2012). Even though there is a paucity of literature on the subject, the issue is particularly exacerbated in Ethiopia because of a lack of awareness, poor internet connectivity, and inadequate infrastructure. Fraudulent activities, network outages, inconsistent service quality, ineffective system delivery, an inadequate number of agents, and limited liquidity are additional barriers to MMT adoption (Mwesigwa, 2013). Although Ethiopia's mobile network operators and banks are virtually connected thanks to mobile financial services, there is still a sizable and thriving informal cash economy. Fraudulent activities, network outages, inconsistent service quality, ineffective system delivery, an inadequate number of agents, and limited liquidity are other obstacles to the implementation of MMT. Although Ethiopia's mobile network operators and banks are virtually connected thanks to mobile financial services, there is still a sizable and thriving informal cash economy.

1.2 Statement of the Problem

Nowadays, most of the developing world, mobile-based banking services are accessible. Most markets sell live products, and many of them offer a variety of services. In recent years, MMS has rapidly risen in popularity. In 2007, less than 20 mobile money providers for the unbanked existed globally. Since then, there have been approximately 190 installations, and another 115 are scheduled to launch (GSMA, 2017). Numerous factors, such as the expanding availability of mobile phones, the rising demand for financial services, and the declining cost of offering mobile money services, are fueling this expansion (CCK, 2013). Kenyan microfinance institutions (MFI) businesses, governments and NGOs and insurance companies are increasingly using mobile money services for cash disbursement, repayment, and procurement and salary payments among others. As more and more corporations adopt mobile money, learning institutions should follow suit to improve efficiency and convenience in payment services. Mobile money is a convenient and affordable way to send and receive money. It is also a secure way to make payments. These features make it a good fit for learning institutions,

which need to be able to collect tuition and other fees efficiently and securely. This has become a convenient way of doing business

Ethiopia, the second-most populous country in Africa, has the lowest level of financial inclusion (the percentage of the population with a bank account) among Sub-Saharan African nations while having frighteningly high cellphone penetration rates that can be utilized as a tool for financial inclusion. Numerous banks and financial institutions are expressing interest in launching mobile banking services after the National Bank of Ethiopia recently finalized a draft order on how such services should be organized. It is not quite known what factors affect the uptake of mobile money services in Ethiopia. Ethiopia has a low adoption rate of mobile money services compared to other African nations like Kenya, Nigeria, and South Africa because mobile money service providers, policymakers, regulators, and related stakeholders in the banking sector find it difficult to understand the important factors that influence the adoption of mobile money services in Ethiopia. As a result, it is imperative that Ethiopia deal with this issue.

The banking and financial sector has changed dramatically over the last ten years as a result of technological advancement, and it is now one of the industries that uses new technology most effectively in consumer markets. With the use of the ICT service that powers M-Birr, one of the most popular mobile money services, several microfinancial institutions in Ethiopia will be able to start providing mobile money services to their customers in September 2015. Even while the number of mobile money users is increasing over time—for instance, CBE-Birr in the case of the Commercial Bank of Ethiopia and Tele Birr in the case of Ethio-telecom in Addis Abeba—the activity level of the registered users appears to be low compared to the total number of users.

To determine the elements that affect the adoption of M-Money, particularly Tele Birr in Addis Abeba, no adequate studies have been conducted. Due to this, there is a research gap that this study aims to close by examining the variables that affected Addis Abeba's acceptance of the Tele Birr service. This study aims to identify the Tele Birr adoption-influencing elements and analyze Addis Abeba's Tele Birr services in the context of the TAM, a relatively recent technology (Davis & Warshaw, 1989a; Mathieson, 1991; Davis & Venkatesh, 1996a). From the distribution network coverage to the customers' attitude toward embracing new technologies, the study aimed to pinpoint the elements that influence the Tele Birr service uptake in Addis Abeba.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of this research was to examine the adoption of Tele Birr for the case of Ethio-telecom using a technology acceptance Model (TAM).

1.3.2 Specific Objectives

The specific objectives of the research were to:

- Examine the effect of customer awareness on Tele Birr Adoption (TBA)
- Uncover the effect of Perceived Ease of Use (PEU) on TB Adoption (TBA)
- Examine the effect of Perceived Usefulness (PU) on Tele Birr Adoption (TBA)
- Explore the effect of Perceived Risk (PR) on Tele Birr Adoption (TBA)
- Examine the effect of Perceived Trust on Tele Birr Adoption (TBA)

1.4 Research Hypotheses

H1. Perceived Usefulness (PU) has a significant positive effect on TBA

H2. Perceived Ease of Use (PEU) has a significant positive effect on TBA.

H3. Perceived trust positively influences TBA

H4. Perceived Risk has a significant negative effect on TBA.

H5. Awareness has a positive effect on TBA.

1.5 Scope of the study

The study's investigation of the use of mobile payment technology in the example of Tele Birr is its only focus in terms of theme. In order to evaluate and test the research variable's capacity for predicting the behavioral intentions and usage of Tele Birr users, the study uses the Technology Acceptance Model (TAM). The respondents were the customers of Ethio-telecom who are the subscribers of tell birr money transfer system. Geographically, the data were obtained from Addis Ababa among tell birr users in Ethio-telecom centers and other business areas. Methodologically, the study employed multiple regression analysis to analyze the data and to test hypothesized relationships.

1.6 Significance of the study

This study contributes to academia and researchers expanding the frontier of knowledge in new technology adoption in the context of telecommunication money transfer systems. It will be

taken as a vital asset for practitioners and business leaders to plan, manage and market contemporary perspectives of creating a cashless modern society. For policy makers, the outputs of this research will be helpful to indicate the behavioural and contemporary direction of the need of customers and enact policy frameworks that will meet the needs of contemporary and tech-savvy customers.

1.7 Organization of the Thesis

The backdrop of the study, the problem statement, the purpose of the investigation, the scope of the study, and the importance of the study are all covered in the first of the thesis' five main chapters. A literature review is included in the second chapter, while the third chapter discusses research techniques. Data analysis, presentation, results, and discussion are covered in the fourth chapter. In the final chapter, there are conclusions and suggestions.

CHAPTER TWO

2. LITERATURE REVIEW

2.1 Introduction

This chapter presents a triangulation of theoretical and empirical underpinnings regarding mobile money adoption and its determinant factors. It focuses on the concepts of payment, namely hard cash payment and noncash payment. It also highlights the benefits of electronic payments versus physical cash payments. It also provides an empirical summary of Ethiopian electronic payments and their issues. It then discusses the ecosystem of mobile financial services (MFS), which includes mobile banking, mobile money transfer, and mobile money payment.

2.2 Payment and Payment Types

According to Investopedia (2015), payment is defined as the exchange of one kind of good, service, or financial asset for another kind in a ratio that has been decided upon by all parties. Bloxham (2010) claims that the evolution of money and payment methods from cowry shells to contactless payments. In today's world, money might come in the form of coins, bills, paper, or electronic money (e-money). Many business transactions revolve around money in one way or another. Payments can be made in cash or in forms other than money. Non-cash payment methods include paper-based instruments (such as payment orders, bills of exchange, promissory notes, checks, and so forth), cards (such as credit cards, debit cards, ATM cards, and prepaid cards), electronic funds transfers (EFTs), and mobile money, according to the National Bank of Ethiopia. Over the past few decades, the payments industry has seen significant development. Physical or digital money can be used to make payments. Electronic payment techniques are becoming more readily accessible for use in everyday commerce, and new electronic payment instruments have been created (Gerdes & Walton, 2002). The payments industry has undergone a significant transformation over the past few decades. Both real money and digital money can be used to make payments. New electronic payment instruments have been developed, and electronic payment options are becoming more readily accessible for use in daily commerce (Gerdes & Walton, 2002).

2.2.1 Cash Payment

Cash is the most basic and straightforward form of payment. Transactions are paid in cash from a buyer to a seller. A cash payment is bills or coins paid by the recipient of goods or services to the provider. It can also involve a payment within a business to employees in compensation for their hours worked, or to repay them for minor expenditures that are too small to be routed through the accounts payable system.

2.2.1.1 Disadvantages of Physical Cash Payment

High costs of labor in the cash management process, which involves counting, balancing, and delivering to a bank. This demands time and energy. The time and labor required to manage a large amount of cash will eventually make it more expensive to handle physical cash than electronic money for the person receiving it. High labor costs in cash management, which includes counting, reconciling, and delivering to a bank. This takes time and effort. If someone receives a large sum of cash, he or she will need a lot of time and labor to handle it and will ultimately find it more expensive to handle physical cash than electronic money.

High risk of theft: Employees and non-employees alike are drawn to cash sales. Many people have been hurt, and some have been killed, as a result of carrying actual currency. A case of a person being killed on December 28, 2017, was reported (ITV, 2015). The victim was seen carrying a sizable amount of actual cash. When working with actual currency, there is a considerable danger of theft, damage, or loss of life.

Revenue leakage: Cash payments are difficult to track down and prove. When consumers pay in cash, the government loses a lot of tax money. There is no automatic payment confirmation.

2.2.1.2 Advantages of Physical Cash Payment

Consumers can benefit from physical cash payment systems in a number of ways, including confidentiality. A real cash payment is preferred for users who do not want their transaction to be publicly known for reasons like fraud or tax evasion because it cannot be easily tracked down or verified. When it first implemented the Electronic Fiscal Device (EFD), the Ethiopia Revenue Authority (ERA) encountered resistance from business owners who were against the payment mechanism. Therefore, the government does not gain as much from actual cash transfers as businessmen do.

Unlimited transaction amount: Financial service providers may set daily transaction restrictions, such that no more than a specific number of transactions may be made at once or that only a particular number of transactions may be made each day. The case with actual cash payments is not the same. As long as someone has cash on hand, they can conduct as many transactions as they like.

No processing or transaction: Unlike the electronic payment system, which has a transaction and processing cost, the physical cash payment system does not. Users would like to pay with cash, which is the only way to pay for the full cost of the goods.

2.2.2 Electronic Payment System

The term "electronic payment system" was used by Nweke (2015) to refer to a system that integrates hardware and software to allow for the electronic payment of goods and services rather than the use of actual currency or paper checks. This can be done with the use of cards (credit cards, debit cards, electronic financial transfers, electronic checks, PayPal, mobile phones like Mpesa, Tigo Pesa, and Airtel Money), Google Wallet, and mobile devices. The NBE defines an electronic payment system (EPS) as any electronic instrument, device, or system used to support payment transfers through the Internet and/or wireless communication networks (NBE Guideline, 2015). Money transfer services include electronic cards, electronic payment transfer systems, online and mobile banking, automated teller machines, point-of-sale terminals, payment switches, and any other type of electronic payment transfer system. The simplified architecture of the electronic payment system is shown in Figure 1.

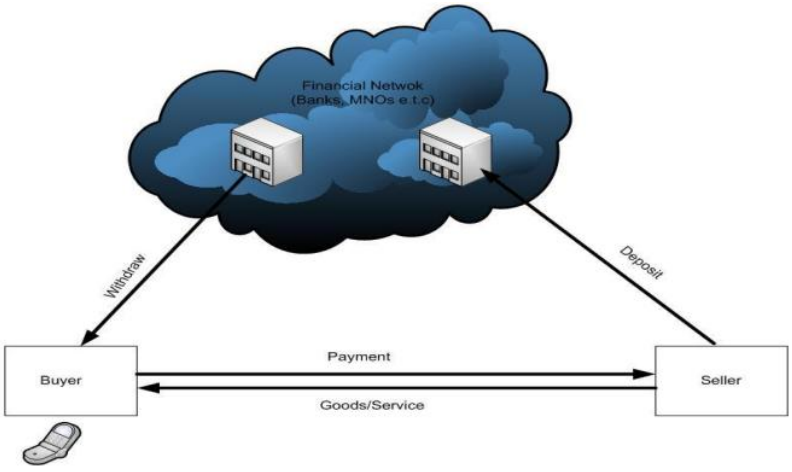

Figure 1: Electronic Payment System (NBE, 2015)

As presented in Figure 1, financial networks consist of Banks and Mobile Network operators. The buyer does not pay the seller in cash.In order to complete the transaction, the buyer must

withdraw electronic funds from their account and deposit those same funds into the seller's account. In this case, all transactions are completely under the jurisdiction of the government.

2.3. Theoretical Background of Mobile Banking in Ethiopia

In recent years,A number of efforts to produce innovative goods and services have included the banking industry. This helps the banking industry migrate from using only traditional banking systems to using technology-based systems alongside traditional ones. The projects are being undertaken to improve competitiveness, cost effectiveness, and customer satisfaction, among other things. Customers can now access banking services without having to physically visit a bank branch. Recently developed projects enable banking services to be delivered via electronic channels.

When the major state-owned bank, Commercial Bank of Ethiopia (CBE), developed ATMs to cater to local consumers in 2001, electronic banking became available in Ethiopia (Gardachew, 2010). In order to further broaden the breadth of electronic banking services, Dashen Bank announced a deal with iVery, a South African provider of e-payment technology, on April 21, 2009, to bring mobile commerce. According to the contract, Dashen Bank has licensed the Gateway and MiCard e-payment processing solutions from iVery Payment Technologies. Users of Modbirr in Dashen Bank have access to a round-the-clock 500 birr transfer service to other users. According to Amanyehun (2011), Dashen Bank was the first private bank in Ethiopia to allow transactions via mobile and online merchants.

However, mobile banking only became completely functional after years of trial and error and client patience. Due to the increasing demand for mobile banking globally, mobile banking has risen progressively in many different parts of Ethiopia since then. Ethiopia continues to use and adopt mobile banking services at a low rate despite having a high mobile penetration rate.

2.4. Implementation of Electronic Payment

There are several uses for electronic payments. Electronic payments can be made using cards

(debit or credit). In other words, a user needs a bank account. Using a cell phone to make a payment is another type of electronic transaction. For this, you need a regular phone and a mobile network operator (MNO) subscription for banking services on the go.

2.4.1 Mobile Financial Services (MFS)

MFS has been described in many ways by numerous researchers. MFS, or mobile financial services, are financial transactions and services that can be carried out using a mobile device, such as a mobile phone or tablet, according to the International Telecommunication Union (2013). The term "mobile money services" (MMS) is used to refer to various financial exchanges and services, which may or may not be directly linked to a bank account. If it links to bank accounts, it qualifies as mobile banking.

2.4.2 Mobile Financial Service Ecosystem

Jenkins (2008) claims that the usual mobile financial ecosystem is made up of mobile network operators (MNOs), regulators, retailers, networks of agents, banks, and users. The MFS is represented in Figure 2 as a diagram.

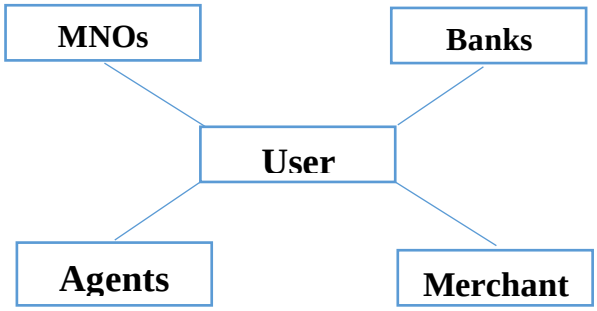

Figure 2: MFS

2.4.2.1 Mobile Network Operators (MNOs)

A MNO ensures that the country's telecommunications laws and rules are being followed, provides the necessary infrastructure, and has a customer base that already uses voice and data services (Masamila, 2014). A MNO needs a license to offer value-added services (Application Service License and Number Resource License) from the Ethiopian government as well as a license to offer financial services from the NBE in order to offer mobile financial services. Ethiotelecom is an MNO that now offers MFS.

2.4.2.2 Agents

Physical points of presence (POP) are agents. The majority of them are people, companies, or organizations that enable cash-in (the process by which a customer credits his account with cash via an agent who takes the cash and credits the customer's mobile money account with the same amount of e-money) and cash-out (the process by which a customer deducts cash from his mobile money account via an agent who gives the customer cash in exchange for a transfer of e-money from the customer's mobile money account).

2.4.2.3 Users

Users are subscribers to mobile network operators who utilize mobile money to communicate. These users may have bank accounts or not, depending on the formal financial institution. One must be a subscriber to mobile financial services and have a mobile money account in order to use mobile financial services. According to Ethiopian telecom, 27.2 million Ethiopians will have mobile money subscriptions by 2022.

2.4.2.4 Banks

Banks use the telecommunications infrastructure as a strategy to give their consumers flexibility while doing various transactions. As MNOs are permitted to provide financial services as well, their influence on the ecosystem is not very significant in mobile-led MFS. In addition to ensuring compliance with financial regulations, banks benefit from providing a variety of services in collaboration with MNOs (mobile banking) and expanding their services to locations where they are inaccessible. Mobile banking offers a variety of services, including bill payment, salary notification, statement inquiry, transaction data, and money transfers from bank accounts to mobile money accounts.

2.4.2.5 Role of Mobile Financial Services in Financial Inclusion

Every country's economy must be included in the financial system to grow and prosper. It makes it easier for money to enter the economy and ensures that people engage in a variety of activities that contribute to economic growth. In addition, it increases the government's income base by reducing cash-based transactions, which are mostly outside of its control. The benefits to the government and the populace increase as more people are included in financial services. Many countries have put several efforts to ensure that many people are getting access to financial services. In an effort to achieve financial inclusion, Therefore, Ethiopia remains very committed to expanding financial inclusion. Our Growth and Transformation Plan stipulates that the current financial access level in. (NBE, 2011).

2.4.2.6 Types of Mobile Financial Service

Boyd and Jacob (2007) divided the MFS into two distinct categories: mobile banking (m-banking) and mobile payments (m-payments), whereas the Smart Card Alliance (2011) divided the MFS into mobile banking, mobile commerce, mobile point-of-sale (PoS), and mobile payments (including person-to-person payment, remote payment, and mobile proximity payment). MFS are divided into three categories, including mobile money transfer, mobile banking, and mobile money payment, according to a recent International Telecommunication Union (ITU) publication. The body that deals with telecommunication standardization and is home to MFS is classified by this study as being the ITU.

MNOs in Ethiopia have launched Mobile Money Payment to help clients who want to purchase things in a manner similar to that of those using credit and debit cards. In September 2021, Ethio Telecom introduced the "Telebirr" brand for its mobile money payment services. "Telebirr is an integrated payment system for the business community that allows merchants, retailers, and distributors to settle payments in a much more secure way," claims Ethio Telecom.

2.4.2.7 Adoption of Mobile Financial Services

Peer-to-peer (P2P) or personal-to-personal services, such as money transfers, savings, and the facilitation of financial transactions (M-Banking), have all benefited from the use of mobile financial services (MFS). In terms of volume and value, mobile money transfer (P2P transfer) continues to lead the global product mix, accounting for about 72.8% of transactions, while mobile money payment (bill payment, merchant payment, bulk disbursement) contributed only 19.1%, according to GMSA (2014).A study conducted in 2013 shows that most people use MFS for P2P services (i.e. send/receive), the study showed that 88% of people were using mobile phones to receive while 69% used them to send money. Bill payment was 6% only (Intermedia, 2013). The Proximity mobile payment has not reached wider acceptance as compared to other MFS such as mobile money transfers. According to the report, the personal-to-business (P2B) or proximity capability of mobile financial has not been widely used (InterMedia, 2014)

2.5 Theories Related to the Adoption of Tell Birr

To explore the framework of innovation adoption, many theories have been produced; However, ideas like the extended technology acceptance model (Extended TAM), the technology acceptance model (TAM), and the diffusion of innovation theory (DIT) will be

heavily utilized in contemporary studies. TAM focuses on IS use and offers precise and reliable metrics based on social psychology theory (Luarn & Lin, 2004). Perceived usefulness and perceived ease of use are two important characteristics, in accordance with Davis (1989), that are important in understanding customers' intentions and behaviors when it comes to new technology.

2.5.1 Theory of Reasoned Action (TRA)

TPB and TAM were built on this notion. The strength of a person's intention to carry out a specific action impacts how well that action is carried out, in accordance with the theory of reasoned action (TRA) (Ajzen & Fishbein, 1980). The intention to engage in a particular behavior is then thought to depend on two variables: the person's attitude towards engaging in the behavior (i.e., one's overall positive or negative feeling about personally engaging in the and/or the person's subjective norm regarding the behavior (i.e., the person's perception that his or her significant others think that he or she should or should not engage in the behavior) (Fishbein Martin and Cyzer Marco, 2003). Behavioral beliefs, or the conviction that engaging in an activity will produce a particular result, and their evaluative components, or the assessment of that result, are what determine attitudes. Subjective norms, in the view of Ajzen and Fishbein (1980), are viewed as a function of normative beliefs (i.e., beliefs that a specific person or group has regarding whether or not one should perform the behavior in question) and motivations to comply (i.e., the degree to which one generally wants to do what the referent thinks one should do).

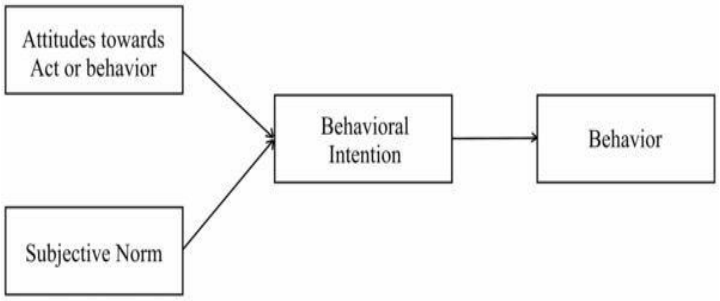

Figure 3: Theory of Reasoned Action (Fishbein & Ajzen, 1980).

2.5.2 Theory of Planned Behavior (TPB)

Despite the predictability of TRA, the theory of planned behavior (TPB) is robust throughout the study; nonetheless, it becomes problematic if the conduct being studied is not fully voluntary (Bargani S. Naimi, 2008). By incorporating a further component termed perceived behavioral control, which forecasts behavioral intention

and conduct, Ajzen (1985) expanded the theory of reasoned action. The theory of planned behavior (TPB) is the name of the expanded model. According to the theory of planned behavior (TPB), human conduct is defined by the intention to carry out the behavior, which is influenced by ATB, SN, and PBC all at once.

Attitude toward the behavior: is the prevailing opinion of the public regarding the desirability or undesirability of a particular behavior.

Subjective Norm: Describe the perceived organizational or societal pressure that an individual is under to engage in a certain behavior. According to Siddik (2014), perceived behavioral control reflects the perception of how simple or difficult it is to carry out a specific behavior. TPB and TRA are very similar. The prediction of actual behavior is heavily influenced by behavioral intention in both models.Both theories make the underlying assumption that people are fundamentally logical and use the information at their disposal in a methodical manner to make judgments (Bargani S. Naimi, 2008). Numerous studies already conducted in the field of e-business have demonstrated that people's attitudes have a direct and considerable impact on their behavioral intention to use a specific e-business application (Mazhar et al., 2014; Yitabrek and Zeleke, 2013). The intention to adopt mobile banking is significantly influenced by attitude, according to the authors. Similar to this, earlier studies on the adoption of online technologies pointed to PBC as a reliable indicator of usage intention (Bahti, 2007; Takele and Sira, 2013).Additionally, PBC has a big impact on whether or not people intend to use mobile banking.The theory of planned behavior (TPB) has been effectively employed in a number of situations to predict user intentions to use new software. TPB has been shown to have better behavior prediction capabilities than TRA by other researchers as well (Leong et al., 2013).

2.5.3 Technology Acceptance Model (TAM)

The theory of reasoned action (TRA) was modified by Davis (1989) into the technology acceptance model (TAM), which is designed primarily for simulating user adoption of information systems. The objective of TAM is to offer a generalized explanation of the factors influencing computer acceptance that can be used to explain user behavior across a wide range of end-user computing technology user groups. In addition, the author claimed that TAM's main goal is to give people a foundation for tracking how external influences affect their own ideas, attitudes, and intentions. According to the TAM, a user's intention to use a new information system

and subsequent belief in the system both influence the user's decision to accept the system. According to the TAM, two beliefs that are essential in explaining the diversity in users' intents are perceived utility and perceived ease of use (Salim, Shoubaki, Ellian, and Salim, 2011). In order to determine whether or not someone will use mobile banking, it is crucial to consider two distinct beliefs: perceived usefulness (PU) and perceived ease of use (PEOU).

Future studies on technology acceptance must consider the effects of other factors on utility, usability, and user acceptance, claim Alzubi et al. (2018). It is therefore vital to look for additional traits that can better predict whether or not a person will adopt mobile banking, as perceived usability and simplicity of use may not fully account for behavioral intentions to use mobile banking.

2.5.4 Mobile Banking Adoption (IDT)

The Innovation Diffusion Theory (IDT) is a different theory that has drawn similar interest from academics in attempting to explain consumer behavior toward emerging technologies. Adoption is defined as the adoption and ongoing usage of a good, service, or concept (Roger, 2003). Before a consumer is prepared to adopt a product or service, the author claims that they must first acquire knowledge, be persuaded, make a decision, apply it, and receive confirmation. The process by which a person or other decision-making unit moves from learning about an innovation to developing an attitude toward it, deciding whether to accept or reject it, putting the new concept into practice, and finally receiving confirmation of this decision is known as innovation adoption.

Wu and Shu-Ching (2004) provide an enhanced technology acceptance model (TAM) that incorporates perceived risk, cost, and innovation diffusion theory into the TAM to study what factors influence consumer acceptance of mobile commerce. The method by which an innovation is disseminated throughout the members of a social system over time through specific channels is another key idea of innovation diffusion. However, research has indicated that the adoption of innovations is only consistently correlated with relative advantage, compatibility, and complexity (Wu and Shu-Ching, 2004). Furthermore, the authors went on to say that while complexity is

comparable to perceived ease of use, relative advantage is similar to perceived usefulness. The level of compatibility of an innovation is the extent to which it is thought to be consistent with the current values, prior experiences, and demands of potential customers. According to Rogers (2003), a person's opinion of an invention can be swayed by five aspects, including how advantageous they perceive it to be. These elements can affect whether or not they support the idea. (the degree to which an innovation is perceived as superior to the idea it replaces); compatibility (the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters); complexity (the degree to which an innovation is perceived as difficult to understand and use); trialability (the degree to which an innovation may be experimented with on a limited basis and observability); and risk (the perceivability of personal information).

According to these definitions, innovation dissemination occurs when a social system accepts and starts utilizing (adopting) a concept or a technology. Therefore, it might be claimed that the factors influencing acceptance in the mobile banking and mobile payment environments should also apply to mobile money. According to Tobin Peter Ebo (2010), TAM and IDT are complementary in certain domains and have striking similarities in others. Tobbin Peter Ebo (2010) claims that RA and PU, as well as complexity and PEOU, share some commonalities to the point where some academics classify the TAM components as a subset of the Innovation Diffusion Theory. However, it was discovered that the adoption of Tele Birr (Mobile Money) placed a significant emphasis on the creation of alternative RA and PU metrics. However, it is believed that complexity and PEOU are too similar to be distinguished in this investigation. In order to better understand what influences user adoption, Wu and Shu-Ching (2004) developed an enhanced technology acceptance model (TAM) that incorporates innovation diffusion theory, perceived risk, and cost. In certain formulations, TAM and IDT are remarkably similar and complement each other. According to some academics, the structures used in TAM are essentially a subset of the perceived innovation features and, if combined, might result in an even more powerful model than either one used separately.

2.6 Dimensions of Tele Birr (Mobile Money) Adoption

2.6.1 Perceived Ease of Use

According to Davis (1989), PEOU measures how much a person thinks utilizing a specific system would be effortless. Tele Birr has registration processes, user-friendly payment processes, simple access to customer support, a few steps needed to complete a payment, and screens with the right size and input options. Additionally, it must be usable on mobile devices with the most fundamental hardware and software. PEOU is a significant predictor of customer behavioral intentions, according to an earlier study (Tobbin, Peter, and Ebo 2010).

2.6.2 Perceived Usefulness

According to this definition, perceived usefulness refers to how much a person believes that adopting a given system will improve their performance. The effectiveness of PU as a predictor of a consumer's propensity to utilize mobile services has been well established in the study of consumer behavior. Additionally, the RA of the service may have an impact on how useful a consumer perceives the MM transfer. Its perceived utility will be impacted if consumers believe that mobile money transfers are superior to their predecessors (other money transfer services) due to their mobility and ease of use.

2.6.3. Perceived Risk

The user's subjective expectation of suffering a loss while pursuing a desired outcome is referred to as perceived risk in Pavlou's (2001) definition. Both customers and service providers have always been worried about the caliber of internet services provided and the potential risk of fraud and unlawful activity. Customers who are unsure of the brand, quality, and online services may be concerned about unfair delivery delays, making payments without obtaining the ordered goods, as well as other fraudulent and criminal acts.Potential adopters may decide to delay making an adoption or rejection decision due to the perceived risk associated with the innovation. Risk was added as a new metric for evaluating IT adoption (Ravichandran et al., 2016).

As a result, perceived risk is defined as a consumer's perception of the possibly unclear negative effects of utilizing Telebirr. During online purchases, credit scores, bank balances, and other financial information could be modified without the owner's

knowledge. Some people think that advancing technology may pose risks. Others pause before placing their trust in online purchases and other activities (Wu and Shu-Ching, 2004).

2.6.4. Perceived Trust

One of the most frequently mentioned outside variables that prevents people from adopting technology is trust, or how much a person believes that others will live up to his expectations and not unfairly take advantage of the situation (Fatima et al., 2014). They indicate that trust plays an important role in diminishing fears about the adoption of Tele Birr or Mobile Money. It helps to reduce uncertainties and ambiguities related to financial transactions using Tele Birr. This, in turn, enhances the likelihood of increasing adoption of M-Money. Like any commercial transactions, mobile money payments demand some level of confidence. Trust is defined for the purposes of this study as a measurement of a customer's level of confidence that the service will be supplied with the least amount of difficulty. Other factors are consumers' perceptions of the service's dependability as a whole. The service's ability to be successfully used over time with little to no interruption can be used to determine how reliable a system is. Customers must believe that the network is trustworthy.

2.6.5 Customer Awareness

Sathye (1999) asserts that one of the key variables influencing customer acceptance and usage of online banking is their level of knowledge about M-Money or Tele Birr. The extent of client awareness could also influence how quickly innovations are adopted. Since Tele Birr's services are new to many customers, it is necessary to raise adequate awareness of them to draw them in. According to a lot of respondents, their decision to use M-Money may be influenced by their lack of familiarity with the program.

Additionally, they are deterred from testing the service by a lack of understanding about the services, particularly information on the applications (Yeong and Fen, 2012). In order to find out what influences the adoption of Tele Birr, the current study investigated the integrated components of the Technology Acceptance Model (TAM) of PEOU and PU, the IDT of perceived risk with perceived trust, and awareness.

2.7 Conceptual Frame work

Known theories that have been previously explored served as the basis for the conceptual framework shown in Figure 4 below. The adoption of Tele Birr is shown to be caused by a number of different causes. It demonstrates that factors such as customer awareness (CA), perceived usefulness (PU), perceived ease of use (PEOU), perceived risk (PR), and trust have an impact on consumers' intentions to use mobile payment technologies.

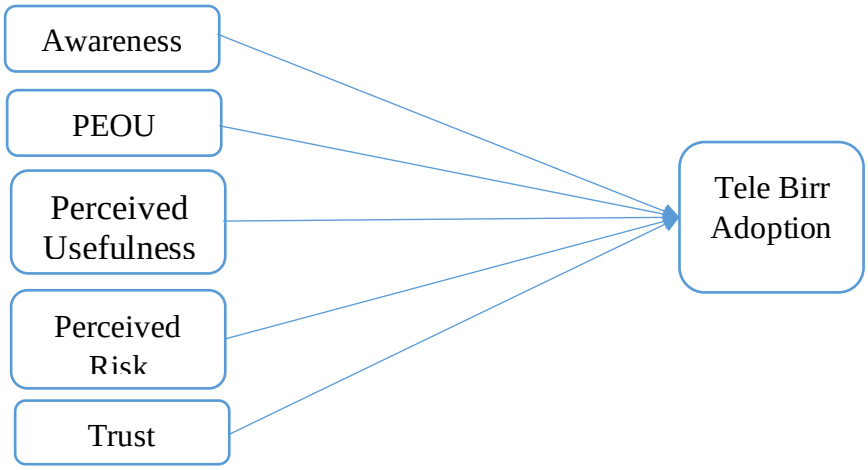

Figure 4: The Conceptual model of the study

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research methodology which incorporates the research approach and design, study population and subject, data sources, sampling techniques, sample size, and data collection instruments. The chapter also presents detail data analysis methods and models used in the study.

3.2 Research Approach and Design

The study was framed with an empirical quantitative research approach to investigate the adoption of Mobile Money and its determinants. Since the study was conducted within a specified period and convenient place (Kumar, 2011), cross-sectional survey design was employed to explore factors that affect mobile payment adoption. As Kothari (2004) noted, explanatory study design helps to build a cause and effect relationship between variables. Consequently, an explanatory research design was also used in this study, which looked at the causal connections between several drivers and the adoption of mobile money.

3.3 Study Population

As depicted in the report, the numbers of tele birr users were more than 33 million registered customers for Tele Birr Services (Ethiopian Tele Communication, 2022). Of which, 32.09 million were users, and agents and merchants were 116, 337 and 44, 436 for the Tele Birr services. However, as the report shows, 1.9 million were active Tele Birr users. Therefore, active users were considered as a target population for this study.

3.4 Source of Data and Method of Data Collection

The study used both primary and secondary data sources. Active Telebirr users were surveyed using standardized questions to compile the main data source. Secondary data was collected both from published (journal articles) and unpublished sources including plans, reports, user databases, and manuals.

3.5 Sampling Techniques and Sample Size

The target population of the study were active users of Tele Birr specifically found in Addis Ababa. In this study, a cluster sampling procedure was employed. In the first stage, Tele Birr service providers were clustered in districts in Addis Ababa in consultation with Ethiopia Tele Communication. All 6 zones or districts were selected purposively by taking the number of active registered users into consideration. In the second stage, a convenience sampling technique was employed to obtain respondents from active users in data collection centres in each district with proportion.

According to research from the year 2022 on telecommunications, there are 1.9 million active customers in the Ethio Telecom districts of Addis Abeba as a whole. Yamane's (1967) formula (Eq. 1) was used to calculate the sample size as a result.

$$n = \frac{N}{1+N\,(e)^2} \quad \text{..... Eq.1}$$

where n = number of samples, N = total population and e = error tolerance (95% confidence interval or a margin error of 0.05).

$$n = \frac{(\,1.9\,million)}{1+(\,1.9\,million)\,(0.05)^2} \approx 400$$ sampled active users.

3.6 Data collection instruments

The main method of data collection was a structured questionnaire. The Tele Birr adoption dimensions (such as perceived ease of use, utility, risk or cost, trust, and users' knowledge) and the associated items measured were taken from earlier research on mobile payment systems. The three dimensions such as perceived ease of use, usefulness, and trust were adopted from prior studies (e.g., Akinyemi & Mushunje, 2020; Alzaidi, 2022); perceived risk (Akturan and Tezcan, 2012); and customer awareness (Lin, 2011). All Items were measured using a 5-point Likert scale due to the reason that it maintains a high response rate and minimizes confusion among respondents.

There were three sections to the questionnaire. The purpose of the questionnaire's first section was to gather information on the users' socio-demographic backgrounds. The purpose of the second section of the questionnaire was to gather information on the use of Tele Birr or Mobile Money, and the adoption factors based on user views were reported in the last section.

Using self-administered procedure, out of 400 questionnaires, 350 questionnaires were returned. Once the data management including treatment of outliers, avoiding missing cases, and voided wrongly answered questions has been carried out, 320 valid responses were obtained and used for data analysis, with a response rate of 92%.

3.7 Validity and Reliability

Different procedures were carried out to verify the appropriateness of a measurement instrument using the two dynamic constructs such as validity and reliability. Firstly, items were adopted from previous studies and revised based on the context. Second, the draft measurement instruments were also reviewed by experts and based on the comments the researcher has revised it again. Thirdly, the measurement instrument was pre-tested among thirty (30) randomly selected users and revised the instrument based on the results, particularly on the content and the general protocol, clarity, and relevance.

The reliability test was carried out using a Cronbach reliability test in which a value of 0.7 and above coefficient alpha was a cut-off point (Field, 2009; Hair et al., 2010). Therefore, the result indicates that the measurement scales in each construct were reliable (see Table 1).

Table 1: Reliability Test

Dimensions	No. of items	Measurement scales	Cronbach's (α)
Mobile Money adoption (MMA)	5	5 point liker scales	.816
Perceived Ease of Use	5	5 point liker scales	.716
Perceived Usefulness	7	5 points liker scale	.731
Perceived Trust	5	5 point liker scale	.718
Perceived Risk	3	5 point liker scale	.759
Awareness	5	5 point liker scale	.799

3.8 Methods of Data Analysis

Through the use of quantitative data analysis methodologies, the quantitative data that were gathered through questionnaires were examined. Before the data is used for the analysis purpose, the raw data has been processed and checked for missing, incompleteness, outliers, and inconsistencies. Data were coded, and entered into the software, i.e., Statistical Package for the Social Sciences (SPSS), version 23, and some of the data were recorded in MS Excel 2013. In line with the data type and nature, different statistic techniques were used. The study,

therefore, used both descriptive (such as percentage, frequency, mean, and standard deviation, and inferential statistics (such as Pearson correlation analysis, and multiple linear regression. All the necessary assumptions have been checked before the final analysis was made.

3.8.1 Regression Model Specification

The factors influencing user adoption of telebirr were modeled using multiple linear regression based on the theoretical review and empirical considerations. The following is the model's mathematical (functional) expression:

$\gamma = \alpha + \beta 1 PEU + \beta 2 x2 + \beta 3 x3 + \beta 4 x4 + \beta 5 x5 +$

ε……..(1)

$$where\ y = depeendent\ variable;\ \alpha = intercept;\ \beta = coffiecients;\ x = independent\ variables, \varepsilon = error\ )$$

Therefore,

$adoption\ of\ Tele\ Birr = \alpha + \beta 1(PEU) + \beta 2(PU) + \beta 3(PT) + \beta 4(PR) + \beta 5(CA) + \varepsilon \pi r^2$,

Where PEU= perceived ease of use,

PU= perceived usefulness,

PT= perceived trust;

PR= perceived risk; and

CA= customer awareness.

1, 2,..., and 5 are the independent variable's coefficients, which demonstrate their influence. Y e=error term

CHAPTER FOUR

4. DATA PRESENTATION, RESULTS, AND DISCUSSION

In this chapter, profiles of respondents, description of dimensions of telebirr adoption, and regression analysis are presented based on the data collected from users' surveys. This chapter also provides a discussion of results based on recent works in the study.

4.1 Response Rate

In Addis Abeba, 400 questionnaires were given out to Tele Birr users. A total of 350 questionnaires had been sent when data collection was complete, with a response rate of 87.5%. 340 valid replies were gathered and used for data analysis, with a response rate of 85% after data manipulation, including treatment of outliers, avoiding missing cases, and voiding incorrectly answered questions.

4.2 Scio-Demographic Characteristics of Respondents

Of the 340 surveyed Tele Birr Users, 194 (57.1%) were male and 146 (42.9%) were female. The age category shows that a majority of respondents (64.4%) were between the age of 18-25, and 32.1% were found between 26-35 age categories. This demonstrates that Telebirr users have an average age that is lower than non-users. Basic literacy, such as the ability to read and at least follow the instructions, is necessary in order to use telebanking and make a payment. In this study, among the total surveyed users, 312(91.8%) were married. Regarding the education profile, the majority of users (78.8%) had first degree and above. Thus, the outcome demonstrates that tele birr users do actually have higher levels of education than non-users. In terms of user type, 147(43.2%), 127(37.3%), and 66 (19.4%) of users were individual customers, merchants, and agents respectively. As of May 2023, the report shows that there are more than 32 million registered customers, more than 103, 900 agents, 42, 300 merchants, and more than 20 banks using tele-birr (https://www.ethiotelecom.et/telebirr/).

Table 1 Demographic information of the respondents

Variables	Category	Frequency	Percent
Gender	Male	194	57.1%
	Female	146	42.9%
Age	18-26	219	64.4.%
	26-35	109	32.1%
	36-45	8	2.4%
	46-55	4	1.4%
Marital status	Single	10	2.9%
	Married	312	91.8%

	Divorced	18	5.3%
Education	High School	12	3.5%
	TVET	3	0.9%
	1st Degree	268	78.8%
	2nd Degree and above	57	16.7%
User's type	Customer	147	43.2%
	Agent	66	19.4%
	Merchants	127	37.3%
Valid count= 340			

Source: User's Survey, 2023

4.3 Access and use of Tele Birr

The respondents were questioned regarding their use of and access to Telebirr. The availability of mobile phones among the respondents to the survey makes Tele Birr adoption easier. This is considered a big opportunity for tele birr adoption in the country. The results in Table 2 below show that the majority of respondents (67.4%) have used Tele Birr services for different transactions. Among the total surveyed users, 167 (49.1%) of the respondents have been using Tele Birr for less than 6 months, 54(15.9%) for 6 months and 119 (35%) of the respondents have been using Tele Birr for over 1 year; dominantly paying for bills, sending and receiving money, buying airtime top up, recharging, purchasing a package, and fueling. According to the findings, the majority of respondents had enrolled as Tele Birr subscribers prior to one year. With regard to information access about tele birr, the majority of users had information access on tele birr services from advertisement, printed media, word of mouth, and social media especially social media networks of Ethio-telecom.

Table 2 Access and Use of Tele Birr

Questions	**Response**	**Frequency**	**Percent**
Do you have mobile phone?			
Valid	Yes	340	100%
	No		
Have you ever used Tele Birr?			
Valid	Yes	229	67.4%
	No	111	32.6%
How long have you been using Tele Birr?			
Valid	Less than 6 months	167	49.1%
	6 months	54	15.9%
	1 year	39	11.5%
	Above 1 year	80	23.5%
For what services you are using Tele Birr?			

Valid	Receive payment	35	10.3%
	Salary payment	42	12.4%
	Bill payment	25	7.4%
	Other payments e.g., tax, insurance, fuel, package, airtime top up	238	70.0%
How did you aware about the use of Tele Birr?			
	TV Adv	145	42.6%
	Print media	15	4.4%
	Word of mouth	105	30.9%
	Social media	75	22.1%

Source: User's Survey, 2023

4.4 Factors affecting the adoption of Tele Birr Services in Ethio-Telecom

4.4.1 Descriptive Results

The descriptive analysis of the variables influencing the adoption of Tele Birr in the case of Ethio-telecom is the first set of analyses in the current study. Utilizing characteristics including perceived usefulness, perceived ease of use, perceived trust, perceived risk, and awareness, Tele Birr adoption is evaluated. Respondents' perceptions of each variable were ranked using the mean score and standard deviation.

4.4.1.1 Perceived Usefulness

Respondents are asked about their perception of the usefulness of using Tele Birr. The results show that the majority of users perceived that using Tele Birr is less useful in Ethiopia (m = 2.9843). This is due to less infrastructure development in Ethiopia to use Tele Birr. However, with the required infrastructure facilities, using Mobile Money such as Tele Birr enhance performance, especially in a business transaction. In consumer behavior literature, perceived usefulness is a significant predictor of a consumer's intention to use mobile money services (Samuel and Eze, 2020). As noted by Abebe and Lessa (2020), the extent to which money transactions using telebirr depends on the infrastructure facilities of the service. According to the current findings, customers believe that money transfers made using Tele Birr are superior to transfers made using more conventional methods because of the mobility and simpler accessibility of the service.

As it is shown in Table (3) below, the majority of the respondents perceived that the cost of using Tele Birr is more affordable than other traditional money transfer methods (*mean* =

3.0882; Std.D. = 1.45670) which increases the usefulness of Tele Birr services. Users also strongly perceived that using Tele Birr is useful in saving time (*mean = 3.6441; Std.D. = 87228*). The perception of users on using Tele Birr for transferring money is easier than other services (*mean = 3.200; Std.D. = .84211*). However, others have less perception of the adoption of Tele Birr for the service of paying money from their account (*mean = 2.9618; Std.D. = 1.44159*) and depositing money to their account (*mean = 2.9647; Std.D. = 1.44269*). Respondents also perceived that Tele-Birr service was less accessible and convenient than banking halls (*mean = 1.7441; Std.D. = 1.02870*). In terms of improving users' productivity and efficacy in their regular transactional tasks, using the Tele-Birr service is less beneficial. The vast majority of respondents consequently concluded that TeleBirr is less useful for their financial needs.

Table 3 Perceived Usefulness

Item No.	Statements	Mean	Std.D
PU1	The cost of accessing Tele Birr service is more affordable as compared to other technology options.	3.0882	1.45670
PU2	Using the Tele-Birr service would make it simpler for me to make payments from my account.	2.9618	1.44159
PU3	Using the Tele-Birr service to deposit money into my account would be simpler.	2.9647	1.44269
PU4	I would save more time when using Tele-Birr service to make transactions	3.6441	.87228
PU5	It would be easier paying bills using Tele-Birr service as compared to traditional banking service	3.2000	.84211
PU6	Using Tele-Birr would make it simpler for me to move money between accounts.	3.4382	.82673
PU7	Compared to regular banking services, Tele-Birr would execute transactions more quickly.	2.9294	.90607
PU8	In comparison to banking halls, Tele-Birr service would be more accessible and practical.	1.7441	1.02870
PU9	With the help of Tele-Birr, I could do my tasks more quickly and successfully.	2.8882	1.20685
Valid N=340		Grand mean	2.9843
Source: User's Survey, 2023			

4.4.1.2 Perceived Ease of Use

According to Samuel and Eze (2020), one of the adoption factors for utilizing a given system that would be free from difficulties is perceived simplicity of use. In other words, adopting and using a particular technology (like Telebirr) would not require any physical or mental effort. However, the complexity of the technology is negatively related to its rate of adoption. As the result shown in Table (4) below, Users believed that using the Tele-Birr service did not take much mental effort. (*mean = 3.2647; Std.D 1.05341*) but it is less easy in accessing account information using tele Birr than the traditional banking services (*mean = 2.5971; Std.D. = 1.03593*).

On the other hand, users' had a strong perception of using Tele Birr to easily make transactions (*mean = 3.4676; Std.D. = 86670*). In comparison to ATMs and banking rooms, the network on a mobile device would be more dependable when performing transactions utilizing Tele Birr (mean = 3.6294; standard deviation =.84718). As perceived by users, using Tele-Birr service would be compatible with various business needs (*mean = 3.5882; Std.D. = 76877*). Of course, using Tele-Birr service requires skill to make a transaction using a mobile device (*mean = 3.5618; Std.D. = 91481*). This affects the adoption of Tele Birr among less-skilled customers. The results; furthermore, implies that the majority of the respondent perceived that using Tele Birr is easy to use (*grand mean= 3.3515*).

Table 4 Perceived Ease of Use

Item No.	Statements	Mean	Std.D
PEU1	I wouldn't have to put in a lot of mental effort to interact with Tele-Birr.	3.2647	1.05341
PEU2	Using the Tele-Birr service instead of traditional banking would make it much simpler for me to keep track of my account information.	2.5971	1.03593
PEU3	Using the Tele-Birr service would make conducting transactions easier.	3.4676	.86670
PEU4	When conducting transactions, the mobile network would be more reliable than ATMs and financial facilities.	3.6294	.84718
PEU5	Tele-Birr service would be compatible with my business needs	3.5882	.76877
PEU6	Tele-Birr service requires skill to make transaction using my mobile device	3.5618	.91481
	Grand mean		3.3515
Source: User's Survey, 2023			

4.4.1.3 Perceived Trust

In the current study, perceived trust was evaluated in terms of the Tele Birr service's legitimacy, transaction security, and privacy. To interpret each item, descriptive data, including the mean, standard deviation, and grand mean score, were used. Table 4.5 shows the descriptive statistics results about the perceived trust of users in adopting and using Tele Birr services. The majority of users don't believe in transferring money using Tele Birr (*mean = 4.1265; StD.90811*) which hinders the adoption of Tele Birr. Trust is one of the external variables, as mentioned by Fatima et al. (2014), that prevents the use of technology in payment systems. Other's perceived that using their own mobile is relatively safe to execute payment (*mean = 3.1618; Std.D 1.53052*), but equally, When using the mobile and agent banking services to conduct transactions, the account information would be kept private (mean = 3.1118; Std.D 1.49705). This suggests that the majority of respondents are wary of using TeleBirr services because they fear that someone else could be able to access their accounts.

However, users have less trust in using Tele-Birr due to exposing to risk (*mean = 2.9500; Std.D 1.40810*). The technology that Telecom provides is likewise seen by the respondents as being difficult to trust (mean= 3.1265; Std.D 1.46700). To some extent, users perceived that Using Tele-Birr service is trust worthy (*mean = 3.2588; Std.D 1.64489*); reliable (*mean = 3.0500; Std.D 1.43507*); and credible (*mean = 3.2441; Std.D 1.60267*). Literature (such as Lal & Sachdev, 2015) demonstrates that a lack of assistance for clients with inquiries about the service, issues with transactions, or other concerns results in a lack of trust in Tele Birr.

Table 5 Perceived Trust

Item No.	Statements	Mean	Std.D
PT1	I don't believe that it is possible to transfer money using my mobile	4.1265	.90811
PT2	I suspect using mobile to execute payments to other	3.1618	1.53052
PT3	I trust that using Tele-Birr doesn't expose me to risk	2.9500	1.40810
PT4	It is challenging to believe in the technology that telecom provides.	3.1265	1.46700
PT5	Tele-Birr service is trust worthy	3.2588	1.64489
PT6	Tele-Birr service is reliable.	3.0500	1.43507
PT7	Tele-Birr service is credible.	3.2441	1.60267
PT8	When I conduct business using the mobile and agent banking services, my account information will be kept private.	3.1118	1.49705

Source: User's Survey, 2023

4.4.1.4 Perceived Risk

As results in Table 4.6 show, respondents perceived that Ethio-telecom has provided a trusted technology which has less risk (*mean = 2.4382; Std.D. = .94962*). However, the risk is associated with the mobile device. If the device would lose, the respondents have a strong perception that their money will not lose (*mean = 3.4706; Std.D. = .97264*). However, users have a strong perception of the network problem which affects business transactions (*mean = 3.8353; Std.D. = .88043*).Cash lost from theft is lessened when Tele-Birr is used (mean = 3.5353; standard deviation =.86317). During financial transactions, there is a negligible chance that third parties may tamper with personal information (mean = 2.4382; Std.D =.94962).

The results of the study showed, as shown in table 4.6, that participants believed all of the concepts used to construct perceived risk were comparable to the average (Grand mean = 3.14352). Although there was noticeable diversity in terms of the technology offered by Ethio-telecom (mean = 2.4382; Std.D. =.94962), this was not the case for other aspects of the technology. The result indicates that perceived risk is frequently occurred when making a payment when a buyer can't generally be sure about achieving the transaction objectives. As noted by literature (see Samuel & Eze, 2020; Alzaidi, 2022), this in general related to social risk, financial risk, and time-consuming risk. Other prior findings also identified some risk factors such as high monetary expense (Marriott and Williams, 2018), security issues (Arcand et al., 2017), and implementation-associated risks (Bove and Benoit, 2020).

Table 6 Perceived Risk

Item No.	Statements	Mean	Std.D
PR1	I don't have faith in the technology Telecom provides.	2.4382	.94962
PR2	Money won't be lost along with my phone if I lose it.	3.4706	.97264
PR3	My transactions will be impacted in the event of a network issue.	3.8353	.88043
PR4	Using Tele-Birr, it is possible to save money from theft	3.5353	.86317
PR5	The likelihood of someone else tampering with my personal information during the transaction is very minimal.	2.4382	.94962
	Grand Mean		3.14352

Source: User's Survey, 2023

4.4.1.5 Awareness

In the current study, awareness was conceptualized in terms of; information on Tele Birr advantage in saving cost and time, information on how to use Tele Birr, types of mobile devices which support Tele Birr services, and security information, and actual benefits and accessibility of the Tele Birr technology. The results are shown in Table 7 below using descriptive statistics for awareness, such as the mean and standard deviation. According to the findings, with a mean of 3.33 and a standard deviation of 0.917, Tele Birr consumers who took part in the study said they chose the service because it allowed them to save money and a lot of time while doing transactions.Users quickly accepted Tele Birr since they had already received sufficient information from Ethio-telecom about how to utilize Tele Birr services, with a mean of 3.873 and a standard deviation of.826. The users' access to sufficient information and the availability of a mobile phone that enables Tele Birr service are the other driving forces behind the adoption of Tele Birr (mean = 3.3559; standard deviation (SD) =.99251). Additionally, Ethio-Telecom has provided users with information regarding the security measures in place for Tele Birr services (mean = 4.1029; standard deviation =.73552).

Additionally, the level of user awareness of Tele Birr is significant (Grand Mean = 3.335). One of the main elements influencing the acceptance and usage of Tele Birr is the level of knowledge users have about M-Money or Tele Birr. In addition, the degree of user knowledge would influence the rate of technology adoption (Alzaidi, 2022). Since Tele Birr has only recently been introduced, there needs to be a lot of customer awareness to generate enough knowledge about the advantages, disadvantages, and application of the system.

As the result reveals, the majority of users perceived that their level of awareness can influence the intention of using the service of Tele Birr. On the other hand, they felt that a lack of information about the services, particularly information about the applications, time, and cost, discouraged them from using the service.

Table 7 Awareness

Item No.	Statements	Mean	Std.D
A1	I am aware of the benefits of TeleBirr's time- and money-saving features.	3.3324	.91762
A2	From Ethio-Telecom, I have learned all I need to know about using Tele Birr services.	3.8735	.82648
A3	I can use Telebirr on my mobile device.	3.3559	.99251

A4	I've learned information from Ethio-Telecom on the security system of Tele Birr services.	4.1029	.73552
A5	I've learned enough about Tele Birr services overall.	2.9647	1.05536
	Grand mean	3.3324	.91762

Source: User's Survey, 2023

4.4.1.6 Tele Birr Adoption

In this study, Tele Birr adoption was conceptualized in terms of users' frequent use of Tele Birr services and intention to adopt the services. The descriptive results are summarized in Table 8 below which reveals users have a high adoption rate (mean = 3.484; Std.D = .697). In particular, users are frequently using Tele Birr service to make transactions (mean = 3.3500; Std.D = .98865) though the likely to use Tele-Birr service is low (mean = 2.9353; Std.D. = 1.19559). On the other hand, the intention to use Tele-Birr service in the near future would be high if more trust would be developed (mean = 3.4206; Std.D. = 1.09012). Users would adopt and use Tele-Birr service to make transactions (mean = 3.9027; Std.D. = .78406). As users perceived that Tele Birr would make transactions more easy and simple (mean = 3.8206; Std.D = .80569). This finding suggests that telebanking enables clients to use their mobile phones to access essential financial services like saving, money transfer, and purchases of products and services.

Table 8 Tele birr adoption

Item No.	Statements	Mean	Std.D
TBA1	I frequently use Tele-Birr service to make transactions	3.3500	.98865
TBA2	I'm very likely to use Tele-Birr service	2.9353	1.19559
TBA3	I'm going to start using Tele-Birr service soon.	3.4206	1.09012
PBA4	I'll use Tele-Birr more frequently going forward to complete deals.	3.9027	.78406
PR5	Due to the complexity of my job, I must use the Tele-Birr service.	3.8206	.80569
	Grand Mean	3.4838	.69695

Source: User's Survey, 2023

4.5 Pearson Correlation Results

The substantial association between adopting factors and adoption and intention to utilize Tele Birr services has been examined using Pearson correlation analysis. The outcome demonstrates that perceived usefulness and Tele Birr adoption have a substantial and significant positive link (p-value 0.01). This result supports earlier research by Luarn and Lin (2005) that found a substantial positive link between uptake of Tele Birr services and perceived usefulness. The

earlier study by Cheah et al. (2011) produced the same outcomes. According to the authors, there is a direct link between perceived utility and the intention to utilize mobile money.Perceived usability significantly correlated with Tele Birr uptake, as shown in Table 10 below (p-value 0.01). This outcome validated earlier studies. For instance, Cudjoe et al. (2015) reported that the perceived ease of use of the technology that will be adopted is substantially connected with the likelihood and intention to use mobile money technology. Because Tele Birr services are simpler to learn, use, and conduct financial transactions through, the majority of users prefer to use them, according to the current study's substantial positive relationship.

Table 9 shows that the adoption of Tele Birr and perceived trust had a substantial and positive association (p-value 0.01). This result backs up the earlier research from Addisu, Lashitew, Tulder, and Liasseand positive association (p-value 0.01). This result backs up the earlier research from Addisu, Lashitew, Tulder, and Liasse (2019). According to the findings, perceived trust and the uptake of mobile money are significantly correlated. (p-value 0.01) There is a large and significant positive link between perceived risk and Telebirr uptake. Due to its low perceived danger, Tele Birr is preferred by the majority of consumers. Despite some users' lack of confidence in the utilization of the technologies provided by Telecom, According to Table 10, there is a strong correlation between awareness and Tele Birr adoption (p-value 0.05). This result is in line with that of Malinga and Maiga (2019), who found that awareness levels affect the rate of adoption and intention to use mobile money services.

Table 9 Correlation Results

Variables	Tele Birr Adoption (TBA)
Perceived Usefulness(PU)	.541**
Perceived ease of Use (PEU)	.475**
Perceived Trust (PT)	.428**
Perceived Risk (PR)	.122*
Awareness (A)	.581**
**. The 0.01 threshold (2-tailed) of significance for correlation.	
*. The 0.05 level (2-tailed) of significance for correlation is met.	

Source: User’s Survey, 2023

4.6 Regression Analysis

Using the technological acceptance model (TAM) as a foundation, a conceptual framework was created, as was covered in chapter one and the literature section. Utilizing a multiple regression model and the study's conceptual framework, it was determined how the independent variables (perceived utility, perceived ease of use, perceived trust, perceived risk, and awareness) and the dependent variable (Tele Birr adoption) related to one another. As a result, all of the study's presumptions—linearity, normalcy, and multicollinearity—were checked, and the results were interpreted using the regression coefficients, the t-value, the standard error (S.E.), and the appropriate p-values.

The model summary displays the overall predictive power of the model, as seen in Table 10. According to the results, which are significant (Hair et al., 2010), the predictor variables account for 70% of the variance in the dependent variable.

Table 10 Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.697[a]	.485	.478	.50375	1.957

a. Predictors: (Constant), A, PR, PT, PE, and PEU

b. Dependent Variable: Tele Birr Adoption

Source: users' survey, 2023

The F-ratio in the ANOVA table (see Table 11) is significant (p-value < 0.05). Therefore, the result shows the regression model is a good fit for the data.

Table 11 Model Fitness

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.677	5	15.935	62.797	.000[b]
	Residual	84.503	333	.254		
	Total	164.181	338			

a. Dependent Variable: Tele Birr Adoption

b. Predictors: (Constant), PA, PR, PT, PE, and PEU

Table 12 summaries the multiple regression results and shows variables such as perceived usefulness (PEU), Perceived ease of use (PEU), and awareness (A) were significant variables

in the model at 5% significance level; whereas perceived trust (PT) and perceived risk (PR) were insignificant at 5% significance level.

Table 12 Predictors of Tele Birr Adoption

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.453	.311		1.457	.146
	PU	.342	.074	.320	4.649	.000
	PT	.027	.041	.044	.653	.514
	PEU	.231	.058	.177	4.002	.000
	PR	.128	.069	.074	1.863	.063
	A	.462	.061	.355	7.594	.000

a. Dependent Variable: Tele Birr Adoption

Source: User's survey, 2023

4.7 Hypothesis Testing and Discussion

According to Table 12, the beta estimate of perceived usefulness has a positive coefficient (=.342) and a statistically significant impact on the adoption of Tele Birr. As a result, the null hypothesis was rejected at the 5% level of significance, while H1 was supported (t-value = 4.649; p-value = 0.000) (see Table 13). The outcome suggests that a crucial element in Tele Birr's consumer uptake is its utility. Currently, Tele Birr is becoming convenient and efficient way of managing financial transactions. Currently, it can be used to make payments, transfer money, and pay bills. A study by Malinga and Maiga (2019) found that the usefulness of mobile money is the most important predictor of user's adoption and intention to use, followed by risk and trust. The other study found that the adoption of mobile money is determined by its usefulness (Akinyemi and Mushunje, 2020).

At a 5% level of significance, the beta estimate of perceived usability has a positive (=.231) and statistically significant (t-value = 4.002; p-value = 0.000) effect on Tele Birr uptake. The null hypothesis was thus rejected in favor of H2 (see Table 13). This suggests that one of the main drivers of Tele Birr uptake is perceived ease of use. Mobile money technology is a practical and effective way to handle financial transactions, as indicated in the literature, but it is only helpful if it is simple to use. For instance, a study by Serkalem, Mekuanint, and Tadele (2020) found that the intention to embrace and use mobile money was significantly influenced by perceived ease of use. The study also discovered that for people who are unfamiliar with

and uncomfortable utilizing mobile technology, perceived ease of use is more important. Studies (e.g., Bongomin and Ntayi, 2020; Afawubo, Couchoro, Agbaglah, and Gbandi, 2020) noted that the design of the mobile banking app, the user interface, and the instructions provided are the key determinant factors for perceived ease of use to adopt the mobile money adoption. The payment system and app need easy and friendly to navigate and use, and the user instructions should be short and easily understandable.

Perceived trust has a positive coefficient of .027 but is significant at 5% significance level. Thus, the null hypothesis was accepted and rejected H3 (see Table 13). This does not mean that perceived trust has no effect on tele birr adoption. The effect of trust might be overridden by other significant variables. The positive coefficient shows that tele birr adoption was positively influenced by perceived trust, which indicates that if users' trust would be high, the likelihood of adoption and use of tele birr would be high. These results confirm previous empirical studies. Bereket, Beza, and Gee-Hyun (2020) reveal that perceived trust is a key factor in the behavioral intention and usage of mobile money services in Ethiopia. As indicated in the study by Souiden, Ladhari, and Chaouali (2021), e-payment using mobile devices would be an efficient way of managing financial transactions. However, it is only effective if users trust that their personal information and financial data will be safe and secured (Shankar & Rishi; 2020).

As indicated in the current study, the security of telebirr app, the reputation of telecom, and the regulatory environment affect the perceived trust to adopt tele birr services. Sleiman et al. (2021) has conducted the effect of trust on the adoption of mobile money payment systems in China using TAM. The authors reveal the effect of trust at different levels such as government, involved companies, social peers, technique, reputation, and mobility. Despite it being insignificant in the current study, perceived trust is critical in determining users' adoption and use of m-payment and building trust in the third-party platform has become critical in the continuity of m-payment services such as tele birr in Ethiopia.

It was statistically insignificant (t-value = 1.863; p-value > 0.05) and had a negative coefficient of the beta estimate of perceived risk (=.128). Therefore, the null hypothesis was approved (see Table 13). The adoption and intention of telebirr are negatively impacted by perceived danger, despite the fact that it is negligible. Adoption of Telebirr is influenced by perceived risk. The majority of users believed that utilizing the services came with some hazards because telebirr is a relatively new payment method, including the risk of fraud, the risk of data breaches, and the risk of identity theft. The outcomes corroborated the earlier conclusions made by Widyanto,

Kusumawardani, and Yohanes (2022). The authors discovered that although users' adoption of mobile payments could have an impact on associated dangers, perceived risk was not shown to have a substantial impact on this technology.

However, inconsistent with the previous findings by Al-Saedi, Al-Emran, Abusham, and El Rahman (2019) that revealed perceived risk is regarded as the most frequent factor for adopting m-payment adoption. As noted by Sleiman et al. (2021), potential risks especially if the payment app or technology, can deter people from adopting and using m-money. For example, fraudsters can misuse or steal users' personal information such as account numbers and crack passwords (Chin, Harris, & Brookshire, 2022). However, there are a number of measures that can be done to reduce the risks of using m-money technologies such as using strong passwords, using two-factor authentication, and being careful about what information you share online.

In support of H5 (see Table 13), awareness had a significant effect on telebirr adoption (t-value =7.594; p-value = 0.000). The outcome suggests that the adoption of mobile banking is significantly influenced by perceived awareness of telebanking adoption and intention to use it. Notably, people ought to be aware of and skilled in the use of telebirr. According to a study, following perceived usefulness and convenience of use, perceived awareness of use is the first and most crucial element in telemedicine adoption. The study also found that perceived awareness of use is more important for people who are not already familiar with and comfortable using technology (Chin et al., 2022). The study also found that perceived awareness of use is more relevant for those who do not have access to information about telebirr over other traditional banking services. According to the report, Telecom is actively raising awareness of Telebirr by marketing and advertising mobile banking services, making sure that services are accessible, and increasing user knowledge and comprehension of mobile banking.

Table 13 summaries of hypothesis testing

Hypothesis	Standardization coefficient	Significant	Acceptance/rejection of the hypothesis
H1	.342	.000	Accepted
H2	.231	.000	Accepted
H3	.027	.514	Rejected
H4	.128	.063	Rejected
H5	.462	.000	Accepted

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

This thesis was conducted to examine tele birr adoption factors and model using TAM in the case of Ethio-Telecom. Using a quantitative research approach, factors affecting tele birr adoption were examined. Five factors—perceived usefulness, perceived ease of use, perceived trust, perceived danger, and awareness—were found in the thesis as models for tele-birr adoption. The results demonstrate that knowledge is shown to be a key factor for the behavioral intention to accept telebirr services, which suggests that telebirr services are more likely to be embraced by people in Ethiopia if people are aware of them and know how to use. Adoption of tele birr was more likely when its perceived utility was high. The results show that adopting telebanking improved customers' efficiency and effectiveness in banking activities. According to the research, tele birr would make it easier for users to manage their finances and communicate with the bank than the conventional banking system. As a result, tele birr is beneficial for allowing users to access fundamental financial services including saving, money transfers, and mobile-based purchases of products and services. As a result, the study comes to the conclusion that tele birr service acceptance is significantly influenced by perceived usefulness.

The adoption of tele birr was shown to be significantly influenced by ease of use, which had a favorable impact. The perceived ease of use is influenced by how easy it is for consumers to remember their passwords and payment instructions. Users' adoption of tele birr is influenced by factors including how simple it is to use, comprehend, and configure the telebirr menu, use other languages, make payments and money transfers, and check their balance. Therefore, the study argues that tele birr would be a more convenient and efficient way to manage finances in Ethiopia but the app or platform, and menu provided for the service need to be easy. Similarly, using tele birr requires strong trust. Despite trust was not statistically significant in the adoption of tele birr in this study, the security of the tele birr app, the reputation of Ethio-telecom, and the regulatory environment would affect users' trust in using tele birr in their financial activities. The study also shown that although they are statistically minor, perceived concerns (such as security risk, performance risk, time risk, social risk, and financial risk) have a negative impact on the adoption of tele birr. This finding suggests that in order for consumers

to feel confidence using tele birr and the system, they must be made aware of the hazards involved.

5.2 Recommendations

This thesis has shown that tele birr in our country is not well adopted as per the population number though has been given due attention by the government. Of course, the launching of tele birr is a recent phenomenon in mobile money technology. Despite appreciated the improvement, still, a significant number of customers are frequently used the traditional banking system. Therefore, to increase the adoption scale, the following recommendations are made.

1. The study found that awareness is a key factor in the adoption of tele birr. Therefore, to increase the number of customers, Ethio-telecom should give proper consideration to create awareness about tele birr services and associated benefits of using it.
2. Tele birr adoption is influenced by perceived usefulness. Thus, in collaboration with banks, agents, and merchants, Ethio-telecom should make the system more convenient, with affordable cost and reasonable time.
3. Ethio-telecom should improve the perceived ease of use by making tele birr apps more user-friendly and by providing simple, clear and concise instructions. Users' understanding of how to use tele birr can be improved through continuous awareness and training.
4. Ethio-telecom can build perceived trust by making the tele birr apps/interface more secure and maintaining personal accounts confidential. Therefore, users need to be trained on using a strong password and the types of information would share. The perceived trust would be high if the service providers protect customers' personal information and financial data.
5. When consumers experience any problems using tele birr as needed via SMS, direct calling, etc., Ethio-telecom is also obligated to provide them with prompt assistance.
6. Despite the fact that the perceived risk in this study was statistically insignificant, Ethio-telecom should make sure that security measures like firewalls, intrusion detection, and other security-related devices are properly developed and integrated in the tele birr systems to prevent frauds, data breaches, theft, and other associated risks.

5.3 Limitations of the Study and Future Work

This study focused on an in-depth analysis of tele birr adoption factors using TAM for the case of Ethio-telecom in Ethiopia. The study, particularly examined the effect of perceived usefulness, ease of use, trust, perceived risk, and awareness on tele birr adoption by employing different methodological and conceptual approaches. Therefore, within a given timeframe and budget, the study has addressed all the objectives.Although this work adds to the body of information on mobile money and specifically increases our understanding of tele birr and offers ramifications, it is not without limits, which raise questions for further investigation. In order to overcome the shortcomings of the current study, providing guidance for future research is crucial. The samples were taken only from active users (N= 400). Therefore, to provide comprehensive policy and financial implications, it will be important that future researches need to model the adoption of tele birr by adding the views of other users such as agents, banks, and merchants. The adoption of tele birr would be influenced by other factors such as sociodemographic variables, costs, compatibility, and others. However, because of the nature of the research topic, the relationship between these characteristics and the adoption of telebirr was not examined in the current study; as a result, this gap should be filled in future investigations. In this study, perceived trust and risk were statistically insignificant; thus, certainly, more investigation needs to be conducted to confirm these results by employing different models and statistical analysis tools.

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Appendix

Addis Ababa University

School of Commerce

Department of Project Management

Questionnaires filled by Tele Birr Users

Dear Respondents,

My name is Natnael Shegaw MA candidate at Addis Ababa University, College of Commerce in Project Management. I am currently conducting a survey for my thesis on the topic, "Adoption of Mobile Money for the case of Tele Birr using a technology acceptance Model (TAM)". This questionnaire is designed to collect data for my thesis. It is expected that the findings from this study consequently, will provide key information on the adoption of mobile money and its determinants for the case of Tele Birr. Therefore, to achieve the study objectives, it needs your attitude and perception on mobile money adoption. I greatly appreciate it if you would answer the following questions as best as you could. All answers will be kept completely confidential and for Academic research purpose only.

Contact Persons

Natnael Shegaw

Mobile: 0938481825
Email: zerubabelshegaw@gmail.com

Advisor:_ Dr. Abraraw Workineh
Mobile_____
Email:-_____

Thank you for participating in this survey!

Section I: Personal Data

Please tick (/) in the appropriate box

1. Gender:- ☐ Male ☐ Female
2. Age:- ☐ 18 -25 ☐ 26 -35 ☐ 36 – 45 ☐ 46 – 55 ☐ Above 56
3. Marital Status:- ☐ Married ☐ Unmarried ☐ Divorced ☐
4. Education

   ☐ Primary school 1st Degree ☐

   ☐ Secondary school 2nd Degree ☐

   ☐ High school 3rd Degree and above ☐

   ☐ TVET Others (please specify) _____

5. What is your current occupation?

   ☐ Student ☐ government employee ☐ private employee ☐ Business owners ☐ others _____.

6. Have you ever used Tele Birr?

   ☐ Yes ☐ No

7. If your answer for Q#6 is yes, how long have you been using Tele Birr?

   ☐ Less than 6 month ☐ 6 months ☐ 1 Year ☐ Above 1 year

8. For what services you are using Tele Birr

   ☐ Receive payment ☐ salary payment ☐ bill payment ☐ tax payment ☐ airtime top up ☐ others _____

9. How did you come to know about the mobile and agent banking service?

   ☐ Television advertisements
   ☐ Newspapers
   ☐ Friends
   ☐ Social media

   Others_____

Part II: Measuring Tele Birr (Mobile Money) Adoption

10. Please indicate your level of agreement or disagreement. Here >1< = strongly disagree to >5< = strongly agree on Mobile Money Adoption.

Statement	Scale

Perceived Trust	(1)	(2)	(3)	(4)	(5)
1. I don't believe that it is possible to transfer money using my mobile					
2. I suspect to use mobile to execute payment to other					
3. I trust that, using Tele-Birr doesn't expose to risk					
4. It is difficult to trust the technology provided by Telecom.					
5. Tele-Birr service is trust worthy					
6. Tele-Birr service is reliable.					
7. Tele-Birr service is credible.					
8. My account information would be kept confidential when I make transactions using the mobile and agent banking service					
Perceived Usefulness					
1. The cost of accessing financial services using Tele Birr service would be more affordable as compared to other technology options.					
2. Paying money from my account would be easier when I use Tele-Birr service.					
3. It would be easier depositing money on my account when using Tele-Birr service					
4. I would save more time when I use Tele-Birr service to make transactions.					
5. It would be easier paying bills using Tele-Birr service as compared to traditional banking service.					
6. It would be easier for me to transfer money from one account to another using Tele-Birr service.					
7. Tele-Birr service would be faster in processing transactions than the traditional banking service.					

8. Tele-Birr service would be more accessible and convenient than banking halls.					
9. Tele-Birr service would enable me accomplish my tasks more efficiently and effectively					
Perceived Ease of Use					
1. Interacting with Tele-Birr service would not require me a lot of mental efforts					
2. It would be much easier tracking my account information when I use Tele-Birr service than when using the traditional banking service.					
3. It would be easier making transactions when using the Tele-Birr service					
4. The network on the mobile would be more reliable when making transactions as compared to ATMs and banking halls.					
5. Tele-Birr service would be compatible with my business needs					
6. Tele-Birr service requires skill to make transaction using my mobile device					
Perceived risk					
1. I do not trust the technology provided by Telecom					
2. If I lose my mobile phone, I will not lose my money as well					
3. If there is a network problem, my transactions will be affected					
4. Using Tele-Birr, it is possible to save Money from theft					
5. There is a low risk of other people tampering with my personal information during the transaction					

Awareness					
1. I know about Tele Birr service and its advantage in saving time and cost					
2. I have received enough information how to use Tele Birr services from Ethio-Telecom					
3. My cell phone support Tele Birr service.					
4. I have received information about security system of Tele Birr services from Ethio-Telecom					
5. In general, I have received enough information about Tele Birr services					
Adoption of Mobile Money					
1. I frequently use Tele-Birr service to make transactions					
2. I'm very likely to use Tele-Birr service.					
3. I intend to use Tele-Birr service in the near future					
4. I will increase my use of Tele-Birr service to make transactions.					
5. With my job complexity, I have to use Tele-Birr service.					

Please specify comments, if any?

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