# ADDIS ABABA UNIVERSITY

# SCHOOL OF COMMERCE

# The Adoption Barriers of Digital Wallet Services. The Case of Telebirr at Gelan City Administration.

By

Bayush Belachew

A Project Research Submitted to Addis Ababa University School of Commerce in Partial Fulfillment of the Requirement for the Master of Arts Degree in Project Management

Advisor

Dr. Zegeye Muluye

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Addis Ababa, Ethiopia

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## Declaration

I, Bayush Belachew, hereby declare that this project work is my original work and does not contain any previously published or written material (except where explicitly acknowledged in the references used). No material that has been submitted for the award of any other degree or diploma at AAU or other institutions of higher learning was copied.

Name: Bayush Belachew

_____

Date: _____,2022

This is to certify that the candidate's above declaration is true to the best of my knowledge.

Advisor Name: Dr. Zegeye  Muluye

_____

Date: _____, 2022

## Certification

This is to certify that the project work prepared by Bayush Belachew Asrat entitled: The Adoption Barriers of Digital Wallet Services: the Case of Telebirr at Gelan City Administration and submitted in partial fulfillment of the requirements for the Master of Arts in Project Management Degree complies with University regulations and satisfies acknowledged quality and originality standards.

Signed by the Examining Committee:

| | Name | Signature | Date |
|---|---|---|---|
| Advisor | _____ | _____ | _____ |
| InternalExaminer | _____ | _____ | _____ |
| ExternalExaminer | _____ | _____ | _____ |

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Chair of Department or Graduate Program Coordinator

## Approval

The  Adoption Barriers of Digital Wallet Services.

The Case of Telebirr  at Gelan City Administration.

By: Bayush Belachew

Addis Ababa University

School of Commerce

Department of Project Management

Approved By The Committee of Examiners

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| Department Head | Signature |
| _____ | _____ |
| Advisor | Signature |
| _____ | _____ |
| Internal Examiner | Signature |
| _____ | _____ |
| External Examiner | Signature |

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## Acronyms/abbreviations

ATM ……Automated Teller Machine

CBE …….Commercial Bank of Ethiopia

DPS……. Digital Payment Services

ETB……. Ethiopian Birr

ETC……. Ethio-Telecom

GERD……Grand Ethiopian Renaissance Dam

IBTE……..Imperial Board of Telecommunications

ICT…….Information and Communications Technology

IDR…….Indonesian rupiah which is the official currency of Indonesia

IRT……..Innovation Resistance Theory

MFI…….Micro-finance institution

MNO……...Mobile network operator

MPS..…… Mobile Payment Solutions

PC……Personal Computer

SMS…….Short Message Service

TCPIP.....Transmission Control Protocol (TCP) and the Internet Protocol (IP),

USD……United States dollar

## *Abstract*

*Telebirr is an Ethio telecom mobile payment and digital wallet service that allows clients to do various financial transactions using their phones. The general objective of this work was to Study adoption barriers of digital wallet services of Telebirr by specific case of Gelan City Administration. This research work is the study of a Telebirr services mainly on issues of Telebirr adoption barriers by selecting Gelan City Administration as the study area. The study used a quantitative cross-sectional approach of doing research and collected data by sample survey design through structured questionnaire. For this study the primary data was collected from 422 Telebirr users from the Gelan City Administration who are willing to answer the questionnaire. Telebirr Head office and also Gelan Ethiotelecom sales center were also interviewed to get the supportive and starting information for the study and also to decide the study population. Several documents from the Ethiotelecom website and other sources were also reviewed. The statistical tools IBM SPSS (Statistical Package for Social Sciences) statistics version 26 and excel sheets were used to analyze the primary data. The innovation resistance theory (IRT) which was adopted from* Kaur et al. (2020) was *used to determine how functional and psychological adoption barriers affect Telebirr users' intentions to continue using and recommending it to others. Usage barriers (UB), risk barriers (RB), value barriers (VB), image barriers (IB), and tradition barriers (TB) were the five independent variables of the IRT barriers, with usage intentions (UI) and intents to recommend (ITR) as the two dependent variables. Twenty nine questions were asked on Telebirr adoption barriers. It has been concluded as that Telebirr is not adopted well in Gelan City Administration and also showed that the respondents have different level of awareness, different level of usage behaviors and affected by different types of IRT barriers on Telebirr issue. This barriers has influenced the respondents use intension and recommendation intension for friends. The four barriers UB, VB, IB and TB are important in explaining the UI of consumers towards Telebirr. And the four IB, TB, RB, and VB are important in explaining the ITR of consumers towards Telebirr.*



*Keywords: Telebirr, Adoption Barriers, Innovation Resistance Theory (IRT)*

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the Study

As mentioned by Quest (2019), companies, organizations, and businesses all around the world have seen substantial changes in their business information systems in recent years and huge investments in information systems did not function until they put the magical "E" word in front of their company and placing "E" is a never-ending tale of corporate success and speedy return. E-commerce, e-sales, e-procurement, e-CRM, e-banking, e-payment, and e-services are just a few of the websites available. (Quest, 2019) Products that cross the financial services and telecommunications industries are growing as technology becomes more integrated in our daily lives. (Lowry, 2016)

As mentioned by The Mobile Economy (2022), by 2021, 5.3 billion individuals have signed up for mobile services, accounting for 67 percent of the worldwide population. Most people now own a mobile phone in an increasing number of markets, implying that future growth will come from younger populations signing up for their first mobile subscription. There will be an additional 400 million new mobile customers between now and 2025, the majority of whom will come from Asia Pacific and Sub-Saharan Africa, bringing the total number of subscribers to 5.7 billion (70 percent of the global population). (*The Mobile Economy*, 2022)

In 2017, China's estimated 890 million unique mobile payment customers processed about USD17 trillion in transactions. To make this possible, technology heavyweights like Alipay and WeChat Pay have teamed up with local ecosystem players. (*National Digital Payments Strategy 2021–2024*, 2021)

Mobile money transfer services are provided by a network of agents, each of whom has been licensed by the service providers. (Wamuyu, 2014). Go-Pay, OVO, and DANA were the most well-known mobile payment companies in Indonesia. In December 2018, the cycle amount of electronic money in Indonesia reached IDR 167.21 million, up 85.78 percent from the previous year, with a nominal value of IDR 47.2 trillion and Go-Pay as the leading provider of mobile payment market share with nearly three quarters of the total use of electronic money coming from the three largest types of transactions, which were 28 percent retail transactions, 27 percent ordering online transportation and 20 percent ordering online food. The government joined in by

aiming 8 million MSMEs (Micro, Small & Medium Enterprises) whose already used the digital services by 2020, and soon on the way to cashless society through the non-cash transaction movement. Go-Jek, Indonesia's largest mobile payment provider was having over 200,000 business partners who accept Go-Pay payments, including MSMEs partners). (Program, 2021)

Kenya had 50,471 mobile money transfer agents by the end of 2011, Tanzania had 15,000, and South Africa had roughly 4,000 by the same date. As of December 2009, the majority of Kenya's poor, unbanked, and rural communities had access to mobile money transfer services (particularly M-Pesa). In Africa, the use of mobile money, mobile payments, and other associated mobile financial transactions varies by country. This is due to a country's level of technological maturity, social-economic growth, and the financial transactions ecosystem (Wamuyu, 2014).

Telecommunication was first introduced in Ethiopia in 1894. Ethiopia reorganized the Telephone, Telegraph, and Postal services in 1941, following the end of the war with Italy, during which the telecommunication network was decimated. By proclamation No. 131/52 in 1952, the Imperial Board of Telecommunications (IBTE) was founded. The Board was in charge of providing and expanding telecommunications services in Ethiopia and had complete financial and administrative authority (Bogale, 2005).

Because Ethiopia is a developing country, contemporary technology is critical to the project's success. However, one of Ethiopia's major issues is a lack of technological expertise. Ethiopia continued to face serious issues such as a lack of suitable hardware and software flow, as well as backward information systems. Huawei and ZTE are two Chinese technology corporations attempting to solve Ethiopia's modern technological difficulties (Bilate et al., 2021). .

In May 2021, Ethio telecom launched Telebirr, a mobile phone-based financial solution built by Huawei. And this was considered one of the most significant achievements in the country's telecom history.

Gelan city Administration which is one of the Oromia Special Zones found at about 33KM from Addis Ababa (the capital city of Ethiopia), which is nearest. Telebirr is publicized extensively by different Ethiopian medias and is also being announced by posters to give awareness for the society about the service. So this service is available in the Gelan city Administration like other

areas of the country. The focus of this work is to study the Telebirr adoption barriers at Gelan city Administration.

## 1.2 Statement of the problem

The advancement of new technologies opens up a world of new opportunities for everyday lives. Global interest in innovations is expanding, particularly in the sphere of mobile commerce. Smartphones are no longer just a means of communication, but also a versatile gadget that allows consumers to perform a variety of financial activities using their phones. The ability to make payments at a point-of-sale (POS) in a store using smartphones or tablets provides an alternative to cash or credit cards. By utilizing wireless and other communication technologies, the mobile payment (m-payment) innovation revolutionizes these traditional payment methods. (Dotzauer & Haiss, 2017).

Ethio-Telecom (ETC) is an Ethiopian telecommunications firm that provides internet and telephone services. Telecom is Ethiopia's major corporation that provides network connection between businesses and individuals. There will always be expansion projects in the Ethiopian telecom network to meet the ever-increasing consumer demand for various services and mobile applications (Tibesso, 2021). Early in May 2021, Ethio telecom launched the Telebirr digital wallet service and mobile payment in the country, which was hailed as one of the most significant achievements in the country's telecom history.

Ethiopia continues to innovate in the payment ecosystem. Several success stories demonstrate how innovation is helping to advance digital payments. Fintech is still in its early stages of growth, and Fintechs mostly providing digital payment services. But as mentioned by the *National* Digital Payments Strategy*2021–2024* (2021), in Ethiopia, one of the biggest difficulties for digital payments is adoption. Digital payment adoption is hampered by a lack of use cases. People in both the public and private sectors prefer to utilize cash for most retail transactions; hence demand for digital payments is modest. On the supply side, there is no commercial basis for developing a digital payments offering due to a lack of demand. Due to the novelty of digital payments, there is also a lack of public trust (*National Digital Payments Strategy 2021–2024*, 2021).

The study of the factors influencing merchants' adoption of mobile payment systems in Malaysia added to the body of information about m-payment in Malaysia by offering insights into merchants' perspectives on the barriers and drivers to m-payment adoption. The relative benefits and lower payment processing fees were shown to be some of the variables that attract merchants to embrace m-payment systems. At the same time, obstacles like as technology incompatibility, complexity, implementation costs, and a lack of critical mass hampered the system's acceptance. (Moghavvemi & Phoong, 2020)

Another study of digital wallet adoption among Malaysian undergraduates found that device compatibility, convenience, ease of use, cash back and reward, and social impact all influence digital wallet use. (Raimee et al., 2021)

According to the study of Abebe & Lessa's (2020) , merchants should perceive mobile payment technology as a useful and quick way of selling compared to traditional sales, they should believe that mobile payments are easy to use, understandable, and that they can become skilled at using it, and they should ensure that the cost of mobile payment service is reasonable and affordable, (Abebe & Lessa, 2020)

As Telebirr is new innovation, most of the users societies from the Gelan City Administration do not fill comforted with the service and most of nonusers are not interested to use the service even though Ethiotelecom is offering different incentives and trying their best to give awareness. It is observed that the societies in this City have different images, ability (knowledge), fears, values considerations and traditional stands on Telebirr services. These things indicate adoption barriers (resistances) in this City for this new service. Slow acceptance of any product or service, according to Kaur et al. (2020), is mostly due to the resistance behavior of retail users. Resistance is a natural response to innovations, according to Kaur et al. (2020), because they have the potential to disrupt established lifestyles and upend the status quo, and most innovations must go through the resistance phase. Some of these inventions fail at this stage, while those that make it through the resistance phase succeed. (Kaur et al., 2020)

Telebirr is not yet studied for its adoption since its formal launch. The barriers for adoption can affect the user’s intension to use in future and also how they recommend for nonusers. The main motivation of this Academic research is to study Telebirr adoption barriers at Gelan City Administration.

## 1.3 Research Questions

Hence to study the Telebirr adoption barriers at Gelan City Administration, the study tried to answer the following main research questions:

1. What are the Adoption barriers of Telebirr at Gelan City Administration?

2. How do these adoption barriers impact the future use and recommendation intentions of Telebirr users at Gelan City Administration?

## 1.4. Objective of the Study

### 1.4.1. General Objective

The general objective of this project work was to study the Telebirr adoption barriers at Gelan City Administration.

### 1.4.2. Specific Objective

1. To study the adoption barriers of Telebirr at Gelan City Administration.

2. To study the effect of these adoption barriers on the users intention to use and recommend for others.

## 1.5 Significance of the Study

As it is being the first time study on Telebirr service, the result of this research can extensively help both the Service provider and society on Telebirr and its adoption barriers as a perceptive source of reference. The results of the study can be used as a reference for the EthioTelecom and the Telebirr project **to make further assessment** of the adoption hindrances and it can help the organization for **change management strategy**, and make other decisions, which are demanded by Telebirr project to expand the service across the country. It will be used also to give awareness for the society about Telebirr digital Wallet Services. This research will be used for academic purpose as Partial Fulfillment of the Requirement for the Master of Arts Degree in Project Management.

Finally, the results of this research work can be used as a reference for future research work and can give an opportunity to the researcher to apply the theoretical knowledge and to provide further information to this literature on Telebirr adoption barriers.

## 1.6 Scope of the Study

The scope of this research work is on Telebirr services mainly on issues of Telebirr Adoption barriers by selecting Gelan City Administration as the study area. Gelan city Administration is one of the Oromia special zone , in Ethiopia. The population statics living in this city is currently estimated to 83039. For this study the primary data was collected from 422 Telebirr users from the Gelan City Administration who were willing to answer the questionnaire. The purpose of selecting Gelan City Administration, based on the observation; the area has not been studied yet, it has been believed to get the relevant data, easy to handle the questionnaires and also to save time and cost of the study.

## 1.7 Limitation of the Study

At first the quality of this study might be affected by the scope of the study itself and also by the source of the data selected and contents of the study. Another limitation was, previously there was no any other related research conducted on Telebirr till now, so no literature on this issue to support this study. The other thing was, this research has passed different difficulties to get the Telebirr project office for collecting general information because the process of Ethiotelecom letter approval is very long and some Ethiotelecom employees do not give fully information due to privacy of organization.

## 1.8. Organization of the Study

This research paper is composed of five chapters including the conclusion and recommendation parts. Chapter one is an introduction part of the paper and deals with background of the study, statement of the problem, objectives, significance, scope, and limitations of the study and organization of the study. Chapter two is about literature reviews with different theoretical and empirical related reviews. In chapter three, research methodology was stated. This part

particularly explains about the research design, data source, sampling methods, data collection method and data analysis techniques. The fourth chapter presents the analysis and discussion of the study. The last chapter presents major findings, conclusion and recommendation of the study.

## 1.9. Description of Terms

**What is wallet**- wallet is a container for storing money, vital cards, and other items. Similarly, the case is about a digital wallet, often known as an e-wallet, where one can safely store money (Tiwari et al., 2019)**.**

**Digital wallets-** A digital wallet, often known as an e-wallet, is a software application (app) or service that enables users to store, transfer, and trade monies. Some digital wallets make use of technology embedded into a mobile device to allow consumers to make card less or contactless payments to businesses at the time of sale (POS). Others help clients and merchants make internet transfers and transactions. Some digital wallets also provide extra services such as digital currency, identity cards, gift cards, tickets, and transportation passes (Joint & Services, 2021). Pass-through or cash storage are common features of digital wallets. Pass-through digital wallets are payment systems that do not store currency and instead serve as a platform or overlay for users to make transfers or transactions using their existing financial accounts (Joint & Services, 2021).

**Mobile payment**: Paying with a mobile phone at a retail point of sale (POS) or a food service outlet, on the Internet for products and services or digital content, or for transit, parking, or other transportation services, ticketing, and so on. Payments can be made by SMS text messages, mobile Internet, downloadable apps, contactless near field communication (NFC), and/or QR codes (Crowe & Tavilla, 2015).

**Mobile money** is a technology that enables financial transactions without a bank account through the use of a SIM-card-based mobile phone system — is driving financial inclusion, especially in developing countries (*National Digital Payments Strategy 2021–2024*, 2021).

**Mobile banking** mobile banking is the use of an application on a mobile device to access and execute banking services, such as check deposits, balance inquiry, and payment transfers(Crowe

& Tavilla, 2015)

**Internet banking** also known as online banking, e-banking or virtual banking, is an electronic payment system that enables customers of a bank or other financial institution to conduct a range of financial transactions through the financial institution's website(Lowry, 2016).

**QR Code ;** Other digital wallets read a two-dimensional barcode (a quick read or QR code) that carries information that allows a consumer to begin a transaction at a POS or to enable peer-to-peer transfers using the camera on their mobile device(Joint & Services, 2021).

**NFC (Near Field Communication**) facilitates short-range communication between wireless devices. By tapping or waving a mobile device at a merchant's point-of-sale (POS) device, a customer completes a transaction. (Abebe & Lessa, 2020)

**Point of Sale (POS**) Card payment processing hardware for retail outlets. The hardware includes software that reads magnetic strips from credit and debit cards (*National Digital Payments Strategy 2021–2024*, 2021) .

**Digital payment** the transmission of instructions using digital or electronic devices and channels to initiate and/or receive value transfers. This entails the use of digital payment instruments (such as payment cards and electronic funds transfers) across digital payment channels (such as ATMs, POS terminals, mobile phones, and mobile/PC applications) and supported by a a digital means of transmitting information (such as the internet (TCPIP), SMS, and Unstructured Supplementary Service Data) (*National Digital Payments Strategy 2021–2024*, 2021).

**Digital payment channel** Device that completes a transaction using the payment instrument and information from the recipient (i.e. ATM, POS device, PC, mobile phone) (*National Digital Payments Strategy 2021–2024*, 2021).

**Digital payment ecosystem** Ecosystem consisting Users (consumers, businesses, government agencies, and nonprofit organizations) who require digital and interoperable financial products and services; providers (banks, other licensed financial institutions, and non-banks) who supply those products and services via digital means; the financial, technical, and other infrastructures that enable them to be delivered; and governmental policies, laws, and regulations that enable them to be delivered (*National Digital Payments Strategy 2021–2024*, 2021).

**Fintech** Entity that leverages technology to facilitate innovation in financial services and is authorized to provide payment services by a central bank (*National Digital Payments Strategy 2021–2024*, 2021).

**Micro-finance institution (MFI)** Entity that is licensed to undertake micro-financing business (Alemu et al., 2021).

**Mobile network operator (MNO**) Telecommunications service provider that provides subscribers with wireless voice and data connectivity (*National Digital Payments Strategy 2021–2024*, 2021).

**M-pessa;** M-Pessa is a Safaricom Company Ltd. (the leading mobile network operator in Kenya) service that allows one to transfer money using a mobile phone. M-Pessa is derived from a combination of two words: "M," an abbreviation for "Mobile," and "PESA," a Swahili word for cash money—hence "mobile cash money". Kenya was the world's first country to adopt this service, which Safaricom and Vodafone jointly developed (Pty). M-PESA provided a number of financial services to all Safaricom subscribers, both prepaid and postpaid, even if they do not have a bank account, including cash transfers between individuals without the use of traditional bank accounts, airtime credit purchases, wage, salary, and bill payment, and the purchase of goods and services (Moges & No, 2018).

**Telebirr;** Telebirr is an Ethio telecom mobile payment and digital wallet service that enables customers to conduct a variety of financial transactions using their phones (https://banksethiopia.com/news/telebirr-mobile-wallet-service-in-ethiopia/).

# CHAPTER TWO: LITERATURE REVIEW

## 2.1 Chapter overview

This chapter presents the theoretical background of the study from related literatures and the proposed conceptual framework based on objectives and statement of problem reflected in chapter one. The aim of this literature review is to present various viewpoints on the subject matter to form the basis of Arguments and confirmations in the study.

## 2.2. Theoretical Background

### 2.2.1. Innovation Characteristics

According to (Wamuyu, 2014), relative advanatage, compatibility, complexity, observability, and trialability are the five qualities of innovations that have a substantial impact on consumer feelings.

**Relative Advantage (Perceived Usefulness**is the degree to which a new product or service is thought to offer more benefits than its predecessor. The relative advantage of a new technology is how well it accomplishes a function better than previous or existing technologies. Increased efficiency, economic gains, and improved status are all indicators of relative advantage. The relative advantage of any innovation has been found to be positively related to its rate of adoption. (Wamuyu, 2014)

**Compatibility**: is the degree to which a potential adopter perceives an invention to be consistent with their existing values, past experiences, and needs. When an invention provides alternative or extra products or services, learning the new operation takes little effort, and potential consumers are more inclined to accept it (Abebe & Lessa, 2020). In technology adoption models, compatibility is also important, because incompatibility of an individual's values with the innovation is bound to stymie uptake. Consumer opinions of digital wallets systems are expected to be influenced by compatibility (Raimee et al., 2021).

**Complexity (not easy to use)**; is the degree to which a new product or service is difficult to comprehend and use. The complexity of an innovation associated with a lower rate of adoption than any other aspect of the innovation. Some innovations are simple enough for most members

of a social system to understand and embrace immediately, whereas others are more sophisticated and take longer to implement(Abebe & Lessa, 2020).

**Observability (Visibility**): is the extent to which the innovation's results are visible to others. If users of mobile money find that it works in the majority of scenarios requiring the exchange of monetary value, they will prefer it to existing alternatives (Wamuyu, 2014).

**Trialability**; the extent to which an innovation can be tested on a small scale. When customers are given the opportunity to sample a new product, they are less likely to be afraid of it and are more likely to accept it (Wamuyu, 2014).

### 2.2.2. The benefits of Digital Wallets

As mentioned by Upadhayaya, (2012) digital wallet has the following benefits; Sending and receiving payments anywhere in the world, allows unlimited transfers, easy recurring payments and transfer using our cell phone, we can manage our account, avails world Ventures-branded prepaid MasterCard, provides protection of our bank account and credit card information, shows us Email or SMS notifications after transactions, we can be in a complete control, gives us quicker access to our commissions, we can pull money into our E-wallet from any bank account, enable directly receiving of wired funds/transfers into our E-wallet, give access to any bank account worldwide, enables transfer of money from E-wallet to E-wallet without sharing personal account numbers and allows to make a request for paper commission checks. So we get all this benefit in using digital wallets services.

## 2.3. Innovation Adoption Models

### 2.3.1 Innovation resistance theory (IRT)

Innovation resistance, according to Kaur et al., (2020), is a behavior arising from rational thinking and decision-making regarding the adoption and use of innovation due to the potential for changes brought about by modifications to the existing status quo and deviations from the existing belief system. Consumer resistance can have a significant impact on whether or not the innovations changes in an individual's life and conduct as a result of innovation use might lead to resistance-oriented behavior among users.

As described by Khanra et al., (2021) the IRT consist of two broad categories of barriers: functional and psychological. Functional barriers (usage barrier, value barrier, and risk barrier) originate from consumers' perceptions of changes resulting from adopting innovation. Psychological barriers, on the other hand (tradition barrier and image barrier), arise when customers' existing views are considered to be contradicted while (adopting) accepting new innovation. Functional barriers Researchers had studied Functional barriers according to the functional resistance: (a) usage, (b) value, and (c) risk (Talwar, 2021)

-Usage barrier is created when innovation clashes with consumers' existing workflows and habits, which is similar to the concept of "perceived ease-of-use." This factor is also linked to "complexity," or the consumer's perceived difficulty in comprehending and using the innovation.
-Value barrier emerges when consumers believe that innovation is incapable of supplying better functionalities than alternative solutions with the same economic resources. In such circumstances, customers are adamant about not changing their current practices.

-Risk barriers created when consumers see innovation as bearing inherent dangers. These can include (a) physical risks, such as when an innovative product causes harm to people or property; (b) economic risks, such as when an investment in an innovation proves to be a waste of money; (c) functional risks, such as when an innovation fails to provide the expected level of functionality; and (d) social risks, such as when an adopter of an innovation is concerned about negative peer reactions (Khanra et al., 2021).

Psychological barriers: There are two sorts of psychological resistance that researchers look into: tradition barriers and image barriers. A tradition barrier illustrates a consumer's aversion to any changes in their daily habits that an innovation may bring. A traditional barrier may arise, for example, if a customer chooses to engage with banks in person rather than using new technology to conduct financial transactions. Stereotypes about an innovation, which may be related to its country of origin or a related brand, create an image barrier (Khanra et al., 2021).

## 2.4. The Experiences of Africa on Digital Wallet Practices.

African countries are no strangers to the usage of digital money transfer solutions or to the rapid adoption of such technology. It is frequently stated that Africa's widespread use of mobile telecommunications has allowed the continent to surpass numerous first-world countries. In less than a decade, mobile phone usage rose from less than 3% to 80%. There are already a slew of local mobile and e-payment systems that have seen this as an opportunity to offer novel ways to eliminate the friction involved with money transfers across the continent. Kenya's M-Pesa, for example, has been around since 2007. The platform, which allows clients to send and receive money through mobile phone, currently manages more than 25% of Kenya's GNP, resulting in increased consumer trust in financial technologies. Sub-Saharan Africa is also said to contain the world's second-largest unbanked adult population, with around 350 million individuals, or 17% of the worldwide total. According to reports, two-thirds of people in Sub-Saharan Africa do not have a bank account (DIGITAL MONEY: The Law of Crypto Currency and Cryptography in Uganda - - - - - - - - - - - - - - - - - -, n.d.).

Mobile money accounts outnumber regular bank accounts in African countries, giving a payment option for those who would otherwise be unbanked or under banked. This massive use of mobile payments in Africa has not gone unnoticed; both government and business have recognized the trend and have developed methods to incorporate mobile payments into their operations (Lowry, 2016).

Kenya M-PESA, Vodafone's proprietary mobile money transfer product, is shared by Tanzania and South Africa. M-Pesa was first introduced in Kenya in March 2007 and in South Africa in August 2010. M-Pesa services have already been implemented in other Eastern African nations like Uganda, Tanzania, Rwanda, and Burundi, as well as other African countries like Cote d'lvore, Senegal, Madagascar, Mali, Niger, Botswana, and Cameroon. In Botswana, for example, two providers, Orange Botswana (Orange Money) and Mascom Wireless (MyZaka), have launched mobile money, which allows for VISA card payments and ATM cash-outs. A comparable program known as e-wallet has been launched by a number of African banks. E-wallet is different from M-Pesa in that it requires the sender to have a bank account, whilst the receiver can just cash out using their mobile phone number and a pin at ATMs. Furthermore, as

smart phones have become more popular in recent years, banks have been able to create mobile services to complement their traditional and online banking services (Africa & Mothobi, n.d.; Wamuyu, 2014)

## 2. 5. The Experiences of Ethiopia on Digital Wallet Practices.

Commercial Bank of Ethiopia (CBE) launched the first Digital Payment Services (DPS) in Ethiopia in the form of ATMs in 2001, with eight machines in the capital city of Addis Ababa. ATMs, on the other hand, were ineffective and inaccessible until 2013/14, when they saw a huge increase in usage. ATMs in Ethiopia offer services including cash withdrawal, transfer, and balance enquiry, however they don't offer cash deposit (Alemu et al., 2021).

Internet banking has been available in Ethiopia since 2008, with United Bank being the first to offer it, followed by all other banks. In June 2012, the CBE, the country's largest commercial bank, introduced Internet banking services.

According to Alemu et al. (2021), there were only 1,771 Internet banking customers in 2013/14, despite the fact that there were 6.2 million Internet subscribers in 2019/20, there were 1.457 million Internet banking customers, which is still a small percentage of overall Internet subscribers (only 6.1%), while the fraction of the adult population (ages 15 and up) utilizing Internet banking was as low as 2.3 percent. In 2013/14, the value of Internet banking transactions climbed from ETB 105.4 million (US$5.4 million) to ETB 22,546.3 million (US$641.3 million) in 2019/20.

Mobile banking, which was also introduced by United Bank in 2008/09, is a type of digital payment service (DPS) in which bank customers can use their mobile phones to access their accounts and conduct financial transactions such as payments, transfers, and balance inquiries, as well as receive instant notifications of any transaction on all accounts linked to the mobile banking service via SMS.

Mobile money is another type of DPS used in Ethiopia. Mobile money is an electronic account linked to a mobile phone number that allows consumers to deposit, withdraw, and transfer money as well as make and receive payments (no need to register a bank account). DPS in

Ethiopia were not integrated with Ethio Telecom because they were not telecom-based. As a result, mobile money accounts (also known as electronic accounts) were not included in SIM cards for mobile phones. Agent banking is a system in which commercial banks permit agents to deliver mobile money services on their behalf.

Mobile money services are also provided by MFIs. M-Birr, the country's first mobile money service, was launched in 2012 by five partnering MFIs in Addis Ababa and four regional states (Addis Credit and Saving Institution, Amhara Credit and Saving Institution, Dedebit Credit and Saving Institution, Oromia Credit and Saving Institution, and Omo Microfinance Institution), and went live in 2013. M-Birr offers deposit/withdrawal services at an agent, as well as the option to use a mobile phone to top up mobile airtime, pay bills, buy items, repay debts, check balances, and obtain statements. Because all five MFIs use the same switch technology, it also provides transfer services between them. These MFIs provide financial services to persons who do not have access to banking. Because M-Birr does not require an Internet connection and operates with low-quality mobile networks, it is especially beneficial to the country's rural areas (Alemu et al., 2021).

In February 2015, Lion International Bank and Somali Micro Finance Institution, in collaboration with BelCash, developed HelloCash, a mobile money service modeled after M-Birr. Deposits, withdrawals, transfers, and payments are all available. Agents are chosen, trained, and authorized to deliver mobile money services on behalf of the banks. The CBE introduced CBE-Birr, a mobile phone-based money transfer platform, in mid-December 2017, with clients being able to deposit, withdraw, transfer, make payments, acquire mobile airtime, and pay bills using their mobile phones. Dashen Bank launched Amole, a mobile phone-based money transfer platform, in July 2018 (Alemu et al., 2021). Some banks have recently provided new services that allow an electronic mobile money account to be linked to a bank account. This has made life easy for those who utilize mobile money and have a bank account (but only for those who have smartphones).These users no longer need to go to agents or bank branches to deposit money because they can simply use their cell phone to put money into their electronic account from their bank account. Many bank account holders have been urged to use mobile money services, while mobile money users have been encouraged to open bank accounts. Mobile money has become a popular alternative to Internet and mobile banking because it does not require Internet

access or a high-value mobile phone (a smartphone). Despite the availability of this simple and popular alternative, Ethiopian mobile money platforms were tiny at first, but are currently rapidly expanding.

Mobile money providers had just roughly 7.96 million subscribers (12.8 percent of the adult population in 2019/20, yet more than quadruple the number in 2018/19) and 22,725 agents by 2019/20 (Alemu et al., 2021).

The reforms in the telecommunications sector are likely to have a big influence on expanding the reach and quality of services. One of the most significant prospects in the ICT sector has been the announcement of Ethio Telecom's privatization in 2018 (*National Digital Payments Strategy 2021–2024*, 2021). A competitive telecommunications sector has the potential to transform the way Ethiopia's 100 million people, more than half of whom are youth, communicate and do business. Competitive broadband services have the ability to catalyze growth in other industries, particularly the computing and software sector, resulting in increased job possibilities and worldwide competitiveness (Case & Ethio, n.d.).

According to the National Digital Payments Strategy 2021–2024 (2021), the NBE (National Bank of Ethiopia) works closely with the Ministry of Finance (MoF), the Ministry of Innovation and Technology (MInT), and the Ethiopian Communications Authority (ECA) to define the role of mobile network operators (MNOs) in the financial landscape and align on telecommunications infrastructure development requirements in order to maintain a digital payment landscape.

The National Bank of Ethiopia (the central bank) regulates mobile money through issuing directions and licenses to financial companies. With the mobile and agent banking directive No. FIS/01/2012, the first rule on mobile money was enacted in December 2012. Unlike neighboring countries like as Kenya and Tanzania, which allow telecom firms to provide mobile money services, Ethiopia's mandate had been only allowing banks and MFIs to provide the service. (Gsma, 2021).

Ethio telecom has previously introduced Telebirr, a mobile phone-based financial service, to improve the digital economy by providing cashless transactions as an alternative to an inefficient banking system, in May 2021, Telebirr was created by Huawei to power an Ethiopian version of M-PESA, Safaricom's mobile banking system. The service primarily aids those who reside in

rural areas and are facing a variety of economic and social challenges. On May 11, 2021, the service began in Addis Abeba, Ethiopia. Huawei developed the mobile platform, which can presently process up to 100 transactions per second. Ethio telecom telebirr services enable customer to deposit, receive, transfer and pay using a mobile number. It allows cashless transactions ,receiving international remittance and also allows to make payment at convenient stores via QR codes, purchase goods. Ethio telecom announced that telebirr is officially working or linked with 12 banks that is banks to telebirr wallet integration and for 10 banks also telebirr wallet to banks integration as of May, 2022 with Debub global bank, Commercial bank of Ethiopia, Awash bank, Bank of Abyssinia , Berhan bank, Hibret bank, and Enat banks, Wegagen bank, Cooperative Bank of Oromia, Abay bank, Dashen Banks and Addis International Bank of Ethiopia. This allows telebirr clients to make simple transfers from their bank account to their telebirr account and take advantage of the service (https://banksethiopia.com/news/telebirr-mobile-wallet-service-in-ethiopia/ & https://www.ethiotelecom.et/telebirr/)

## 2.6. Research model and hypothesis

### 2.6.1. Innovation Resistance Theory (IRT) Perspective on the Adoption Barriers of Telebirr

According to Dotzauer and Haiss (2017), Ram and Sheth (1989) were among the first to focus their study on barriers to adoption that cause consumer resistance. They presented a theoretical framework for researching resistance to innovation. This framework has been regularly developed and tested in various circumstances and is the most widely used model in innovation resistance research. Although the model is relatively ancient, it is still relevant in today's research and is particularly appropriate for various studies including technology breakthroughs such as mobile banking and online shopping.

So for this study the research model formulated by Kaur et al. (2020) which was from Innovation resistance theory (IRT) was implemented for assessing how adoption functional and psychological barriers impact the use behavior of users in terms of their intentions to carry on to use and recommend it to others (Fig. 1). According to this model the five IRT barriers; usage, risk, value, image, and tradition barriers are the independent variables. And the usage intentions (UI) and the intentions to recommend (ITR) are the two dependent variables in this model. These

dependent variables are often used post-adoption measures that capture consumers' intents to keep using the product and spread positive word-of-mouth, which is a key factor in adoption decision-making. The seminal work on technology adoption, as described and quoted by Kaur et al. (2020), implies that negative word-of-mouth can have a detrimental impact on service providers by delaying, or even permanently blocking, the diffusion process. Furthermore, when consumers are opposed to a change or are dissatisfied with a product or service, they are more likely to spread negative word-of-mouth.

## Proposed Research hypothesis

Dotzauer and Haiss (2017) had also mentioned that the five IRT barriers are negatively influence the adoption intention of mobile payments. So starting from these views of literatures the association of different user barriers with the use intentions and intentions to recommend Telebirr was examined. In order to assess the adoption barriers of the Gelan City Administration Telebirr users, the hypotheses were developed in a way that consumer's barriers are negatively associated with the continued use intentions and intentions to recommend of first-time Telebirr users.

H1. Usage barriers are negatively linked with use intentions toward Telebirr.

H2. Usage barriers are negatively linked with ITR Telebirr.

H3. Value barriers are negatively linked with use intentions toward Telebirr.

H4. Value barriers are negatively linked with ITR Telebirr.

H5. Risk barriers are negatively linked with use intentions toward Telebirr.

H6. Risk barriers are negative linked with ITR Telebirr.

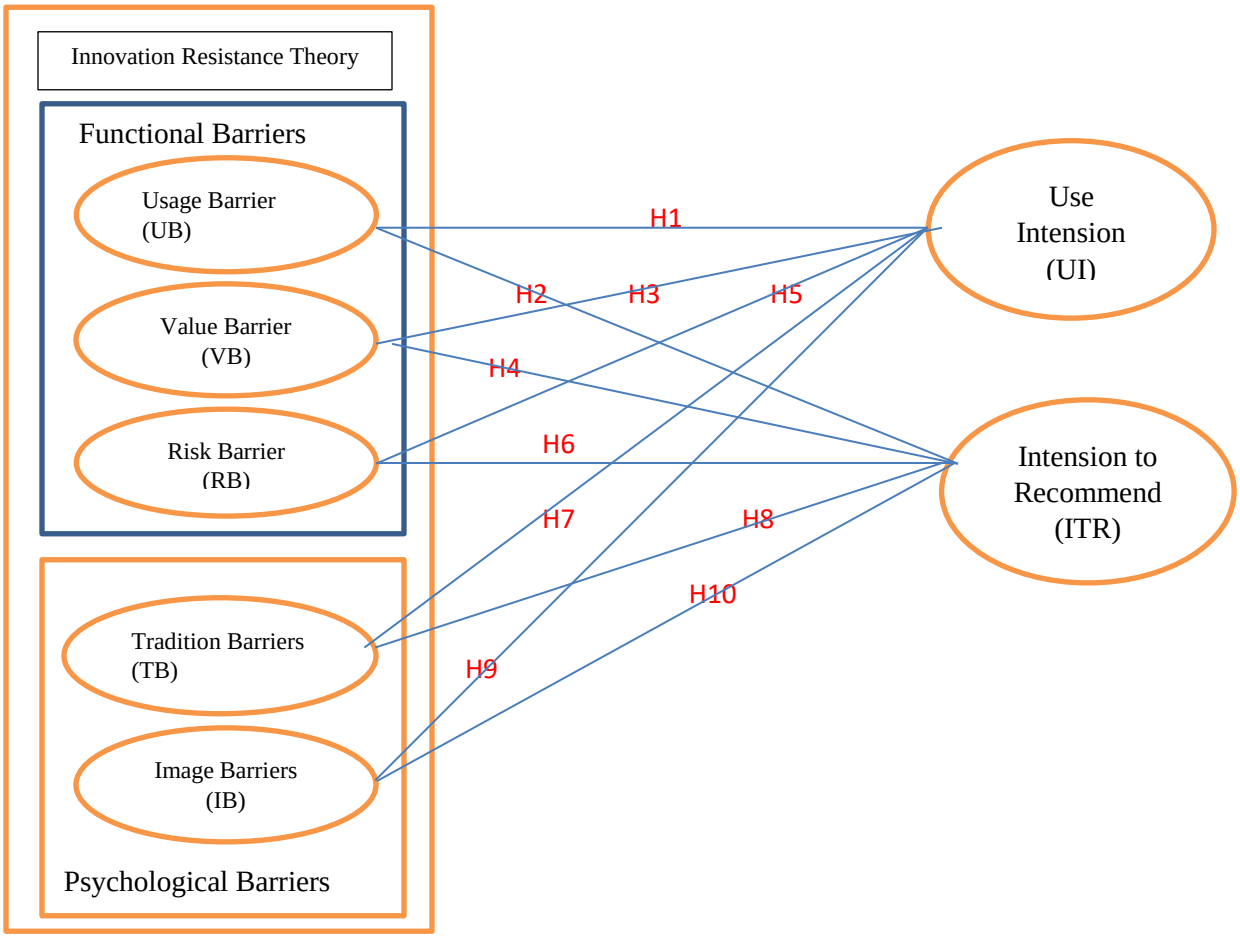
H7. Tradition barriers are negatively linked with use intentions toward Telebirr.

H8. Tradition barriers are negatively linked with ITR Telebirr.

H9. Image barriers are negatively linked with use intentions toward Telebirr.

H10. Image barriers are negatively linked with ITR Telebirr.

Figure 2.1. Innovation Resistance Theory Research model on Telebirr Adoption Barriers.




Source : (Adopted from Kaur et al., 2020)

# CHAPTER THREE: METHODOLOGY

## Introduction

This chapter is dealing with the methodological part of the study in order to analyze the Telebirr services and its adoption barriers on the Gelan City Administration Telebirr users. This section provides an overview of the study‘s research approach (design) which lies within the quantitative strategies. The chapter will focus on namely the study‘s research design, source of data, sampling method, data collection method and data analysis method.

## 3.1. Research Design

The study used a quantitative cross-sectional approach of doing research, to collect all relevant data at a particular time from the large number of samples. The benefits of cross-sectional designs include that data is collected at one point in time on several cases and variables which are then compared and analyzed (Dotzauer & Haiss, 2017).This research employed explanatory purpose of research design which was also supported by descriptive parts.

## 3.2. Study Variables

For this study the five Innovation resistance theory (IRT) barriers were the five independent variables namely; Usage Barriers, Risk Barriers, Value Barriers, Image Barriers, and Tradition Barriers and the two dependent variables were Usage intentions (UI) and Intentions to recommend (ITR).

## 3.3. Source of Data

Gelan city Administration is one of the Oromia special zone, in Ethiopia. The population statics living in this city is currently estimated to 83039. The study was on Telebirr users in this city. So the primary data for this study were collected from the Telebirr users in Gelan City Administration. For additional information Telebirr Head office and also Gelan Ethio telecom sales center were also interviewed to get the supportive and starting information for the study and also to decide the study population. Several documents from the Ethiotelecom website, NBE directives and others were referred.

## 3.4. Sampling Method

A probabilistic simple random sampling method was used to give each member of the population equal chance of being selected. And it is also simple and most reliable/representative method.

Since there is no direct study done on the title in Ethiopia sample size was determined from all Telebirr users living in Gelan city Administration using sample size calculation of single population proportion formula (which is modified Kish-Leslie's formula) assuming p = q = 0.5

Formula $n = \frac{(Z_{\alpha/2})^2 \, p \, (1-p)}{d^2}$

$n = \frac{(1.96)2x \, (0.5) \, (1-0.5)}{(0.05)^2} = 384.16$

So with adjustment for non-response (10% contingency) n= (384+38), the final sample size became 422 (Bongomin et al., 2018).

Where

n = sample size

P = percentage

q = 1-p

d = desired degree of precision

Z= is the standard normal value at 95% confidence level

### Inclusion criteria

In this study those who use Telebirr and willing to participate in this study were included.

## 3.5. Data collection method and Instrumentation

The study employed a sample survey design through structured questionnaire, which is high-speed in data collection and economical in nature. The key informant interview with Telebirr Head office and also Gelan Ethiotelecom sales center have been conducted to get supportive information. Talwar, (2021) and Kaur et al., (2020) are the two literatures from which the questionnaire was developed for the study. The questionnaires were translated to Amharic and again to English. Then the questionnaires distributed to the data collectors after orienting the purpose of the study. Then the investigator organized the collected, and received from the data collectors.

## 3.6. Data Analysis Method

After questionnaires receiving, the researcher checked them for the completeness, clean unnecessary data, then analyzed them. The data analyses were done using statistical tools IBM SPSS (Statistical Package for social sciences) statistics 26 and excel sheets. The collected quantitative data were coded, analyzed and interpreted. The analyses from the data were presented in form of percentages, figures, tables and charts.

## 3.7. Reliabilty and Validity Test

The Cronbach‟s Alpha reliability test were employed for the independent variables (Usage Barriers (US), Value Barriers (VB), Risk Barriers (RB), Tradition Barriers (TB) and Image Barriers (IB)) and dependent variables (Intension to use Telebirr for future (UI) and Intension to Recommend Telebirr for friends (ITR)). Cronbach's Alpha should be more than 0.7 and closer to 1.0 to accept data instruments and internal consistency of items in research (Lemma, 2021). So the Cronbach‟s Alpha reliability test statics for the both dependents and independents items were found to be greater than the acceptable standard value of 0.7 and so possible to say the study is in reliable scale.

Table 3.1 Reliability Test

| **Variables** | **Cronbach's Alpha** |
|---|---|
| Usage Barriers (UB) | .842 |
| Value Barriers (VB) | .713 |
| Risk Barriers (RB) | .793 |
| Tradition Barriers (TB) | .704 |
| Image Barriers (IB) | .878 |
| Intension to use (UI) | .941 |
| and Intension to Recommend (ITR) | .983 |

**For Validity purpose**

The previous researcher's questionnaires used to keep content validity of data collection instrument, which means questionnaires were created based on the literature analysis and several previous studies' questionnaires that were related in context in order to maintain validity. . Twenty questionnaires were sent and filled out by potential respondents (from limited Addis Ababa areas), ahead of time to ensure that the data collection instruments were objective, relevant, appropriate for the situation, and trustworthy. Respondents' concerns were addressed, and the questionnaires were improved. Finally, the questionnaires were printed and reproduced in their revised form.

## 3.8. Ethical Consideration

Prior to conducting the study, supportive letter obtained from the Addis Ababa University, School of Commerce, department of Business Administration and Information System and the letter was accepted and permitted by Ethiotelecom Head office to provide the necessary information. The researcher informed the participants of the study's objectives and consciously considered ethical concerns in obtaining consent, avoiding deceit, maintaining confidentiality, respecting the privacy of all respondents, and protecting their identity.

# CHAPTER FOUR: ANALYSIS AND DISCUSSION

## Chapter Over view

This chapter presents, analyze and interpret data gathered from the questionnaires. The acquired data should be described, analyzed and discussed; in order to uncover the study's primary outcomes and provide crucial recommendations; as a result, the analysis and key findings from the collected data are detailed below. This chapter, on the other hand, discusses the findings and interpretation of data gathered using a questionnaire. The remaining part of this chapter is organized as follows. Section 4.1 Description of results , section 4.2 Analysis of the Results and section 4.3 Discussion of the result.

## 4.1 Description of Results

A total of 422 questionnaires randomly distributed for Telebirr users living in a Gelan City Administration. Since Participants were informed about the research objectives and process all questionnaires were returned and valid by 100 percent response rate .The chapter contains the demographic information of respondents, Telebirr Practice of the users, Telebirr Adoption Barriers respectively. The analysis of the data is conducted by SPSS version 26 software.

## 4.2. Analysis of the Results

### 4.2.1 Demographic Data of Respondents

This part describes the demographic information of respondent's gender, age, educational qualification and the working organizations the respondents belongs to, by using descriptive analysis in SPSS software and summarized in the following table.

Table 4.1.Demographic Data of Respondents

| | | Frequency | Percent | Valid percent | Cumulative Percent |
|---|---|---|---|---|---|
| Gender of Users | Male | 260 | 61.6 | 61.6 | 61.6 |
| | Female | 162 | 38.4 | 38.4 | 100.0 |
| Age of Users | <15 | 0 | 0 | | |
| | 16-25 | 108 | 25.6 | 25.6 | 25.6 |
| | 26-35 | 140 | 33.2 | 33.2 | 58.8 |
| | 36-45 | 67 | 15.9 | 15.9 | 74.6 |
| | 46-55 | 107 | 25.4 | 25.4 | 100.0 |
| | >56 | 0 | 0 | | |
| Educational level of users | Not Educated | 0 | 0 | | |
| | Primary school | 54 | 12.8 | 12.8 | 12.8 |
| | Secondary school | 82 | 19.4 | 19.4 | 32.2 |
| | Diploma degree | 94 | 22.3 | 22.3 | 54.5 |
| | Bachelor's degree | 133 | 31.5 | 31.5 | 86.0 |
| | Master's degree | 59 | 14.0 | 14.0 | 100.0 |
| Categories of the working organization users | Government Administration | 76 | 18.0 | 18.0 | 18.0 |
| | International Organizations, NGOs & Embassies | 62 | 14.7 | 14.7 | 32.7 |
| | Public Institutions | 38 | 9.0 | 9.0 | 41.7 |
| | Private institutions | 80 | 19.0 | 19.0 | 60.7 |

| | | | | | |
|---|---|---|---|---|---|
| belongs to | Production Enterprises | 39 | 9.2 | 9.2 | 69.9 |
| | Financial Institutions | 12 | 2.8 | 2.8 | 72.7 |
| | Others | 115 | 27.3 | 27.3 | 100.0 |

*Source: own Survey (2022)*

According to the data in the table above, 260 (61.6%) of the 422 respondents are males, while 162 (38.4%) are females. As a result, the number of male responders greatly outnumbers the number of female respondents.

According to the age information provided by respondents, 140 (33.2 percent) are between the ages of 26 and 35, 108 (25.6 percent) are between the ages of 16 and 25, and 107 (25.4 percent) are between the ages of 46 and 55.

The remaining respondents' age categories show that 67 (15.9%) are between the ages of 36 and 45, while no one is under the age of 15 or over the age of 56. Based on this data, it is reasonable to conclude that the majority of Telebirr users are in the first middle aged category.

In terms of academic qualification, a significant number 133(31.5%) of respondents are Bachelor'sdegree holders and 94(22.3%) of them are Diploma degree holders while the others 59(14.0%) of them holds Master's degree. They are followed by respondents of primary school 54(12.8%) and secondary school 12.6%. The rest 29 (6.9) are respondents of high school and no one of uneducated societies responded as a user of Telebirr service. From these information one can understand that majority of the users have a good level of education.

The next variable is about categories of the working organizations the respondents belong to. Most of the respondents opt other working organization, which can be out of the following options, covering 115(27.3%)of the total participants. The rest respondents are from Private institutions covering 80(19.0%), others from Government Administration 76(18.0%), from International Organizations, NGOs & Embassies covering 62 (14.7%) and also from Production Enterprises 39(9.2%),that from Public Institutions 9.0% and lastly 2.8% from Financial Institutions. From this part of respondent information it can be clear that the majority part of the society and workers of different sectors are users of Telebirr but with varied percentage of participation. In general, the features of the respondents indicate that they can supply useful information for the study's goals.

### 4.2.2.Descriptive Statistics data of Telebirr Practices

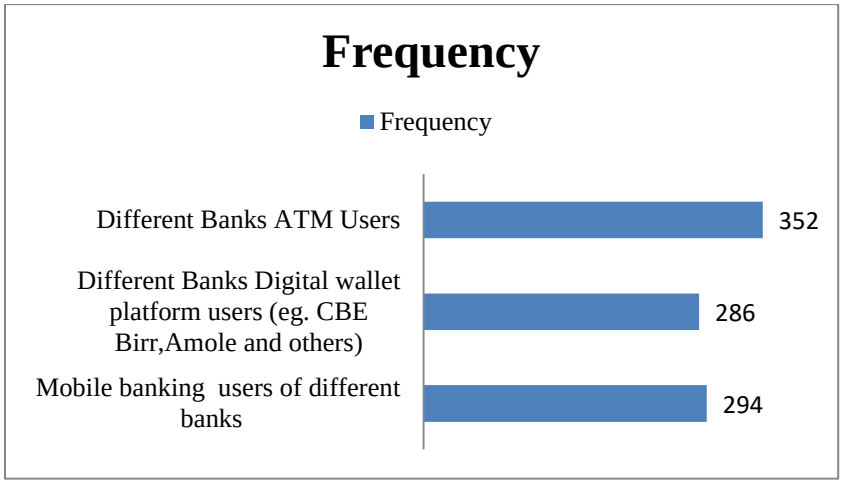
To study the other digital wallets usage of the respondents the following information gathered through questionnaires and analyzed below.

Table 4. 2 Other Digital Wallets and mobile payment services that the respondents use (N= 422)

| Digital Wallets and mobile payment services Telebirr users use | Mobile banking users of different banks | Different Banks Digital wallet platform users (eg. CBE Birr,Amole and others) | Different Banks ATM Users |
|---|---|---|---|
| Frequency | 294 | 286 | 352 |
| Percentage | 69.7% | 67.8% | 83.4% |

*Source: own Survey (2022)*

Figure 4.1Graphical representation of Other Digital Wallets and mobile payment services that the respondents use (N= 422)




*Source: own Survey (2022)*

According to this data from the total 422 Telebirr subscribers respondents the majority 352(83.4%) are different banks ATM users, followed by 294(69.7%) are Mobile banking users of different banks and lastly from 422 respondents 286 (67.8%) are different Banks Digital wallet platform users (eg. CBE Birr,Amole and others). So one can understand that there is higher use of ATM service than the other two services.

Table 4.3 Telebirr usage of Respondents

| | | Frequency | Percent | Valid percent | Cumulative Percent |
|---|---|---|---|---|---|
| Do you registered for Telebirr Services? | yes | 422 | 100.0 | 100.0 | 100.0 |
| Do you want to learn more about Telebirr ? | yes | 380 | 90.0 | 90.0 | 90.0 |
| | no | 42 | 10.0 | 10.0 | 100.0 |
| How often you use Telebirr? | daily | 61 | 14.5 | 14.5 | 14.5 |
| | occasionally | 172 | 40.8 | 40.8 | 55.2 |
| | once in aweek | 87 | 20.6 | 20.6 | 75.8 |
| | once in amonth | 102 | 24.2 | 24.2 | 100.0 |
| Do you prefer Telebirr service over cash? | yes | 273 | 64.7 | 64.7 | 64.7 |
| | no | 149 | 35.3 | 35.3 | 100.0 |
| Do you prefer Telebirr over other Digital wallets and mobile money services? | yes | 214 | 50.7 | 50.7 | 50.7 |
| | no | 208 | 49.3 | 49.3 | 100.0 |

*Source: own Survey (2022) (N =422)*

From this table it is clear that all the 422 respondents are Telebirr service registered customers. According to this data 380(90%) of the respondents are willing to learn more about the Telebirr and the rest 42(10%) do not want to learn more about Telebirr . From this information one can understand that majority of the respondents want to get further knowledge about Telebirr.

In terms of the Telebirr service usage frequency of the respondents, majority 172(40.8%) uses occasionally, 102(24.2%) of the respondent use only once in month, 87(20.6%) of the respondents use once in aweek and the rest 61(14.5%) of the respondents use daily. From this information it is clear that majority of the respondents use Telebirr service occasionally.

According to the above table 273(64.7%) of the respondent prefer Telebirr services over cash and 149(35.3%) of the respondents do not prefer Telebirr services over cash. This can show that majority of the respondent prefer Telebirr over cash, but there are still respondents prefer cash over Telebirr service.

The another information from this table is 214(50.7%) of the respondent prefer Telebirr over other Digital wallets and mobile money services 208(49.3%) do not prefer Telebirr over other Digital wallets and mobile money services. This indicates that near to half of the respondents do not prefer Telebirr over other Digital wallets and mobile money services.

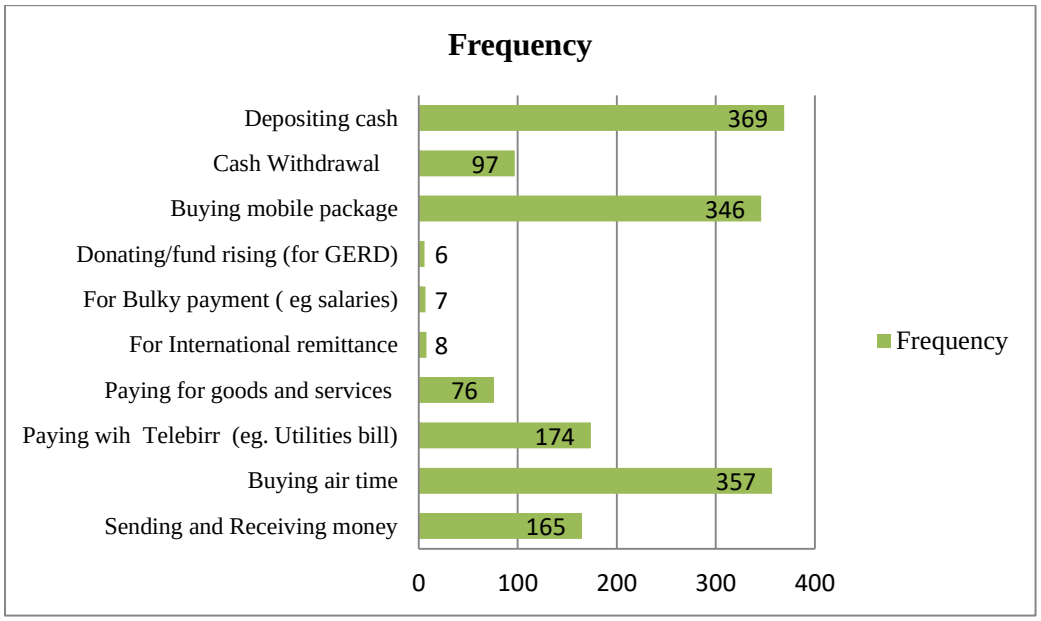
For the questions concerning types of Telebirr services that the respondents use is presented in the following table.

Table 4.4 Telebirr services that the respondents use

| Telebirr services used | Sending and Receiving money | Buying air time | Paying with Telebirr (e.g. Utilities bill) | Paying for goods and services | For International remittance | For Bulky payment ( eg salaries) | Donating/fund rising (for GERD) | Buying mobile package | Cash Withdrawal | Depositing cash |
|---|---|---|---|---|---|---|---|---|---|---|
| Frequency | 165 | 357 | 174 | 76 | 8 | 6 | 7 | 346 | 97 | 369 |
| Rate of response | 39.1 | 85 | 41.2 | 18.0 | 1.9 | 1.4 | 1.7 | 82.0 | 23.0 | 87.4 |

*Source: own Survey (2022) (N =422)*

Figure 4.2 Graphical representation of Telebirr services that the respondents use.




*Source: own Survey (2022) (N =422)*

From this table and also graphical data majority 369(87.4%) of the respondent use Telebirr services for depositing cash services,357(85%) use for Buying air time and also 346(82%) use

for buying mobile package services. The rest of the respondent 174(41.2%) pay with Telebirr service for different utilities, 165(39.1%) of the respondents send and receive money with Telebirr services. Others 97(23%) of the respondents withdraw cashes with Telebirr services ,76(18%) of the respondents pay for goods and services using Telebirr services ,8(1.9%), 7(1.7%) and 6 (1.4%) of the respondents use telebirr services for International remittance, Donating/fund rising (for GERD) and for Bulky payment( eg salaries) respectively. So it can be seen that depositing cash, buying air time and buying mobile package are the major Telebirr services that the respondents use.

### 4.2.3 Telebirr Adoption Barriers

For this part of analysis Innovation resistance theory (IRT) is implemented for assessing how adoption functional and psychological barriers impact the use behavior of Telebirr users in terms of their intentions to carry on to use and recommend it to others. These adoption barriers categorized in to the five independent variables of the IRT barriers which are : usage barriers (UB), risk barriers(RB), value barriers(VB), image barriers(IB), and tradition barriers(TB) and also to the usage intentions (UI) and the intentions to recommend(ITR) as the two dependent variables. Twenty nine questions were asked on Telebirr adoption barriers. Respondents were asked to indicate the extent of their agreements on each corresponding closed ended statements rated on a five-point Likert scales ranging from '1' "Strongly Disagree" to '5' "Strongly Agree". The associations of different user barriers with the continued use intentions and with the intentions to recommend of first-time Telebirr users were studied. The data analysis conducted using IBM SPSS 26. The inferential analysis of Pearson correlation between the variables, then linear regression analysis, model summary and statistical significance of the model and the proposed hypotheses were assessed in this analysis part.

## Correlation analysis

With pearson correlation there is significant correlation values between the dependent and independent variables.

Table 4.5 Correlation table

| | | UB | VB | RB | TB | IB | UI | ITR |
|---|---|---|---|---|---|---|---|---|
| UB | Pearson Correlation | 1 | .061 | .608** | .719** | .763** | **-.770**** | **-.712**** |
| | Sig. (2-tailed) | | .212 | .000 | .000 | .000 | **.000** | **.000** |
| VB | Pearson Correlation | .061 | 1 | .045 | .149** | .124* | **.097*** | **.153**** |
| | Sig. (2-tailed) | .212 | | .361 | .002 | .011 | **.047** | **.002** |
| RB | Pearson Correlation | .608** | .045 | 1 | .565** | .740** | **-.545**** | **-.550**** |
| | Sig. (2-tailed) | .000 | .361 | | .000 | .000 | **.000** | **.000** |
| TB | Pearson Correlation | .719** | .149** | .565** | 1 | .587** | **-.654**** | **-.653**** |
| | Sig. (2-tailed) | .000 | .002 | .000 | | .000 | **.000** | **.000** |
| IB | Pearson Correlation | .763** | .124* | .740** | .587** | 1 | **-.698**** | **-.795**** |
| | Sig. (2-tailed) | .000 | .011 | .000 | .000 | | **.000** | **.000** |
| UI | Pearson Correlation | -.770** | .097* | -.545** | -.654** | -.698** | **1** | **.882**** |
| | Sig. (2-tailed) | .000 | .047 | .000 | .000 | .000 | | .000 |
| ITR. | Pearson Correlation | -.712** | .153** | -.550** | -.653** | -.795** | .882** | 1 |
| | Sig. (2-tailed) | .000 | .002 | .000 | .000 | .000 | .000 | |

**. Correlation is significant at the 0.01 level (2-tailed). *Source: own Survey (2022)* *(N =422)*

*. Correlation is significant at the 0.05 level (2-tailed).

So this table shows us the statistically significant linear relationship between UI and ITR and each of the barriers since all p-values are less than the alpha level of 0.05. It indicates that there is negative correlation between independent variables UB, RB, IB, and TB and the two dependent variables UI and ITR and positive poor correlation between VB and of UI(r=**.097 at p=.047)** and with ITR(r=**.153**** **at p=.002)**. This means when the independent variables UB, RB, IB, and TB increases the dependent variables UI and ITR decreases. But the independent variable VB increases with UI and ITR by poor correlation coefficient. Correlation cannot tell us the cause and effect of the variables, so for causal association purpose we analyzed by regression analysis.

## Multiple Linear Regression Analysis

For this section of the analysis the study used multiple linear regressions, which is a statistical approach that combines two or more independent variables to predict the result of a dependent variable. The technique can be used to calculate the model's variation and the relative contribution of each independent variable to the total variance. The following assumptions of multiple linear regressions have been tested in order to apply the model for analysis for this study.

### The Assumptions of multiple linear regression Analysis

1, The dependent and independent variables must be correlated linearly.

Making scatterplots and checking them visually for linearity allow us to verify the linear relationships (Schreiber-Gregory & Bader, 2018). So there was linear relationship as concluded from scattered plot of the graph.

2, There is not much correlation between the independent variables.

Multicollinearity, which happens when the independent variables (explanatory variables) are highly connected, shouldn't be present in the data. Furthermore, correlation coefficients can be used to investigate the issue of multicollinearity. There is no multicollinearity between the variables when the values are less than 0.9, which is the case in this study (Dotzauer & Haiss, 2017). The Variance Inflation Factor have also been tested. This assumption has been proven correct by collinearity statistics analysis, since VIF scores were significantly below 10 and tolerance scores were over 0.2 (Statistics Solutions, 2014) (statistics = 1.050 , 2.249, 2.370, 3.322and 3.446 are VIF values of independent variables).

3, Independence of observation

The observations should be independent of one another, according to the model. In other words, the model implies that the residual values are independent. We employ the Durbin Watson statistic to verify this assumption. The obtained value was (Durbin-Watson = 2.239 for UI and 2.345 for ITR), which indicated that the Durbin-Watson statistic indicated that this assumption had been met. The absence of first-order autocorrelation is confirmed by a DW value between

1.5 and 2.5. A positive autocorrelation is present if the DW value is smaller than 1.5.If the DW number is larger than 2.5, it means that the autocorrelation is negative (Schreiber-Gregory & Bader, 2018).

4, Multivariate normality

When residuals have a normal distribution, multivariate normality obtains. It can also be checked using one of two major techniques, the Normal Probability Plot method or a histogram with a normal curve overlay. So the plot showed normal distribution of the residuals.

5, The variance of the residuals is constant (homoscedasticity)

The predicted values compared to the standardized residuals to see if the points are distributed equitably across all values of the independent variables (Statistics Solutions, 2014). The data was plotted on a scatterplot by utilizing SPSS to generate a scatterplot that incorporates the whole model in order to test the hypothesis. So it met the assumption.

So after the test of these five assumptions of multiple linear regression analysis, the overall statistical significance of the model, how much variance does the model explain and regression path coefficients have been examined for the five independent variables UB, VB, RB, TB, and IB, as well as the two dependent variables UI and ITR.

Table 4.6 Model summary (UI)

| **Model Summary[b]** | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .822[a] | .675 | .672 | .65606 |

*Source: own Survey (2022) (N =422)*

a. Predictors: (Constant), IB, VB, TB, RB, UB

b. Dependent Variable: UI

Table 4.7 Model significance table(UI)

| ANOVA[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 372.602 | 5 | 74.520 | 173.137 | .000[b] |
| | Residual | 179.052 | 416 | .430 | | |
| | Total | 551.654 | 421 | | | |

*Source: own Survey (2022) (N =422)*

a. Dependent Variable: UI

b. Predictors: (Constant), IB, VB, TB, RB, UB

Table 4.8 Model summary (ITR)

| Model Summary[b] | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .884[a] | .781 | .779 | .61306 |

*Source: own Survey (2022) (N =422)*

a. Predictors: (Constant), IB, VB, TB, RB, UB b. Dependent Variable: ITR

Table 4.9 Model significance table (ITR)

| ANOVA[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 558.642 | 5 | 111.728 | 297.279 | .000[b] |
| | Residual | 156.348 | 416 | .376 | | |
| | Total | 714.991 | 421 | | | |

*Source: own Survey (2022) (N =422)*

a. Dependent Variable: ITR b. Predictors: (Constant), IB, VB, TB, RB, UB

If the Anova F ratio is statistically significant, the model as a whole accounts for a statistically significant percentage of the variance in the dependent variables (i.e. $R^2>0$).The R-square value

close to 1, suggesting that the model fit the data better (Analysis, 2017). The $R^2$ in the (table 4.6) reflects that 67.5% of the total variation of UI can be explained by the five barriers UB, VB, RB, TB and IB. And in table 4.8 we see $R^2$ reflecting 78.1% of the total variation of ITR can be explained by the five barriers UB, VB, RB, TB and IB.

**Path coefficient assessment for hypothesis testing**

A structural model's path coefficients are standardized beta coefficients from ordinary least squares regressions that represent the direction and strength of the causal relation and significance level of beta coefficients and are also important for confirming the hypothesized link. To obtain a significant result at p.05, a t-value of 1.96 must be accepted. If p 0.05 (or the absolute value of the t-value is less than 1.96) the hypothesis is accepted, suggesting that the discovery is significant at least 95 percent of the time; otherwise, it is not accepted (Abebe & Lessa, 2020).

Table 4.10 Regression Path coefficients, t values and p values

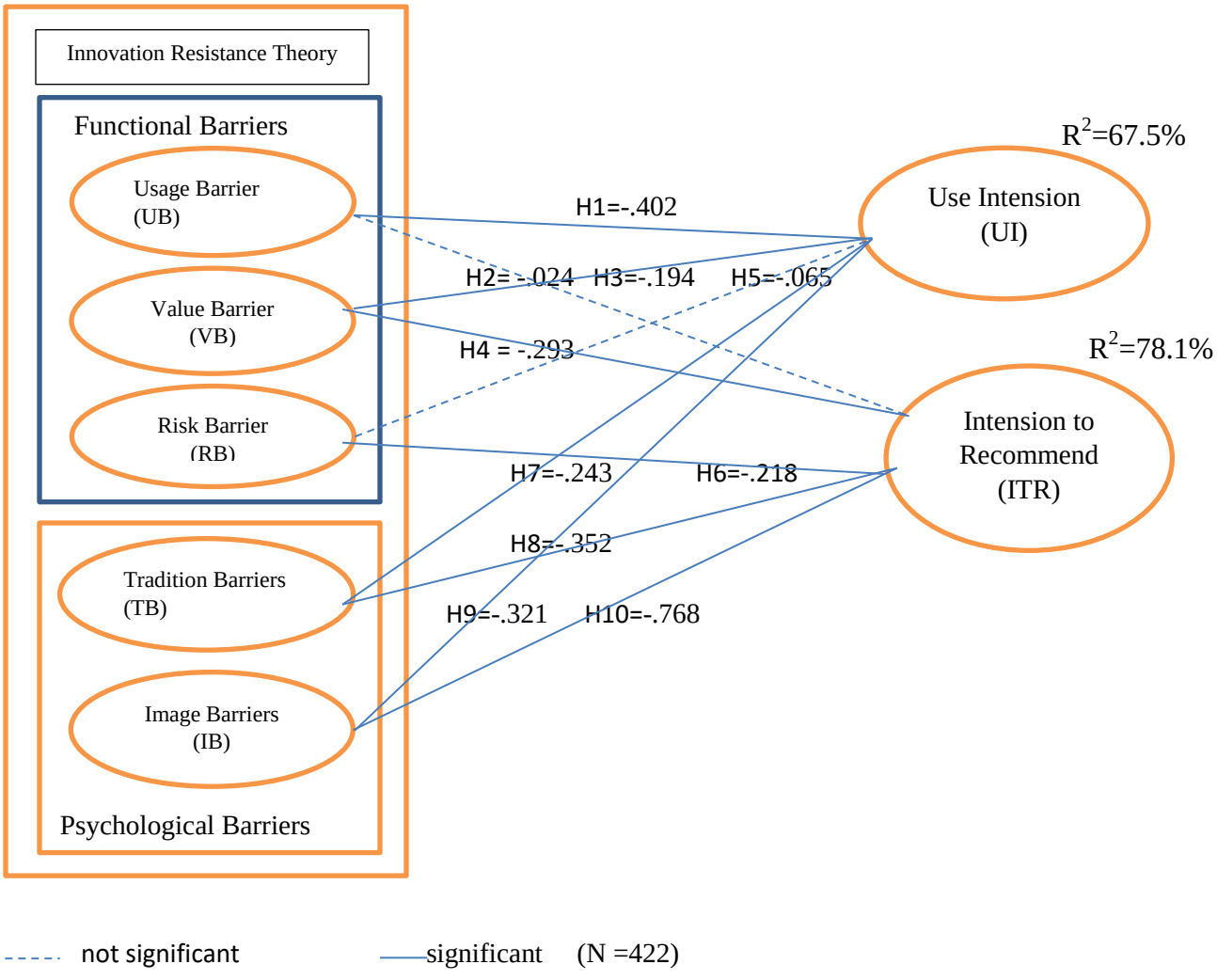
| Hypothesis | Constructs/path | Beta coefficients(β) | t- value | P value/sig | Status |
|---|---|---|---|---|---|
| H1 | **UB----UI** | -.402 | -7.891 | .000 | Supported |
| H2 | **UB----ITR** | -.024 | -.571 | .568 | Rejected |
| H3 | **VB---UI** | -.194 | -6.784 | .000 | Supported |
| H4 | **VB---ITR** | -.293 | -12.451 | .000 | Supported |
| H5 | **RB---UI** | -.065 | -1.520 | .129 | Rejected |
| H6 | **RB---ITR** | -.218 | -6.178 | .000 | Supported |
| H7 | **TB---UI** | -.243 | -5.796 | .000 | Supported |
| H8 | **TB---ITR** | -.352 | -10.224 | .000 | Supported |
| H9 | **IB---UI** | -.321 | -6.194 | .000 | Supported |
| H10 | **IB---ITR** | -.768 | -18.035 | .000 | Supported |

*Source: own Survey (2022) (N =422)*

The results show that the UB (p=0.000 <0.05), VB (p=0.000 <0.05) ,IB( p=0.000 <0.05) TB (p=0.000 <0.05) are statistically significant in influencing the UI. Additionally, as indicated by the β -coefficient, they have a negative influence on the UI, whereas UB (-.402) has the strongest

influence followed by IB(-.321) then by TB( -.243) and VB(-.194). And also IB (p=0.000 <0.05) with β of (-.768) has strongest negative influence followed by TB (p=0.000 <0.05) with β of (-.352) then by VB(p=0.000 <0.05) with β of (-.293) and then by RB (p=0.000 <0.05) with β of (-.218) on Telebirr ITR. UB has no (p=.568>0.05) statistically significant influence on ITR. The RB has no significant influence on the UI (RB with p=0.129>0.05.Therefore, it can be concluded that the four barriers UB,VB, IB and TB are important in explaining the UI of consumers towards Telebirr .And the four VB,RB,TB, and IB are important in explaining the ITR of consumers towards Telebirr.

Figure 4.3 Results of the structural model testing on Telebirr Adoption Barriers.



## 4.3. Discussion the results

**H1** investigated whether the usage barrier is negatively associated with the use intentions toward Telebirr. Our data supported this hypothesis with strongest influence (-.402) and also strengthened the findings reported in prior literature on mobile payment solutions (Kaur et al., 2020) and mobile payment services in the hospitality sector during a pandemic (Khanra et al., 2021). **H2** suggested that the usage barrier associated negatively with the consumers' with ITR Telebirr. However, we did not find support for this hypothesis. This result does not match with the prior literature that has shown that usage barriers share a negative association with ITR (Kaur et al., 2020). This implies that there are no significant influences of usage barrier that affect the recommendation intension of the respondents. According to the result of this study different usage barriers like that of slow transactional function, complicated processes have no effect on the recommendation intension of the respondents. This may need further investigation.

**H3** and **H4** studied whether value barrier is negatively associated with use intentions and ITR Telebirr. The study findings support for both hypotheses indicating negative associations with significant statistical value. This is consistent with previous research, which implies that value barriers have a negative association with mobile payment adoption intentions (Dotzauer & Haiss, 2017). This implies that when Telebirr provides several advantages and profitable promotional perks (discounts, cashback, etc.) as compared to other payment methods and when used for financial transactions, the respondents' intention to use and recommend Telebirr will be significantly influenced. This is the good way of attracting new users and also increases the frequency of use of the users.

The study findings do not support for **H5**, hypothesized risk barrier as having a negative association with use intentions toward Telebirr. The findings match the research that has reported risk barriers as having no association with consumers' adoption postponement of MPS (Khanra et al., 2021). Furthermore, the respondents in this study sample look like well-informed with Telebirr. So the fear of transferring to the wrong contact when using Telebirr for sending and receiving payments , sending the wrong amount, low network signal , debiting multiple times and fear of fraud that phishers may obtain the sensitive data, risk barriers are the users barriers

that has no statistically significant effect on the respondents UI towards Telebirr in case of this study.

**H6** hypothesizing a negative association between risk barriers and the ITR, supported for its negative association. The study finding shows the statistically significant negative association between RB and ITR. This result contradicts the investigation that reported association of risk barriers with ITR is statistically insignificant (Kaur et al., 2020). But from the fact of this study result when the above mentioned risk barriers increase the respondents ITR of Telebirr affected negatively.

**H7** and **H8** hypothesized that tradition barriers are negatively linked with use intentions towards Telebirr and ITR Telebirr. The study findings support both hypotheses. The study results also supports most prior literature, which has suggested a significant negative association with intentions and positive association with consumer resistance (Dotzauer & Haiss, 2017). According to this study traditional barrier is the second strongest for ITR and third strongest influencing for UI concerning the preference of cash payments, financial transactional services seeming complicated, preference of bank services and other traditional barrier aspects of the respondents affect the use intension and recommendation intension of the respondents. So the Telebirr service providers need to put a lot of exertion of breaking with these traditions.

The study findings also supported **H9** and **H10**, which examined the negative association of image barrier with intentions to use and recommend Telebirr. These findings supports the prior literatures suggested the image barrier as the most important barrier for postponement intentions, followed by opposition intentions and rejection intentions (Talwar, 2021). From the result of this study image barrier is the strongest influencing barrier with coefficient of (-.768) on ITR Telebirr and also the second strongest influencing barrier with coefficient of (-.321) on UI towards Telebirr. So the respondents image barriers concerning Telebirr services requirement of a lot of work (linking a bank account, mobile number, etc.), frequent transactional failures, complicated and difficult process of the service and also the spiritual issue related doubt of the respondents on the Telebirr technology are the influencing barrier of intention to use and recommend Telebirr.

# CHAPTER 5: SUMMARY, CONCLUSIONS and RECOMMENDATIONS

## Introduction

The main purpose of this study was to assess the adoption barriers of digital wallet services of Telebirr by specific study at Gelan City Administration. The study assessed different barriers that affect the user's use and recommendation intensions. Therefore, the aim of this chapter is to present the major findings, conclusions drawn from the results of the analysis of the data collected through different techniques and then make recommendations and comment on problems for further study.

## 5.1. Summary of Major Findings and Conclusion

The overall finding of the data is prepared, collected and analyzed based on the objective of the study, which is studying adoption barriers of Telebirr digital wallet service at Gelan City Administration. To answer the following research questions, questionnaire was developed and distribute to four hundred twenty two Telebirr users at Gelan City Administration.

1. What are the Adoption barriers of Telebirr at Gelan City Administration?

2. How do these adoption barriers impact the future use and recommendation intentions of Telebirr users at Gelan City Administration? According to the data collected through questionnaires and interview the major findings of the study and conclusion are presented as follows:

With concern to Other digital wallets and offered Telebirr services at Gelan city Administration;

- From the total 422 Telebirr subscribers respondents the majority 352(83.4%) are different banks ATM users which is by far greater than other digital wallets and mobile banking.
- Majority (90%) of the respondents want to get further knowledge about Telebirr.
- Majority (40.8%) of the respondents use Telebirr service only occasionally.
- There are respondents (35.3%) prefer cash over Telebirr service.
- Near to half of the respondents (49.3%) do not prefer Telebirr over other Digital wallets and mobile money services.
- From different offered Telebirr services (sending and Receiving money, buying air time,

Paying wih Telebirr (eg. Utilities bill), Paying for goods and services, For International remittance, For Bulky payment ( eg salaries), Donating/fund rising (for GERD), Buying mobile package, Cash Withdrawal and Depositing cash ,majority of the respondents use only limited services.

With regard to Telebirr adoption barriers and the impact this barriers on the future use and recommendation intentions of Telebirr users at Gelan City Administration;

- For this part of analysis Innovation resistance theory (IRT) is implemented for assessing how adoption functional and psychological barriers impact the use behavior of Telebirr users in terms of their intentions to carry on to use and recommend it to others. These adoption barriers categorized in to the five independent variables of the IRT barriers which are: usage barriers (UB), risk barriers (RB), value barriers (VB), image barriers (IB), and tradition barriers (TB) and also to the usage intentions (UI) and the intentions to recommend (ITR) as the two dependent variables.
- So for correlation analysis; there is a statistically significant negative linear relationship between UI and ITR and each of the barriers except for VB.
- According to the $R^2$ in the regression study, the five barriers UB, VB, RB, TB, and IB account for 67.5 percent of the overall variation in UI. The five barriers UB, VB, RB, TB, and IB account for 78.1 percent of the entire variation in ITR, as measured by $R^2$.
- These barriers have a negative impact on UI, as indicated by the β -coefficient, with UB (-.402) having the most impact, followed by IB (-.321) then by TB( -.243) and VB(-.194). And also IB with β of (-.768) has strongest negative influence followed by TB with β of (-.352) then by VB with β of (-.293) and then by RB with β of (-.218) on Telebirr ITR. UB has no ($p=.568>0.05$) statistically significant influence on ITR. The RB has no significant influence on the UI (RB with $p=0.129>0.05$). However, it can be concluded that the four barriers UB, VB, IB and TB are important in explaining the UI of consumers towards Telebirr. And the four IB, TB, RB, and VB are important in explaining the ITR of consumers towards Telebirr.

### Conclusion

From the above summary it can be seen that Telebirr is not adopted well in Gelan City Administration and also show that the respondents have different level of awareness, different level of usage behaviors and affected by different types of IRT barriers on Telebirr issues. This barriers influence the respondents use intension and recommendation intension for friends. These barriers are described in the appendix part of this paper.

## 5.2 Recommendations

From the information obtained by interview it was mentioned that Telebirr aimed to extend mobile money service solutions to financially excluded sections of Ethiopian society and to create cashless and fraud free society. So to achieve this objectives and goal through the country it is recommended that to consider the following points.

- According to this study, usage barriers are the strongest hurdle in the successful use intensions of the respondents. Consequently, Ethio telecom should focus on making Telebirr services easy to use. Furthermore, a product or service should be accessible at any time and in any circumstances.
- Image barriers are the highest among the barriers influence the respondent's intension to recommend and also the second strongest barrier of respondent's intension to use. So the Telebirr service providers should identify and try to solve the specific reasons why individuals perceive that using Telebirr is too complicated, difficult, has frequent instances of transaction failures and think as having related spiritual issues which can affect their life.
- This study findings also show that the Tradition barriers are also among the strongest barriers influencing both the respondents use intension and intension to recommend. So this needs special focus to the communication of the advantages of Telebirr against the most favored payment method cash.
- Also Value barriers proved to be another obstacle of Telebirr users intention to use and recommend. Therefore, Ethio telecom need to carefully think of the value Telebirr provides to consumers which is required to be transferred into a suitable communication strategy. Eg. Should consider the advantages Telebirr offer while used compared with other payment methods (e.g., cash, card, internet banking).

- Lastly the risk barriers concerning the security issues has the power to influence users intension to recommend for others, and it should be considered by giving privacy and security guidelines, it should be revealed that service providers including Ethiotelecom sale centers and Telebirr agents act in interest of their customers. In summary, it is of crucial significance that trusts in Telebirr services is recognized in order to win more consumers.

In addition the society of this study area are recommended to identify what is advantageous and what is harmful , what is good and what is not and also the have to ask the concerned ones (service providers) for their barriers and challenges on Telebirr service.

## Limitations and future research directions

This study assessed the adoption barriers of Telebirr digital wallet service at Gelan City Administration. The study centered only on the Gelan city administration Telebirr users. To get generalized information, the researchers are recommended to do further studies on the same subject at different areas and also with the inclusive of non Telebirr users. Researchers are also recommended to identify other variables that are barriers to adoption of Telebirr. Future researchers may undertake a qualitative investigation in order to develop a conceptual model and a framework for Telebirr adoption hurdles. Views of respondents may change over time when they get more awareness and experience, as Telebirr is recent innovation, so the study will be useful if re-studied after some period of time.

## References


*Abebe, F., & Lessa, L. (2020). Factors Affecting Mobile Payment Adoption by Merchants in Ethiopia. July, 1–11.*

*Africa, S., & Mothobi, O. (n.d.). Infrastructure Deficiencies and Adoption of Mobile Money in. 1–22.*

*Ahmed, T. (2021). EVALUATION OF THE OPTIMUM CELLULAR NETWORK SITE USING GEOSPATIAL TECHNOLOGIES: A CASE OF MUNESA WEREDA, ARSI, ETHIOPIA (Doctoral dissertation, ASTU).*

*Alemu, G., Ferede, T., & Fiorito, A. (2021). on Digital Payment Services in Ethiopia : An Application of a Decision Tree Framework CGD Policy Paper 220 July 2021. July.*

*Analysis, M. R. (2017). ft Pr oo f - e rib e.*

*Bilate, G. T., Affairs, P., Zou, X., & Affairs, P. (2021). Journal of African Foreign Affairs ( JoAFA ) 50-Year China-Ethiopia Diplomatic Relations : Achievements and Challenges. 8(1), 77–96.*

*Bogale, W. (2005). Ethiopian Telecommunications Corporation A Background Paper on Telecom & Telecom Statistics in Ethiopia.*

*Bongomin, F., Chelangat, M., Eriatu, A., Chan Onen, B., Cheputyo, P., Godmercy, S. A., Ekuk, E., Idony, F., & Henry Obol, J. (2018). Prevalence and Factors Associated with Contraceptive Use among HIV-Infected Women of Reproductive Age Attending Infectious Disease Clinic at Gulu Regional Referral Hospital, Northern Uganda. BioMed Research International, 2018. https://doi.org/10.1155/2018/9680514*

*Case, T. H. E., & Ethio, O. F. (n.d.). RISKS AND OPPORTUNITIES OF LATE TELCO PRIVATISATION.*

*Crowe, M., & Tavilla, E. (2015). Mobile Banking and Mobile Payment Practices of U . S . Financial Institutions : Results from 2014 Survey of FIs in Five Federal Reserve Districts.*

*DIGITAL MONEY: The Law of Crypto Currency and Cryptography in Uganda - - - - - - - - - - - - - - - - - -. (n.d.).*

*Dotzauer, K., & Haiss, F. (2017). Barriers towards the adoption of mobile payment services.*

*Gsma. (2021). Humanitarian cash and voucher assistance programmes in Ethiopia: Context analysis and capability assessment of the mobile money ecosystem. March. www.gsma.com/m4h*

*Joint, P., & Services, F. (2021). Parliamentary Joint Committee on Corporations and Financial Services (Issue October).*

*Kaur, P., Dhir, A., Singh, N., Sahu, G., & Almotairi, M. (2020). Journal of Retailing and Consumer Services An innovation resistance theory perspective on mobile payment solutions. Journal of Retailing and Consumer Services, 55(June 2019), 102059. https://doi.org/10.1016/j.jretconser.2020.102059*

*Khanra, S., Dhir, A., Kaur, P., & Joseph, R. P. (2021). Journal of Hospitality and Tourism Management Factors influencing the adoption postponement of mobile payment services in the hospitality sector during a pandemic. Journal of Hospitality and Tourism Management, 46(October 2020), 26–39. https://doi.org/10.1016/j.jhtm.2020.11.004*

*Lemma, T. S. (2021). Addis ababa university college of business and economics. March.*

*Lowry, C. (2016). What ' s in Your Mobile Wallet ? An Analysis of Trends in Mobile Payments and Regulation. May, 353–384.*

*Moges, A., & No, I. D. (2018). Assessment of the Practices and Operational Barriers of Mobile money Service in the Commercial Bank of Ethiopia : The Case of CBEBirr in East Addis District Assessment of Practices and Operational Barriers of Mobile money Service in the Commercial Bank of. September.*

*Moghavvemi, S., & Phoong, S. W. (2020). CO. November. https://doi.org/10.1016/j.jretconser.2020.102364*

*National Digital Payments Strategy 2021–2024. (2021).*

*Program, M. (2021). The Effect of Perceived Cost , Trust , Usefulness and Customer Value Addition on Intention to Use of Go-Pay Mobile Payment Services in Small Merchants. 2(10), 715–732. https://doi.org/10.47153/jbmr210.2392021*

*Quest, T. M. (2019). A Study on How Digital Payments have Revolutionized the Customer Experience. 2(1).*

*Raimee, N., Maheswaran, L., & Appannan, J. S. (2021). Adoption of Digital Wallet : Influencing Factors among Undergraduates in Malaysia. 3(2), 34–43.*

*Schreiber-Gregory, D., & Bader, K. (2018). Logistic and Linear Regression Assumptions: Violation Recognition and Control. Midwest SAS User Group, January 2018, 1–21. https://www.lexjansen.com/wuss/2018/130_Final_Paper_PDF.pdf*

*Statistics Solutions. (2014). Assumptions of Linear Regression. Statistics Solutions, 1–7. https://www.statisticssolutions.com/assumptions-of-linear-regression/*

*Talwar, S. (2021). Why have consumers opposed , postponed , and rejected innovations during a pandemic ? A study of mobile payment innovations. 25, 1–27.*

*The Mobile Economy. (2022).*

*Tiwari, P., Garg, V., & Singhal, A. (2019). A study of Consumer adoption of Digital Wallet. 2019 9th International Conference on Cloud Computing, Data Science & Engineering (Confluence), 664–669.*

*Wamuyu, P. K. (2014). T HE R OLE OF C ONTEXTUAL F ACTORS IN THE U PTAKE AND C ONTINUANCE OF. 1–19. https://doi.org/10.1002/j.1681-4835.2014.tb00457.x*

*https://banksethiopia.com/news/telebirr-mobile-wallet-service-in-ethiopia/*

*https://www.ethiotelecom.et/telebirr/*

# Appendixes

## Annex. I. Questionnaires

**Addis Ababa University**

**School of Graduate Studies**

**Department of Project Management**

Research Questionnaire for Gelan City Administration Telebirr Users.

Name of student researcher: Bayush Belachew

Contact address: Mobile: 09 13 20 70 47

E-mail: Bayush.Belachew@ymail.com

Dear Respondents!

I am a postgraduate student in MA of Project Management Program in Addis Ababa University, School of Commerce. Currently, I am undertaking a research on the topic "The Adoption Barriers of Digital Wallet Services. The Case of Telebirr at Gelan City Administration" in Partial Fulfillment of the Requirement for the Master of Arts Degree in Project Management. The general objective of this project work is to study the Adoption barriers that the Gelan City Administration Telebirr users facing. Please support me by giving correct and complete information so that it is possible to come up with basic findings on matters chosen for investigation. Your participation is completely voluntary, and the information you provide will be kept private and used only for academic purposes.

Please do not hesitate to contact me at the aforementioned address if you have any questions. Please accept my sincere gratitude in advance for your cooperation.

**Part 1: Demographic/ Personal Information**

Instruction: Please indicate your answer for each of the following questions by circling your answers.

1. Gender: a. Male b. Female

2. Age category:

a. 5-15 b. 16-25 c. 26-35 d. 36-45 e. 46-55 f. above 56

3. What is your level of education?

a. Not educated b. Primary school c. Secondary school

d. Diploma degree e. Bachelor's degree f. Master's degree or more

4. To which categories of the following working organization are you belong?

a. Government Administration
b. International Organizations, NGOs & Embassies
c. Public Institutions
d. Private institutions
e. Production Enterprises
f. Financial Institutions
g. others

**Part 2 : Other digital wallets and offered Telebirr services**

**About Telebirr**: Telebirr is a mobile payment and digital wallet service by Ethio telecom that lets customers makes different financial transactions using their phones. It allows depositing, receiving, Transfer and pay using mobile numbers, and also allows cashless transactions, receiving international remittance and to make payment at convenient stores via QR codes, purchase goods.

1. What other Digital Wallets and mobile payment services do you use? Select all you use.

a. Mobile banking of different banks

b. Different Banks Digital wallet platform (eg. CBE Birr,Amole and others)

c. Different banks ATM

2. Do you registered for Telebirr services?

a. Yes b. No

3. Do you want to learn more about Telebirr ?

a. Yes b. No

4. How often you use Telebirr?

a. Daily b. Occasionally c. Once in a week d. Once in a month

5. Do you prefer Telebirr service over cash?

a. Yes b. No

6, Do you prefer Telebirr over other Digital wallets and mobile money services?

a. Yes b. No

7. Which types of Telebirr services you use ? Choose all that you use.

A. Sending and Receiving money
B. Buying air time
C. Paying wih Telebirr (eg. Utilities bill) .
D. Paying for goods and services
E. For International remittance
F. For Bulky payment ( eg salaries)
G. Donating/fund rising (for GERD)
H. Buying mobile package
I. Cash Withdrawal
J. Depositing cash
K. None

**Part 3 : Telebirr Adoption Barriers Questions.**

Instructions: In the table below, tick your answer or level of agreement or disagreement with each of the following statements.

1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=strongly agree

| **Usage Barriers (UB)** | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| **UB1**. Using a Telebirr for mobile payment and digital wallet services is difficult for me. | | | | | |
| **UB2** Using a Telebirr for mobile payment and digital wallet services is inconvenient for me because my phone is not always with me. | | | | | |
| **UB3**. Telebirr often hang or work slowly when used for financial transactions. | | | | | |
| **UB4** The steps to use Telebirr for financial transactions are not clear to me. | | | | | |
| **UB5**. Entering data in a Telebirr for financial transactions is a complicated process. | | | | | |
| **Value Barrier (VB)** | | | | | |
| **VB1**. Telebirr offers many advantages while used compared with other payment methods (e.g., cash, card, internet banking) | | | | | |
| **VB2**. Telebirr offers lucrative promotional benefits (discount, cashback, etc.) when used for financial transactions. | | | | | |
| **Risk Barriers (RB)** | | | | | |
| **RB1**.I fear that money may be transferred to the wrong contact when using Telebirr for sending and receiving payments | | | | | |
| **RB2**. I fear that I may send the wrong amount (e.g., with an extra zero) when using Telebirr for sending payments | | | | | |
| **RB3**. I fear that money may be debited multiple times from my account when using a telebirr for sending payments. | | | | | |
| **RB4**. If the network signal is low, Telebirr do not process the financial transactions. | | | | | |
| **RB5**. I fear the fraud that phishers may obtain my sensitive data such as password of my Telebirr account. | | | | | |
| **Tradition Barriers (TB)** | | | | | |
| **TB1**. I am more comfortable with cash transactions. | | | | | |
| **TB2**. Telebirr financial transactional services seem complicated to me. | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **TB3**. I like going to bank branches on a weekday for money transfers. | | | | | |
| **TB4**. Chatting with the teller in the bank boosts my confidence in money transfers. | | | | | |
| **TB5**. I find it difficult to get my problem resolved from the Telebirr service providers, by the time I use Telebirr. | | | | | |
| **Image Barriers (IB)** | | | | | |
| **IB1**. I think in a way that using Telebirr services requires a lot of work (linking a bank account, mobile number, etc.) | | | | | |
| **IB2**. I have the image of that using Telebirr services causes frequent transaction failures. | | | | | |
| **IB3**. In my opinion Telebirr services are suitable only for the youth. | | | | | |
| **IB4**. I have an image that Telebirr is too complicated to be useful. | | | | | |
| **IB5**. I have an image that using Telebirr services is a difficult process. | | | | | |
| **IB6**. I have the image that Telebirr may have related spiritual issues which can affect my life. | | | | | |
| **Intension To Use (UI)** | | | | | |
| **UI1**. I expect my use of Telebirr to increase in future | | | | | |
| **UI2**. I intend to use the Telebirr in the future | | | | | |
| **UI3**. If I have an opportunity ,I will use the Telebirr | | | | | |
| **UI4**. I plan to use the Telebirr frequently | | | | | |
| **Intension To Recommend(ITR)** | | | | | |
| **ITR1**.I will recommend the Telebirr to my friends | | | | | |
| **ITR2**. If I have a good experience with the Telebirr, I will recommend it to my friends. | | | | | |

**Thank you again for your cooperation!**

አዲስ አበባ ዩኒቨርሲቲ

የድህረ ምረቃ ትምህርት ቤት

የፕሮጀክት ማኔጅመንት መምሪያ

ለገላን ከተማ አስተዳደር የቴሌብር ተጠቃሚዎች የምርምር መጠይቅ።

የተማሪ ተመራማሪ ስም፡ ባዩሽ በላቸው

አድራሻ፡ ሞባይል፡ 09 13 20 70 47

ኢሜል፡- Bayush.Belachew@ymail.com

ውድ ምላሽ ሰጪዎች!

በአዲስ አበባ ዩኒቨርሲቲ የንግድ ትምህርት ቤት የፕሮጀክት ማኔጅመንት ፕሮግራም የድህረ ምረቃ ተማሪ ነኝ። በአሁኑ ጊዜ፣ "የዲጂታል የኪስ ቦርሳ አገልግሎቶች የመቀበል መሰናክሎች፣ በገላን ከተማ አስተዳደር የቴሌቢር ጉዳይ" ("The Adoption Barriers of Digital Wallet Services; The Case of Telebirr at Gelan City Administration") በሚል ርዕስ ምርምር እያካሄድኩ ነው። በፕሮጀክት ማኔጅመንት የኪነጥበብ ማስተርስ ዲግሪ መስፈርቱን በከፊል አሟልታል። የዚህ ጥናት አጠቃላይ አላማ የገላን ከተማ አስተዳደር የቴሌብር ተጠቃሚዎች እያጋጠሙት ያለውን የመቀበል መሰናክሎች መገምገም ነው።

ለምርመራ በተመረጡ ጉዳዮች ላይ መሰረታዊ ግኝቶችን ማምጣት ይቻል ዘንድ ትክክለኛ እና የተሟላ መረጃ በመስጠት ደግፉኝ። የእርስዎ ተሳትፎ ሙሉ በሙሉ በፈቃደኝነት ላይ የተመሰረተ ነው; እና እርስዎ የሚያቀርቡት መረጃ በሚስጥር ይጠበቃል እና ለአካዳሚክ ዓላማዎች ብቻ ጥቅም ላይ ይውላል::

እባክዎ ማንኛውም አይነት ጥያቄ ካሎት በተጠቀሰው አድራሻ እኔን ለማግኘት አያቅማሙ። እባኮትን ለትብብራችሁ አስቀድማችሁ ልባዊ ምስጋናዬን ተቀበሉ::

**ክፍል 1፡ የስነሕዝብ/የግል መረጃ**

መመሪያ፡ እባኮትን ለሚከተሉት ጥያቄዎች ለእያንዳንዱ መልስዎን በማክበብ ያመልክቱ።

1. ጾታ፡ ሀ. ወንድ ለ. ሴት

2. የዕድሜ ምድብ፡-

ሀ. 5-15 ለ. 16-25 ሐ. 26-35 መ. 36-45 ሠ. 46-55 ረ. ከ 56 በላይ

3. የትምህርት ደረጃዎ ስንት ነው?

ሀ. ያልተማረ ለ. የመጀመሪያ ደረጃ ትምህርት ቤት ሐ. ሁለተኛ ደረጃ ትምህርት ቤት

መ. የዲፕሎማ ዲግሪ ሠ. የባችለር ዲግሪ ረ. የማስተርስ ዲግሪ ወይም ከዚያ በላይ

4. እርስዎ ከሚከተሉት የሥራ ድርጅት ምድቦች ውስጥ የትኞቹ ናቸው?

ሀ. የመንግስት አስተዳደር ለ. ዓለም አቀፍ ድርጅቶች፣ መንግሥታዊ ያልሆኑ ድርጅቶች እና ኤምባሲዎች

ሐ. የሕዝብ ተቋማት መ. የግል ተቋማት ሠ. የምርት ኢንተርፕራይዞች ረ. የፋይናንስ ተቋማት

ሰ. ሌሎች

**ክፍል 2: ሌሎች ዲጂታል የኪስ ቦርሳዎች እና የቴሌቢር አገልግሎቶች አቅርቦት ጥያቄዎች:**

ስለ ቴሌብር፣ ቴሌቢር የሞባይል ክፍያ እና የዲጂታል ቦርሳ አገልግሎት ደንበኞች ስልኮቻቸውን በመጠቀም የተለያዩ የፋይናንሺያል ግብይቶችን እንዲያደርጉ የሚያስችል የኢትዮ ቴሌኮም አገልግሎት ነው። የተንቀሳቃሽ ስልክ ቁጥሮችን በመጠቀም ገንዘብ ማስገባት፣ መቀበል፣ ማስተላለፍ እና መክፈል ያስችላል፣ እንዲሁም ያለ ገንዘብ ግብይቶች፣ ዓለም አቀፍ የገንዘብ ልውውጦችን መቀበል እና በQR ኮድ ምቹ በሆኑ መደብሮች ክፍያ ለመፈጸም፣ ዕቃዎችን መግዛት ያስችላል።

1. ምን ዓይነት ዲጂታል የኪስ ቦርሳ (digital wallets) እና የሞባይል ክፍያ አገልግሎቶችን ይጠቀማሉ?

ሀ. የተለያዩ ባንኮች የሞባይል ባንክ

ለ. የተለያዩ ባንኮች ዲጂታል የኪስ ቦርሳ (ለምሳሌ CBE Birr፣Amole እና ሌሎች)

ሐ. የተለያዩ ባንኮች ኤቲኤም

2. ለቴሌብር አገልግሎት ተመዝግበዋል?

ሀ. አዎ ለ. አይ

3. ስለ ቴሌቢር የበለጠ ማወቅ ይፈልጋሉ?

ሀ. አዎ ለ. አይ

4. ቴሌቢርን ምን ያህል ጊዜ ይጠቀማሉ?

ሀ. በየቀኑ ለ. አልፎ አልፎ ሐ. በሳምንት አንድ ጊዜ መ. በወር አንድ ጊዜ

5. ከጥሬ ገንዘብ ይልቅ የቴሌቢርን አገልግሎት ይመርጣሉ?

ሀ. አዎ ለ. አይ

6, ቴሌቢርን ከሌሎች የዲጂታል ቦርሳዎች እና የሞባይል ገንዘብ አገልግሎቶች ይመርጣሉ?

ሀ. አዎ ለ. አይ

7. የትኞቹን የቴሌብር አገልግሎቶች ይጠቀማሉ? የምትጠቀመውን ሁሉ ምረጥ።

ሀ. ገንዘብ መላክ እና መቀበል ለ. የአየር ጊዜ መግዛት

ሐ. በቴሌቢር መክፈል (ለምሳሌ የፍጆታ ክፍያ)። መ. ለሸቀጦች እና አገልግሎቶች መክፈል

ሠ. ለአለም አቀፍ የገንዘብ ልውውጥ ረ. ለጅምላ ክፍያ (ለምሳሌ ደሞዝ)

ሰ. ልገሳ/ ፈንድ መጨመር (ለGERD) ሸ. የሞባይል ጥቅል መግዛት

ቀ. ጥሬ ገንዘብ ማውጣት በ. ጥሬ ገንዘብ ማስቀመጥ

ተ. የለም

**ክፍል 3 : ቴሌቢርን የመቀበል (adoption) እንቅፋቶች ጥያቄዎች:**

*መመሪያዎች፡- ከታች ባለው ሠንጠረዥ ውስጥ መልስዎን ወይም የስምምነት ደረጃዎን ወይም አለመግባባቱን ከእያንዳንዱ የሚከተሉት መግለጫዎች ጋር ምልክት ያድርጉ።*

1= በጣም አልስማማም ፣ 2= አልስማማም ፣ 3= ገለልተኛ ፣ 4= እስማማለሁ እና 5= በጣም እስማማለሁ

| **የአጠቃቀም እንቅፋቶች (Usage Barriers ) (UB)** | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| UB1. ለሞባይል ክፍያ እና ለዲጂታል ቦርሳ አገልግሎት ቴሌቢርን መጠቀም ከባድ ሆኖብኛል። | | | | | |
| UB2. ለሞባይል ክፍያ እና ለዲጅታል ቦርሳ አገልግሎት ቴሌቢርን መጠቀም ለእኔ አይመቸኝም ምክንያቱም ስልኬ ሁል ጊዜ ከእኔ ጋር አይደለም። | | | | | |
| UB3. ቴሌቢር ለፋይናንሺያል ግብይት ሲውል ብዙ ጊዜ ተንጠልጥሎ ወይም ቀስ ብሎ ይሰራል። | | | | | |
| UB4. ቴሌቢርን ለፋይናንሺያል ግብይቶች የምጠቀምባቸው ደረጃዎች (Steps) ለእኔ ግልጽ አይደሉም | | | | | |
| UB5. ለፋይናንሺያል ግብይት በቴሌቢር ውስጥ መረጃ ማስገባት ውስብስብ ሂደት ነው። | | | | | |
| **የእሴት እንቅፋቶች (Value Barriers ) (VB)** | | | | | |
| VB1. ቴሌቢር ከሌሎች የመክፈያ ዘዴዎች (ለምሳሌ ጥሬ ገንዘብ፣ ካርድ፣ ኢንተርኔት ባንክ) ጋር ሲወዳደር ብዙ ጥቅሞችን ይሰጣል። | | | | | |
| VB2. ቴሌቢር ለፋይናንሺያል ግብይቶች በሚውልበት ጊዜ ትርፋማ የማስተዋወቂያ ጥቅማጥቅሞችን (ቅናሽ፣ ገንዘብ ተመላሽ ወዘተ) ይሰጣል | | | | | |
| **የአደጋ እንቅፋቶች ( Risk Barriers ) (RB)** | | | | | |
| RB1. ቴሌቢርን ለመላክ እና ክፍያ ለመቀበል በሚጠቀሙበት ጊዜ ገንዘብ ወደ ተሳሳተ አድራሻ ሊተላለፍ ይችላል ብዬ እሰጋለሁ። | | | | | |
| RB2. ክፍያ ለመላክ ቴሌቢርን ስጠቀም የተሳሳተ መጠን (ለምሳሌ ከዜሮ ጋር) ልልክ እችላለሁ ብዬ እሰጋለሁ። | | | | | |
| RB3. ክፍያ ለመላክ ቴሌቢርን ስጠቀም ገንዘቡ ብዙ ጊዜ ከመለያዬ ሊከፈል ይችላል ብዬ እሰጋለሁ። | | | | | |

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| RB4. የኔትወርክ ምልክቱ ዝቅተኛ ከሆነ ቴሌቢር የፋይናንሺያል ግብይቶችን አያካሂድም። | | | | | |
| RB5. አስጋሪዎች (phishers) እንደ ቴሌቢር መለያ የይለፍ ቃል ያሉ የእኔን ሚስጥራዊ መረጃዎች ሊያገኙ የሚችሉትን ማጭበርበር እፈራለሁ። | | | | | |
| **የባህላዊ መሰናክሎች (Tradition Barriers) (TB)** | | | | | |
| TB1. በጥሬ ገንዘብ ልውውጥ የበለጠ ይመቸኛል። | | | | | |
| TB2. የቴሌብር ፋይናንሺያል ግብይት አገልግሎቶች ውስብስብ ይመስሉኛል። | | | | | |
| TB3. ለገንዘብ ማስተላለፍ በሳምንት ቀን ወደ ባንክ ቅርንጫፎች መሄድ እወዳለሁ። | | | | | |
| TB4. በባንክ ውስጥ ከገንዘብ ሰጪው ጋር መወያየት በገንዘብ ማስተላለፍ ላይ ያለኝን እምነት ይጨምራል። | | | | | |
| TB5. ቴሌቢርን ስጠቀም የሚገጥመኝን ችግር ከቴሌቢር አገልግሎት ሰጪዎች መፍታት ከብዶኛል። | | | | | |
| **የአመለካከት እንቅፋቶች (Image Barriers) (IB)** | | | | | |
| IB1. እኔ እንደማስበው የቴሌቢር አገልግሎትን ለመጠቀም ብዙ ስራ የሚጠይቅ (የባንክ አካውንት፣ የሞባይል ቁጥር፣ ወዘተ ማገናኘት) ነው። | | | | | |
| IB2. የቴሌቢር አገልግሎትን መጠቀም ተደጋጋሚ የግብይት ውድቀቶችን ያስከትላል የሚል አመለካከት አለኝ። | | | | | |
| IB3. በእኔ እምነት የቴሌቢር አገልግሎት ለወጣቶች ብቻ ተስማሚ ነው። | | | | | |
| IB4. ቴሌቢር ጠቃሚ እንዳይሆን በጣም የተወሳሰበ ነው የሚል አመለካከት አለኝ። | | | | | |
| IB5. የቴሌቢር አገልግሎትን መጠቀም ከባድ ሂደት እንደሆነ አስባለሁ። | | | | | |
| IB6. ቴሌቢር በሕይወቴ ላይ ተጽዕኖ ሊያሳድሩ የሚችሉ መንፈሳዊ ጉዳዮች ሊኖሩት ይችላል የሚል አስተሳሰብ አለኝ። | | | | | |
| **የመጠቀም ፍላጎት (Intension To Use) (UI)** | | | | | |
| UI1. ወደፊትም የቴሌቢር አጠቃቀሜ ይጨምራል ብዬ እጠብቃለሁ። | | | | | |
| UI2. ወደ ፊት ቴሌቢርን ልጠቀም አስባለሁ። | | | | | |
| UI3. እድሉ ካገኘሁ ቴሌቢርን እጠቀማለሁ። | | | | | |

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| UI4. ቴሌቢርን በተደጋጋሚ ስመጠቀም እቅድ አለኝ | | | | | |
| **የመምከር ፍላጎት (Intension To Recommend) (ITR)** | | | | | |
| ITR1. ቴሌቢርን ለጓደኞቼ እመክራለሁ | | | | | |
| ITR2. በቴሌቢር ጥሩ ልምድ ካገኘሁ ለጓደኞቼ እመክራለሁ። | | | | | |

**ስለ ትብብርዎ በድጋሚ አመሰግናለሁ!**

Key informant  Interview for Telebirr Head office

1. General information about Telebirr and the Project objectives?
2. Who are Telebirr agents and what do they do?
3. What strategies your office using to expand the service and what is your future plan?.
4. What are frequent challenges and barriers raised about Telebirr sevice from the society?
5. Is there any assessment done on Telebirr by this office up to date?

Key informant  Interview for  Gelan City Administration Ethio teleom  Sale Centers

1. What are the Role of Ethio telecom sale centers on Telebirr Issues?
2. How is the Gelan City Administration societies' awareness and intension on Telebirr Service?
3. What frequent complains and barriers you hear from these society on Telebirr service?