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

By

G/Amanuel Moges

ID No. GSE/0055/08

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

Fesseha Afework (Ast. Prof.)

September 2018

Addis Ababa, Ethiopia

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Declaration

I, G/Amanuel Moges, hereby declare that this thesis is my own work and that it contains no material previously published or written by another person (except where explicitly acknowledged in the references used). No material was copied which to a substantial extent has been submitted for the award of any other degree or diploma at AAU or other institutions of higher learning.

Name: G/Amanuel Moges

_____

Date: September 2018

This is to certify that the above declaration made by the candidate is correct to the best of my knowledge.

Advisor Name: Fesseha Afework (Ast. Prof.)

_____

Date: _____, 2018

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Internal Examiner _____Signature _____Date_____

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Table of Contents

List of Figures

List of Tables

Abstract

The study was about the practices and operational barriers associated with Mobile Money (CBEBirr) services in the commercial bank of Ethiopia. The focal point of the study was to point out barriers and reveal practices currently undertaken by the bank's administrative branches and CBEBirr agents. It also assessed on current performance on activities of various CBEBirr Products like Airtime, cash in, cash out, send money, and buy goods and the total trust account transaction. The research was based on both primary and secondary data sources. Primary data was collected using a survey done in East Addis district through questionnaires and from the project office by interview. Data analysis was done using descriptive statistics. The research findings reveal that the barriers in CBEBirr project are technological, legal, business and customer related. Specific barriers identified are lack of IT infrastructure, unfriendly mobile interface design, weak agent network, complex procedures and formalities, lack of legal support for noncash transaction, lack of product awareness, low level of literacy, lack of technical support by the bank, lack of engagement by branches and agents, and lack of sufficient training. From the survey, it was understood that many branches did not give adequate training and support to agents. There is insufficient training given to branch staffs about CBEBirr project implementation. Branches considered CBEBirr activities as extra burdens on their functional assignments. These were some of the factors for performance variations among branches. In terms of CBEBirr products, also, performance varies among cash in, cash out, airtime, send money and buy goods. Cash-in (57%) and airtime (32%) have the first and second largest amount of transaction in Birr. Cash-out (7.9%) and send-money (2.4%) have the third and fourth largest shares of transaction amount in Ethiopian Birr, while, Buy goods have the least share (0.7%).

Keywords: *Barrier, Transaction, Mobile money, CBEBirr*

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Finally, I am grateful for Amen Desta who gave me technical advices during the questionnaire design.

Abbreviations

AML	Anti Money Laundering
ATM	Automated Teller Machine
CBE	Commercial Bank of Ethiopia
CCK	Communications Commission of Kenya
GCASH	Global Cash
GSMA	Global System Mobile Association
HCD	Human Centered Design
IDEO	Innovation Design Engineering Organization
JESH	Jijiga Slaughter House
MMU	Microfinance and Microenterprise Unit
MTN	Maritime Telecommunications Network
NCL	Nanotechnology Characterization Language
P2P	Person to Person
POS	Point of Sale
SADC	South African Development Community
SASSA	South African Social Security Agency
SME	Small and Medium Enterprises
UNCTAD	United Nations Conference on Trade and Development
USAID	United Nations Agency for International Development
WBG	World Bank Group

Chapter one

1. Introduction

1.1. Background of the study

Now a days, financial markets are quite simply failing to meet the needs of a vast swath of society—those who are poor, and especially the poor living in rural areas—in a way that is affordable, convenient, and safe(Ignacio, 2009). In the near past, electronic and card banking systems increase financial market accessibility very alarmingly. However, these services can only serve literate people who are mainly dwelled in most urban areas of the globe. Another spectrum of banking system (Mobile money) is emerging to reduce the gaps of card and the normal mobile banking services. Though challenging to be effectively and efficiently adopted by many developing nations, it can be used as an immediate cash by mobile transfer, mobile payments, and mobile financial services (UNCTAD, 2012).

Mobile technology has already proved to be the best solution to provide financial services to the marginalized poor and remotely living people of the developing world; it has many failure backgrounds except some exceptional success trends in some developing countries. As a role model by Kenyan M-PESSA, mobile phone based financial service enabled marginalized people get access to formal financial institutions. The different success history of mobile money services in Kenya, Tanzania, South Africa, Brazil, India etc., attracted the attention of many telecommunication companies for Mobile money development and aid. NGOs; like (DFID), International Finance Corporation (IFC), Consultative Group to Assist the Poor (CGAP), Bill & Melinda Gates Foundation, Innovation for Poverty Action (IPA), many research Centers, and governments are working in hope of providing an alternative means to enable the rural community to access financial services, irrespective of their being located remotely.

Based on a research finding by Mesfin and Ginea (2011) in Ethiopia, there are many barriers when thinking of providing financial services to people who cannot read and write in many remote areas. Issues like interfaces management and the technicality of Mobile Money projects

are among the major challenges, though, the state of mobile phone usage is relatively on a good status among rural Ethiopians. Even in villages without electricity, mobile phone ownership was surprisingly widespread. The primary use of mobile phones was to reduce money spent on transportation costs, to meet families in urban and other rural areas, and to be updated about market prices. They are quite aware of the utility of mobile phones and even non-owners easily describe how they would make use of it if they had one.

Mesfin and Ginea, however, analyzed that there is a problem of how to operate and use mobile phones by most old aged and illiterate Ethiopians. Most of the old people generally need the assistance of others to make a phone call and even to answer an incoming call. Literacy wise, over 70% of the adult populations are also functionally and practically illiterate and uneducated about Mobile money services in Ethiopia. According to researches undertaken by many other scholars, the question "how to design an appropriate model for illiterate part of the population" is still unanswered.

In addition to literacy related barriers, many studies proved in developing countries that the success or termination of mobile money programs are affected by institutional environment, market environment, end user environment, adoption, and availability (IDEO, 2009). An assessment of MFS(Mobile Financial Services) in South Africa indicated that the services able to be offered through mobile money are constrained through regulation, primarily due to the stipulation that E-money can only be issued by a bank, and the definition of deposit limits and the ability to offer mobile payments without a partnership with a bank (FinMark Trust, 2016).

The structure of the national payments system creates barriers for non-bank participants to participate in clearing services and adds cost to participation in payment services. The effect of these barriers is that the ability to launch payment mechanisms that are able to compete with. It is evident from the withdrawal behavior of consumers that a large portion of the South African banked population are not experiencing the benefits of financial inclusion. Cash is still the primary transacting mechanism, with the associated risk of safe storage and transport, and access to affordable credit is constrained through limited behavioral information (Mhlongo, 2016).

Designing a convenient and affordable Mobile money model for the vast majority of the unbanked population is a key problem to gain benefits of Mobile money programs across the world. As noted earlier, Ethiopia has also majority of its population unbanked. However, the problem of finding appropriate mobile money design for the poor is still under study, adoption of mobile money programs is increasingly expanding across most developing nations. Recently, private banks and the commercial bank of Ethiopia have been launching mobile money projects to expand financial inclusion in the country. The M-Birr, the Hello Cash, and since March 2017, the CBE Birr, are among the Mobile money projects that are being undertaken in Ethiopia. The main objective of this academic thesis was to assess on the operational barriers and practices of mobile money (CBE Birr) service in the commercial bank of Ethiopia.

1.2. Statement of the Problem

Mobile payments are on the rise, and it is argued that the magnitude of using mobile payments is higher in developing countries compared to the developed ones (Nielsen, 2014). According to GSMA (2014), the number of active mobile money accounts increased by 64% from 2012 to 2013 worldwide. The 2015 report by GSMA (2015) again revealed that the number of mobile money users continues to grow. As of December 2014, it was observed increment of 41% active mobile money accounts worldwide, with more than 100 million active accounts compared to 73 million in December 2013.

In 2014, there was no significant increment of Mobile Money Services (MMS) in Sub-Saharan Africa compared to Latin American and Caribbean but a rank still shows that Sub-Sahara Africa accounts for the majority of live service globally (53%), GSMA (2014). The International Telecommunication Union (ITU) in 2013 revealed that fewer numbers of people in developing countries, particularly in Africa, hold formal bank account; it is estimated 41% of the developing countries and 20% of adult Africans, respectively. Several factors account to this observation, but the distance from where the bank is located to where the rural majority live and the poor transport systems are experienced to be major contributing barriers.

Villasener (2013) argues that although there is a growing trend of mobile money (MM) presence in Latin America, East Asia and South Asia, the Sub-Sahara Africa, in particular, East Africa, the project implementation in some countries have faced barriers. Lack of awareness was cited as a significant barrier to mobile money ownership (FINMARK TRUST, 2016). Users acceptance behavior, business models (restrictions and Complexity), Suppliers (lack of infrastructure), regulation, were identified by Albuquerque and Cernev in 2011.

The barriers in some countries are significant affecting its successful implementation. A Fieldwork undertaken by Addis Ababa and Brunel Universities in 2012 rural Ethiopia revealed that many old-aged women and men could not use this new technology. According to this field assessment, they could not read in their own spoken language, and many of them could not read anything at all. Many of them do not understand symbols, icons, illustrations, and instructions. On the other hand, it should be contended that any system designed to serve them should be technically viable to them. Thus, this brings a challenge to designers of the system to make sure such users can be able to use their system. According to the fieldwork, the majority of the study population can identify currency notes based on color, images, and sizes, and not based on values inscribed. This raises the question, how could the mobile money project expanded among the vast majority of illiterate individuals to transact in an electronic payment ecosystem?

Another problem is to diffuse the Mobile money program among the literate urban dwellers and others. There are barriers that affect the success of this project practically for the literate urban dwellers. According to Fin-Mark Trust's report in 2016, Lack of information was found as the most significant barrier to mobile money ownership. Bank account ownership, access to ATMs, mobile banking and internet banking are inversely related to mobile money ownership. A research under taken by Chogo and Sedoyeka in 2015 also identified other barriers affecting the success of mobile money implementation in Tanzania. These barriers were technological, lack of infrastructure, lack of trust, lack of Standards / interoperability, regulations / legal framework, Problems of Scale, lack of cooperation between market players, rack of knowledge of m-money, low Levels of literacy and financial education.

Users, business models (restrictions and Complexity), Suppliers (lack of infrastructure), regulation, were identified by Albuquerque and Cernev in 2011 as some of the barriers affecting the success of the project implementation.

According to Mesfin and Ginea (2011), more than 70% of the population is functionally illiterate for mobile money services in Ethiopia. However, mobile money service operation in general, is not well studied in the country. Specifically, the CBEBirr mobile money program's operation is not studied since its formal launch. From literatures undertaken in other countries, it is assumed that there are barriers created variation of acceptance of the technology among branches of CBE due to literacy differences. Other barriers like, technological gaps, weak agent network strength, low product awareness , lack of training, lack of technical support etc. are not studied whether they have a significant impact on the success of CBEBirr Project operation for financial inclusion. Assessing on the practices and barriers of the CBEBirr service operation was the focus of this academic research with a specific focus on technological, legal, business and customer related barriers.

1.2.1. Research Questions

1. What are the current practices of the CBEBirr project in the Commercial bank of bank Ethiopia?
2. What are the operational barriers during CBEBirr service delivery by the bank?

1.3. Objectives of the Study

The Primary objective of this study was to assess on the barriers and practices of Mobile Money project operation in the commercial bank of Ethiopia.

Particularly, the study aimed to identify the following specific objectives

1. Make an Assessment on the barriers of CBEBirr Mobile Money Operation in the Commercial bank of Ethiopia.
2. Examine current practices of the project in the bank.

1.4. Significance of the Study

The main significance of this study is knowledge and experience sharing about CBEBirr (Mobile Money) operation by branches in the commercial bank of Ethiopia. The study is also vital for information sharing among partner groups of the bank, agents, merchants and individual customers as an insightful source of reference.

Some Countries have failure experiences in Mobile money implementations. Care have to be taken for Ethiopian mobile money programs, since it can seriously affect the entire business operation and development of banks in our country. The results of the study could be used as a reference for the bank to make further assessment of the project's operational obstacles. Additionally, it will help the organization for change management strategy, and other decisions, which are demanded by CBE Birr operation to expand the service across the country. Finally, the results of this research work can be used as a reference for future research work.

1.5. Scope and Limitation of the Study

This research work is a single case study in an organization to assess on the barriers and practices of mobile money (CBE Birr) operation in the commercial bank of Ethiopia by selecting East Addis Ababa district as a case study. The study analyzes secondary (Report) data from 97 branches in the district. For triangulation, the bank's total CBEBirr account analysis and CBE Birr Project office information was used as a research data. Primary data was also gathered from 25 branches by selecting 75 respondent staffs and 15 CBEBirr agents. Interview was also undertaken with three project office staffs and the total sample of the study was 93 including branch staffs, agents and the three project office employees.

The quality of this project work **might be** affected by factors emanated from its scope, content, and source of information, experience and time constraints.

1.6. Organization of the Paper

This paper is composed of five chapters including the conclusion and recommendation parts. Chapter 1 is an introductory part of the paper and deals with background of the study, statement of the problem, objectives, significance, scope, and limitations of the research. Chapter 2 is about literature reviews with two parts. Part one with theoretical review and part two empirical reviews on mobile money practices. It also contains a conceptual framework and a summary on related literatures. In chapter three, research methodology was stated. This part particularly explains about the research design, data collection tools and procedures, population sampling and data analysis techniques. The fourth chapter presents the analysis and result of the study. The last chapter presents major findings, conclusion and recommendation of the study.

Chapter Two

2. Review of related Literatures

2.1. Definition of Mobile Money

Financial services provided through digital mobile technologies have multiple configurations, goals, and characteristics. Depending on the combination of agents, technologies and objectives, they may have banking features, which are known as mobile banking. They may also have transaction payment features, which are recognized as mobile payments. Finally, they may also replicate the concept of money with digital features, which is then called mobile money.

However, the definitions of these concepts are not rigid and their delimitations are not very clear. In fact, there is a considerable confusion with regard to the terms, which are often used freely, regardless of their original meanings. This is the case with mobile payments: it may refer to bill payments, acquisition payments, or a transfer of financial resources or money between economic agents, and still come into the banking domain. In certain contexts, other concepts would be more appropriate, like mobile money, mobile transfer and/or mobile banking. This confusion of terms is not restricted to mobile services, but also to their objectives. The wide use of these confusing definitions led us to establish an initial conceptual basis, to support the literature review (refer at end of literature review).

2.1.1. Definition of Terms

Mobile transactions: This refers to transactions carried out through mobile technologies and devices. In addition to mobile payments, it includes every kind of mobile transaction offered by technology, whether it involves financial values or not.

Mobile payments: Mobile payments include payments made or enabled through digital mobile technologies, via handheld devices, with or without the use of mobile telecommunications networks. These payments are digital financial transactions, although not necessarily linked to

financial institutions or banks. There are several models of mobile payments that are currently employed worldwide. These are:

Mobile banking: Mobile banking can be understood as a set of mobile banking services, involving the use of portable devices connected to telecommunications networks that provide users with access to mobile payments, transactions and other banking and financial services linked to customer accounts, with or without the direct participation of traditional banking institutions. This concept can also be regarded as the banking channel through which the digital mobile services are provided by the institutions to their clients, i.e. by integrating the concepts of service and channel.

Mobile money: Electronic money – being essentially digital – has attributes related to mobility and portability, and is equivalent to mobile-money or mobile-cash. It can be differentiated from other means of electronic payment (such as credit cards, debit cards, smart cards, etc.) because of its ability to replicate the essential attributes of traditional money, such as liquidity, acceptability and anonymity. Mobile money may be related to mobile wallet, which refers to a digital repository of electronic money developed and implemented on mobile devices, allowing peer-to-peer transactions (P2P) between mobile devices (M2M) from users of the same service. It is similar to a normal physical wallet and is able to store money and credit and debit cards.

2.2. Theoretical Literature Reviews

2.2.1. Technology Acceptance Theories and Models

Many research works in the field of information systems have revealed theories and models that have power in predicting and explaining usage and acceptance behaviors. Mainly, these models and theories focus on how to promote usage by examining what encourages or hinders technology adoption and implementation. Since every prominent technology acceptance theory has different premises and benefits, it is vital to analyze each of them and consider how they may contribute towards a sound basis for creating a model that could be applicable to

mobile money projects. Some of related theories and technology acceptance models are discussed in this research work.

2.2.2. INNOVATIONS DIFFUSION THEORY (IDT)

IDT is concerned with how innovations spread and consists of two interlinked processes notably the diffusion and the adoption process. IDT gradually developed towards a refined innovation-decision process familiarized by Rogers (Rogers 1962, 1983, 1995). The innovation-decision process is one through which an individual or other decision-making entity passes through the critical phases of knowledge of an innovation; forming an attitude toward the innovation; making a decision to adopt or reject; implementation of the new idea and confirmation of this decision (Rogers 1995).

Using IDT as a baseline theory, Al-Jabri&Sohail (2012) examined the factors that may help financiers to design mobile services, which are appropriate for and adoptable by bank customers. Data obtained from 330 actual mobile banking users shown that relative advantage, compatibility, and observe-ability have positive impact on mobile money program implementation. Contrary to the findings in existing literatures, trial ability and complexity appeared to have insignificant effect on mobile money acceptance.

2.2.3. TECHNOLOGY ACCEPTANCE MODELS (TAM1 &TAM2)

The Technology Acceptance Model (TAM) was developed from the Theory of Reasoned Action (TRA) as a theoretical basis for specifying the causal linkages between perceived usefulness, perceived ease of use, users' attitudes, intentions and actual success in implementing mobile money (Davis 1989). Davis (1989) developed and validated better measures for predicting and explaining usage, which crystallized on two theoretical, constructs namely perceived usefulness and perceived ease of use as the fundamental determinants of system use. Hence, TAM replaces determinants of attitude of TRA with perceived usefulness and perceived ease of use.

Hung et.al (2004) used TAM to evaluate the acceptance and usage of mobile money by employing data collected from 205 students selected proportionally from nine universities located at the Taipei City in China. Study results revealed that perceived ease of use and perceived usefulness are the fundamental determinants of user acceptance and positively impact on attitude to use as well as behavioral intention to use.

Lule et.al (2012) applied technology acceptance model to examine the factors that influence the adoption of mobile banking in Kenya. The study specifically focused on the evaluation of "M-Kesho", a mobile banking application in Kenya. Results revealed that perceived ease of use, perceived usefulness, perceived self-efficacy and perceived credibility significantly influenced customers' attitude towards usage of M-banking.

In 2000, Venkatesh and Davis extended the first technology acceptance model to include additional key determinants that explain perceived usefulness and usage intentions in terms of social influence and cognitive instrumental processes as well as to understand how the effects of these determinants change over time with increasing user experience. Social influence processes entail subjective norm, voluntariness and image while cognitive instrumental processes relate to job relevance, output quality, result demonstrability, and perceived ease of use.

Moser et.al (2013) undertook a study on the factors that drive the intention to use online social business networks based on the theoretical frame of TAM and its extensions, particularly the TAM2 model. Core results revealed that TAM2 model generally holds in the case of online social network usage behavior, explaining 73% of the observed usage intention.

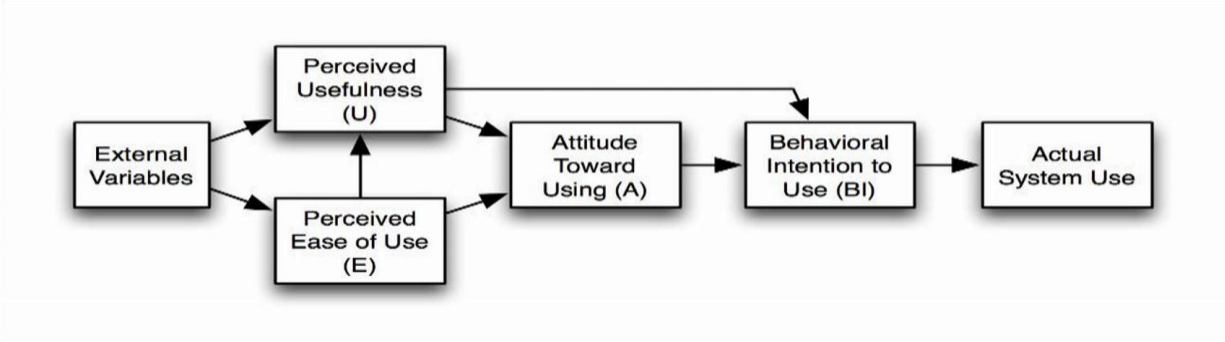

Figure 2.1. Technology Acceptance Model Version 1.

Source: Davis (1989)

2.2.4. IS SUCCESS MODELS

Organizations and institutions invest large amounts of money and time in various information systems. IS investments are typically justified by the expected increase in economical effectiveness. The success of the investments is a critical concern of both academic and practitioner communities (Sylla and Wen, 2002).

Managers are particularly eager to recognize the benefits achieved by IS investments. Though various approaches for measuring the success of IT investments exist, IS related benefits are still difficult to quantify owing to multiple factors that influence organizational outcomes. The measurement of IS effectiveness and success remains a highly complex issue. Sector specific models identify distinct critical success factors or new success dimensions within a restricted context.

2.2.5. TASK TECHNOLOGY FIT (TTF) MODEL

In an attempt to better understand the linkage between information systems and individual performance, Goodhue & Thompson (1995) explored the linkage between two complementary streams of research notably "utilization focus" research and "fit focus" research and subsequently proposed a new comprehensive model.

Essentially, utilization research is based on theories of attitudes and behaviors among other situational factors that lead to intentions to increase utilization of systems. Fit focus research

is premised on the notion that performance impacts will only result if technology provides features and support that fit the requirements of a task.

Lee et al (2007) proposed and validated a modified task-technology fit model to explore the factors affecting the effective adoption of mobile commerce in the Taiwan insurance industry. The study established that experience, cognitive style, and computer self-efficacy are major factors that can predict the fit of applying a specific technology.

2.2.6. THE IDEO HUMAN CENTERED MODEL

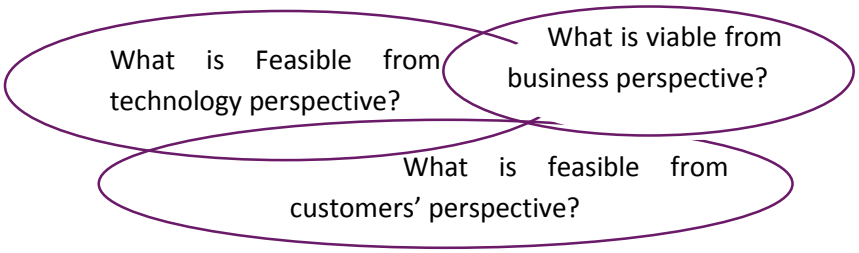

Figure 2.2: EDEO Human Centered Model

Adapted from IDEO (2009)

Rajiv Lal, Stanley and Ishan Sachdev made a Case study in 2013 on "the factors that drove the termination of mobile money services in South Africa"). These researchers used their conclusions to develop a preliminary framework to help prospective mobile money operators with the design and development of a de-novo system. This framework lays out what they believe to be the key decisions mobile operators must make, and their perspectives on which paths will lead to the highest chance of success in adoption. Their conclusions came primarily from the data sources they used in the period of 2011 to 2013. Although others might have evolved since, to the best of their knowledge any such changes do not affect their conclusions they reached, and they have added updates where significant structural changes have occurred.

One objective of their study was focusing on other challenges at least to survive, like, institutional environment, market environment, end user environment, adoption, and

availability. The secondary objective was to identify barriers to launching new and effective mobile financial services (MFS) in South Africa with a specific focus on the regulatory environment required to enable such opportunities.

In addition, the IDEO Human Centered Design model (IDEO, 2009) has been used to further interpret the findings of their report. At its core, the IDEO HCD model is a useful tool to provide insight into the design of products and/or services as it places people in the Centre of the design, and ultimately, MFS and mobile money solutions are about people and how they use money.

2.3. Empirical Literature Reviews

2.3.1. Developments in Mobile Money Solutions: Global Experiences

Mobile money services are being deployed rapidly across emerging markets as a key tool to further the goal of financial inclusion. Financial inclusion, the development of novel methods to enable individuals at the base of the pyramid to access formal financial services and become part of the formal financial system, is considered a key pre-requisite for lifting these populations out of poverty and for driving economic growth (Rajiv and Sachdev, 2015).

Today, these services are available throughout much of the developing world. Most markets have a live offering and many have multiple services. In 2007, there were fewer than 20 mobile money services for the unbanked worldwide. Since then the number of deployments has ballooned to over 190, with another 115 planning to launch. According to GSMA's 2012 Global Mobile Money Adoption Survey, 14 services qualified as Mobile Money Sprinters, the world's fastest growing mobile money services. What has been the formula for their success? A number of elements need to be in place for a mobile money service to become a sprinter, including an enabling regulatory environment, adequate levels of investment, strong marketing, and well-managed distribution networks (GSMA, 2012).

Over the past year, MMU has published case studies that examine how certain mobile money services have managed to thrive in countries such as Zimbabwe, Pakistan and Somaliland.

Together these case studies demonstrate that mobile money success is no longer the story of just one country or region, and by sharing these lessons with the industry, MMU hopes to accelerate the success of more mobile money services around the globe.

There have been some notable successes regionally and nationally, such as Vodafone / Safaricom's M-Pesa in Kenya. Within five years of its launch, M-Pesa had 15 million customers, equivalent to 37.5% of the country's population, and was processing $10 billion annually. However, the success of mobile money services more broadly has been limited – in its 2012 Mobile Money Adoption (Mats Granryd, et al; 2015).

Easypaisa: a mobile money service launched in Pakistan in 2009, serves more than 5 million customers a month through 25,000 points of service. By the end of 2012, it had processed more than 100 million transactions with a throughput of more than US$1.4 billion. Easypaisa was identified as a 2012 GSMA Mobile Money Sprinter – one of the 14 most successful mobile money services. Three important mobile money innovations emerge from the Easypaisa story. First, Easypaisa was launched from a unique corporate structure.

According to Sachdev and others, Pakistan presented an attractive market opportunity for mobile money with a population of 180 million and only 15% bank penetration in 2008. Easypaisa seized this opportunity by creating an innovative partnership, a new delivery approach, and an effective distribution model. As noted by these scholars, OTC has become the de facto model for mobile money in Pakistan, but it has significant constraints. Without a stored value account, there are limitations to the product offering, reduced profits for the service providers, and an inability to build a robust financial digital ecosystem. Mobile money providers in Pakistan should focus their efforts on driving adoption of the mobile account by expanding registration locations, extending the product offering, raising awareness, and educating consumers about the benefits of a mobile account.

However, the pace of new deployments is only accelerating, and given these past results and the apparent challenge in learning from them, it is likely that many new deployments will also prove less than successful. Vodacom M-Pessa's experience in South Africa is one of the less successful mobile money practice in Africa (Morgan, 2016). Rajiv Lal, Stanley and Ishan

Sachdev in 2013 also regarded Communications SMART Money in the Philippines, and Globe Telecom GCASH in the Philippines, MTN m-money in Uganda, Eko financial Services in India, and the broader situations in Nigeria and Brazil as the less successful experiences. They performed their analysis by reviewing existing primary researches on these deployments, in order to understand how they were developed, structured, and implemented, and how different factors impacted their eventual success, or lack thereof.

2.3.2. African Experience

African countries like Kenya, Nigeria, Tanzania, Ethiopia and the like have been experienced different trends in Mobile money services to their national financial inclusion. However, success rates in these countries is a different story. Some are successful, some are still very infant and others are unsuccessful. The Kenyan experience is among the most successful trends while the South African experience is less successful to expand mobile money programs.

The services able to be offered through mobile money, including remittance and mobile payments (bill payments and merchant payments) are constrained in South Africa through regulation primarily due to the stipulation that e-money can only be issued by a bank and the definition of deposit limits the ability to offer mobile payments without a partnership with a bank. The structure of the national payments system creates barriers for non-bank participants to participate in clearing services and adds cost to participation in payment services. The effect of these barriers is that the ability to launch payment mechanisms that are able to compete with (FinMark Trust, 2017).

2.3.3. The Kenyan Practices of M-Pessa

M-Pessa derived from combination of two words, “M”, an abbreviation for “Mobile”, and “PESA”, a Swahili word for cash money—hence “mobile cash money”—is a Safaricom Company Ltd. (the leading mobile network operator in Kenya) service allowing one to transfer money using a mobile phone. Kenya is the first country in the world to use this service, which Safaricom is offering in partnership with Vodafone (Pty). M-PESA offers several financial

services to all Safaricom subscribers both prepaid and postpaid, even if one does not own a bank account, including: transfer of cash from one individual to another without need of traditional bank accounts; purchasing of airtime credits; paying of wages, salaries, bills; and purchasing of goods and services (Safaricom, 2009b). Within the first two years of introducing M-PESA services in Kenya, the company has grown its customer base for mobile money banking services to over 8.6 million customers with a transaction volume of over US$ 328, million per month (Safaricom, 2009c).

A research undertaken by Sanja and Stev in 2014 raises two key and interconnected questions that have an important correlation to both the specific case of Africa and to the process of technology adoption in general. First, why have some sectors of Africa, notably Kenya, quickly adopted this technology while others have not? M-PESA in Kenya has been an extraordinary success, however efforts by Vodacom (Pty) Limited to duplicate this success in neighboring Tanzania have been much less successful. Whereas the Kenyan M-PESA had 2.7 million users by its 14th month following its launch, the Tanzanian M-PESA only had 280,000 users by the same time (Rasmussen, 2009; cited by Sanja and Stev, 2014).

Secondly, they asked, "why have Kenyans quickly adopted this particular technology? Therefore, the cellular phone, with little initial effort by Safaricom Company Ltd to promote mobile money in Kenya itself has long been a primary example of low adoption of new technology in many sectors of economic advancement—including new techniques in farming, banking, transport, manufacturing and, recently, information communication technology (ICT); especially regarding the practical and social use of computers?" They noted, "Even after concerted government efforts and numerous attempts by local and foreign NGOs to bring these various technologies to local Kenyans, the country is still far from embracing advanced technology".

Sanja and Stev considered their questions through a case study of both the historical and social implementation of this M-PESA program in Kenya, offering a theoretical review and consideration of the factors that allowed it to flourish where other technologies and other countries' social structures did not. Second, they then turn to the future application of mobile

banking itself, exploring results from a survey targeting early adopters of mobile phone users living in the major urban centers of Kenya.

2.3.4. M-Pessa in South Africa: Why was it unsuccessful?

A Research Report by FinMark Trust on South Africa's M-Pessa Mobile money in September 2017 identified potential factors that drove the termination of mobile money services in South Africa. These were focusing on the institutional environment, market environment, end user environment, adoption, and availability of technology. As it was noted by the research, there are also other barriers to launching effective mobile financial services (MFS) in South Africa. Among these barriers, regulatory environment was considered the most critical challenge that blocked opportunities.

FinMark Trust published research in December 2016 assessing the determinants of mobile money adoption across SADC (including South Africa) and the link between mobile money and financial inclusion. Although the study covered the regional dynamics, insights gained relevant to the MFS environment going forward, included: Bank account ownership, access to ATMs, mobile banking and internet banking are inversely related to mobile money ownership. Mobile money adoption is lower among those that own a bank account and those who use ATMs, mobile banking, and internet banking to access their bank account, which implies existence of substitutability. Mobile money can act as a substitute for both formal and informal account ownership. Remittances are strongly related to mobile money adoption. Both the descriptive analysis and regression results show a strong link between remittances and mobile money adoption. Mobile money is mostly used to buy airtime, send and receive money and to a lesser extent to pay bills, access savings, credit, and insurance products. This implies that further innovation in the sector is needed to make various financial products available to the unbanked. Lack of information is cited as a significant barrier to mobile money ownership.

According to FINMARK TRUST, Both the descriptive and regression analysis shows that mobile money adoption is low among those with no education, which calls for designing mobile applications that focus on the utility of financial services and in a manner that usable by the uneducated. FinMark Trust also identified additional factors that influenced the lack of

sustainability include: Agent network challenges, including cash float, aggregation, and trust and value proposition, Poor technology choices for the implementation of the services. Using the IDEO model to further reflect, it is clear to see that while both M-PESA and MTN Mobile Money were technically feasible (they had their challenges, but none were insurmountable), and the customer desirability was high. The primary causes for failure lie within the business viability lens; that is; the business models were constrained by the institutional environment that limited the product offering, a highly competitive domestic remittance market and an end user market with high financial inclusion.

For those explanations, stakeholders need to understand what is not currently working, and why the value propositions of their products are not attractive to customers. Sustainable financial inclusion has to address demand (what consumers want), supply (what financial institutions provide), and the environment (how the public sector and other private-sector companies play facilitative role). Alternatively, to put the challenge in other terms, sustainable financial inclusion is built on operating models, regulation, and infrastructure, as outlined below. The Operating Models of Financial Institutions. Innovations such as branchless banking block chain, correspondent and agent banking, mobile payments, and flexible loan repayments are all potential solutions. Enabling regulatory environments. Regulatory environments that encourage competition and open the market to non-bank players while still maintaining stability and protecting the interests of consumers are more effective and increasing financial inclusion. Focus on interoperability. Many consumers rely on cash because the infrastructure that would support alternative payment mechanisms such as card, biometric or mobile money transactions is not in place. Allowing non-traditional players to offer interoperable services in payments has the potential to challenge the reliance on cash. MFS offerings have the potential to provide a viable alternative to traditional banking and established remittance offerings; thereby increasing real financial inclusion with all the associated benefits. Fundamental to achieving this potential is a regulatory environment that enables innovation, encourages competition, ensures interoperability and provides fiscal stability and consumer protection. Changes to regulation can increase the range quality and suitability of financial products and services to low income consumers – thereby increasing financial inclusion.

In that research report, the following were recommendations for the South African unsuccessful trend:

- Review the current position on e-money and consider the role of non-banks issuing e-money.
- Increase access to the national payment system at a payments and clearing level, including non-banks.
- Review the definition of deposit and consider the option of introducing granularity into the usage of deposit (Deposits for transacting) and using that to guide appropriate oversight.
- Introduce regulation to enforce banks to provide access to their services to third parties through secure APIs.
- Introduce of inter-operable real-time-push mobile transactions.
- Improve co-ordination between different departments and explore the opportunities for South African Social Security Agency (SASSA) to better advantage existing payment and transacting infrastructure.
- Shift the focus from the regulation of institution to the regulation of activity, service or product.

2.3.5. Mobile Money Practices in Ethiopia

2.3.5.1. National Bank's Strategic Directions

According to the National Bank of Ethiopia's strategic report in 2017, the national financial strategy analyses the state of financial inclusion and creates a cogent framework for accelerating efforts towards financial inclusion based on the country's development priorities. Over the past decade, Ethiopia has made sustainable progress towards rapid, broad based and equitable economic growth and become Africa's fastest growing economy.

Recognizing the overarching positive impact of financial inclusion, the government has set up national council for financial inclusion to coordinate various financial inclusion initiatives under one umbrella and formulated national financial inclusion strategy in 2017. The country has planned and formulated its financial inclusion strategy through a national steering

committee comprised of authorities from various organs of the country. The financial sector has expanded considerably and the country has taken strides to develop an inclusive and modern financial sector. As of march 2016 of National bank report, there were 18 banks, 17 insurance companies, 35 microfinance institutions, and 5 capital goods lease companies operating in Ethiopia. According to the report, there were about 18,000 savings and credit cooperatives spreading throughout the country, mainly in rural areas.

National financial inclusion strategy uses Findex Survey of 2014 of the World Bank to approximate demand side data and cross country comparisons. There were 19.3 million bank and 11.4 million microfinance institutions' accounts, totaling 30.7 million transaction accounts that resulted 68 transaction accounts per 100 adults. According to World Bank survey (Findex 2014), only 22% adults have transaction accounts in regulate financial institutions in the country. Ethiopian National payment system has also been undergoing planned modernization reforms with the objective to support a growing and vibrant economy and to create efficient, effective and enabling environment to the finance sector.

The national financial inclusion strategy has a vision to achieve universal access; use of a range of affordable and high-quality financial products and services in Ethiopia by 2025.Based on the foregoing facts and background and to promoting access and usage of financial services, the national financial inclusion strategy has set out four key Strategies for its successful financial inclusion

Strategy 1: Strengthening (financial and other) infrastructure

Strategy 2: Ensure the supply of adequate range of suitable products, services and access points

Strategy 3: Build a strong financial consumer protection framework

Strategy 3: Improve Financial Capability

Using World Bank group’s 2015-enterprise survey report, the strategy was designed to solve barriers to financial inclusion in the country like, lack of awareness, trust and confidence on financial institutions, insufficient fund attitude, distance and relatively high cost of services.

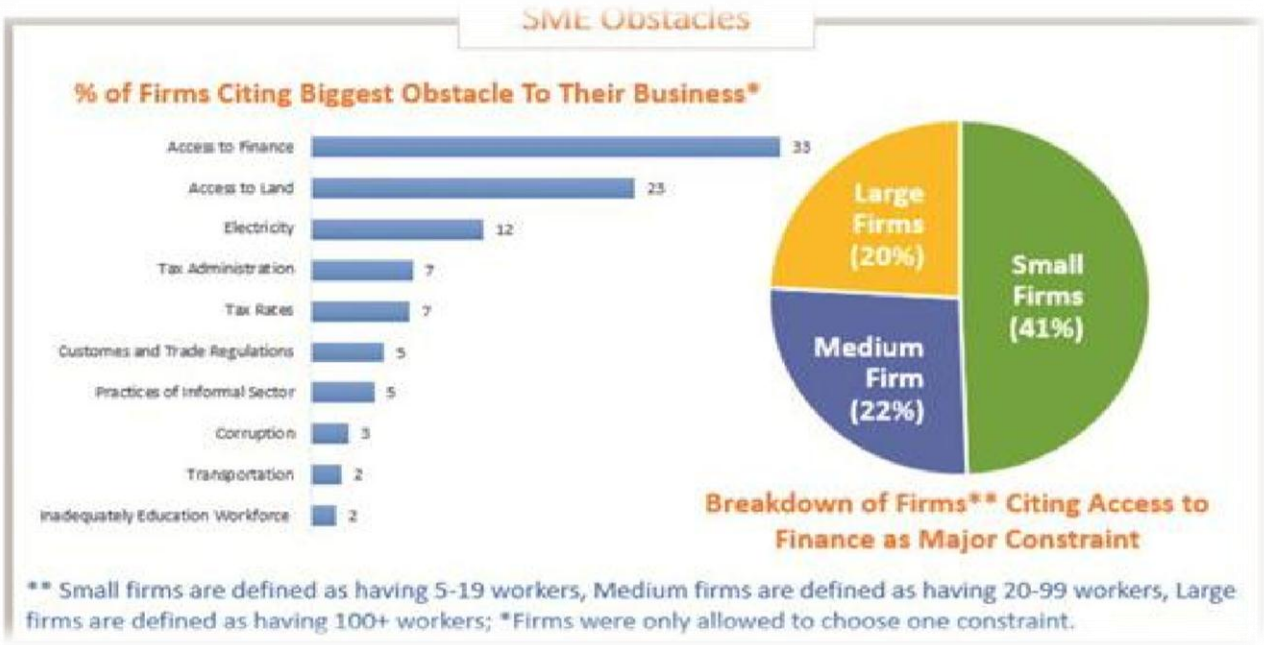

Figure 2.3. SME Obstacles

Source: WBG's Enterprise Survey (2015)

2.3.5.2. M-Birr

Even though M-Birr has not yet significantly impacted the unbanked, particularly in rural areas, the combination of microfinance institutions, agent banking and mobile banking technology effective in bringing financial services to people, wherever they are.

This brand of mobile banking technology is a money transfer system designed by Moss ICT Consultancy, a spin-off of the Irish firm NCL Technologies. NCL specializes in the supply of middleware: a platform that helps applications, like Viber, communicate easily with their operating system, like Android, helping both mobile network operators and application developers operate in cohesion. Moss, initially dubbed M-Birr, was formed in Dublin, Ireland, in 2009, for the exclusive purpose of developing software fit for the Ethiopian context. A year later, it opened offices in Addis Ababa and started marketing its product – the M-Birr software to the microfinance institutions (MFI) in the country (Fortune, 2016).

According to Fortune Magazine *report* on *January 04, 2016*, MFIs were suffering from two major bottlenecks, general manager of Inclusive Financial Technologies (IFT) S.C. Operational costs were high and outreach was limited. Moss's offer was therefore accepted. Laws regarding mobile banking were yet to be declared and it was not until 2012 when that form of banking was allowed to be carried out through agents. Mobile banking was defined by the National Bank as "performing banking activities which primarily consist of opening and maintaining mobile/regular accounts and accepting deposits; furthermore, it includes performing fund transfers or cash in and cash out services using mobile devices."

The system is limited. A single account holder can neither have more than 25,000 Br in his account nor move more than 6,000 Br a day. The financial institution will also be responsible and liable for any actions and omissions their agents commit.

M-Birr targets rural residents. It was put into effect in Ethiopia by five microfinance institutions (MFIs), namely Addis Credit, Dedebit Credit, Amhara Credit, Oromia Credit and Omo Credit in 2013 based on the directive of the National Bank, Regulation of Mobile & Agent Banking Services Directives No. FIS/01/2012. These institutions formed IFT. Third parties like ethio telecom, and even the creator of M-Birr, Moss, directly deal with the body. It facilitates a revenue sharing agreement that the parties have entered.

M-Birr was never purchased. It is an entity that is still owned by Moss, who extended all capital expenditure. Entering a revenue sharing scheme enabled the MFIs to start making use of the software without first dishing out large sums of money for purchase. Currently, the operating agent gets 40pc, ethio telecom gets 12pc, and Moss, IFT and the MFIs share the rest.

The micro finance institutions, which provide loans, savings, money transfers, micro insurance and other services; have increased their accessibility by the employment of 720 agents and 800 branches. In 2015, M-Birr has been able to facilitate 273,620 transactions and has served almost 50,000 account holders.

Clients can deposit their money, with no interest offered, and they can withdraw. They can also transfer money to others whether they are account holder or not that, they are charged for.

The smallest rate is 4.60 Br for amounts less than 6,000, and the rate increases at intervals until it reaches a maximum of 23.58 Br for amounts between 20,000 and 25,000 Br. Since the end of M-Birr's pilot phase 11 months ago, 50,000 account holders banking via 800 branches have transacted 150 million Br.

2.3.5.3. JESH AND HELLO CASH LAUNCH

The United States Government, through USAID, has been a long-term development partner of the Somali Region with investments in livestock and pastoral development, water access, vocational education and humanitarian assistance. On February 25, 2016 the US Ambassador to Ethiopia, Patricia Haslach made a speech on JESH and Hello Cash launch in Somalia Region. That was on their start to support to the Jijiga Export Slaughter House (JESH) and to build partnerships between Hello cash and JESH. According to the Ambassador's Speech, *"the opening of JESH is really a huge development for the livestock sector in this region*". Previously, the nearest export-standard slaughter houses were located hundreds of miles from the primary source of animals in the Somali Region. With JESH opening, there is a slaughterhouse right here, which will soon provide a reliable, year-round market for 250,000 households to sell their livestock.

JESH private investors put up $6 million of their own capital to build this facility. Through President Obama's Feed the Future initiative, the United States provided an additional $1.5 million to purchase equipment, including cold-chain facilities, and to provide technical assistance to ensure JESH would be able to meet *halal* requirements and export standards. In addition, the Somali Regional State has been a strong supporter of this initiative providing road access and electricity connections worth $350,000. Meat from the Somali Region will soon be exported directly from here to the Middle East, Asia and other locations in Africa and the Ambassador encourage all stakeholders including the private sector, government and the pastoral community to support JESH and similar ventures, which can have such a positive impact on the economic development of Somali Region. This partnership between JESH and Hello Cash also highlights USAID's efforts to support resilience to climate-related shocks and to facilitate livestock trade, it is important to have finance available. As such, it is very fitting

that, together with the Somali Micro Finance Institution and BelCash, they were also launching the first commercial mobile and agent banking service. The Ambassador mentioned at the launch that USAID and its partner Mercy Corps helped with the establishment of the Somali Micro Finance Institution over five years ago.

Hello Cash offers saving options, money transfers and mobile-based payments for transactions of goods and services. This new financial service for the Somali Region is an exciting innovation that will support entrepreneurship and increased incomes for tens of thousands of households. As we speak, over 300 people are opening mobile bank accounts each day, and already 55,000 individuals have opened Hello Cash accounts with Somali Micro Finance Institution.

Over the next three years, the new service expects to have 780,000 mobile banking users with projected transactions of $12 million annually through loans, savings, and money transfer services. Hello Cash will also create employment opportunities for at least 2,000 households as agents, marketers, and service providers.

USAID provided $350,000 to support the expansion of Hello Cash services to hard-to-reach areas. Somali Micro-Finance Institute is investing over 3 million dollars, while the Belcash investment amounts to 1.8 million dollars. JESH and Hello Cash also demonstrate the innovation, creativity and focus of the people of Somali Region.

2.3.5.4. The CBE Birr Project

The commercial bank of Ethiopia has launched various E-banking products like, mobile banking, internet banking, card banking and the POS (Point of Sale) services, which are directly linked to the normal bank account.

However, recently the bank has recognized “the mobile money” service, which is not currently integrated to the normal bank account, as an essential project to enhance resource mobilization and financial inclusion. The CBEBirr project was initiated in February 2016 as new financial development for financial inclusion and resource mobilization using personal phones.

Based on the bank's CBE Birr strategy**,** the mobile money service (CBE Birr) is being implemented to create significant contribution in deepening financial service accessibility to the un-banked and unserved population. Since it uses agents in the provision of banking service to foster financial service accessibility and depth, the CBE Birr Service can take advantage of its existing branch networks to recruit "Banking Agents".

2.3.5.5. Definitions and Interpretations

In the CBE Birr procedure, unless the context requires otherwise, terms and concepts contained shall be defined as follows:

Agent shall mean an individual or businessperson that is contracted to facilitate specific financial services for users on behalf of the bank

Billers shall mean a merchant that allow a customer to initiate a non-face to face transaction to pay for different kinds of bills, tickets, subscriptions and services using CBE Birr solution.

CBE Birr shall mean a CBE Mobil service that provides services like mobile payment, mobile transfer and agent banking

International Money Transfer Agents shall mean an entity that provides money remittance service

Level one agent shall mean an agent hierarchically created as top agent in CBE Birr System and able to create an agent. Unlike a sole agent, level one agent are responsible for managing the cash and balance on CBE Birr account liquidity requirements of a particular group of agents.

Level two agents shall mean an agent hierarchically created as sole agent in CBE Birr System and cannot create an agent. In addition, managing the cash and balance on CBE Birr account liquidity requirements of its own.

Level Three agents shall mean an agent hierarchically created as agents in CBE Birr System

Mobile Money System shall mean an electronic system, which is used to transact, transfer funds and other financial activities between entities using mobile phone.

2.3.5.6. Objectives of the CBE Birr Procedure

The primary objectives of this procedure are to:

a) Ensure standardization and uniformity for all users
b) Serve as a single source of reference to performers
c) Provide guidance and support for respective employees by enhancing efficiency and effectiveness of performance,
d) Delineate duties and responsibilities for employees at all levels.

2.3.5.7. Structure of CBE Birr Project

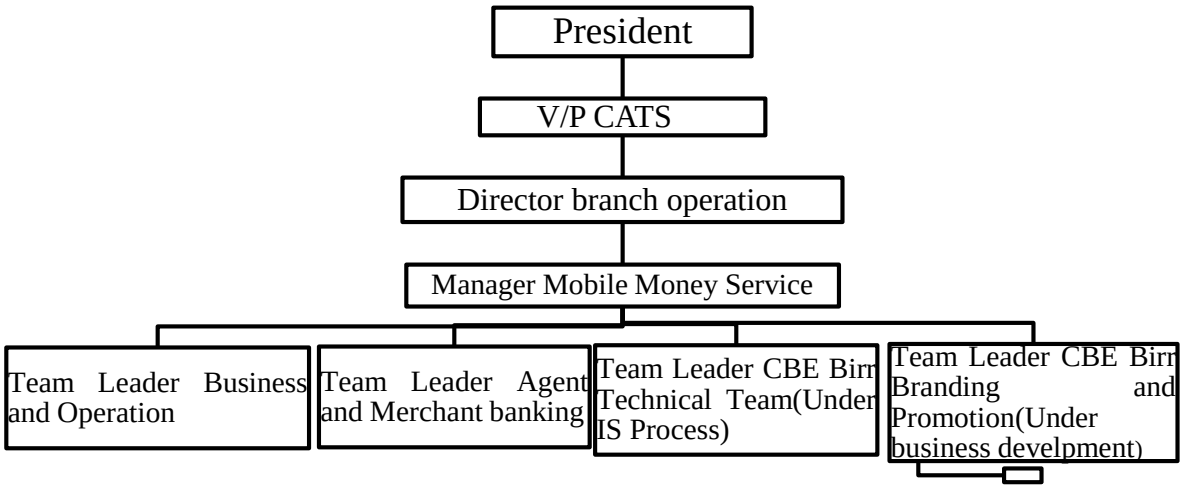

Figure 2.4. Structure of CBEBirr Project

Source: *Commercial Bank of Ethiopia, CBE Birr Procedure (2017)*

2.4. Barriers of the CBE Birr Mobile Money Service

Users acceptance behavior, business models (restrictions and Complexity), Suppliers (lack of infrastructure), regulation, were identified by Albuquerque and Cernev in 2011 as some of the barriers for the success of mobile money projects implementation. Technically, most Mobile interfaces are not suitable for illiterate users to expand mobile money programs among the illiterate poor. For this research, the barriers of the mobile money service are generally summarized as customers' perspective, business perspective, and technological perspective, where its technical perspective to the illiterate majorities is further analyzed from its technological environment.

2.5. Conceptual framework

In mobile money service, there are three sided concepts need to be considered in this project work. These are the service providers' side, the customers' side and the legal (government side). At the service provider's side, Technology and business concepts are considered. Technical people are responsible in making sure that technological platform is in place and through interview, the researcher was found out what is being done in supporting users and performers to solve technical problems during implementation. Business people mainly bank agents, individuals and branches are responsible to bring the product to the market and make sure customers are aware of it and use it, the study was also used questionnaire and interview to find out what is being done at bank branches and agents.

The concept of the customer side considered that Customers would use the product only if they are aware of it and if it has value and usable qualities (Blanca and Pablo, 2008). Lack of awareness is cited as a significant barrier to mobile money ownership (FINMARK TRUST, 2016).Users acceptance behavior, business models (restrictions and Complexity), Suppliers (lack of infrastructure), regulation, were identified by Albuquerque and Cernev in 2011.

On the other hand, the government side concept is related to the design and implementation of flexible laws and financial regulation. The figure below shows the conceptual framework of the three sides of the study. Under four major domains, the framework consists of seven

independent variables of awareness, infrastructure, unfriendly interface design, training, Literacy, Poor User support, transaction cost and poor agent network, which if combined will used into implementation of CBEBirr project (FinMark Trust, 2016, et al).

In this case, awareness means the knowledge customers have about the product, value is the quality or performance, which comes from the customers overall assessment of the utility of the product based on perception of what is given, and what is received. Infrastructure means the software and hardware facilities required for mobile money implementation. Interface design is easiness of a mobile apparatus for users. Training is both technical and theoretical which must be given to stakeholders (implementers). The level of education customers and the community have is literacy. Lastly, transaction cost represents the expense customers incur for travel to banks and for related transaction (Blanca and Pablo, 2008, et al).

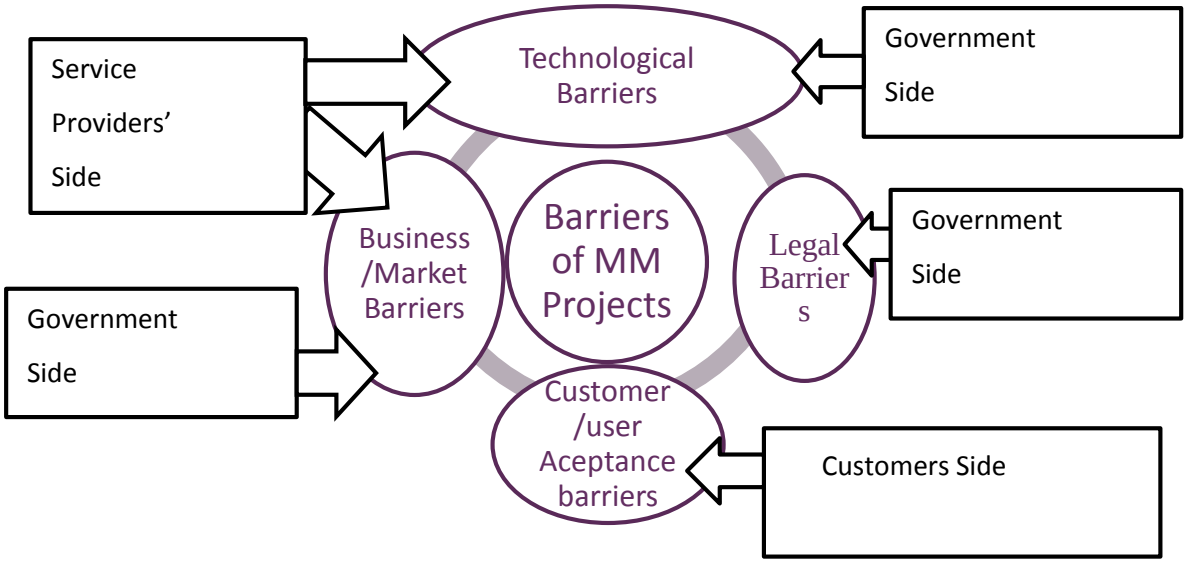

Figure 2.5. Conceptual framework on the Barriers of CBEBirr Project

Sources: Adapted from Blanca, & Pablo (2008), Albuquerque, and Cernev(2011), FINMARK TRUST(2016)

2.6. Summary of Related Literatures

No	Authors/Organ./Journals	Problem area	Applied Methodology	Key findings	Year
1	Bet Jenkins	Developing mobile money ecosystems	Deep interviews	1, Mobile ecosystem is Configured by: Strong banking sector, Sound financial, telecom, AML regulation & policy, Competitive telecom companies, Active micro finance institutions, Efficient mobile money operators, Dynamic SME sector, Collaboration on joint product developments, Efficient distributors, Reliable data and analyses on user behavior, market segment, user education etc. 2, Agents and retail outlets are backbones of any mobile eco system 3, Responsibility of government regulators is the key to provide open environment for developments of mobile ecosystems 4, Growing mobile money ecosystems need; Utility, Capacity and enabling environment.	2008
2	GSMA, State of the Industry report	Mobile Money trends across the world	close engagement with mobile money providers	• More than a third of all registered mobile money accounts were opened in 2015 in South Asia. • In 2015, there were 29 cross-border mobile money initiatives connecting 19 countries International remittance was the fastest growing product with 52% growth in2014.	**2015**
3	Sanja Mutong'Wa And Steve WasilwaKhaemba(European Journal of Engineering and technology)	A comparative study of critical success factors (csfs) in implementation of mobile money transfer services in Kenya	Questionnaire and Transaction data was sent to server and stored in Excel sheet. The data is the collected and	. One of the Hindrances towards secure on mobile money is the Security issue to transfer money from one person to other. . CCK has little control on the activities of each MNO and it will be appropriate if CCK monitors activities by recruiting data analysis who will be reporting on MNO activities. The CCK should also review its Network Sharing guidelines to reduce use of	**2014**

			analyzed giving daily averages of each MNO	many BTSs and reduce costs of running networks.	
4	PamelaJohn and Eliamani Sedoyeka (International Journal of Computing and ICT Research	Exploring Factors Affecting Mobile Money Adoption in Tanzani**a**	interviews and questionnaires	The main factors affecting the adoption are poor agent network and poor user support. Other factors are insufficient service awareness, high transaction cost, and fear for money safety, unfriendly interface design and lack of procedure training.	**2015**

Source: Various Literatures

Chapter Three

3. The Research Methodology

3.1. The Research Design

In social research the issues of sampling, method of data collection (e.g. questionnaire, observation, and document analysis), and design of questions are all subsidiary to the matter of `What evidence do I need to collect?' Research design types can be experiment, longitudinal, cross-sectional or cases study based on the research objectives. Therefore, the research design for this study is a single organizational case study design selecting a specific administrative unit (East Addis District of CBE). For these purpose the study used descriptive type of study in order to "describe an accurate profile of persons, events, or situations" (Robson, 2002, as cited by Saunders, 2007). A descriptive study can be used to understand a verbal or numerical picture of a situation. It is an extension of the exploratory study where it is actually necessary to begin the research by having a clear picture of the concept proposed. It is also appropriate for situations where a problem is clearly identified and the intention of the research is not to present the link between causes and symptoms

3.2. Case Selection and Sampling

In this research, non probability sampling technique was used. Saunders et al (2007) divided non-probability sampling into four methods. These are quota, snowball, self-selection, convenience and purposive sampling. Quota sampling refers to the selection of non-random cases as per a certain fixed quota. Snowball sampling is mostly used when the researcher is trying to find a population that is difficult to get. This means, one person informs another about the research and through that, more cases can be attained. Non-probability sampling methods like self-selection, convenience and purposive sampling techniques are applied in this study.

3.3. Sample populations

The East Addis Ababa district of CBE has 100 branches with more than 2800 clerical staffs as of May 2018. For the researcher's convenience purpose, this district is selected as a case study using financial and non-financial reports of 97 branches. Primary data is also collected from 75 staffs in 25 branches for data triangulation. That is for primary data collection, taking 100 branches as a population and applying the formula of Naissiuma (2000), $n = NC^2/C^2 + (N-1)(e)^2$ Where, n = Sample size, N = Population size, C= Coefficient of Variation and taking "e" as error margin, 25 branches were determined to be number of samples for the study. Again, number of samples were selected from branches by stratifying them into three strata. These strata were branch supervisors, branch performers and CBEBirr agents. From branch supervisors, 25 sample respondents (one from a branch), 50 performer staffs (2 from a branch on average), and 15 CBEBirr agents located in various woredas of Bole and Yeka sub cities.

Sample branches were selected based on their CBEBirr project operational performances. Based on their performance, branches were first grouped as "A", "B", "C" and below based on their 9 months cumulative CBEBirr performances. CBEBirr customer base performance, number of CBEBirr transaction, and amount of transaction were the basis to select branches for representation. In all three measures, two top (Grouped A) branches, three top Group B branches and twenty low performing or C branches were selected. Among respondents from these branches, one supervisor and two performer staffs were chosen on average basing their grade quota (considering higher-grade branches having more number of performer staffs). Before respondent selection from each sample branch, a short investigation about respondents' exposure on the problem areas of CBEBirr project operation at their respective branch was made.

Therefore, 75 Respondents were selected from 25 branches based on

- Their direct relation and experience about the project operations

- Their ease of access to the researcher from each sample groups of A, B, and C branches. Approximately, three respondents were selected from each branch including branch supervisors.

Data was gathered from Project office staffs in terms of interview. For this purpose, three experienced CBEBirr project officers were assigned as samples to access data that are more reliable.

As of 11 May 2018, East Addis Ababa District has 170 agents with a customer agent ratio of 382.28. As complementary input for this assessment, 15 questionnaires were distributed to fifteen CBEBirr agents. These agents were selected based on the researcher's convenience. The sample size for primary data of this research is 93 including fifteen agents and three project office staffs.

3.4. The Research Approach

In this project work, report figures, data from likert scale questions and numbers expressed by participants, were quantified, summarized and interpreted in terms of their percentages, means and/or graphs which is a **quantitative Approach**.

In this study, qualitative Approach is used to interpret words and arguments of respondents' interview answers and discussions after carefully writing, summarizing and interpreting them as reported speeches (or simply quoting them). To check reliability, both quantitative and qualitative results of the study were reconciled and Cronbach's reliability taste was made using SPSS version 23.00.

3.5. Instruments of Data Collection

A. Questionnaires

As it was explained above, primary data was collected using a self-administered likert scale questionnaire and an interview. Questionnaires were carefully designed from literatures conducted in mobile money projects. The questionnaires have three major parts that is part one

demographic, part two current practices in CBEBirr project and part three about barriers on CBEBirr project operation. Part three of the questionnaires were designed with likert scale questions of seven independent variables (barriers). It was organized in the form of a priority scaling (1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree).

The respondents were various performers in different branches of the bank. These were branch performers, branch supervisors, and agents located in various branches. As it was noted in the sampling section, these respondents were selected purposefully for two reasons.

- Based on their direct relation and experience about the project during operation
- Based on their ease of access to the researcher.

These respondents were assigned from 25 sample branches based on the branches' current performances on CBEbirr project operation. To be more reliable, two top performing(Group A) branches, three mid performing(Group B) and 20 low performing branches considering their 9 months cumulative CBEBirr performances were chosen. On average three respondents were selected from each sample branch. These respondents were chosen using mixed sampling methods; some by convenience and others by purposefully based on their willingness, ability and representative experience to respond the questions. Some investigation was made about respondents' relationship with the project operation during questionnaire distribution, that is, they were asked their knowledge about the research objective before filling the questions. Based on this principle, only those who were directly related to the activities of the project were included.

B. Interviews

According to Creswell (2007), interviews are well appropriate when looking for opinions, experiences and privileged information from respondents in key positions.

Semi-structured interview was found preferable for this study since it allowed detail discussions that enable controlling the scope of the study.

The researcher had prepared a semi-structured interview guide based on the objective of the study. Before interview, the researcher had discussed with the project manager when, how and whom to interview in order to get reliable information from Key project staffs. The researcher contacted these key people immediately and agreed on the time and place of interview. Then the interviews were conducted at a convenience place and time agreed between the researcher and interviewee. Sound recording system was not used, since it would not give interviewees freedom to express their views willingly during pilot discussions. The researcher also believed that insisting interviewees for recording would make them refrain from the interview. Due to this, only notes were taken from the interviews. The note was taken in English and Amharic and the Amharic notes were translated into English. The notes were categorized based on the research questions, expanded, reviewed and summarized after each interview.

The interview process was started by contacting the selected candidates, briefly describing the objective of the study and sharing the interview outline through their organizational email. Based on the first briefing, an interview appointment was set at the interviewees' convenient place and time. Most of the interviews were going to be conducted out of the normal office hours or during non-peak working weeks of the bank or after other peak workweeks when congestion of customers is low so that the informants can give an in-depth feedback without time constraint. The interviewees were contacted with in the span of a week and interview took between 10 to 40 minutes.

All the interviews were conducted in the interviewees' respective offices in order to keep their comfort. The interviews were started by a brief introduction of the objective, scope and expected benefits of the study. It was conducted using the prepared interview questions.

After all interview process is accomplished, the responses were organized and analyzed to summarize the required information for the study. For this study, one CBE Birr experienced project officer and two technical staffs were interviewed.

C. Observation and Participation

Direct observation is a situation in which the researcher makes a site visit and collects data from the case company. Participatory observation is a method in which the researcher actually participates in the events being studied and related activities (Yin, 2009).

The researcher had observed on CBEBirr Project operation and practices by agents and staffs. Observation was made at different branches and agent outlets. This enabled the researcher to grasp what is important to know about the gap and what are to be fulfilled in this research answers. Since CBE Birr Project operation is a new practice in the bank and the community, its functional, technical, technological and economic expertise are very low for most of us.

Since the researcher is one of the CBE Birr Project performers at Branch level, he is mostly involved with ground level CBE Birr Customer contact. The researcher also had attended both formal and informal Trainings about CBEBirr Project operation. These trainings have given him insights about the Project and related operational barriers and factors affecting its performance.

For keeping track of observed variables (barriers), observation Checklists were also designed. The checklists have seven rows of variable lists and three columns of variable data of observation, name, description of occurrence, and frequency of occurrences.

D. Report and document Analysis

Documents, Various financial and non-financial performance reports of the bank and sample branches were also reviewed to have more reliability on the analysis. First, related documents were identified; selected/filtered/, grouped, rewritten, interpreted (in reported form) based on the research questions. Finally, refined analysis and crosschecking was made with other primary sources and literatures.

3.6. Ethical Considerations

The participants of this research gave their consent to fill in the data collection tool, i.e. questionnaire. The respondents were asked to fill the questionnaire and they were assured that the information will be confidential and only for research purpose.

3.7. Methods of data analysis

3.7.1. Descriptive Statistical Analysis tools

After Questionnaires were received, the researcher checked them for completeness, clean unnecessary data then he analyzed them. The primary data analysis was done using descriptive statistics and statistical tools like SPSS (Statistical Package for social sciences). The analysis from the data was presented in form of percentages by Tables and, or by pie charts. Some important Demographics to this research analysis (sex, experience, job titles, and academic qualifications) were analyzed using percentages.

Observations and Reports were summarized based on the research questions/objectives and were processed for further analysis by grouping them based on their qualitative and/or quantitative natures. Quantitative data, which was compiled from CBEBirr service operational reports, was summarized and presented by calculating and interpreting percentages using tables, pie charts and graphs. Analysis results from all these sources were summarized, crosschecked and interpreted with primary sources based on the research objectives.

3.8. Research Validity and Reliability

In any research, it is vital to present its validity and reliability. Validity, according to Kvale and Brinkman (2001), infers that data received or analyzed is based on the truth, and is presented correctly.

To ensure validity in this research, the following has been done at every stage of the tests as highlighted by Yin (2009).

Construct Validity: Interview is one source of data collection. Interviews which were done with CBEBirr project office staffs were very important to ensure that different ideas and backgrounds about the project in all its stages. All interviewees were based on the CBEBirr project implementation that had taken place. This also adds to the data triangulation and constructs validity, which addresses several sources of evidence referring to the same topic. Other sources of evidence, such as questionnaires, observation and having been a part of the implementation process, add validity to the research as a complimentary source. In addition, real performance reports were very important evidences to validate the outcome of the assessment.

The interviews were presented to the respective interviewees within one to two days after the interview. This was used to get feedback from the interviewees regarding to the report. Adjustments were processed into final interview result and reached in consensus with the interviewees prior to using the interview output.

Internal Validity: Since this research follows a descriptive method, it is used to ensure validity during the data analysis phase where pattern matching is the technique followed. The objective is to ensure that the data gathered from interviews and other sources (questionnaire, interview and reports in this research) matches the data derived from the literature.

Reliability: Interviews and questionnaires undertaken were only with those that were part of the CBE Birr Project implementation phase and have participated in the service provision afterwards. They were assumed to have adequate background knowledge, which is important to ensure that information they shared is reliable. Interviews were set at their offices, to ensure that a certain comfort zone is maintained where the stress factor could be reduced. The interviews were conducted in Amharic by taking notes and interpret them in English. In addition, the researcher analyzed a statistical reliability test on questionnaires distributed to branch supervisors, agents and branch performers. Cronbach's Alpha reliability test was made for seven barriers on CBEBirr Project operation. The barriers were Lack of customer awareness, Low level of customer Literacy, unfriendly mobile interface design, lack of training

for various stakeholders, Lack of strong technical support to branches, lack of staff commitment, use of other substitutable products. The test was made for branch supervisors, agents and branch performer staffs.

3.8.1. Cronbach's Alpha Reliability Statistics

Table 3.1. Cronbach's Alpha Reliability test results

Supervisors' Questionnaires	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
	.754	.770	7
Agent's Questionnaires	Cronbach'sAlpha	Cronbach's Alpha Based on Standardized Items	N of Items
	.751	.745	7
Branch performers' Questionnaires	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
	.790	.781	7

Source: Survey, 2018

Cronbach's alpha reliability test shows .754, .751 and .790 for supervisors, agents and branch performers respectively suggesting that the items have relatively high internal consistency. (Note that a reliability coefficient 0.70 or higher is considered "acceptable" in most social science researches.

Chapter Four

4. Data analysis and discussion

4.1. Introduction

This chapter presents the results of data obtained from the respondents, documents, reports and observation. The results are presented by using descriptive statistics. Data was analyzed using SPSS of version 23. The data about background of respondents, current practices of CBEBirr, and the barriers on CBEBirr Project operation is presented in the next sections.

4.2. Background of Respondents

Table 4.1. Profile of Supervisor participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Female	9	36	36	36
	Male	16	64	64	100
Approximate Age group	< 30	8	32	32	32
	30 <= 35	9	36	36	68
	35 <= 45	8	32	32	100
Work experience	0<=3	2	8	8	8
	3<=4	3	12	12	20
	5<=7	13	52	52	72
	7<=10	5	20	20	92
	>10	2	8	8	100
Highest Education Level	College diploma	1	4.0	4	4
	First degree	10	40	40	44
	Master's degree	14	56	56	100
	Above Masters	0	0	0	100
Current position At branch	Branch Manager	6	24	24	24
	Customer Service Manager(CSM)	19	76	76	100.
	Total	25	100	100	

Source: Survey (2018)

From this tabular analysis, one can understand that males dominate the gender mix of supervisors, which is 64% from the total branch supervisors. From the study, it was found that 36% branch supervisors fall under the age range of 30 and 35. Eight supervisors (32%) are below 30 and the same number of participant supervisors are between 35 and 45 years old. From the 25 sample supervisors, only two (8%) have supervisory experience between zero and three years. Majority (52%) of these supervisors have served in supervisory position between five and seven years. In general, more than 80% of supervisors served the bank for more than five years in supervisory position. Therefore, it can be said that supervisors are sufficiently experienced in branch business operation.

In terms of academic qualification, a significant number (56%) of respondents are second-degree holders and 40% of them are first-degree holders while the remaining one supervisor (4%) is college diploma. More than 76% of supervisors are Customer Service managers (Assistant branch managers).

The profile of branch supervisors in general, indicates the presence of Male domination, energetic and experienced supervisors. The bank may take advantage of its young and experienced professionals. While, missing the wise decision-making and leadership capacity of women in some branches.

Table 4.2. Profile of Customer service officers

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Female	11	22.4	22.4	22.4
	Male	38	77.5	77.5	100.0
Approximate age group	<= 23	3	6.1	6.1	6.4
	24 - 29	37	75.5	75.5	81.6
	30 - 35	8	16.3	16.3	97.9
	36 - 45	1	2.04	2.04	100.0
Work Experience	0 ≤ 1	2	4.1	4.3	4.3
	1≤3	21	42.9	42.9	47.2
	3≤5	19	38.8	38.7	85.9
	5≤7	5	10.2	10.2	97.7
	>7	2	4.1	4.1	100.0
Highest Education Level	First Degree	42	85.7	85.7	85.7
	Masters	7	14.3	14.3	100.0
	Total	49	100.0	100.0	

Source: Survey (2018)

In the study, 50 front office performer staffs (Customer service officers) were covered. From these participants, 49 of them had returned questionnaires with full answers. The remaining one was disqualified due to incomplete answers on the designed questionnaires. From the table we can see that Male frontline Customer service officers accounted more than 77.6% from these frontline staffs. From the total participants only 22.4% were females. It is also confirmed in the researcher's observation that many branches in the commercial bank of Ethiopia are highly dominated by male employees.

The approximate age group of the majorities (75.5%) of these customer service officers are between 24 and 29 inclusive, which is categorized under the youth age groups of the country. Sixteen percent of these staffs are between 30 and 35 while the remaining 6.1% and 2.04 are below 23 and above 35 respectively. Majority of these staffs (42.9%) served the bank between 1 and 3 years of service. A significant number (38.8%) of customer service officers served in the bank between 3 and 5 years. About 11% of performer staffs at sample branches have work

experiences between 5 and 7 years. The remaining 4.1% and 2.04% served in the bank for less than one year and greater than 7 years respectively. About 85.7 % of these staffs are first-degree holders and the remaining 14.3% are Masters Degree holders, while there are no diploma holders. This table indicates that the bank has qualified employees both in academic and experience who will help to expand the service widely in the community.

Table 4.3. Participant agents' profile

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Female	6	40.0	40.0	40.0
	Male	9	60.0	60.0	100.0
Age	≤18	1	6.7	6.7	6.7
	18 - 29	4	26.7	26.7	33.3
	30 - 45	8	53.3	53.3	86.7
	45 - 60	2	13.3	13.3	100.0
Educational level	Primary and Below	1	6.7	6.7	6.7
	Secondary	3	20.0	20.0	26.7
	College diploma	5	33.3	33.3	60.0
	First degree	5	33.3	33.3	93.3
	Masters and above	1	6.7	6.7	100.0
Experience in business	1-3	2	13.3	13.3	13.3
	3-6	4	26.7	26.7	40.0
	6-10	7	46.7	46.7	86.7
	>10	1	6.7	6.7	93.3
	5.00	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

Source: Survey (2018)

For a complementary assessment, 15 agents were covered in the study. Out of these 15 participant agents, 40% of them are females and the other 60% are male business owners. Majority of these agents (53.3%) are under the age range of 30 and 45. The next bigger figure is under the age group of 18-29, which is 26.7% from the total. More than 66% of CBEBirr agents are college diploma and first-degree holders in sum. The remaining 26.7% and 6.7% are below secondary education and masters and above respectively. About 47% of these agents stayed in business between six years and or equal to ten years. Only 6.7% of agents stayed in

business more than 10 years, while the remaining 40% worked as business owners below six years. The CBEBirr agents are sufficiently experienced in business, which could enable them for expanding the service for more customers.

4.3. Current practices in CBEBirr Project

Table 4.4. Branch Supervisors view on CBBirr activities

Questions		Frequency	Percent	Valid Percent	Cumulative Percent
Did your branch give CBEBirr Support for agents in the last three quarters of 2017/18?	No	14	56.0	56.0	56.0
	Yes	11	44.0	44.0	100.0
Do you have formal business plans to train agents?	No	14	56.0	56.0	56.0
	Yes	11	44.0	44.0	100.0
Are there Sufficient staffs who were trained about CBEBirr in your branch?	No	19	76	76	76
	Yes	6	24	24	100
Does the CBEBirr system interface helps you to record CBEBirr KYC & Literacy profiles?	No	5	20.0	20.0	20.0
	Yes	20	80.0	80.0	100.0
	Total	25	100.0	100.0	

Source: Survey (2018)

From 25 sample supervisors, majority of them (56%) replied that they did not give training to CBEBirr agents for the last three business quarters of 2017/18. These branches have no formal business plan to recruit and train more CBEBirr agents. Out of 25 branch supervisors, only 24% of them agreed that there are sufficient staffs in their branches who had attained CBEBirr training. The Majorities (76%) replied "no". for this question. Branch supervisors were asked their agreement on the CBEBirr system interface whether it is fully installed to record all customer literacy and KYC information. Majority of these supervisors (80%) agreed that the current CBEBirr system interface supports them to record required customer literacy and KYC information.

From the above Tabular analysis, we can infer that branches are not equally aware of CBEBirr service delivery due to gaps in training for their staffs. From observation, it is also noted that

branches who have formal business plans to train agents and acted accordingly have better performances. As some of the branch managers noted in their open-ended questions, branches' relative location to business areas and staffs' commitment variation are the two key factors for performance variation among branches. The other least noted factor was due to wrong target setting for branches. Technical staffs in the project office also support the idea that there are variations in functional staffs' engagement in CBEBirr service implementation. Some branches considered CBEBirr service delivery as an additional burden over their functional assignments. CBEBirr service delivery was not targeted for individuals with the bank's performance management system. In addition to the researcher's observation, many respondents and interviewees from the project office confirmed this notion.

Table 4.5. Agents' view on Branches' technical support

Question		Frequency	Percent	Valid Percent	Cumulative Percent
Did your parent branch supported your business to expand CBEBirr?	No	7	46.7	46.7	46.7
	Yes	7	46.7	46.7	93.3
	2.00	1	6.7	6.7	100.0
	Total	15	100.0	100.0	

Source: survey (2018)

In table 4.4, majority of sample branch supervisors (56%) replied that they did not give support to CBEBirr agents for the last three business quarters of 2017/18. From 15 sample CBEBirr agents 46.7% of them confirmed that their parent branches did not give them technical or training support. This reality is also confirmed by the researcher's observation in various CBEBirr agents. Agents were facing difficulties in recruiting CBEBirr customers due to network problems, invisibility of their agency and low level of technical assistance from branches. During the researcher's field visit, two agents around Kotebe complained their parent branches that they did not care for them at all. Once branches recruit these agents, no one visited them for assistance. Agents requested branches for banners and some necessary advertising materials. Branches were failed to respond on time.

From Field observation, which was made around Gerji, Megenagna, CMC and Bole, similar problems were raised by CBEBirr agents. Some agents criticized on complex and unclear

procedures in documents as barrier to recruit more customers. Clear Training was not given to agents about customer risk management, document authentication and customer recording as these agents replied. One stationary business owner around Gerji also criticized on the CBEBirr account-opening formats, which waste agent's business time during writing of each space. This agent considered paper formats as unnecessary formalities killing his business time during new customer recruitment.

The CBEBirr project has faced obstacles not only during operation level at branches and agents. From the bank side training, procurement and activity arrangements were lagged behind the project plan. As it was found from interviewees, the CBEBirr project was launched one year later than its planned time due to barriers emanated from internal and external forces. The NBE's legal requirement and processes were lagged behind the bank's plan to implement the newly introduced mobile money (CBEBirr) project. Internally various procurement items were slowed at fright. For example, delivery of server was late to start the project's system configuration and instalment activities as the project officers explained. It was identified from the project office that except few workshops about the project, there had not been formal and adequate trainings undertaken for project office staffs about the new project.

4.3.1. Number and Amount of CBEBirr Transaction by type

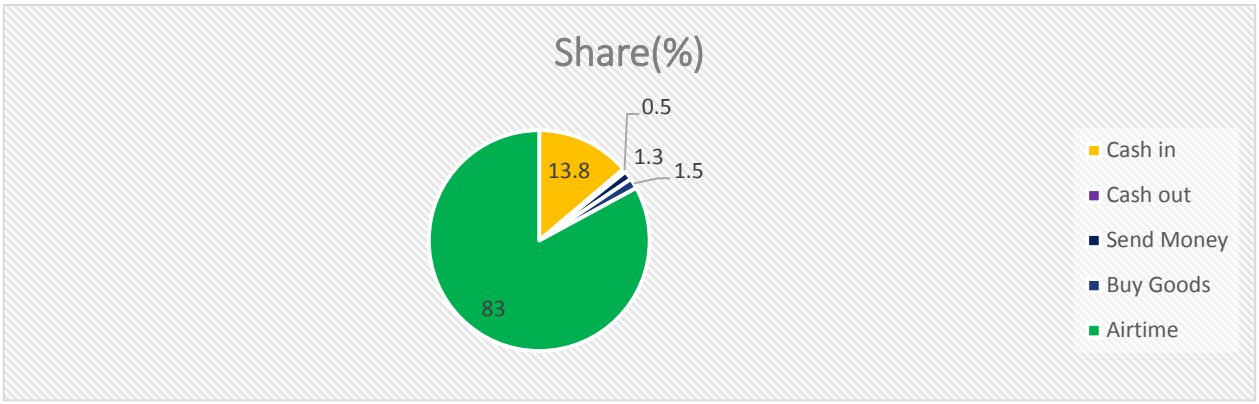

Figure 4.1. Shared Number of transaction by CBEBirr products

Source: Survey (2018)

Airtime transaction holds the largest share (83%) among all other transactions undertaken by CBEBirr Service. Cash out transaction has the lowest repetition (only 0.5). The second highest number of transaction is cash in (13.8%).

4.3.2. Percentage Share of Amount transacted by product

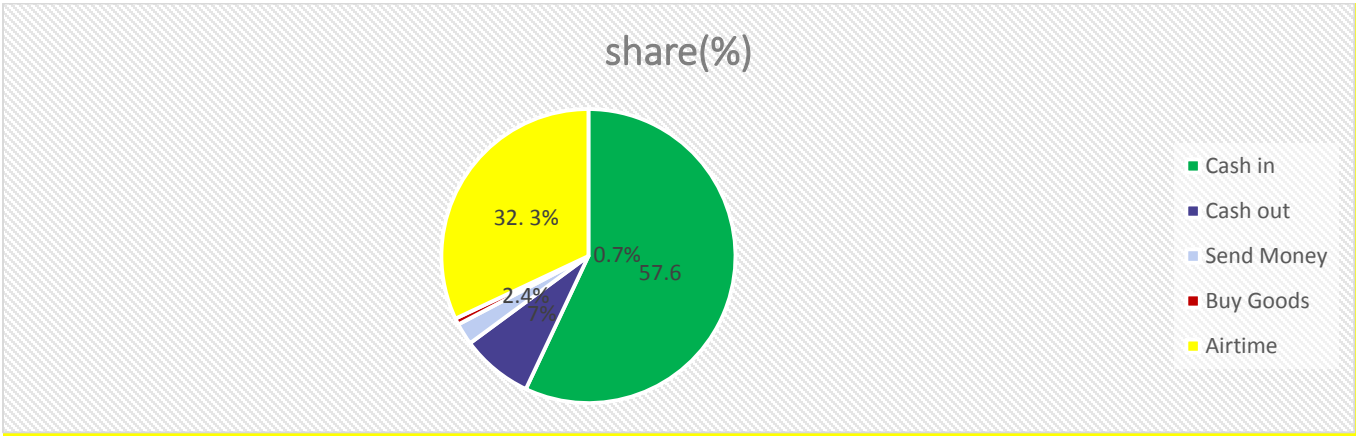

Figure 4.2 - shared Amount of transaction by different CBEBirr products

Source: Survey (2018)

In terms of amount mobilized, Cash in had 57% share from the total transaction. The second largest amount of money mobilized was shared by airtime (32.3%). Buy goods transaction was the lowest (0.7) share mobilized from the total CBEBirr money transaction. Send money and cash out transactions take 2.4% and 7% share respectively.

4.3.3. Trends in CBEBirr Trust Account Transaction

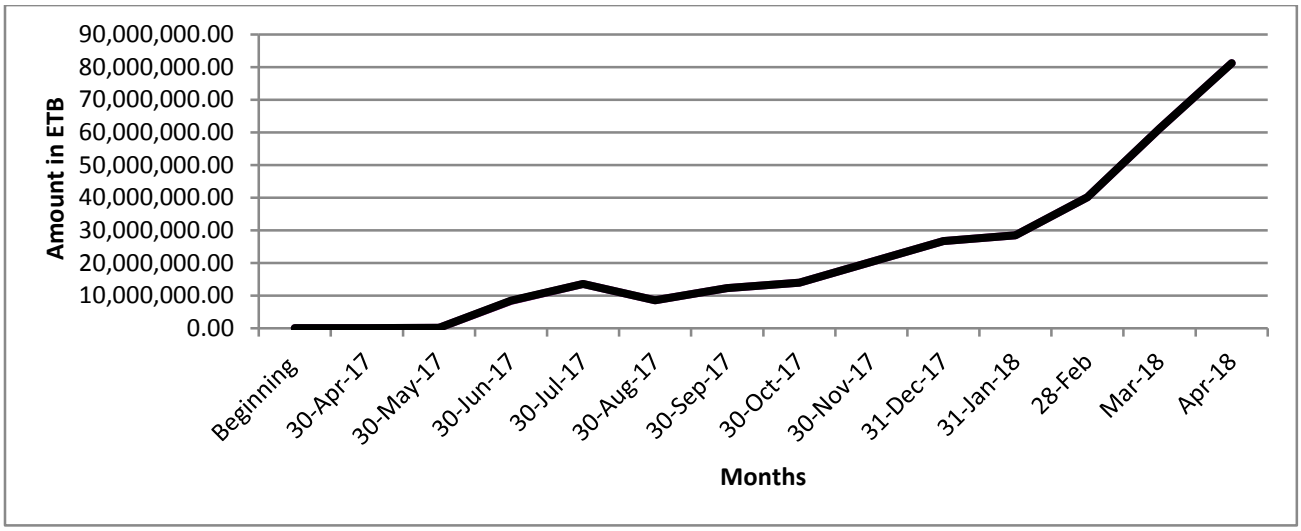

Figure 4.3. Trend of CBEBirr Trust Account Transaction

Source: Survey, 2018

From this graph, we can see that the growth of CBE Birr trust account balance has been declined from July to September 2017. During this time, as it was found from the internal operational investigations, there were technical problems in the bank. There were also adjustments and system installations, which deter the progress of the MMS activities a little bit. After January 2018 and onwards, the CBE Birr activities showed a tremendous growth and hence, CBE Birr Trust Account balances showed a sudden rise from its steady and inconsistent growth. Management made decisions, passed targets, and operational guidelines to branches. A significant number of employees of the bank were also participated in CBE Birr's technical training program from each branch of the bank.

4.3.4. CBEBirr Activity Shares By Branch Groups

A. Number of CBEBirr Transaction

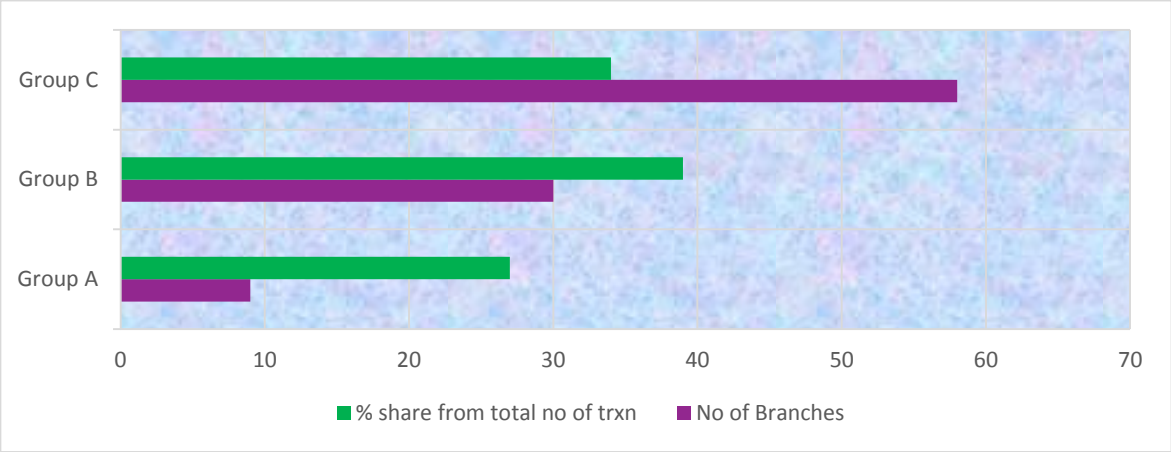

Figure 4.4. Percentage share of CBEBirr Transaction by Branch Groups

Source: Survey (2018)

Previously, it was noted that Branches were grouped by performances on amount of CBEBirr Mobilized, number of CBEBirr Transactions and customer bases. In the above figure, performance variation of branches was analyzed based on the total number of CBEBirr transaction they made in the first three quarters of 2017/18. From the total 97 branches more than fifty-five branches were transacted about thirty-five percent of CBEBirr transaction. These branches were grouped C and below performances. The other 30 mid (B performing) branches made 38% percent of the total CBEBirr transaction. Seven top performing branches transacted about twenty-eight percent of the total CBEBirr transaction.

B. Number of CBEBirr Customers Recruited

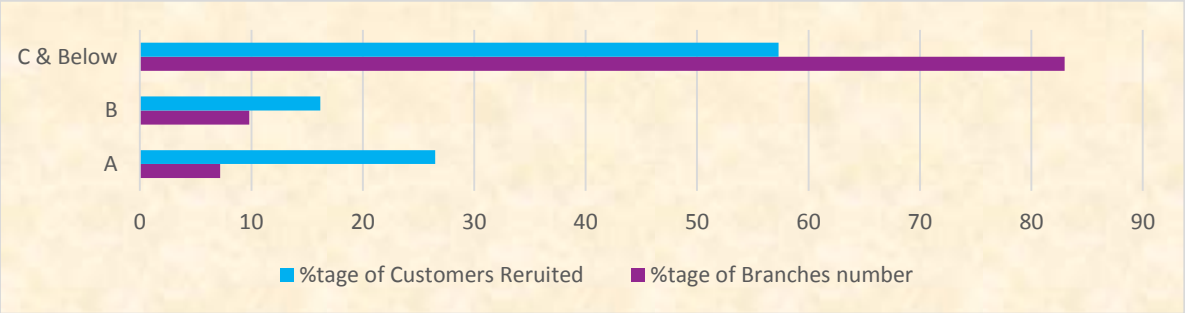

Figure 4.5. Percentage Share of Customer Recruited By branch Groups

Currently East Addis District of CBE has 100 branches. As it was outlined in chapter three, 97 branches were included in the study. These branches have targets to recruit CBEBirr Customers. However, majority of the branches were performed below target in the first three business quarters of 2017/18. These branches were grouped as C and below performance for this research purpose. About 83% of low performance branches could recruit not far more than 50% of the total district CBEBirr customers. Unlikely only 7.2% of top (A) performing branches recruited about 27.3% of the total CBEBirr customers.

C. Amount of CBEBirr Deposit Mobilized

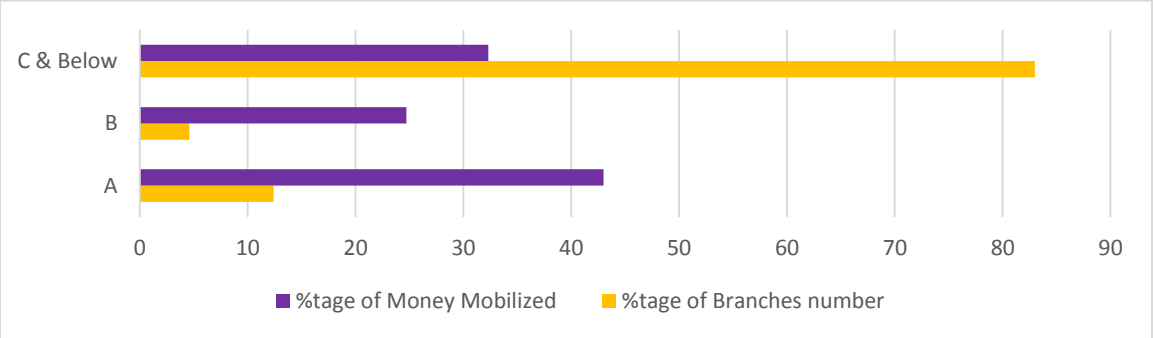

Figure 4.6. Share of Amount mobilized by Branch group

Source: Survey (2018)

Figure 4.5 shows that there is huge performance variation among branches. From this figure, we can see that 12.4% of branches Mobilized more than 42% of the total money while 83% of low performing branches mobilized lower than 40% of the total CBEBirr money in the district.

Branches in East Addis district had wide performance variations due to a number of reasons. From the primary data, it was revealed that there is difference in awareness and engagement by branches for the project. Data from Supervisors and project office staffs states that many branches and their performers considered CBEBirr project as an additional burden over their functional assignment. The other factor was lack of equal commitment by branches. The survey of this research confirmed the truth that many branches were not committed to support their agents. In addition, data from the survey indicated that many branches rarely distribute CBEBirr broachers and leaflets to customers.

4.4. Barriers on CBEBirr Project service delivery

As it was reviewed in the chapters' one and two, so many barriers hinder the mobile project implementation across the globe. The barriers affecting the successful operation of mobile money (CBEBirr) project are summarized in four categories. These are technological, legal, business, and customer (user) related. Specifically, government regulation, lack of product awareness, lack of IT infrastructure, low level of literacy, unfriendly mobile interface design, lack of training and technical support to concerned stakeholders are identified as some of the barriers for successful mobile money(CBEBirr) project operation. Twenty-one questions were asked on the barriers of CBEBirr project operation. The questions were distributed to three different participants. These were branch supervisors, branch performer staffs and CBEBirr agents. These questions contain seven barriers, which were obtained from different literatures.

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".

Statistical results are presented under each section of the barriers considered using the table including the number of frequencies, the Mean, Mode and standard deviation points. The

"Valid" column shows the number of respondents who provided answer for each corresponding variables. On the other hand, the "Missing" column depicted the variables, which were not answered by respondents. The mean tried to tell the average where the data points fall for each specific variable, Mode indicated most frequently answered points for each specific variable while the standard deviation column showed the variability of the data points for each variable under consideration. Accordingly, the researcher tried to interpret the Mean and the Mode of the data points. The researcher tried to triangulate and complement the result obtained from the interview and open-ended and other yes or no questions with the results obtained from the Likert type statements pertaining to similar variables, when found appropriate.

Table 4.6. Branch supervisors' Likert scale response analysis

		Government Regulation	Lack of strong technical support	Lack of training for various stake holders	Low level of customer literacy	Lack of strong IT infrastructure	Information gap	Unfriendly interface design
N	Valid	25	25	25	25	25	25	25
	Missing	0	0	0	0	0	0	0
Mean		3.5600	3.9200	4.0000	3.8800	3.5200	4.1600	3.1600
Mode		4.00	4.00	4.00	4.00	4.00	4.00	2.00[a]

Source: Survey (2018)

Tables 4.6 shows that Information gap and lack of adequate training for stakeholders are the most significant barriers with a mean likert results of 4.2 and 4 respectively. Lack of strong technical support is found to be the third most influential barrier affecting successful implementation of CBEBirr project with a likert mean of 3.92. Low level of customer literacy, government regulation and lack of strong IT infrastructure are considered as barriers by supervisors with mean likert results of 3.88, 3.56 and 3.52 respectively. Branch supervisors were almost neutral whether unfriendly mobile interface design is a barrier for CBEBirr project operation.

Table 4.7 branch frontline officers s' Likert scale response analysis

		Government regulations	Low product Awareness	Unfriendly Mobile Interface design	Weak IT Infrastructure	Lack of Training to various stakeholders	Low Literacy	Lack of Strong Technical Support to Branches	Lack of Commitment
N	Valid	49	49	49	49	49	49	49	49
	Missing	1	1	1	1	1	1	1	1
Mean		4.1064	4.4255	3.8085	4.0000	4.4468	4.2340	3.8511	3.8085
Mode		4.00	5.00	1.00	5.00	5.00	4.00[a]	5.00	5.00

Source: Survey (2018)

Table 4.7 shows that lack of training and low product awareness are the two most significant barriers with a mean likert results of 4.45 and 4.43 respectively. Low level of literacy is found to be the third most influential barrier affecting successful operation of CBEBirr project with a likert mean of 4.23. Government regulation, weak IT infrastructure, and weak technical support are other significant barriers considered by branch performers with likert means of 4.11, 4, and 3.85 respectively. The last barriers are lack of commitment and unfriendly mobile interface design with a likert means of 3.81 each equally. Unlike branch supervisors, more branch performers considered unfriendly mobile interface design as barrier for CBEBirr project operation. In almost all variables in table 4.7, the highest repetitions are likert points of "4" and "5" except "1" in Unfriendly mobile interface.

Table 4.8 Likert scale response analysis of CBEBirr Agents

		Government Regulation	Lack of technical by the bank	lack of training to various stakeholders	Unfriendly Mobile interface	Low customer literacy	Low IT infrastructure	Lack of awareness
N	Valid	15	15	15	15	15	15	15
	Missing	0	0	0	0	0	0	0
Mean		4.2667	4.0000	4.2667	3.8000	4.4000	3.8667	4.0000
Mode		4.00	4.00	4.00	4.00[a]	5.00	4.00	4.00

Source: Survey (2018)

In this table agents considered low customer literacy, lack of training and government regulation as the three most important barriers with likert means of 4.4, 4.3, and 4.3 respectively. Agents considered lack of technical support by the bank and lack of awareness as the fourth and fifth barriers with equal likert magnitude of four. The last two barriers are low IT infrastructure and unfriendly mobile interface design with mean likert points 3.9 and 3.8 respectively.

With exception of slight differences in magnitude of likert means and rank order, all three participants of the questionnaires agreed that low customer literacy, lack of technical support, unfriendly mobile interface, government regulation, lack of product awareness, Lack of technical support by the bank, lack of training, and weak IT infrastructure are some of the barriers identified in this research. The following figure shows the general summary of the barriers in CBEBirr project operation.

In general, lack of training, lack of awareness/information gap, lack of strong technical support were the three top strong barriers with agreement percentages of 89.4%, 88.7% and 81.7% respectively by averaging the three groups of five point likert(both 5=strongly agree and 4= Agree) responses(i.e. Supervisors', Branch performers' and agents' answers).(Refer Annex IV).

Technological Barriers: In most literatures under taken in mobile money project barriers; technical complexity, lack of product knowledge, lack of IT infrastructure, weak agent network and low level of R&D were identified as the barriers for mobile money program implementation in different nations.

Legal Barriers: According to Fin Mark Trust (2016), enabling regulatory environments can open competitive markets for non-bank players while still maintaining stability protecting the interest of customers. These regulatory environments are considered as legal barriers when government fails to maintain them in an equitable and flexible manner. The study has identified specific legal barriers for mobile money (CBEBirr) operation. These are excessive financial

restrictions, complex procedures and legal formalities at branches, lack of legal support for cashless transaction.

Business related Barriers: From both questionnaire and interview analysis, it was found that there is low investment for CBEBirr product awareness, weak market support to agents and merchants, weak government initiatives for non-cash transactions, and weak engagement by CBE branches and agents. From CBEBirr financial reports, we can also see that business transactions (buy goods) are insignificant since the market in the country is not strongly linked to noncash transaction. Many literatures regarded it as "weak market integration with e-commerce". These are barriers related to the business itself.

Customer related Barriers: Customers will use a product if they are aware of it and if it has value and usable qualities (Blanca and Pablo, 2008). In this case, awareness means the knowledge customers have about the product, value is the quality of the product, which comes from the customers overall assessment of the utility based on perception of what is given and what is received. Data collected from questionnaires, observation and interview revealed that customer related barriers identified in this research. These are lack of product awareness, low level of literacy, and wrong product perception.

In general, with strongly disagree = 1 up to strongly agree = 5 points likert scale SPPS analysis of questionnaires from supervisors, branch performers and agents confirmed the existence of these barriers in the above tables For interpretation of results, the mean and mode are used in this study. The following figure shows simple summary of the barriers on CBEBirr operation.

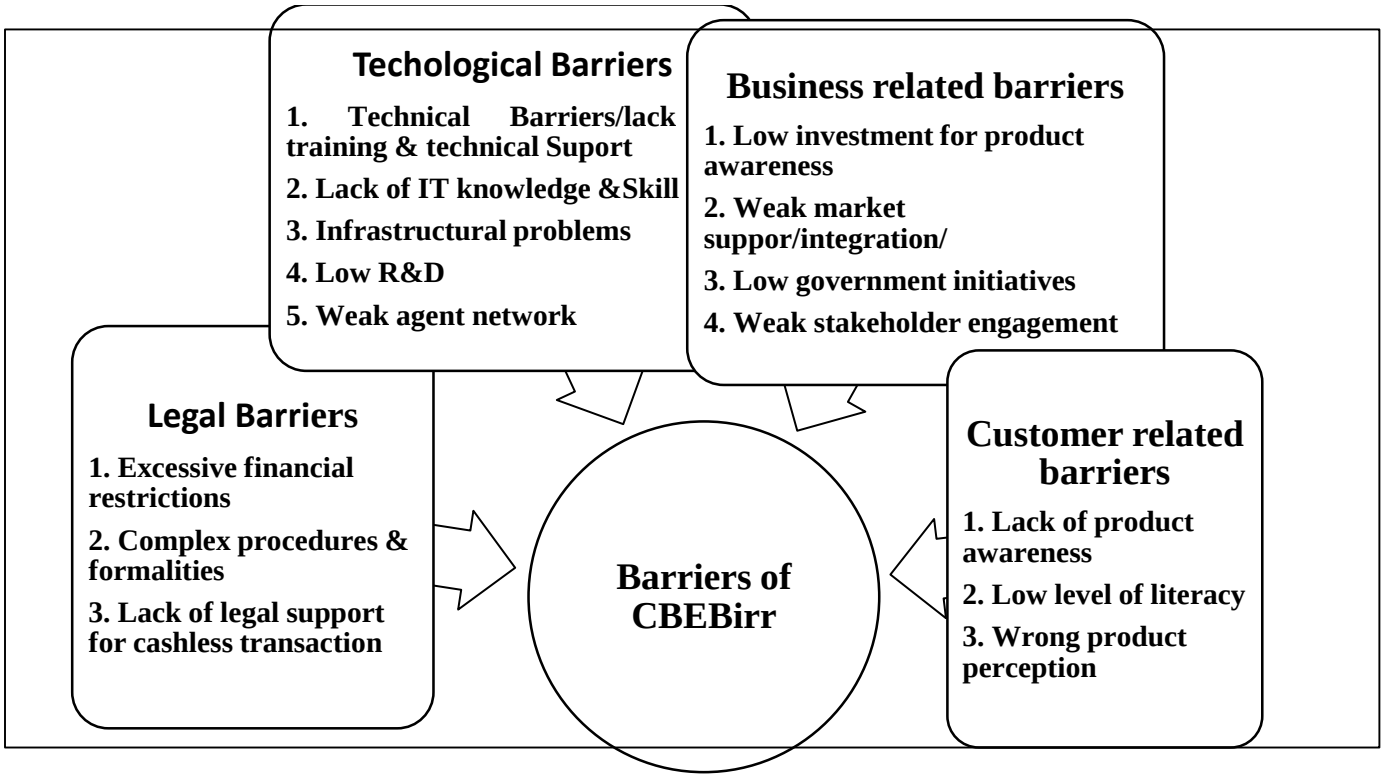

Figure 4.7. Summary Barriers on CBEBirr Project

Source: Survey (2018)

Chapter Five

5. Conclusion and Recommendation

5.1. Introduction

The principal purpose of this study was to assess on the barriers and practices of CBEBirr project operation in the commercial bank of Ethiopia by specific case study in East Addis Ababa district. The study also assessed the level of performance of CBEBirr in the district and the reasons for performance variations among branches. The aim of this chapter is, therefore, 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.

5.2. Summary of major findings

Following the objectives of the study, a mixed research approach was employed and the research design had the following major features: Self-administered questionnaires distributed to 25 branch supervisors, 50 frontline officers, and 15 CBEBirr agents. Interview was also made with three CBEBirr project office staffs. In addition, reports, documents, and observation checklists were analyzed.

Although the bank has been initiated Mobile money project since 2016, the project was officially launched after one year of delay in December 2017. The study was specifically focused in east Addis Ababa district in 97 branches and identified the following major findings.

- During operation, there is wide performance variation between branches. Majority of the district branches had performed below target. There are factors for performance variations among branches. Unequal awareness among branches, lack of commitment, lack of engagement by branches and agents, lack of sufficient training were identified as some of the reasons for performance variations among branches.

- Since CBEBirr mobile money system is not linked to businesses, more customers are not selling and/or buying goods using the system. From the total amount mobilized, buying and selling of goods takes only 0.7% share.
- From the research questionnaire, information gap (lack of product awareness), lack of training, lack of strong technical support to branches and agents were the three most significant barriers identified by this research. Low level of customer literacy, weak IT infrastructure (Network problems, security and Knowledge gaps), and unfriendly mobile interface design (technical problem) were identified as the other significant barriers identified in this research.
- Respondents also commented legal barriers as the other dimensions. These are NBE's regulatory procedures, the bank's complex procedures, and long details in paper formats. There is also weak legal and business support for cashless transaction in the country.
- In general, barriers on the CBEBirr project implementation were summarized in four groups based on the findings of this research. These were related to, technological barriers, Business barriers, Legal barriers, User (customer) resistance.
- Under technological barriers; technical problems, lack of product knowledge, infrastructural barriers, Low level of R&D, Weak agent network were identified.
- Low level of investment for product awareness, weak market support for stakeholders, low government initiatives for cashless transaction, weak engagement by CBE Branches, agents and merchants were identified as business related barriers.
- Lack of product awareness, low level of customer literacy, and wrong product perception were identified as barriers related to the users or customers themselves.
- Finally, financial restrictions of NBE, complex procedures & formalities of the bank, lack of legal support for cashless transaction were considered as legal related problems.

5.3. Conclusions

Previously, it was noted that Branches were grouped by performances on amount of CBEBirr Mobilized, number of CBEBirr Transactions and customer bases. Again, in chapter four, performance variation of branches was analyzed based on their CBEBirr activity performances in the first three quarters of 2017/18. In this research, it was understood that from the total 97 branches more than fifty-five branches transacted about thirty-five percent of CBEBirr number of transaction. These branches were grouped C and below performances. The other 30 mid (B performing) branches made 38% percent of the total CBEBirr transaction. Seven top performing branches transacted about twenty-eight percent of the total CBEBirr transaction.

From this research, we can understand that 12.4% of branches Mobilized more than 42% of the total money while 83% of low performing branches mobilized lower than 40% of the total CBEBirr money in the district.

Branches in East Addis district had wide performance variations due to a number of reasons. From the primary data, it was revealed that there is difference in awareness and engagement by branches for the project. Data from Supervisors and project office staffs stated that many branches and their performers considered CBEBirr project as an additional burden over their functional assignment. The other factor was lack of equal commitment by branches. The survey of this research confirmed the truth that many branches were not committed to support their agents. In addition, data from the survey indicated that many branches rarely distribute CBEBirr broachers and leaflets to customers.

After January 2018 and onwards, the CBE Birr activities showed a tremendous growth and hence, CBE Birr Trust Account balance showed a sudden raise from its steady and inconsistent growth. Management made decisions, passed targets, and operational guidelines to branches. A significant number of employees of the bank were also participated in CBE Birr's technical training program from each branch of the bank.

Even though CBEBirr performance increases after January 2018, the findings of this research revealed that there are potential barriers for the project implementation. It can be concluded

that the barriers for CBEBirr operation were technological, legal, business and users (customers') resistance. Specifically, information gap, lack of training, lack of strong technical support from the bank, low level of customers' literacy, Weak IT infrastructure(connection problem, security problem(viruses in agents computers, knowledge gap in IT), unfriendly mobile interface design for illiterate customers and substitution of internet banking, mobile and ATM were the factors negatively affecting the CBEBirr project operation.

5.4. Recommendations

Based on the findings from this research work, the following recommendations are forwarded for stakeholders in order to implement the project for successful financial inclusion and resource mobilization throughout the country.

For the government;

- It is advisable to make flexible financial policies to make our banks cop up with the dynamic global financial market competition and to satisfy the quickly changing market demands locally.
- The country in general and the banks in particular, must have strong financial technology bases to tackle associated failures and risks in the market. For this effect, adequate investment and resource management must be undertaken for training in technology and financial product development. More Research and development programs have to be initiated and subsidized in the sector.
- To reduce money-printing cost, cashless transaction must be supported, integrated with businesses and incentivized by every administrative organs of the country. All stakeholders must work in collaboration.

For the bank;

- It is recommended that adequate IT related facilities, training, and strong product management and market link must be created.
- A strong technical support and regular assistance must be given to agents and bank branches
- Effective agent-merchant management must be developed.
- Excessive procedures and paper works must be minimized from agent outlets and substituted by easy technological risk management systems
- Must initiate ideas for better mobile interface design for illiterate customers
- Integrate the CBEBirr targets properly with the bank's performance management system to minimize performance variations.

For Branches;

- From the research, it was found that, many branches considered CBEBirr service delivery as an additional burden over their functional assignments. Branch supervisors and performers should avoid this perception and take CBEBirr activities as their major targets.
- They must regularly support their agents and merchants by training, technical support and supplying the necessary information and resources.
- Aggressive marketing campaigns and product awareness must be created by branches
- Branch supervisors must assign or delegate staffs to manage the product offer and service delivery.
- All performers must work to recruit traditional bank users for CBEBirr service by introducing the product properly

For Agents;

- Agents must ask branches eagerly for any assistance during or before problems
- It is recommended that agents should display themselves within the community by introducing the product for their customers

- They must create awareness in their community by introducing the benefits of Mobile transactions and initiate their customers to buy goods, airtime, send money, open account and deposit or withdraw cash using their phones.

5.5. Suggestion for Future Research

Even though this study had met its objectives, it had its own limitations and gaps which might be potentials for future research. The study is limited in both scope and context. Participants were selected via a non-probability, purposeful sampling process. Therefore, regardless of the sample size sampling represents, the entire population cannot be known, therefore it is not good to generalize the results beyond the specific sample used. Moreover, this study excludes the views of customers of CBEBirr in wider context. Therefore, future researchers in the area of CBEBirr service should consider the views of wider participants in the country.

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Appendices

Annex. I. Questionnaires

Addis Ababa University

School of Graduate Studies

Department of Project Management

Questionnaires for branch supervisors

Dear participants, this questionnaire is designed for the purpose of an Academic research work titled "*Assessment on the barriers of CBEBirr Mobile Money Service expansion".*

I hope you will give me your genuine responses that are highly important for this research work. Your responses will be used only for the intended research analysis purpose.

Part one: Demographic information

Dear RESPONDENT! Please click on one of the given correct options about information.

1. Gender: □ Male □ Female

2. Your age group: □ Below 30 □ 30 ≤35 □ 35≤45 □ Above 45

3. Your highest education level?

□ Above Masters □ Masters □ First degree □ College Diploma

4. Your Work experience in managerial position of banking job

□ 0 ≤ 3 □ 3 ≤ 5 □ 5 ≤ 7 □ 7 ≤ 10 □ > 10

5. Your current position in the bank □ Branch Manager □ CSM □ SCSO

6. Do you have taken any training on CBEBirr Mobile Money Service delivery? □ Yes □ No

Part 2: Current Practices of CBEBirr Mobile Money Service Operation

Dear Respondent, Please answer the following questions based on your experience or observation at branches. Please Mark √ On the answers of your choice

7. Do you think that the new CBEBirr system supports you to record all required literacy and KYC information of Incoming CBE Birr customers? □ Yes(1) □ No (0)

8. Are there sufficient staffs in your branch who took training about CBE Birr Service Delivery? □ Yes □ No

9. If you said "Yes" for question number 8, these trained employees transferred skills to other non-trained ones successfully. □ Strongly Agree(5points) □ Agree(4points) □ Neutral(3points) □ Disagree(2points) □ Strongly Disagree(1point)

10. Based on your branch's CBEBirr Project implementation targeted plans, majority of your staffs' performed above expectation during the last three or current quarters cumulatively.

□ Strongly Agree(5points) □ Agree(4points) □ Neutral(3points) □ Disagree(2points) □ Strongly Disagree(1point)

11. Did your branch give training to its CBE Birr agents? □ Yes(1) □ No(0)

12. Do you have formal business plans to recruit and train more CBEBirr agents as a branch.

□ Yes(1point) □ No(0 point)

Part 3: Barriers of CBEBirr Service Expansion

Dear Respondent, please mark √ in the correct answer of your choice in the table about the barriers on CBEBirr project implementation in the table provided below

Note that the numbers in the brackets show the value for each scale of your agreement

		Your Agreement Scales				
No	Questions	Strongly Agree(5)	Agree(4)	Neutral(3)	Disagree(2)	Strongly Disagree(1)
1.	Current CBEBirr mobile interface/way of instruction/ is not suitable for illiterate customers					
2.	Customers who already owned mobile, ineternet, Card banking and normal books tend to refuse CBEBirr service.					
3.	Information gap in the community is a strong barrier to expand CBEBirr Service					
4	Lack of strong IT infrastructure is a strong barrier for CBEBirr Project implementation					
5	Low level of Customer Literacy is a strong barrier to expand CBEBirr Service as required					
6	Lack of training for various stakeholders is a significant barrier to expand CBEBirr Service					
7	Lack of Strong technical Support to branch's is a barrier for CBEBirr Expansion					
8	Government regulations are barriers on CBEBirr project implementation					

Addis Ababa University

School of Graduate Studies

Department of Project Management

Research questions Designed for branch performers on CBEBirr Project

Dear respondent, I request your goodwill to answer the following questions only for the purpose of academic study titled "Assessment on the barriers of CBEBirr Mobile Money Service Delivery in CBE"

I hope you will give me your generosity in giving genuine responses, which are highly important for this research work. Be confident that your responses will be used only for the intended research analyses purpose.

Thank you in advance!!

Part one: Demographic information (Please mark on the right choice)

1. Sex: □ Male □ Female

2. Your approximate age group, □ ≤23 □ 24≤29 □ 30≤35 □ 36≤45 □46 ≤60 >60

3. Your highest education level?

□ College Diploma □ First degree □ Masters degree □ Above

4. Your Work experience in Banking?

□ 0<=1 □ 1<=3 □ 3<= 5 □ 5<= 7 □ 7<=10 □ >10

Part 2: Current Practices of CBEBirr Mobile Money service at Branches of CBE

Based on your observation or understanding during CBEBirr Mobile Money Service operation at branch or bankside, Please Mark √ on the correct answer of your own.

5. Have you accessed weekly/Monthly/ performance reports of your branch/and or district regularly?

□ Yes □ No

6. Have you received quarterly targets to expand CBE Birr Customer base □ Yes □ No

7. Have taken training About CBEBirr Mobile Money Service Delivery □ Yes □ No

Part 3: Barriers of CBEBirr implementation

Dear Respondent, please mark √ in the correct answer of your choice in the table about the barriers on CBEBirr Mobile Money Service delivery in the table provided below

Note that the numbers in the brackets show the value for each scale of your agreement

		Your Agreement Scales				
No	Questions	Strongly Agree(5)	Agree(4)	Neutral(3)	Disagree(2)	Strongly Disagree
1.	Current CBEBirr mobile interface/way of instruction/ is not suitable for illiterate customers					
2.	Customers who already owned mobile, ineternet, Card banking and normal books tend to refuse CBEBirr service.					
3.	Information gap in the community is a strong barrier to expand CBEBirr Service					
4	Lack of strong IT infrastructure is a strong barrier for CBEBirr Project implementation					
5	Low level of Customer Literacy is a strong barrier to expand CBEBirr Service as required					
6	Lack of training for various stakeholders is a significant barrier to expand CBEBirr Service					
7	Lack of Strong technical Support to branch's is a barrier for CBEBirr Expansion					
8	Government rules and regulations are barriers on CBEBirr Project implementation					

አዲስ አባባ ዩኒቨርሲቲ

የንግድ ሥራ ትምህርት ቤት

የድህረ-ምረቃ ፕሮግራም

ፕሮጀክት ማኔጅመንት ትምህርት ክፍል

በኢትዮጵያ ንግድ ባንክ የሲቢኢ ብር ፕሮጀክት ትግበራ ላይ ያሉ እንቅፋቶችን ለመዳሰስ በምስራቅ አዲስ አባባ ዲስትሪክት ዙሪያ የሚደረግ የትምህርታዊ ጥናት መጠይቅ

ለCBE Birr ወኪሎች

የተከበሩ የሲቢኢ ብር ወኪል፣ ስለ ‘CBE Birr’ አጠቃቀማችሁ፣ ቅርንጫፎች ስለሚያደርጉላችሁ የቴክኒክ ክትትልና ሌሎች ድጋፎች፣ ስለ አዳዲስ ደንበኞች ምልመላና ችግሮች ወዘተ መረጃ እንድትሰጡ የሚያግዙ እና የግል እይታዎትን እንዲሞሉበት የሚጋብዝ መጠይቅ ቀርቦልዎታል፡፡ ጥያቄዎቹን በጥሞና በማንበብ በራስዎ መንገድ ትክክለኛ የሚሉትን መልስ ከታች ባሉት መመሪያዎች መሰረት ይሙሉልን!! ማንኛውም እርስዎን የሚመለከት መረጃ ከዚህ ትምህርታዊ ጥናት ውጪ ለሌላ አላማ እንደማይውል ልንገልፅልዎት እንወዳለን፡፡

ስለውድ ጊዜዎ እናመሰግናለን!!

ክፍል አንድ፡- የግል መረጃዎን በተመለከተ ከታች ባሉት መሰረት የተጠቀሱትን ትክክል የሆነውን የ√ ምልክት በማድረግ ይተባበሩን፡፡

1ኛ. ፆታ □ ወንድ □ ሴት

2ኛ. ዕድሜ □ <18 □ 18 -29 □ 30 -45 □ 45 – 60 □ >60

3ኛ. የእርስዎ የትምህርት ደረጃ ከታች ካለው ምርጫ በየትኛው ውስጥ ይመደባል?

□ አንደኛ ደረጃና በታች □ ሁለተኛ ደረጃ ያጠናቀ □ ኮሌጅ ዲፕሎማ □ የመጀመሪያ ዲግሪ □ ማስተርስ ዲግሪና በላይ

4ኛ. በንግድ ሥራ ያለዎት የሥራ ልምድ ብዛት □ 1-3 □ 3 – 6 □ 6-10 □ >10

ክፍል ሁለት፡ <u>ባንኩ ለወኪሎች ስለሚያደርገው ድጋፍ</u>

5. የእርስዎን ድርጅት ውክልና የሰጠው ቅርንጫፍ ድጋፍ ያደርግልዎታል? □ አዎ □ አያደርግልንም

6. ከላይ ላለው ጥያቄ ‘‘አዎ’’ ካሉ ድጋፉ በአብዛኛው ጊዜ የተደረገው በማን አነሳሽነት ነው?

□ በእኛ በወኪሎች □ በቅርንጫፉ

7ኛ. አሁን ያለው የሞባይል ሥልክ የገንዘብ ማንቀሳቀሻና ግብይት ትዕዛዝ መስጫ ማንበብና መፃፍ ለማይችሉ ደንበኞች ምቹ ነው ብለው ያስባሉ? □ ምቹ ነው ብዬ አላስብም □ ምቹ ነው ብዬ አስባለሁ

ክፍል ሶስት: <u>በፕሮጀክቱ ትግበራ ሂደት ላይ ተፅእኖ ስላላቸው ነገሮች</u>

<u>መመሪያ 4</u>፡ ውድ የመጠይቅ ተሳታፊያችን! ለሚከተሉት ምርጫ ጥያቄዎች የራስዎን ልምድ፣ እውቀት ወይም ግምት በመጠቀም በእንዳንዱ ጥያቄ ላይ ለአንድ መልስ ብቻ በተቀመጡት ሳጥኖች ላይ የ √ ምልክት ያድርጉልን::

8ኛ. ደንበኞች የባንክ ቡክ፣ ኤቲኤም፣ ሞባይልና ኢንተርኔት ባንኪንግ ስለሚጠቀሙ የCBEBirr አገልግሎተትን አይፈልጉም፡፡

□ በጣም እስማማለሁ □ እስማማለሁ □ ገለልተኛ ነኝ □ አልስማማም □ በጣም አልስማማም

9ኛ. የሲቢኢ ብር አገልግሎተችን ለማስፋፋት በህዝቡ/በደንበኞች/ ዘንድ ያለውን የመረጃ ክፍተት ትልቅ እንቅፋት ፈጥሯል፡፡

□ በጣም እስማማለሁ □ እስማማለሁ □ ገለልተኛ ነኝ □ አልስማማም □ በጣም አልስማማም

10ኛ. የባንኩ የኢንፎርሜሽን ቴክኖሎጅ አቅም ማነስ የሲቢኢ ብር አገልግሎትን ለማስፋፋት እንደዋና እንቅፋት ይወሰዳል፡፡

□ በጣም እስማማለሁ □ እስማማለሁ □ ገለልተኛ ነኝ □ አልስማማም □ በጣም አልስማማም

11ኛ. በማህበረሰቡ ውስጥ ያለው የትምህርት ደረጃ ማነስ የሲቢኢ ብር አገልገግሎትን ለማስፋፋት እንቅፋት ነው፡፡

□ በጣም እስማማለሁ □ እስማማለሁ □ ገለልተኛ ነኝ □ አልስማማም □ በጣም አልስማማም

12ኛ. የሲቢኢ ብር የሞባይል ትዕዛዝ ማስተላለፊያ /የፅሑፍ ትዕዛዝ መስጫ ዘዴ ያልተማሩ ሰዎችን ሊጠቀሙበት ይችላሉ፡፡

□ በጣም እስማማለሁ □ እስማማለሁ □ ገለልተኛ ነኝ □ አልስማማም □ በጣም እልስማም

13ኛ. ለወኪሎችና ፈፃሚ አካላት ባንኩ ስለሲቢኢ ብር ስልጠና አለመሰጠቱ አገልግሎቱን ለማስፋፋት ትልቅ እንቅፋት ነው፡፡

□ በጣም እስማማለሁ □ እስማማለሁ □ ገለልተኛ ነኝ □ አልስማማም □ በጣም አልስማማም

Annex II. Observation Checklist

B. CBEBirr Mobile Money Service delivery Observation Checklist

B.1. Observation at Branches

No	Observed variable/barrier	Description	Number of repetition
1.	Lack of proper technical Training	Performers failed to pay for unrequested CBEBirr customer who have received local money transfer by CBEBirr	7
2.	Network failure	CBEBirr customers returned unpaid	10
1.	CBEBirr Brochures unused	Customers can't access broachers for product awareness	20
4	Agents didn't get sufficient support from branches	No box files, no training and tehnical support	21
5	Invisible agents(No banners, broachers …)	People cannot easily find	10
6	Computer viruses, network failure and technical problems at agents	Agent webs failed to transact	3
7	Staff user expired, blocked	Passwords not function to serve customers	15

Annex III. **Interview Questions for project office staffs**

Dear Mr/s _____, I requested your goodwill to answer questions on the purpose of academic study titled "Assessment on the barriers and practices of CBEBirr service Expansion in CBE"

I hope you will give me your generosity in giving genuine responses as promised earlier

Your responses are highly important only for this research work and be confident that your responses will be used only for the intended research analyses purpose.

Part one: General Interview questions

1. Please Give me General information about the project from its initiation to current status
2. What are its Major objectives?
3. Please tell me about common technical support requests from branches. Were these technical problems become barriers for branches' success in CBEBirr service expansion?
4. What factors do you think are there contributing for performance variations among CBE Branches during implementation?

Part two: Barriers of CBEBirr mobile money service operation

5. What internal and external barriers did you face during the project phases?
6. Are there there problems related to technological capacity of the bank you have faced during over all history of the project?
7. Please tell me one or two key technical problems you have faced mostly during implementation.
8. Customers complain that CBEBirr is not suitable for illiterate people. What do you alternatively or technically advice about the product to be an all-inclusive?

Part three: Suggested strategy to minimize the gap

9. Your suggested strategy or view to expand CBEBirr service successfully across the country?
10. What Key risk areas to be managed included in your planning part?

Annex IV. Likert Scale Response Analyses

Table 4.6. Likert scale response analysis of supervisors

		Freq.	Percent	Valid %	Cum. %
Unfriendly Mobile interface design is a barrier for CBEBirr Service Expansion	Strongly disagree	2	8.0	8.0	8.0
	Disagree	7	28.0	28.0	36.0
	Neutral	5	20.0	20.0	56.0
	Agree	7	28.0	28.0	84.0
	Strongly Agree	4	16.0	16.0	100.0

Lack of strong IT infrastructure is a strong barrier to expand CBEBirr	Strongly disagree	1	4.0	4.0	4.0
	Disagree	4	16.0	16.0	20.0
	Neutral	5	20.0	20.0	40.0
	Agree	11	44.0	44.0	84.0
	Strongly agree	4	16.0	16.0	100.0
Low level of customer literacy is a strong barrier to expand CBEBirr	Strongly disagree	1	4.0	4.0	4.0
	Disagree	2	8.0	8.0	12.0
	Neutral	4	16.0	16.0	28.0
	Agree	10	40.0	40.0	68.0
	Strongly agree	8	32.0	32.0	100.0
Lack of training for various stake holders is a strong barrier to expand CBEBirr	Disagree	1	4.0	4.0	4.0
	Neutral	2	8.0	8.0	12.0
	Agree	18	72.0	72.0	84.0
	Strongly agree	4	16.0	16.0	100.0
Lack of strong technical support to branches is a strong barier to expand CBEBirr	Disagree	2	8.0	8.0	8.0
	Neutral	2	8.0	8.0	16.0
	Agree	17	68.0	68.0	84.0
	Strongly agree	4	16.0	16.0	100.0
	Total	25	100.0	100.0	

Source: survey 2018

Table 4.7 branch performers' view on likert scale questions

	Agreement	Freq.	%	Valid %	Cum. %
Lack of Training to various stakeholders is a key barrier to expand CBEBirr Service	Strongly Disagree	1	2.0	2.0	2.0
	Disagree	1	2.0	2.0	4.0
	Neutral	1	2.0	2.0	6.0
	Agree	19	38.8	38.8	44.9
	Strongly Agree	27	55.1	55.1	100.0
Weak IT Infrastructure is a key barrier to expand CBEBirr Service	Disagree	7	14.3	14.3	14.3
	Neutral	7	14.3	14.3	28.6
	Agree	14	28.6	28.6	57.2
	Strongly Agree	21	42.8	42.8	100.0
Low Literacy	Disagree	2	4.3	4.3	4.3
	Neutral	5	10.6	10.6	14.9
	Agree	20	42.6	42.6	57.4
	Strongly Agree	20	42.6	42.6	100.0
Unfriendly CBEBirr Mobile	Strongly Disagree	14	9.8	29.8	29.8

Interface design is a barrier to expand CBEBirr service	Disagree	9	19.1	19.1	48.9
	Neutral	4	8.5	8.5	57.4
	Agree	12	25	25	83.0
	Strongly Agree	8	17.0	17.0	100.0
Use of bank book, ATM , Mobile banking & Internet banking is a barrier CBEBirr service	Strongly Disagree	7	14.9	14.9	14.9
	Disagree	7	14.9	14.9	29.8
	Neutral	14	29.8	29.8	59.6
	Agree	8	17.0	17.0	76.6
	Strongly Agree	11	23.4	23.4	100.0
Lack of Strong Technical Support to Branches is a barrier to expand CBEBirr Service	Strongly Disagree	4	8.5	8.5	8.5
	Disagree	5	10.6	10.6	19.1
	Neutral	3	6.4	6.4	25.5
	Agree	17	36.2	36.2	61.7
	Strongly Agree	18	38.3	38.3	100.0
Low Product Awareness/information/ gap is a barrier to expand CBEBirr service	strongly Disagree	3	6.1	6.1	6.1
	Disagree	3	6.1	6.1	12.2
	Agree	14	28.6	28.6	40.8
	Strongly Agree	29	59.2	61.7	100.0
Government Regulation	strongly Disagree	1	2.04	2.04	2.04
	Disagree	4	8.2	8.2	10.2
	Agree	14	28.6	28.6	38.8
	Strongly Agree	30	61.2	61.2	100.0
	Total	49	100	100.	

Government Regulation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	2	13.3	13.3	13.3
	Agree	7	46.7	46.7	60.0
	Strongly Agree	6	40.0	40.0	100.0
	Total	15	100.0	100.0	

Lack of technical support to branches and varoius stake holders is a strong barrier to expand CBEBirr Service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	6.7	6.7	6.7
	Neutral	1	6.7	6.7	13.3
	Agree	9	60.0	60.0	73.3
	Strongly Disagree	4	26.7	26.7	100.0
	Total	15	100.0	100.0	

Source: Survey, 2018