ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

AGENCY BANKING IN ETHIOPIA: THE CASE OF WEGAGEN BANK SC AND LION BANK SC

THESIS SUBMITTED TO COLLEGE OF BUSINESS AND ECONOMICS OF ADDIS ABABA UNIVERSITY FOR THE PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE OF ACCOUNTING AND FINANCE

BY

NEGASSI MESFIN

ADVISOR: - ALEM HAGOS (PhD)

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Approved by Board of Examiner:

_____	_____	_____
External Examiner	**Signature**	**Date**
_____	_____	_____
Internal Examiner	**Signature**	**Date**
Alem Hagos(PhD)	_____	_____
Advisor	**Signature**	**Date**

DECLARATION

I, NEGASSI MESFIN, declare that the thesis entitled **"AGENCY BANKING IN ETHIOPIA: THE CASE OF WEGAGEN BANK SC AND LION BANK SC"** is my original work. I have carried out the present research independently with the guidance and support of the study advisor, **ALEM HAGOS (PhD).** Any other contributors or sources used for the study have been duly acknowledged. Moreover, this study has not been submitted for the award of any Masters, Degree or Diploma Program in this or any other Institution.

Negassi Mesfin _____ _____

Signature Date

Confirmed by Advisor: _____ _____

Alem Hagos(PhD) Signature Date

Approved By Examiner: _____ _____

Signature Date

Statement of Certification

This is to certify that **NEGASSI MESFIN** has carried out his research work on the topic entitled **"AGENCY BANKING IN ETHIOPIA: THE CASE OF WEGAGEN BANK SC AND LION BANK SC"** is his original work and suitable for submission for the award of Degree of Master of Science of Accounting and Finance

Advisor: Alem Hagos (PhD) _____ _____

Signature Date

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List of Acronyms

ATM	Automatic Teller Machine
CBS	Conventional Banking System
EAC	East African Countries
FtFt	Face-to-face Transaction
ICT	Information Communication Technology
MM	Mobile Money
MMS	Mobile Money Service
MNO	Mobile Network Operator
NBE	National Bank of Ethiopia
nFtFt	Non Face-to-face Transaction
PIN	Personal Identification Number
TP	Technology Provider
TSP	Technology Service Provider

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Abstract

Now a day information Technology is highly important in every human activities which reduce many complications in our day to day activities. Agency banking is one of the banking service technology which enable customers to get financial service even without going to branches of the bank. The main objective of the study was to assess the development status of Agency Banking services in Ethiopia by taking the experiences of two banks (Wegagen Bank S.C and Lion Bank S.C) and agents participating in the development of the Hellocash MMS provision as a case study. The researcher use primary and secondary source of data in the study. The questionnaires were developed for sample employees and agents of Wegagen Bank SC and Lion Bank SC. In addition, Interview question was developed for Key informants with knowledge and required experience on the Hellocash pilot project to collect information regarding the viability of Hellocash MMS business model for agents and banks. Secondary data such as reports of banks, 12 months electronic records of customers (subscribers of Hellocash MMS) transactions data and the National Bank of Ethiopia mobile and agent banking directives were investigated in the study. The collected data was analyzed using descriptive and inferential statistics. The result of the study shows that the development of mobile and agent banking depends on the existing regulatory situation on Agency Banking services in Ethiopia as well as on specific factors such as amount of agent/Bank revenue from the Hellocash MMS, Cost reduction, security and reliability, Customer service and convenience.

KEY WORDS: - Mobile and agent banking, Hellocash MMS, Banks

CHAPTER ONE

1. INTRODUCTION

1.1. Background of the study

Information technology is vastly affecting human activities and their ways of life. Advancement in Information technology is altering every sector's working practice. Banking is one of the sectors which are quickly evolving through information technology (Ferdous et al., 2015).

Currently there are large numbers of commercial banks in Africa, but most of commercial bank branches are found in towns, in search of strong infrastructure and market. As stated by World Bank (2017), About 61.73% of populations in sub-sahara Africa lives in pastoral areas. However, usual branch based banking distinguishes this significant number of population from retrieving modern banking services (Atandi, 2013).

In Ethiopia there are 17 private and 1 state-owned commercial banks and there are a total of more than 3282 branches around the country. However, 35% of Bank branches are situated in Addis Ababa and most of the remaining 65% of branches are also located in other cities like Bahirdar, Dire Dawa and Adama (NBE, 2017). As stated earlier this phenomena hampers large portion of the society from getting services of financial institutions. For example there are only 82 bank branches for more than 8 million people living in Afar, Benishangul, Harari and Gambela (NBE, 2017).

Agent banking is becoming an alternative channel to deliver banking services to the unbanked people and for society who are located in geographically inaccessible areas. It is largely depends on the use of information technology, specifically the mobile technology. Agent banking allows financial institutions to serve the needy and unbanked societies. This technology permits customers to access their account at nearby agent (retail shops, post offices, supermarkets and others). The agent keeps customers with basic banking services including account opening, cash withdrawal, fund transfer, cash deposit and other simple services. In response the agent makes commission for each service it provides (Kanini, 2011).

Most of Ethiopian Commercial banks are exercising mobile phone technology for notification when there is a change on customers' account balance. In addition customers are also capable to see their balance and make transfers between accounts if both accounts are held within the same bank (Asfaw, 2015).

The present Mobile banking service is restricted to each bank's network and to use mobile banking, the customer must have an account within formal bank branches; agent banking can avert such problems because customers shall open mobile money account without going to the traditional bank branches and make transfers to any mobile phone subscriber.

The introduction and development of Mobile and Agent Banking Service in Ethiopia is a very recent phenomenon. The National Bank of Ethiopia (NBE) issued "Regulation of Mobile and Agent Banking" directive for the first time on 31st of December 2012. The directive addressed the definition of relevant terms and conditions, modes of business conduct, limits on mobile banking transactions, application processes and procedures for financial institutions, system technology, customer due diligence, agent management, customer protection and reporting requirements with its effective date 1st January 2013. (NBE, 2012)

1.2. Statement of the problem

According to the study made by Ndungu and Njeru (2014) Agency banking is providing accessibility in form of extended hours of banking and by making the banking service closer to the customers directing to increased acceptance of agency banking. A good agent increases the implementation of agency banking while poor quality agents inhibit the acceptance of agency banking. Commissions earned by agents grew from one period to the other signifying adoption and growth of agency banking.

On the other hand, the descriptive study conducted by Kanini (2011) that aimed at defining the factors affecting implementation of agent banking between commercial banks in Kenya. The results of the study shown that the main factors inspiring the implementation of agent banking among commercial banks in Kenya are, (I) Cost reduction (ii) Enhancement of customer service (iii) Expanded presence by banks particularly in remote areas. Highly significant factor was cost reduction in the provision of banking services. Another key factor was the prospect of customer service enhancement owing to a greater level of accessibility that comes with the presence of retail agent outlets. The study obtain that the involvement of third party retail agents presents numerous risk factors with regard to effective control and supervision of banks, and therefore suggests that the supervisor closely monitors the banking sector and strictly requires compliance with the agent banking guidelines, whereas the banks continuously safeguard careful vetting of agents.

The finding from the study by Watiri (2013) indicated that the purposes of the agency department majorly play tasks of reconciliation of agents' accounts, pay agents' commissions, marking agent's premises, check the systems robustness, opening agents accounts and dormant account activation among other functions. The main factors recognized to be influencing the development of agent banking included: cost reduction, enhancement of customer service, expanded presence by banks particularly in remote areas.

Chiteli (2013) states that Challenges confronted by commercial banks in processing agent banking operations include reputational risk, anti-money laundering, consumer protection and legal risk. Mwachofi (2013) Studied in Karatina and Likuyani Sub Counties isolated main challenges as adoption of mobile and agency banking technology to be cost related,

compatibility, lack of institutional pressure, competition between adopters, culture related, inadequate resource, inadequate relevant training, skills, knowledge and attitudinal which are categorized as internal and external factors.

Empirically there was no research conducted on "agency banking in Ethiopia" by investigating the Hellocash experience and using those five factors as independent variables which creates empirical gap and boosts the novelty of this research paper.

Theoretically to the best of the student researcher at international level there was no research which studied all the 5 factors together in a single research to see their interrelationship and level of significance on Agency banking in Ethiopia which creates theoretical gap to be addressed by this research on the stated major factors.

1.3. Research Questions

The study attempts to answer the following questions.

i. How does amount of revenue have an effect on the development of mobile and agent banking in Ethiopia?
ii. How does cost reduction influence on the development of agency banking in Ethiopia?
iii. How does system security have impact on agency banking development?
iv. To what extent does customer service quality enhance the development of agency banking service?
v. How does agency banking service convenience affect mobile and agent development?

1.4. Objective of the study

The main objective of the study is to assess the development status of Agency Banking services in Ethiopia by taking the experiences of two banks(Wegagen Bank S.C and Lion International Bank S.C) and agents participating in the development of the Hellocash MMS provision as a case study.

The Specific Objectives of the study are:

i. To examine the effect of amount of revenue on agency Banking Services in Ethiopia;

ii. To evaluate agency banking service cost reduction impact on agency banking development.

iii. To assess the effect of system on agency banking development in Ethiopia.

iv. To explain the effect of customer service on the development of agency banking in Ethiopia.

v. To investigate the effect of agency banking convenience to the customers on its development.

1.5. Significance of the study

The results of the study can be important inputs to the development of MMS in Ethiopia by providing useful guide to financial institutions as well as to potential agents who wish to start a MMS. It will also use as an important input for NBE and other stakeholders. It will also be an important reference and a starting point for other fellow researchers interested to conduct further studies in the area.

1.6. Scope and limitations of the study

The scope of study covers the assessment of development of Hellocash MMS in Wegagen Bank S.C and Lion Bank S.C. Belcash Technology solutions plc is the technology provider of Hellocash which provide this technology for about four financial institution(Wegagen Bank S.C, Lion Bank S.C, Cooperative Bank of Ethiopia S.C and Somali Microfinance institution) from those four financial institutions only Wegagen Bank S.C and Lion Bank S.C actively providing MMS for the customers.

In addition, the scope of the study includes examining the NBE Mobile and Agent Banking Directive with respect to assessing the regulatory framework of MMS provision in Ethiopia.

The main limitation facing the researcher was time and resource limitations. The other problem was unwillingness of some respondents to give valuable and reliable information. The study was also limited to five major factors selected.

1.7. Organization of the study

The remaining sections of the thesis will be organized as follows. Chapter two deals with review of literature relevant to the study include Theoretical and empirical literature review. Chapter three deal with the research methodology used in the study. It has five main sections, including: the study areas, type and sources of data used, sample design and sampling techniques, data collection methods and methods of data analysis. In chapter four, the results of the study, including the viability of the Hellocash MMS for agents and Banks in Ethiopia; followed by a detailed discussion of the study findings. Chapter five comprises two sections; conclusion and recommendations. The final section of the report presents lists of references used in the study, followed by appendices, which include: definition of Terms and sample questionnaires used in the study.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Introduction

The banking industry is frequently answering to changes in customer preferences and wants; increasing competition from non-banks, changes in demographic and social looks, information technology advances, channel plans, and government deregulations of the financial service sector (Byers & Lederer, 2001).

Kenya is specially seen for the mobile banking technology leadership in Africa. This country has accepted for prevalent and expended use of mobile payments. It is estimated that 60% of the GDP of Kenya goes through mobile money (Pénicaud (2013)). This is largely as a result of the introduction in March 2007 by Vodafone of the mobile money product M-Pesa ('M' denoting mobile and Pesa is the Swahili word for money). M-Pesa enables person-to-person transfers via the use of mobile phones. Mobile phone operators detected that people were selling airtime into a network parallel to a banking network, which allowed the receiver to re-sell the airtime and thereby getting 'cash' for the sold airtime. In remote areas and in the lack of wide branch grids, mobile phones enable cheap and direct payments to the large population. M-Pesa manipulates a mobile phone to transfer money, deliver finance and also later developed microfinancing facilities. M- Pesa permits users to deposit money into an account kept on the mobile phone. The account owner can then use a Short Message Service (SMS) by means of a secured Personal Identification Number (PIN) to send money to other account holder or withdraw deposited money at different retail channels or pay for goods and services.

Banking through mobile phones has been usual in developed countries for years. But the main potential of "m-banking" may be to create basic financial services more available to millions of poor people across the world (Flaming, 2011).

According to another study by Mckinsey in (2011), more than a billion societies in developing markets have cell phones but no bank accounts. Many low-income society store and transfer money using informal networks, but these have high operation costs and are exposed to theft.

Mobile money resolves the problem to fill this gap by offering financial services over mobile phones, from simple person-to-person transfers to more complex banking activities.

Bank-led theory implies that a certified financial institution deliver financial service through agents. The financial institutions provide financial services but accessible through retail agents who handle all or most customer interaction (Lyman, Ivatury and Staschen, 2006). According to this theory the financial institution is the official and accountable entity which handles the service, appoint agents and regulate their activities.

According to Kumar. et al,(2006) non-bank led theory is the theory that customers do not contact with banks. Instead, people deal with a non-banking entity either through a mobile network operator or through prepared card issuer and retail agents serve as the point of customer contact.

The bank-focused theory arises when a traditional bank uses non-traditional low-cost delivery mechanisms to run banking services to its existing customers.

There are various researches undertaken on the globe about agency banking and few researches in Ethiopia. In order to identify gaps from previous research and make some understanding from them I just try to review some journals.

2.2. Theoretical literature review

2.2.1. The Hellocash Service

A BelCash technology solution (BCTS) is a tech provider whose solution provides a toolkit for banks and institutions to allow its customers to have easy access to financial products and services. Its goal is to offer the tools to financial institution which enables their customer to have high-end banking and financial services without customer having the need to have internet and without any downloadable application installed on the mobile phone using the brand Hello Cash.

Using Hello Cash customers are able to deposit, withdraw, and Pay their bills and transfer funds using any mobile phone. In addition, customers are able to receive remittance from abroad directly to their mobile phone.

HelloCash users access their accounts using a mobile phone through IVR, USSD, SMS and online web portal as a complementary channel.

The service is available in 5 languages [Amharic, Oromiffa, Tigrigna, Somali and English]

End users can make money transfers, sale their goods and pay their bills using their mobile phones.

Local merchants are used as mini branches for the financial institutions with roles of facilitating the registration of new customers and serving as Cash in, Cash Out outlets.

The solutions of agent and mobile banking are so cost effective that even the poorest part of the population can be served. Using local merchants as cash in, cash out points makes the banking network available 24 hours a day, 365 days a year for their end users.

As agent banking service is new to Ethiopia, we do rely heavily on our agents at the launch of the HelloCash service. Especially in during the launching phase, the initial agents need to sell the service and represent the brand to customer who has never experiences the service. Therefore, we carefully consider the qualities that our agents need to have as well as to be screened more cautiously than prospective merchants that sell other products.

At the launching phase, one of the most important criteria for agents is to share the vision and to be enthusiastic about the service as well as the business aspect of the banking service.

Activities such identification, recruitment, training and management of the Agent network may be outsourced but the responsibilities shall remain on the bank to ensure that agent activities are in compliance with terms and conditions of the NBE and the Bank. The outsourcing shall result in helping the agent networks scale quickly while providing high- quality and consistent service.

2.2.2. Merits of Agency Banking

2.2.2.1. Improvement in customer satisfaction

According to Ivatury (2006), agency banking purposes include; Allowing customers to pay their bills, check for account balance, sell airtime anywhere at any time. It also aids bank clients to make payments of rent and insurance premium. Moreover, it accepts deposits from clients and

permits withdrawals and transfer of funds. This directs to improved customer satisfaction. Masila, BellahandShibairo (2015) investigation was how mobile and agent banking has affected customer satisfaction in Kenya. Agency banking provide accessbility form of prolonged hours of banking which make the banking service closer to the customers that leads to better adoption of agency banking.

2.2.2.2. Improved the brand image of the bank

Financial institutions must provide consecutive training to their employees on how to sell the service and maintain the operations. These will make agents to be trained with skilled employee of the banks. These agents become brand ambassadors for the bank and for many clustomers.. Giving them adequate training is vital for upholding the banks brand image (iVeri Whitepaper, 2014).

2.2.2.3. Decrease overpopulation at the Banking Halls

On the traditional banking system as we know every customer must come to branches physically to get financial services. Agency banking reduce largely customers contact to branches to have access every financial service for the reason of getting the service through mobile and network of agents.

2.2.2.4. Ease of Implementation

Akturan and Tezcan (2010) investigated the effect of innovation characteristics on mobile banking adoption intention. The finding of the study reveals that mobile banking does not affected by complexity. Which means every operation and implimentation to use agency banking to access financial service is simple and user friendly.

2.2.2.5. Compatibility with the culture of the bank

Pearce and Robinson, (2003) states that culture influences the way managers behave in an organization. Their decision affects the relationship between the organization, its plan and atmosphere. Successful strategy enhanced by appropriate organizational cultures.

2.2.3. Models of Agency Banking

2.2.3.1. Bank-led Theory

The financial institution provides financial products and services but spreads them through retail agents who handle most of customer interactions (Lyman, Ivatury and Staschen, 2006). According to this theory the financial institution is the lawful and accountable body which handles the service, recruit agents and regulate their activities.

According to Rotman (2010), the bank led theory propose a model that promises the potential to enhance considerably the financial service outreach by using a different delivery path, a different business affiliate with experience and target market distinct from formal banks, and may be considerably cheaper than the bank based alternatives.

2.2.3.2. Non-Bank led theory

According to Kumar. et al,(2006) non-bank led theory is the theory that customers do not engage with banks. Instead, customer deal with a non-banking body either through a mobile network operator or through prepared card issuer and retail agents serve as the point of customer contact. Customers transact their cash for E-Money account on the non-banks server, which is not linked to a bank account in the customer's name. This model is riskier as the controlling environment in which these non- banks task might not give much weight to topics related to customer identification. Further the non-banks are not much controlled in areas of clear documentation and record keeping which is a precondition for a safe financial system.

According to National Bank of Ethiopia Directive No. FIS/01/2012(NBE, 2013) mode of business conduct, the non-bank led theory is not allowed, since only financial institutions that are licensed by the National Bank are allowed to engage in mobile and agent banking services.

2.2.3.3. Bank focused theory

The bank-focused theory arises when a formal bank uses modern low-cost delivery channels to provide banking services to its existing customers. Examples range from use of automatic teller machines (ATMs) to internet banking or mobile phone banking to provide certain limited banking services to bank's customers. Even though with many challenges, the bank-focused model presents benefits such as more handling and branding visibility to the financial institutions concerned. Customers' first interests are to do with the quality of experience, security of identity

and transactions, reliability and availability of service and degree of personalization allowed. All commercial banks in Ethiopia have practiced the bank focused theory by deploying automatic teller machines (ATMs), point of sales terminals (POS), M-Wallet and internet banking just to provide efficient and quality banking services to its client with low cost and good availability. In Ethiopia telecom infrastructures is the problem, there is no private network operator which enhance the technology and initiate a positive competition. The bank-focused theory arises when a traditional bank uses non-traditional low-cost delivery routes to provide banking facilities to its existing customers.

2.2.3.4. Agency theory

Agency theory is further give focus on risk sharing. The principal's roles are to deliver capital, gain risk and to build incentives, while the role of the agent are to create decisions on the principal's behalf and to also accept risk (Lambert,2002).Jenses and meckling (1976) was the first scholars to explicitly model the theory of agency.

2.3. Empirical Literatures

There are various researches undertaken on the globe about agency banking and few researches in Ethiopia. In order to identify gaps from previous research and make some understanding from them I just try to review some journals.

2.3.1. Empirical literatures in global study

Study made in Kenya by Watiri (2013) conducted a study on the taking up of agency banking by a common Bank in Kenya (Equity Bank Kenya Limited) in its business undertakings that are across borders. The findings indicated that the functions of the agency department majorly play roles of reconciliation of agent's accounts, pay commissions, labeling agents' premises, test the systems strength, opening agents accounts and inactive account activation among other functions. The main factors identified to be affecting agent banking development included: cost reduction, enhancement of customer service, expanded presence by banks particularly in inaccessible areas.

As per the study made by Ndungu and Njeru (2014) on the title of "Factors affecting the adoption of agency banking in Kenya using the case of Kajiado North Sub County". The study focused on three independent variables: convenience, customer service and quality of agents.

The results indicate that system accessibility interposes to service reliability. High reliability enhances the acceptance of agency banking. Agency banking was delivering accessibility in form of unlimited hours of banking and by making the banking service closer to the clients directing to better implementation of agency banking. High quality of agents enhances the taking up of agency banking whereas weak agents hinder the acceptance of agency banking. Commissions received by agents rose from one period to the other indicating implementations and enhancement of agency banking.

The descriptive study conducted by Kanini (2011) with the intention of defining the issues affecting adoption of agent banking between commercial banks in Kenya. The author exercised a census survey by use of questionnaires. The result of the study describe that the core factors affecting the adoption of agent banking between commercial banks in Kenya are, (I) Cost reduction (ii) Enhancement of customer service (iii) Expanded presence by banks particularly in remote areas. Highly significant factor was cost reduction in the delivery of banking services. Another key factor was the possibility of customer service enhancement due to a better level of suitability that appears with the occurrence of retail agent outlets. The result found that the introduction of third party retail agents gives several risks with regard to effective control and supervision of banks and for this reason recommends that the governor closely supervises the banking sector and strictly applies compliance with the agent banking guidelines, whereas the banks constantly ensure careful checking of agents.

A descriptive study conducted by Musau and Jagongo (2013) in showing an analysis of the utilization of agency banking on the performance of Kenyan banks. The research results provide a record on how banks across developing countries are involving branchless banking by the assumption of increasing the financial levels inclusion in their regions. The aim of the study included: assessing how agency liquidity influence banks performance; determining how agency costs affects the banks performance; examining the effects of agency security on the performance of banks; and evaluating how security agency affects regulations on the performance of banks. Descriptive statistics was used which includes: mean, standard deviation, frequency distribution and percentage points in the analysis. The results shows that agency banking had allowed cost saving and availability of financial services by banks and clients as well. Agency banking had allowed banks to move the unbanked socety.

Chiteli (2013) states that Challenges faced by commercial banks in operating agent banking operations include reputational risk, anti-money laundering, consumer protection and legal risk. Mwachofi (2013) Studied in Karatina and Likuyani Sub Counties indicates main challenges as adoption of mobile and agency banking technology to be cost related, compatibility, lack of institutional pressure, competition between adopters, culture related, inadequate resource, inadequate relevant training, skills, knowledge and attitudinal which are categorized as internal and external factors.

Njuki (2012) identified that agency banking has made to raise banks' profits and spread reach of financial services in Kenya. As such and owing to the accelerated competition of banking services in Kenya today, 13 out of 44 Kenyan commercial banks have involved agency banking model. Intense to get advantage of the cost-saving, availability and better customer service which brought about by the agency banking model, Kenyan financial institutions have over the last two years boarded on an aggressive entry into this segment.

2.3.2. Empirical research in the case of Ethiopia

The study made by Henos (2018) on Challenges and Prospects of Agent Banking in Ethiopia: the case of M-BIRR and CBE Birr. He identified that the main challenges presented in his research includes; Lack of Awareness of both agents and customers, NBE regulations and limitations, lack of budget, Poor advertisement, unavailability of new and additional services, illiteracy, dependability of the service and Poor network quality. He suggests that the service should be available with voice or other channel to illiterate customers who can't read and write services. Additional services should be added and it requiers more advertisement, promotion and other awareness creation programs to attract customers.

Another research was done by Elfagid (2015) on the challenges and prospects of mobile and agent banking. In this research the researcher concentrated to assess Ethiopian mobile and agent banking practice.. As of the author the challenges of mobile and agent banking service invoves low level of ICT and road infrastructures, limited number of agents in countrysides and educational level of both customers and agents. On the other side, he also describes possible prospects for this rising technology these includes, untouched potential market, agent banking support banks to enhance their market share and number of customers. Convenient political,

social, technological and economic conditions and the growth of mobile penetration are also considered as prospects for Ethiopian agent banking.

The research study by Gugsa (2015) on Barriers and drivers of adoption of agent banking innovation in Ethiopia, the researcher was focused on four commercial banks and the collected data is analyzed using descriptive statistics. He indicated several external barriers to the development of agent banking in Ethiopia, such as lack of legal framework, under developed ICT infrastructure including poor network connectivity, lack of competition among banks, lack of enough government support and customer trust towards the service. He suggests that, the central bank should prepare and issue legal framework that govern agent banking, the government has to support the banking sector by developing ICT infrastructure for successful implementation of agent banking and banks should work on technology based competition to increase their number of customers, participate in awareness creations and making the system easy for use.

The study made by Gardachew (2010) on the title of the opportunities and challenges of E-banking in Ethiopia. The purpose of his study was focused on analyzing the status of electronic banking in Ethiopia and investigates the main challenges and opportunities of implementing E-banking system. The researcher conducted a survey on the existing operating style of banks and identifies some challenges of using E-banking system, such as, lack of suitable legal and regulatory frame works for E-commerce and E- payments, political instability in neighboring countries, high rates of illiteracy and absence of financial networks that links different banks.

According to the study made by Ayana (2012) on the title that says factors that affect adoption of E-banking in the Ethiopian banking industry. The study was conducted based on the data gathered from four banks in Ethiopia; three private banks (Dashen bank, Zemen bank and Wegagen bank) and one state owned bank (commercal bank of Ethiopia). A mixed research approach was used to answer the research questions that emerge through the review of existing literature and the experiences of the researcher in respect of the E- banking system in Ethiopia. The study statistically analyzes data obtained from the survey questionnaire. The result of the study indicated that, the major barriers Ethiopian banking industry faces in the adoption of Electronic banking are: security risk, lack of trust, lack of legal and regulatory frame work, Lack of ICT infrastructure and absence of competition between local and foreign banks. The study

suggests a series of measures which could be taken by the banking industry and by government to address various challenges identified.

The research study made by Mesfin Tefera(2014) on the title of the development of mobile and agent banking service in Ethiopia; the M-Birr experience of Addis, Amhara and Oromia Microfinance Instituitions. The aim of the study is to assess the development status of Mobile and Agent Banking services in Ethiopia by taking the experience of three selected microfinance institutions (BANKs), such as: Addis Credit and Saving Institution (ADCSI), Oromiya Credit and Saving Share Company (OCSSCO) and Amhara Credit and Saving Institution (ACSI) and 12 sample agents participating in the development of the M-BIRR Mobile Money Service (MMS) provision as a case study. The study identified and examined the MMS regulatory framework in Ethiopia. According to the results of the study the M-BIRR MMS business model faces regulatory challenges. Some key informants from the NBE and the BANKs argue that the technology provider is assuming the role of financial institutions which they claim is beyond its expected role according to the NBE regulation directive.

2.4. Research Gap

Research has been undertaken on Agency banking on different part of the world to investigate the problems that this technology faces with and to direct the methods on which problems solved. Some of the global research includes; Watiri (2013) conducted a study on the taking up of agency banking by a common Bank in Kenya (Equity Bank Kenya Limited) in its business undertakings that are across borders, Ndungu and Njeru (2014) on the title of "Factors affecting the taking up of agency banking in Kenya using the case of Kajiado North Sub County", Kanini (2011) that aimed at determining the factors affecting adoption of agent banking amongst commercial banks in Kenya, Musau and Jagongo (2015) in conducting an analysis of the utilization of agency banking on the performance of Kenyan banks, Chiteli (2013) states that Challenges faced by commercial banks in operating agent banking operations, Mwachofi (2013) Studied in Karatina and Likuyani Sub Counties identified main challenges as adoption of mobile and agency banking technology, Njuki (2012) indicated that agency banking has helped to raise banks‟ profits and spread reach of financial services in Kenya.

However, few researches have been undertaken in Ethiopia on agency banking. Which includes; Henos (2018) on Challenges and Prospects of Agent Banking in Ethiopia: the case of M-BIRR

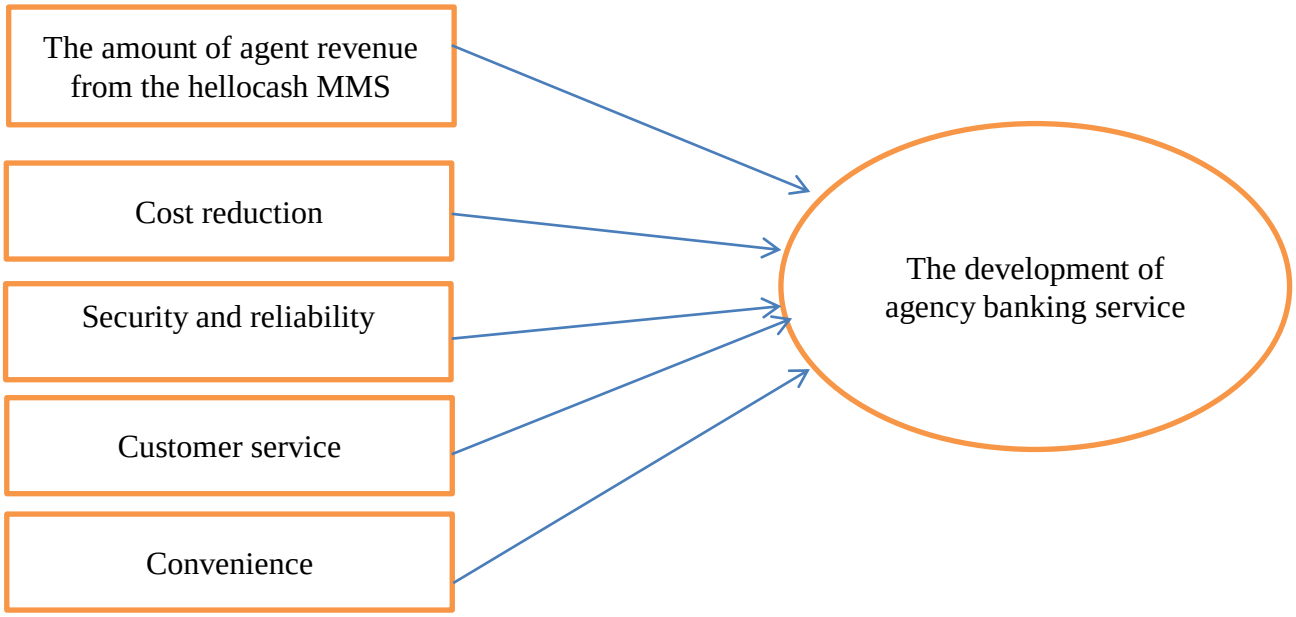
and CBE Birr, Elfagid (2015) on the challenges and prospects of mobile and agent banking, Gugsa (2015) on Barriers and drivers of adoption of agent banking innovation in Ethiopia, Gardachew (2010) on the title of the opportunities and challenges of E-banking in Ethiopia, Mesfin Tefera(2014) on the title of the development of mobile and agent banking service in Ethiopia; the M-Birr experience of Addis, Amhara and Oromia Microfinance Instituitions.

However there are no adequate and up-to-date studies that have been done on agency banking in Ethiopia: the Hellocash experience of Wegagen bank sc and Lion bank sc .This has created a research gap that this study seek to fill by investigating the factors for the development of mobile and agent banking in Ethiopia.

2.5. Conceptual frame work

The conceptual framework is aiming to examine and explain the development of mobile and agent banking service in Ethiopia. These factors includes the amount of agent revenue from the hellocash MMS, Cost reduction, Security and reliability, Customer service and convenience. The study determines the effect of independent variables on the dependent variable in order to investigate the development of agency banking service in Ethiopia.

Fig: - 2.1 Conceptual frame work



Source: Compiled from literature (2020)

CHAPTER THREE

3. RESEARCH METHODOLOGY AND DESIGN

3.1. Research methodology

Research methodology is the path through which these researchers formulate their problem and objective and present their result from the data obtained during the study period.

This chapter discusses the processes and techniques used in carrying out the study. It also gives a description of the respondents including information on the study population, the number of respondents and how they were selected. It also provides an outline of research design and the instruments for data collection. The methods adopted in the administration of the research instrument, data collection procedure, data analysis and measures used to ensure validity of the instrument used.

3.2. Research design

Research design is blue print of research and it shows the overall activities including data collection, sampling, data analysis and other aspects of a research (Bhattacherjee, 2012).

Based on their scientific objective researches are classified as positivist or interpretive. Positivist designs are used for theory testing and their aim is generalization. Whereas interpretive research designs focuses on theory building and interpret to the actual phenomena. Under both research designs there are several other specific research designs (Bhattacherjee, 2012).

According to Bhattacherjee (2012) researches are also grouped as Explanatory, Descriptive, and Exploratory on the basis of the research purpose. Exploratory research is suitable to study complex situation. Unlike explanatory research, that emphasizes on cause and effect analysis. Exploratory research focuses on the why and how part of the particular condition.

For this research the researcher uses descriptive research approach in view of the nature of problem. In this study, the researcher adopted both quantitative and qualitative study approach the rational for combining both approaches is to better understand the research problem by

combining both numeric value from quantitative research and the detail of qualitative research and to neutralize limitation of applying a single approach.

3.3. Variables

3.3.1. Dependent Variables

In this study dependent variable is Development of Agency banking service. Generally five variables affect the development of Agency banking service.

3.3.2. Independent Variables

Independent variables included in this study that would be factor for the development of Hellocash mobile money service are:-

- The amount of revenue from the hellocash MMS:-
  It is affected by factors includes the amount of commissions earned from mobile money transfer, withdrawals, mobile airtime topups
- Cost reduction:-

Those factors such as upfront capital requirement, liquidity management and additional staff and space are Cost reduction.

- Security and reliability
  Security risk, system reliability and effect on other agent business are included on security and reliability.

- Customer service
  Is depend on Adequate revenue at start up, major costs with growth, fragmented demand among agents at start up and availability and accessibility of adequate MMS for customers to utilize their mobile money deposits during start up.
- Convenience:-

The opportunity cost of capital, Agents proximity to branches, transport costs to replenish deposits, time spent for travel to and from branches(to replenish agent MM deposit), level of

customer awareness, promotion and other marketing activities, individual mobile account balance limits and daily debt limits of MM accounts, The geographical coverage of Hellocash service.

3.4. Research method

3.4.1. Data gathering and gathering tool

The researcher was use primary and secondary source of data in the study.

The researcher develop questionnaires for 16 sample employee from four branches of which two branches are from Wegagen Bank SC and two branches from Lion Bank SC. The purposely selected samples was asked to rate 21 factors that affect the viability of Hellocash MMS for banks on Likert scale who are engaged in the delivery of Hellocash MMS. 8 sample agents purposefully was selected, four sample agents from each banks. The selected samples were asked to rate 26 factors that affect the viability of Hellocash MMS for Agents on Likert scale. In addition, 15 Key informants who had knowledgeable and required experience on the Hellocash pilot project, such as: Employees of two banks, Belcash Technology solution and individuals from the financial regulator (NBE) was asked to collect information regarding the viability of Hellocash MMS for agents and banks.

Primary data from 16 sample emplyees, 8 sample agents and 15 sample key informats was collected.

Secondary data such as reports of banks, 12 months electronic records of customers (subscribers of Hellocash MMS) transactions data and the National Bank of Ethiopia mobile and agent banking directives was used in the study.

3.4.2. Population

The study was conducted by taking two selected banks (Wegagen Bank SC & Lion Bank SC), Belcash Technology Solution Company which is the Hellocash technology provider and National Bank of Ethiopia. Two branches from each bank were selected and two Agent samples from each branch were selected. Each banks agency banking department (division) was included to the study. In general, belcash technology solution, National Bank of Ethiopia, four branches,

eight agents, and agency banking divisions of Lion Bank SC and Wegagen Bank SC was included to the study.

3.4.3. Sampling technique

In the study, purposive sampling technique was used to select the study samples. The study was conducted by taking two selected banks (Wegagen Bank SC & Lion Bank SC) , Belcash Technology Solution Company which is the Hellocash technology provider and National Bank of Ethiopia. Two branches from each bank were selected and two Agent samples from each branch were selected. Each banks agency banking department (division) was included to the study. In general, Belcash technology solution, National Bank of Ethiopia, four branches, eight agents, and agency banking divisions of Lion International Bank SC and Wegagen Bank SC was included to the study.

3.4.4. Data analysis method

Data analysis is the computation of certain indices or measures along with searching for patterns of relationship that exist among the data groups. The data analysis for this research was made by using both descriptive and inferential statistics. Descriptive statistics was used to describe the data collected in research studies and to accurately characterize the variables under observation within a specific sample and frequently used to summarize a study sample. In addition to this, Spearman correlation coefficient was used to show the correlation between the independent and dependent variables. IBM SPSS data analysis software version 23 was used in the data analysis.

3.4.4.1. Descriptive statistics

Descriptive statistics help to describe and understand the features of a specific data set by giving short summaries about the sample and measures of the data. descriptive statistics was used to explain the diferent economic characteristics of the sample agents and Banks providing Hellocash MMS. These include Mean, percentage and frequency of occurrence of different types of MM Transactions.

3.4.4.2. Likert scale

Likert scale was used to rate the level of significance of 26 factors for Agents and 21 factors for Banks categorized under 5 major variables that affect the viability of the Hellocash MMS for Agents and Banks in Ethiopia. The scale ranges from 1 to 5 scale points. In the scale, 1 represented highest significance of the factor; 2 represented significance of the factor; 3 as neutral factor; 4 represented lower significance of the factor; and 5 represented least significance of the factor in determining the viability of the Hellocash MMS for agents and Banks.

3.4.5. Reliability

Reliability refers to the stability of the measure used to study the relationships between Variables. The questions in the questionnaire were designed taking into consideration the issues related to the problem and goals of the study and theories on the subject. To check the reliability of the questionnaire the researcher were use reliability test by using Cronbach alpha to check the consistency of the questions with the topic of the study.

Reliability in a research is basically required to ensure for dependability, consistency and repeatability over time, over instruments and over groups of respondents. Joppe (2000) was defined reliability as: the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable. It is a measure of consistency over time and over similar samples. A reliable instrument for a piece of research was yield similar data from similar respondents over time. Calculation of reliability as internal consistency can be found in Cronbach's alpha, frequently referred to simply as the alpha coefficient of reliability (Louis C, Lawrence M and Keith M. 2007). According to the various authors Alpha coefficients greater than 0.90 are very highly reliable, 0.80 to 0.90 highly reliable, 0.7 to 0.79 reliable, and 0.60 to 0.69 marginally / minimally reliable and less than 0.60 unacceptable or low reliability. As a result of this, the Cronbach‟s Coefficient Alpha value of variable of this study listed below in table 3.2, which depicts that the instruments were reliable and able to support collection of data and for further analysis.

Table 3.1:- ***Cronbach's Alpha reliability test of Employee questionnaire***

No.	Variables	Value of Cronbach's Coefficient Alpha	Items in Cronbach's Alpha
1	Amount of Revenue from Hellocash MMS	0.834	5
2	Cost reduction	0.741	3
3	Security & reliability	0.808	3
4	Customer service	0.794	5
5	Convenience	0.757	5

Source: Researcher Computation Using SPSS, 2020

Table 3.2:- ***Cronbach's Alpha reliability test of Agent questionnaire***

No.	Variables	Value of Cronbach's Coefficient Alpha	Items in Cronbach's Alpha
1	Amount of Revenue from Hellocash MMS	0.928	5
2	Cost reduction	0.759	3
3	Security & reliability	0.917	4
4	Customer service	0.899	5
5	Convenience	0.894	9

Source: Researcher Computation Using SPSS, 2020

3.4.6. Validity

Validity refers to the extent of accuracy of the results of the study. Validity of the results can either be internal or external. Internal validity refers to the analysis of the accuracy of the results obtained. External validity refers to the analysis of the findings with regards to whether they can be generalized.

3.4.7. Ethical consideration

The study was conducted by considering ethical responsibility. This includes providing Information to the respondents the purpose of the study and the use of the information as Well. Every person involved in the study was entitled to the right of privacy and dignity of treatment, and no personal harm was caused to subjects in the research. Information obtained was held in strict confidentiality by the researcher.

CHAPTER FOUR

4. RESULTS AND DISCUSSION

This chapter depicts results and findings of the descriptive statistics**.** The data analysis was made with the help of Statistical Package for Social Science (SPSS v. 23).

The main purpose of this section is to present the result and discussion of the findings of the study about Mobile and Agent banking in Ethiopia. The researcher distributed a total of sixteen questionnaires for Employees, eight questionnaires for Agents and fifteen interview questions for key informants from purposely sampled branches employees and Agents; Wegagen Bank S.C, Lion International Bank S.C and Belcash technology solutions PLC. Out of the total 39 questionnaires, 35 useable questionnaires were obtained to enable a meaningful analysis of the data with 90 % response rate, while 4(10%) remain uncollected and not relevant for analysis due to negligence of the respondents in filling the questionnaires. Statistical Package for the Social Sciences (SPSS) software is used to analyze the descriptive part of research findings. The first part of this chapter presents results of finding. The second part of the chapter describe discussion of results detail analysis of descriptive and correlation findings.

4.1. Result

4.1.1. Demographic profile of respondents

This section summarizes the demographic characteristics of the sample, which includes gender of the respondents, age, education level and year of experience. The purpose of the demographic analysis in this research was to describe the characteristics of the sample such as the number of respondents, proportion of males and females in the sample, range of age, education level of respondents and service year of experience so that the analysis could be more meaningful for readers.

Table 4.1: Gender of respondents

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	21	60.0	60.0	60.0
	Female	14	40.0	40.0	100.0
	Total	35	100.0	100.0	

Source: Researcher Computation Using SPSS, 2020

The gender character of the respondents of 35 which constitutes 21 (60%) was male and the remaining 14 (40%) were females.

Table 4.2: Age of respondents

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-30	26	74.3	74.3	74.3
	31-45	9	25.7	25.7	100.0
	Total	35	100.0	100.0	

Source: Researcher Computation Using SPSS, 2020

As indicated in the above tables from the total respondents, 26 (74.3%) were within age gap of 18-30 and the remaining 9 (25.7%) was between age of 31-45 respectively.

Table 4.3: Education background of respondents

Educational Background of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	First Degree	31	88.6	88.6	88.6
	Masters	4	11.4	11.4	100.0
	Total	35	100.0	100.0	

Source: Researcher Computation Using SPSS, 2020

The educational qualification of the sample respondents out of the total respondents of 35, 31(88.6%) were with First Degree and 4(11.4%) was Master's Degree holder.

Table 4.4: Year of experience of respondents

Year of Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<2 years	13	37.1	37.1	37.1
	2-5 years	11	31.4	31.4	68.6
	6-10 years	7	20.0	20.0	88.6
	Above 10 years	4	11.4	11.4	100.0
	Total	35	100.0	100.0	

Source: Researcher Computation Using SPSS, 2020

As indicated on the above table Service year of experience out of the total respondents, 13(37.1%) were <2 years of experience, 11(31.4%) were 2-5 years of experience, 6-10 years of experience were 7(20%) and the remaining respondents 4(11.4%) were above 10 years of experience.

4.1.2. Descriptive Analysis

Five factors which influence Agency Banking (Hellocash MMS) were considered for the study. These five broad factors were Amount of revenue from Hellocash MMS, Cost reduction, Security and Reliability, Customer service & convenience. Each factor has incorporated their sub statements. These statements have the ability to explain the broad dimension. The researcher develop questionnaire for 16 employees of two banks and also for 8 agents of branches. In addition interview questions were developed for 15 key informants. Out of selected samples employees and key informants was responding for my questionnaire. But, only 4 agents out of 8 agents were responding to my questionnaire. Which means from a total of 39 samples (16 bank employees, 8 agents and 15 key informants), 35 usable questionnaires were obtained from respondents.

4.1.2.1. Descriptive analysis from the result of employees respondents

The mean score for amount of revenue for hellocash service is 4.026 which means the result is found from sub factors which includes number of transaction an agent conduct per day score 3.94, earning from transfer have a mean value of 4.13, Earning from mobile card top-up have value of 4, Earning from withdraw accounts for 4.06 and earning from other types of transaction have a mean value 4. This indicates that Amount of revenue from hellocash have high positive response for Agency Banking (Hellocash MMS).

Table 4.5: The Mean for amount of revenue from Hellocash

	N	Minimum	Maximum	Mean
Number of transaction an agent conduct perday	16	1	5	3.94
Earning from transfer	16	1	5	4.13
Earning from mobile card top up	16	2	5	4.00
Earning from withdrawals	16	3	5	4.06
Earning from other transaction	16	1	5	4.00
Comulative of Amount of Revenue	**16**			**4.026**

Source: Researcher Computation Using SPSS, 2020

The second variable with the second higher mean score is Security & Reliability with the mean score of 3.98. This indicates Security & Reliability which includes system reliability with score of 4.25, security risk with the mean value of 3.63 and the hellocash effect on other agent business with mean value of 4.06 are highly affect the development of mobile and agent banking technology in Ethiopia.

Table 4.6: The Mean for Security & Reliability

	N	Minimum	Maximum	Mean
Security risk for example robbery	16	1	5	3.63
Reliability of the Hellocash MMS system	16	1	5	4.25
The effect of providing the Hellocash MMS on other	16	2	5	4.06
Commulative of Security &Reliability	**16**			**3.98**

Source: Researcher Computation Using SPSS, 2020

Cost reduction is the third higher mean score of 3.5. Additional staff and space need to run the Hellocash MMS is one of sub factor which highly contribute to Cost reduction score with the mean value of 3.69. liquidity management and initial capital requirement to start Hellocash MMS are the convenience with the mean value of 3.5 and 3.31.

Table 4.7: The Mean for Cost reduction

	N	Minimum	Maximum	Mean
The initial capital requirement to start Hellocash MMS	16	1	5	3.31
Additional staff and space need to run the Hellocash MMS	16	1	5	3.69
Liquidity management	16	2	5	3.50
Comulative of Cost reduction	**16**			**3.5**

Source: Researcher Computation Using SPSS, 2020

Fourth ranked variable based on mean value is Convenience with mean value of 3.35. this explains that the development of mobile and agent banking influenced by level of public awareness about hellocash MMS, Promotion of the Hellocash MMS by Bank and Belcash technology, the daily debit limit of MM subscribers account, the maximum account balance limit set on individual with the mean value of 3.81, 3.00,3.44, 3.19 and 3.00.

Table 4.8: The Mean for Convenience

	N	Minimum	Maximum	Mean
The level of public awareness about the Hellocash MMS	16	2	5	3.81
The geographical coverage of the Hellocash service to allow customers' of different branches' to transact among each other	16	1	5	3.00
Promotion of the Hellocash MMS by Bank and Belcash technology	16	1	5	3.44
The daily debit limit of subscribers' accounts	16	1	4	3.19
The maximum account balance limit set on individuals'	16	1	5	3.31
Comulative of Convenience	**16**			**3.35**

Source: Researcher Computation Using SPSS, 2020

Customer service has a mean value of 3.216. this implies that, respondents consider amount of capital at start up, anticipated costs with growth, demand among agents, availability of hellocash MMS for subscribes to utilize their money deposited in their mobile accounts and accessisibility of the hellocash MMS for customers affect the development of mobile and agent banking in Ethiopia.

Table 4.9: The Mean for Customer service

	N	Minimum	Maximum	Mean
The amount of revenue at start up	16	1	5	3.13
Anticipated costs that will come with the growth of Hellocash	16	1	5	3.13
Demand among Agents	16	2	5	3.38
Availability of adequate number of MM services	16	1	4	3.13
Accessibility of the Hellocash MMS at any time and anywhere where there is a mobile network coverage	16	1	5	3.31
Comulative of Customer service	16			3.216

Source: Researcher Computation Using SPSS, 2020

4.1.2.2. Descriptive analysis from the results of Agents respondents

The mean score for amount of agent revenue 3.89 which means the result is found from sub factors which includes number of transaction an agent conduct per day score 3.85, earning from transfer have a mean value of 4, Earning from mobile card top-up have value of 4.01, Earning from withdraw accounts for 3.90 and earning from other types of transaction have a mean value 3.7. This indicates that Amount of revenue from hellocash have high positive response for Agency Banking (Hellocash MMS).

Table 4.10: The Mean for Amount of agent revenue

	N	Minimum	Maximum	Mean
Number of transaction an agent conduct perday	4	2	5	3.85
Earning from transfer	4	2	5	4
Earning from mobile card top up	4	1	5	4.01
Earning from withdrawals	4	2	5	3.90
Earning from other transaction	4	1	5	3.70
Commulative of agent revenue	4			3.89

Source: Researcher Computation Using SPSS, 2020

The second variable based on mean value is Security & reliability with mean value of 3.75. this explains that the development of mobile and agent banking influenced by system security security, reliability, Availability of mobile network and The effect of providing the Hellocash MMS on other with the mean value of 4, 4.25,2.75 and 4.

Table 4.11: The mean of Security and reliability

	N	Minimum	Maximum	Mean
Security risk	4	3	5	4.00
Reliability	4	4	5	4.25
Availability of mobile network	4	2	4	2.75
The effect of providing the Hellocash MMS on other	4	3	5	4.00
Cumulative of Security & reliability	4			3.75

Source: Researcher Computation Using SPSS, 2020

Third ranked variable based on mean value is Convenience with mean value of 3.72. this explains that the development of mobile and agent banking influenced by level of public awareness about hellocash MMS, The geographical coverage of the Hellocash service to allow customers' of different branches' to transact among each other ,Promotion of the Hellocash MMS by Bank and Belcash technology, the daily debit limit of MM subscribers account, the maximum account balance limit set on individual, Opportunity cost, Cost of transport the agent pays for travel, Time spent by the agent for travel and The agent's proximity to affiliated branches with the mean value of 3.75,3.5, 3.75, 3.5, 3.25, 3.75, 3.75,4.25and 4.

Table 4.12: The mean of Convenience

	N	Minimum	Maximum	Mean
The level of public awareness about the Hellocash MMS	4	2	5	3.75
The geographical coverage of the Hellocash service to allow customers' of different branches' to transact among each other	4	2	5	3.50
Promotion of the Hellocash MMS by Bank and Belcash technology	4	2	5	3.75
The daily debit limit of subscribers' accounts	4	3	4	3.50
The maximum account balance limit set on individuals'	4	2	4	3.25
Opportunity cost	4	3	4	3.75
Cost of transport the agent pays for travel	4	2	5	3.75
Time spent by the agent for travel	4	4	5	4.25
The agent's proximity to affiliated branches	4	3	5	4.00
Cumulative of Convenience	4			3.72

Source: Researcher Computation Using SPSS, 2020

Cost reduction is the fourth higher mean score of 3.42. Additional staff and space need to run the Hellocash MMS is one of sub factor which highly contribute to Cost reduction score with the mean value of 3.75. Liquidity management and initial capital requirement to start Hellocash MMS are with the mean value of 3.75 and 2.75.

Table 4.13: The Mean of Cost reduction

	N	Minimum	Maximum	Mean
The initial capital requirement to start Hellocash MMS	4	2	4	2.75
Additional staff and space need to run the Hellocash MMS	4	3	5	3.75
Liquidity management	4	2	5	3.75
Cumulative of cost reduction	4			3.42

Source: Researcher Computation Using SPSS, 2020

Customer service has a mean value of 3.216. this implies that, respondents consider amount of capital at start up, anticipated costs with growth, demand among agents, availability of hellocash MMS for subscribes to utilize their money deposited in their mobile accounts and accessisibility of the hellocash MMS for customers affect the development of mobile and agent banking in Ethiopia.

Table 4.14: The mean of Customer services

	N	Minimum	Maximum	Mean
The amount of revenue from the Hellocash MMS at start-	4	2	5	3.50
Anticipated costs that will come with the growth of Hellocash	4	2	5	3.50
Demand among Agents	4	1	3	2.25
Availability of adequate number of MM services	4	2	5	3.25
Accessibility of the Hellocash MMS at any time and anywhere where there is a mobile network coverage	4	1	5	3.00
cumulative of customer service	4			3.1

Source: Researcher Computation Using SPSS, 2020

4.1.3. Finding from key informants

15 Sample key informants from financial institutions (Wegagen bank SC and Lion Bank SC) and MMS technology providers who are knowledgeable in the introduction and development of Mobile and Agent Banking Services in Ethiopia were asked to give their (expert) opinions in the development status of Agency Banking Services in Ethiopia by giving a particular emphasis to the Hellocash MMS experience of Wegagen Bank SC and Lion Bank SC. The information from the key informants was collected using structured interview questionnaires.

It is already known that as per NBE directives on agent banking the maximum daily debit limit of customer mobile account was 6,000 birr and maximum credit limit that one regular customer hold on his/her account was 25,000 birr. But recently this has been revised and changed. According to the revised NBE directives the maximum daily debit limit of regular customer is 8,000 birr and maximum credit limit revised into 30,000 birr. Most key informants reveal that the daily debt limit is not enough for the reason that it couldn't motivate customers to process bulk payments. One regular customer can entertain from linkage of hellocash to CBS account. This means, the customer can transfer at any time from his CBS account to hellocash account and viseversal. Due to this reason, the maximum credit limit couldn't hold customers to get service from their hellocash account.

Sample key informants also describe that this technology has been in process in addition to financial institutions to be handled by technology providers that will boost the technology and also face some challenges if not put some restriction rules to control money laundery.

According to sample key informants the requirements for one business to be an agent is not attractive. There is some limitations, for example for one business to be an agent it require to come with police certificate. Even though the requirement will help to reduce risk, as one new technology nobody wants to take time on bringing the police certificate.

On the basis of the assessment findings, deposits mobilized through the Hellocash service is a significant factor for Banks with regard to the viability of a MMS for banks. The financial institutions' are particularly interested with deposits generated through MMSs due to its non-interest bearing nature. Sample key informants revealed that MMSs has a positive impact in improving the business processes of financial institutions by significantly reducing their

operation costs, such as costs associated with opening of additional branch offices since MMSs are branchless form of financial services.

It is important to see the number of subscribers registered in both wegagen Bank SC and Lion Bank SC to know Hellocash MMS activities since Jan, 2017. Since Jan, 2017 up to Sep, 2020 number of Hellocash subscribers with in Lion Bank SC were 425,346 and Agents of 1873, whereas by Wegagen Bank SC Hellocash subscribers were 151,063 and have number of Agents of 1670. A total of 576,409 regular customers and 3543 Agents are registered on almost three years which has slow progress.

Table 4.15: Number of Hellocash subscribers and Agents

	Number of Hellocash Subscribers	Number of Agents
Wegagen Bank SC	151,063	1,670
Lion Bank SC	425,346	1873
Total	576,409	3,543

Source: - from Hellocash web page

4.1.4. Correlation Analysis

Correlation analysis, measures the strength of association and direction of their association between the variables of the study. There are two types of correlation analysis techniques which are bivariate and partial correlation analysis techniques. In addition to this there are two methods of correlation which are Spearman's and Pearson Correlation Coefficient. A bivariate correlation is a correlation between two variables whereas a partial correlation looks at the relationship between two variables while controlling the effect of one or more additional variables. Pearson's and Spearman correlation coefficient are an example of methods of bivariate correlation. Pearson's Correlation Coefficient is parametric and Spearman's Correlation coefficient is non-parametric method of correlation (Field, 2009).

Therefore, to determine the relationship between the outcome and predictor variables this study was used the non-parametric method of correlation coefficient. Thus, the study was used the Spearman's Correlation Coefficient to determine the relationship of the development of mobile and agent banking between the predictor variables of (Amount of earning from hellocash MMS, Cost reduction, Security & Reliability, Customer service and Convenience).

According to Field (2009), Spearman's correlation coefficient shows that the relationship and direction between the predictor variables and outcome variables of the study. The value of coefficient of correlation has to lie between + 1 & - 1. A value lies ± 1 shows a perfect relationship between variables. In addition, if the relationship measure of the size of an effect and those values of ± 0.1 represent weak effect, ± 0.3 is strong effect and ± 0.5 is a very strong effect; of which the sign tells us the direction of their relationship. The results of the analysis are indicated below on table 4.10.

Table 4.16: Correlation Analysis

Correlations			
			Development of MMS
Spearman's rho	Amount of Revenue	Correlation Coefficient	.827
		Sig. (2-tailed)	.000
		N	16
	Cost reduction	Correlation Coefficient	.717
		Sig. (2-tailed)	.002
		N	16
	Security & Reliability	Correlation Coefficient	.755
		Sig. (2-tailed)	.001
		N	16
	Customer service	Correlation Coefficient	.808
		Sig. (2-tailed)	.000
		N	16
	Convenience	Correlation Coefficient	.836
		Sig. (2-tailed)	.000
		N	16
	Development of MMS	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	16

Source: Researcher Computation Using SPSS, 2020

The table shows that, there is a relationship between Development of MMS in Ethiopia and Amount of revenue with coefficient of 0.827 and a P-value of 0.000. Cost reduction also has a relationship with coefficient of 0.717 and a P-value of 0.002. Security & Reliability have a relationship with the coefficient of 0.755 and P-Value of 0.001. Customer service has strong relationship with the coefficient value of 0.808 and P-Value of 0.000. Convenience has a relationship with coefficient value of 0.836 and P-value of 0.000.

Thus as per the above recommended correlation coefficient, the correlation of amount of revenue, Customer service and Convenience have strong effect on dependent variable while the other two independent variables has moderate effect towards dependent variable.

4.2. Discussion

The purpose of the demographic analysis in this research was to describe the characteristics of the sample such as the number of respondents, proportion of males and females in the sample, range of age, education level of respondents and service year of experience so that the analysis could be more meaningful for readers. The gender character of the respondents of 35 which constitutes 21 (60%) was male and the remaining 14 (40%) were females. From the total respondents, 26 (74.3%) were within age gap of 18-30 and the remaining 9 (25.7%) was between age of 31-45 respectively. The educational qualification of the sample respondents out of the total respondents of 35, 31(88.6%) were with First Degree and 4(11.4%) was Master's Degree holder. Service year of experience out of the total respondents, 13(37.1%) were <2 years of experience, 11(31.4%) were 2-5 years of experience, 6-10 years of experience were 7(20%) and the remaining respondents 4(11.4%) were above 10 years of experience.

The mean score for amount of revenue for hellocash service is 4.026 which means the result is found from sub factors which includes number of transaction an agent conduct per day score 3.94, earning from transfer have a mean value of4.13, Earning from mobile card top-up have value of 4, Earning from withdraw accounts for 4.06 and earning from other types of transaction have a mean value 4. This indicates that Amount of revenue from hellocash have high positive response for Agency Banking (Hellocash MMS).

The second variable with the second higher mean score is Security & Reliability with the mean score of 3.98. This indicates Security & Reliability which includes system reliability with score

of 4.25, security risk with the mean value of 3.63 and the hellocash effect on other agent business with mean value of 4.06 are highly affect the development of mobile and agent banking technology in Ethiopia.

Cost reduction is the third higher mean score of 3.5. Additional staff and space need to run the Hellocash MMS is one of sub factor which highly contribute to Cost reduction score with the mean value of 3.69. liquidity management and initial capital requirement to start Hellocash MMS are the convenience with the mean value of 3.5 and 3.31.

Fourth ranked variable based on mean value is Convenience with mean value of 3.35. this explains that the development of mobile and agent banking influenced by level of public awareness about hellocash MMS, Promotion of the Hellocash MMS by Bank and Belcash technology, the daily debit limit of MM subscribers account, the maximum account balance limit set on individual with the mean value of 3.81, 3.00,3.44, 3.19 and 3.00.

Customer service has a mean value of 3.216. this implies that, respondents consider amount of capital at start up, anticipated costs with growth, demand among agents, availability of hellocash MMS for subscribes to utilize their money deposited in their mobile accounts and accessisibility of the hellocash MMS for customers affect the development of mobile and agent banking in Ethiopia.

Based on the result from descriptive analysis of agent respondents Amount of agent revenue has a mean value of 3.89, security & reliability has a mean value of 3.75, convenience have a mean value of 3.72, cost reduction has a mean value of 3.42 and customer service has a mean vale of 3.1.

Study results indicated that the independent variables (Amount of revenue, Cost reduction, Security & Reliability, Customer service and convenience) can explain and predict bank development of mobile and agent banking in Ethiopia. The chapter also indicates that all the independent variables were significant in the model, as well the independent variables were found to be having significant positive relationship with dependent variable.

Based on the results of Spearman's correlation test, amount of revenue, Customer service and other factor have positive strong effect on dependent variable while the other two independent variables has moderate effect towards dependent variable.

The Hellocash MMS business model is a revenue sharing model in which the technology provider, Belcash technology solution PLC, and the agent/Banks who initially registered the (MMS) subscriber shares the revenue collected from subscribers as service fees. The service charges paid by the (Hellocash MMS) subscribers for all financial transactions is shared by the technology provider and either the Bank or the agent (who initially registered the subscriber) for a period of 18 months (following the customer's subscription) for all non-face-to-face transactions (nFtFt) and for unlimited period of time for all face – to-face transactions (FtFt).

CHAPTER FIVE

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

Based on the result of the study and analysis conducted on this study which assesses the development of Mobile and Agent Banking services in Ethiopia by focusing on the Hellocash MMS experiences of the Wegagen Bank SC and Lion Bank SC, examined the effects and significance of 21 factors for Banks employees and 26 factors for agents categorized under 5 major variables that determine the viability of the Hellocash MMS for agents and Banks in Ethiopia.

The 5 variables include: the amount of agent/Bank revenue from the MMS, Cost reduction, security and reliability, Customer service and Convenience. Each factor was rated on a Likert scale from 1 to 5, with 1 representing very low significance of the factor; 2 representing low significance of the factor; 3 representing medium significance of the factor; 4 representing higher significance of the factor; and 5 representing highest significance of the factor in determining the viability of the Hellocash MMS business model for Banks and agents in Ethiopia.

Qualitative data was collected from sample key informants comprised of agents, Banks, NBE, TSPs, and MNO having knowledge and experiences about Mobile and Agent Banking Services in general and the Hellocash MMS business model in particular. Such data was collected through structured questionnaire based interviews.

Relevant literature on MMS, including: articles, research outputs, the Banks reports, the Hellocash MMS operational documents used by agents, the TP and Banks, agreements between Banks and agents, Banks and the TP, the TP and MNO, the NBE Mobile and Agent Banking services regulation directives assessed.

The Mobile and Agent Banking services regulatory framework in Ethiopia including setting of conceptual definitions and new terminologies were also examined by the study.

The research findings show that the current development status of Banks is at its early stage in introducing and promoting Mobile and Agent Banking services in Ethiopia. The financial instituitions contributions to the development of Mobile and Agent Banking services has been hindered by lack of relevant technical know-how and expertise; lack of well-developed telecom infrastructures , lack of adequate supply of the required Hard Ware and Soft Ware technologies', lack of clearly defined regulation to run a MMS. Lack of systems in place in particular is found to have been negatively affecting the required integration between/among Banks operating in different regions of the country to make inter-financial institutions transactions and to allow customers of different financial institiution to transact among each other. Lack of clearly defined systems and rules in place for inter- financial institiutions clearing and settlement of MM transactions; lack of public awareness about MMSs; lack of well- developed cash-in/cash-out MMS networks, including in Banks branches and agents; and lack of sufficient information regarding the viability of (the Hellocash) MMS for agents and Banks are revealed by the study as major constraints for the development of the Hellocash MMS.

In the face all these constrain, however, the two banks have showed encouraging efforts and progress in introducing and promoting the Mobile and Agent Banking Services in Ethiopia.

The results of the study shows that the Hellocash MMS suffers from the limitations inherited in the NBE Mobile and Agent Banking services regulations directives as well as from lack of relevant skills and technical know-how on Mobile and Agent banking service by the financial institutions.

The study revealed that the viability of the Hellocash MMS for agents and financial institutions depends on the existing regulatory situation on Mobile and Agent Banking services in Ethiopia as well as on specific factors such as amount of agent/Bank revenue from the Hellocash MMS, Cost reduction, security and reliability, Customer service and Convenience.

Among these factors, the amount of revenue earned from the Hellocash MMS is the most significant factor, whereas Customer services are least significant in determining the viability of the Hellocash MMS**.**

Amount revenue from transfer, withdraw, airtime top-up and other transactions enhance the viability of the development of agency banking. As the revenue from Hellocash MMS increase the agency banking implementation will increase.

As the system become secure and reliable for the customer trust will be developed that make society be initated to use agency banking technology and through time will enhance its development.

Banks which use agency banking technology reduce cost of paper, additional staff and also opening new branches to provide financial services to customers for the reason of this technology need mobile and a network of agents to provide bank service to customers. Agents can contribute to the development of agency banking if the cost of providing the service reduced.

Convenience to the customer will be promoted through agents proximity to branches , time spent for travel to/from branches to replenish agent MM deposit, customer awareness about Hellocash MMS, Market & promotion of Hellocash, Individual mobile account balance. As the customer convenient with the technology it will contribute for its development.

Adequate Hellocash MMS availability for subscribers to utilize their mobile money deposited in their account and accessibility of the Hellocash MMS for the customers also have impact for the development of agency banking in Ethiopia.

In conclusion, in the current Hellocash MMS the relationship between/among financial institutions' to enable MM transactions between/among customers' of different financial institutions as well as for clearing and settlement of payments associated with inter-financial institutions MM transactions are not in place. Even though the TP and the financial institutions have identified and proposed clearing and settlement rules and mandate agreement templates; it has neither signed by any of the financial institutions nor approved by the financial regulator yet.

5.2. Recommendations

Based on the findings of the study, the researcher suggests that financial institutions in general and Banks in Ethiopia in particular need capacity development support through relevant skills trainings on Mobile and Agent Banking Services to develop their staffs' technical expertise and know how on mobile money technologies.

One of the major significance of agency banking services is improved efficiency and effectiveness of the operations so that, transactions can be processed faster and most conveniently. Thus, it has enhanced customer services, effective distribution, improved operations, faster access to information and improved internal processes. This implies that customers benefit ranges from reduced frequency of going to the banking halls to handling of cash. The financial institution should embark on intense campaigns or advertising of creating awareness to the customers and the public in general is aware of these services.

The banks should embark on regular training of the agents to ensure they are familiar that they can understand Agent Banking services. This can be through public awareness campaigns, brochures and other programs as the nature of the institution's products may require.

The Hellocash MMS needs revision in order to comply with the Mobile and Agent Banking Services regulation in Ethiopia as well as to be viable for agents and financial institutions, including Banks in the current period as well in the long run.

All the actors involved in the introduction and development of Mobile and Agent Banking Services in Ethiopia including financial institutions, TSPs, regulators, MNO and agents need to learn from other countries' experiences on successful mobile money service business models to develop a viable and workable model for all the actors involved.

The financial regulator in Ethiopia in consultation with all stakeholders directly and indirectly involved in the development and provision of Mobile and Agent Banking Services in Ethiopia and by taking the regulatory experiences of other countries, particularly EACs, need to make the necessary changes and clarifications in the existing Mobile and Agent Banking Services regulation's directives for smooth introduction and development of the service.

The responsible government body needs to make the necessary developments in the telecom infrastructures to accommodate the introduction and further development of Mobile and Agent Banking Services in the country.

There should be a clear and workable system and inter-financial institutions integration and cooperation to allow mobile money transactions among customers of different financial institutions, and to make on time clearing and settlement of inter-financial institutions mobile money transaction payments.

The financial institutions in collaboration with TSPs need to conduct marketing and promotional activities about the Hellocash MMS to create public awareness, and to increase the number of MMS subscribers and transactions.

Developing a national network of cash-in/cash-out mobile money agent network is a key issue for the growth and success of mobile and agent banking services. That will enhance the amount of revenue from agency banking technology. The financial institutions and their TP need to make the necessary efforts in recruiting and developing competent agents to provide the service conveniently to users.

an adequate development level and quality of a national ICT infrastructure, Mobile and Agent banking use cannot do well, so Ethio telecom have to support banking industry by investing on ICT infrastructure development in order to improve service of the telecom. The country in general need to invite other MNO for better development of telecom infrastructure in return for better development of Mobile and Agent banking services.

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APPENDICES

APPENDICES

APPENDIX A Questionnaire for Agents

Dear Sir/Madam

I am conducting research on **the development of mobile and agent banking in Ethiopia** in partial fulfillment for the requirements of Master's Degree program in Accounting and finance at Addis Ababa University.

The questionnaire is developed for the purpose of collecting data on the variables of the research from participants selected for the research. The outcomes of the research are important for the development of mobile and agent banking.

You are here by kindly requested to give your honest responses to the maximum of your knowledge and skills related to the attached questions.

The researcher would like to confirm to you that the identity of respondents as well as the data obtained through this questionnaire will remain confidential and used only for the academic purpose stated above.

Instruction

Please put a mark corresponding to your answer choices for each questions.

Thank you,

Negassi Mesfin

Addis Ababa University

Faculty of Business and Economics

Part I Demographic information of respondents

1. Sex

Male ☐

Female ☐

2. Age

18-30 ☐ 31-45 ☐ above 45 ☐

3. Educational Background

Certificate ☐ Diploma ☐ First Degree ☐

Masters ☐ above Masters ☐

4. Year of Service (experience) in current years

< 2 years ☐ 2-5 years ☐ 6-10 years ☐ Above 10 years ☐

Part II: The development of Mobile and Agent Banking in Ethiopia

S/N	Factors	Very Low Importance	Low Importance	Neutral	High Importance	Very high Importance
1	**The amount of commission earned from the Hellocash MMS**					
1.1	The number of transactions an agent conducts per day					
1.2	Earning from transfer,					
1.3	Earning from mobile top ups					
1.4	Earning from Withdraw					
1.5	Earning from other transactions					
2	**Cost reduction**					
2.1	The initial capital requirement to start Hellocash MMS					
2.2	The minimum amount of money an agent is required to keep in his/her Hellocash account					
2.3	Additional staff and space need to run the Hellocash MMS					
3	**Security and reliability**					
3.1	Security risk for example robbery					
3.2	Reliability of the Hellocash MMS system					
3.3	Availability of (ethiotelecom) mobile network					
3.4	The effect of providing the Hellocash MMS on other					

4	**Customer services**					
4.1	The amount of revenue from the Hellocash MMS at start-up					
4.2	Anticipated costs that will come with the growth of Hellocash MMS like requirement to recruit additional staff and space to operate the Hellocash MMS					
4.3	Level of Demand at start up					
4.4	Availability of adequate number of MM services for customers to utilize their Hellocash account deposits					
4.5	Accessibility of Hellocash MMS at anytime and anywhere where there is a mobile network coverage					
5	**Convenience**					
5.1	Opportunity cost of the money the agent is using/invested to provide Hellocash MMS					
5.2	The agent's proximity to affiliated branches					
5.3	Cost of transport the agent pays for travel to and from its affiliated branch to get Hellocash service					
5.4	Time spent by the agent for travel to and from its affiliated branch to get Hellocash service					
5.5	The level of public awareness about Hellocash MMS					
5.6	The geographical coverage of Hellocash service to allow customers' of different branches' to transact among each other					
5.7	Promotion of Hellocash MMS by financial instituitions and Hellocash					
5.8	The daily debit limit of subscribers' accounts					
5.9	The maximum account balance limit set on individuals'					
6	**Development of mobile and Agent Banking**					
6.1	Effect of amount of revenue on the development of mobile and agent banking					
6.2	Effect of cost reductions on the development of mobile and agent banking					
6.3	Effect of security and reliability on the development of mobile and agent banking					
6.4	Effect of customer services on the development of mobile and agent banking					
6.5	Effect of Convenience on the development of mobile and agent banking					

APPENDIX B

Questionnaire for Employees

Dear Sir/Madam

I am conducting research on the development of mobile and agent banking in Ethiopia in partial fulfillment for the requirements of Master's Degree program in Accounting and finance at Addis Ababa University.

The questionnaire is developed for the purpose of collecting data on the variables of the research from participants selected for the research. The outcomes of the research are important for the development of mobile and agent banking.

You are here by kindly requested to give your honest responses to the maximum of your knowledge and skills related to the attached questions.

The researcher would like to confirm to you that the identity of respondents as well as the data obtained through this questionnaire will remain confidential and used only for the academic purpose stated above.

Instruction

Please put a mark corresponding to your answer choices for each questions.

Thank you,

Negassi Mesfin

Addis Ababa University

Faculty of Business and Economics

Part I: Demographic information of respondents

1. Sex

Male ☐

Female ☐

2. Age

18-30 ☐ 31-45 ☐ above 45 ☐

3. Educational Background

Certificate ☐ Diploma ☐ First Degree ☐

Masters ☐ above Masters ☐

4. Year of Service (experience) in current years

< 2 years ☐ 2-5 years ☐ 6-10 years ☐ Above 10 years ☐

Part II: The development of Mobile and Agent Banking in Ethiopia

S/N	Factors	Very Low Importance	Low Importance	Neutral	High Importance	Very high Importance
1	**The amount of revenue from the Hellocash MMS**					
1.1	The number of transactions an agent conducts per day					
1.2	Earning from transfer,					
	Earning from mobile top ups					
1.4	Earning from Withdraw					
1.5	Earning from other transactions					
2	**Cost reduction**					
2.1	The initial capital requirement to start Hellocash MMS					
2.2	Additional staff and space need to run the					
2.3	Liquidity management					
3	**Security and reliability**					
3.1	Security risk for example robbery					
3.2	Reliability of the Hellocash MMS system					
3.3	The effect of providing the Hellocash MMS on other					
4	**Customer services**					
4.1	The amount of revenue from the Hellocash MMS at start-Up					
4.2	Anticipated costs that will come with the growth of the Hellocash MMS like requirement to recruit additional staff and space to operate the Hellocash MMS					
4.3	Demand among Agents					
4.4	Availability of adequate number of MM services for customers to utilize their Hellocash account deposits					

4.5	Accessibility of the Hellocash MMS at anytime and anywhere where there is a mobile network coverage					
5	**Convenience**					
5.1	The level of public awareness about the Hellocash MMS					
5.2	The geographical coverage of the Hellocash service to allow customers' of different branches' to transact among each other					
5.3	Promotion of the Hellocash MMS by Bank and Belcash technology					
5.4	The daily debit limit of subscribers' accounts					
5.5	The maximum account balance limit set on individuals'					
6	**Development of mobile and Agent Banking**					
6.1	Effect of amount of revenue on the development of mobile and agent banking					
6.2	Effect of cost reductions on the development of mobile and agent banking					
6.3	Effect of security and reliability on the development of mobile and agent banking					
6.4	Effect of customer services on the development of mobile and agent banking					
6.5	Effect of Convenience on the development of mobile and agent banking					

APPENDIX C

Questionnaire for Key Informants

Dear Sir/Madam

I am conducting research on the development of mobile and agent banking in Ethiopia in partial fulfillment for the requirements of Master's Degree program in Accounting and finance at Addis Ababa University.

The questionnaire is developed for the purpose of collecting data on the variables of the research from participants selected for the research. The outcomes of the research are important for the development of mobile and agent banking.

You are here by kindly requested to give your honest responses to the maximum of your knowledge and skills related to the attached questions.

The researcher would like to confirm to you that the identity of respondents as well as the data obtained through this questionnaire will remain confidential and used only for the academic purpose stated above.

Instruction

Please put a mark corresponding to your answer choices for each questions.

Thank you,

Negassi Mesfin

Addis Ababa University

Faculty of Business and Economics

Part I: Demographic information of respondents

1. Sex

Male ☐

Female ☐

2. Age

18-30 ☐ 31-45 ☐ above 45 ☐

3. Educational Background

Certificate ☐ Diploma ☐ First Degree ☐

Masters ☐ above Masters ☐

4. Year of Service (experience) in current years

< 2 years ☐ 2-5 years ☐ 6-10 years ☐

Above 10 years ☐

Part II: The development of Mobile and Agent Banking in Ethiopia

1. Do you think the maximum daily debit limit for individual mobile accounts set in the NBE Mobile and Agent Banking Directive is fair? Why?
2. Do you think the maximum mobile account balance is fair? Why?
3. Why NBE didn't mention anything about corporate customers in the directive?
4. Do you agree with the limitation of registration of business customers only at financial institutions' premises?
5. Do you think the minimum requirements for mobile money agents put on the directive is fair? Why?
6. Do you think Belcash Technology solution is a pure technology provider?
7. What are the factors that motivate agents/Banks to provide mobile money services?
8. What factors affect the introduction, development and promotion of Mobile and Agent Banking Services in Ethiopia?
9. What should be the roles and responsibilities of financial institutions, regulators, MNOs, agents and MMS technology providers in the development and provision of Mobile and Agent Banking Services in Ethiopia?
10. What do you think will be the long term effect of the development and provision of Mobile and Agent Banking Services for financial institutions, regulators, MNOs, agents and MMS technology providers in Ethiopia?
11. What should be the relationship of financial institutions, MM technology service providers, MNOs, MM Agents and financial (MMS) regulators in Ethiopia?

APPENDIX D

Definition of Terms

Mobile Money Service: Mobile Money Service is the service delivered by the MFIs and their network of Branches and Agents. The Service allows users to transfer funds to other registered users or Mobile phone holders within Ethiopia, transfer funds between accounts, deposit or withdraw funds, pay bills, top-up their phone credit, all from the convenience of their mobile phone.

Bank: is a financial institutions licensed to receive deposits and make loans.

Account: refers to a mobile money account that can only be accessed either with the use of a Mobile Phone or through a mobile money technology console.

Agent: Agents are businesses that deliver the M-BIRR service for the MFIs. Agents may be local grocery stores, petrol stations, or a village's butcher.

Branch: Branches are Banks branches and sub-branches which provide the face-to face Mobile Money Service to customers and agents.

Deposit/Withdrawal: These are the acts of physically putting money into an account (deposit), or taking from it (withdrawal). Agents and Customers carry-out those transactions on their account through their mobile phone. Deposits and withdrawals constitute 'Face to Face' transactions and are only carried out through Agents or Branches.

Debit/Credit: A Debit means that money has been taken out of an account. A Credit means that money has been added to an account. Debits or Credits can be generated by a variety of transactions such as deposit/withdrawal, money transfer (sent/ received), transaction fee payment, purchase of mobile credit, etc.

Face-to-Face Transaction: A Face-to-Face transaction is a transaction carried out by a subscriber with an agent or a branch. Typical Face-to-Face transactions are: subscriber registration, deposit and withdrawal.

Non Face-to-Face Transaction: is the opposite of Face-to-Face Transaction.

NBE: National Bank of Ethiopia

Subscribers: Subscribers are the registered 'end-users' of the Mobile Money Service.

Users: Users are people using the Mobile Money Service; they can be subscribers, non- registered end-users.

KYC: KYC stands for Know Your Customer and refers to the activities of customer due diligence that financial institutions and other regulated agents must perform to identify their clients and ascertain relevant information pertinent to doing financial business with them.

AML/CFT: Stands for 'Anti-Money Laundering/Combating the Financing of Terrorism' – They are a set of rules to mitigate the adverse effects of criminal activity

Financial Transactions include money transfer, cash withdrawal, and mobile top-ups. Non-financial services include balance inquiry, changing secret word, language change, PIN change, and mini statement request.

Top-Up: refers to recharging of mobile phone credits from mobile money accounts.

Direct Top-Up: refers to recharging of mobile phone credits by purchasing from mobile money agents or cashiers.

Indirect Top-Up: refers to recharging of mobile phone credits by subscribers directly from mobile money accounts.

Money Voucher: refers to mobile money transferred to non-registered customers by subscribers of a mobile money service.

Cash Float: refers to the amount of cash an agent keeps in his/her till for daily cash-in/cash-out activities.