ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE

PROJECT MANAGEMENT DEPARTMENT

ASSESSEMENT OF THE FACTORS AFFECTING TELEBIRR-MOBILE MONEY PROJECT IMPLEMENTATION IN THE CASE OF ETHIO TELECOM

BY

WUBALEM TADESSE

JUNE 2022

ADDIS ABABA, ETHIOPIA

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BY

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ADVISOR

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A Project Work Submitted to the School of Graduate Studies of AAU in Partial Fulfillment of the Requirements for the Award of Master of Arts Degree in Project Management

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APPROVED BY BOARD OF EXAMINERS

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Dean, Graduate Studies	**Signature**
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Declaration

I, Wubalem Tadesse, declare that the study entitled "Assessment of the factors affecting Telebirr-Mobile Money project implementation in the case of Ethio Telecom" is my original work that is done under the guidance and input of my advisor, Dr. Solomon Markos (PhD).

This study will be done in partial fulfillment for Master of Arts in Project Management.

Declared by:

Name: _____

Signature: _____

Date: _____

Certification

This is to certify that Wubalem Tadesse has carried out her research work on the topic entitled "Assessment of the factors affecting Telebirr-Mobile Money project implementation in the case of Ethio Telecom".

This study has been submitted to Addis Ababa School of Commerce, School of Graduate Studies for examination with my approval as a university advisor.

Advisor: **Dr. SOLOMON MARKOS (PhD)**

Signature: _____

Date: _____

Acknowledgement

I am greatly indebted to thank my advisor **Dr. Solomon Markos (Phd)** for his diligent academic guidance, inputs, and unreserved support in conducting this Project Work.

My Family, I will always be in debt of your sacrifices to make me a better person.

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Finally, those individuals who have been contributing a lot for the entire work deserve to be acknowledged.

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ACRONYMS

AML	*Anti money laundering*
CFT	*Combating the Financing of Terrorism*
CSI	*Customer Satisfaction Index*
CVA	*Cash and Voucher Assistance*
ERP	*Enterprise resource planning*
GSMA	*Global System for Mobile Communications*
ICT	*Information Communication Technology*
MCIT	*Ministry of Communications and Information Technology*
MFIs	*Microfinance institutions*
NBE	*National Bank of Ethiopia*
NPS	*Net Promoter Score*
PE	*Performance Expectancy*
PIP	*Project Implementation Plan*
PMBOK	*Project Management Body of Knowledge*
PSNP	*Productive Safety Net Project*
SPSS	*Statistical Package for the Social Science*
TAM	*Technology Acceptance Model*
TRA	*Theory of Reasoned Action*
UN	*United Nation*
UTAUT	*Unified Theory of Acceptance and Use of Technology*

Abstract

Mobile money service allows mobile users to perform financial transactions using their mobile phones which helps to decline the physical use of money. This research paper aims to assess factors affecting Tele birr-Mobile Money project implementation in the case of Ethio telecom. Clear understanding of these factors will enable Telebirr mobile money service to develop suitable project management strategies, business models, processes, and enhanced project implementation. To address the research objective 83 employee who work under project team at Legahar and Melka Tower office were selected and used Census survey. Questioners were distributed to 83 employee and Interview held with the project manager. *The main research instrument was a Likert 5 scale questionnaire to collect primary data. The collected data processed with the help of computer software package (SPSS version 23.00) and analyzed through descriptive statistics, frequency, percentage, mean and standard deviation. According to the findings of the study, with Comparison of the mean value of all Tele birr project implementation factors (Financial Regulation, technical team, customer awareness and attitude, Technology, covid 19, Top Management support, Compatibility) indicates that the mean score of "Technology feedback" (m=3.77) is the highest among others which indicates Tele birr is designed well to respond effectively to the behavior of the users and the environment depending on the platform. A responsive app design has a wide range of flexible layouts, grids, and images. On the contrary there a flexibility issues regarding API integration with the third-party system. (e.g., Merchant APP, Mini AP, Partner APP, etc… therefore the researcher recommend that Tele birr needs to have proper API development enhancement to be flexible enough to integrate with the third-party system.*

Keywords: Telebirr, Project Implementation, Ethio telecom

CHAPTER ONE

1. Introduction

This chapter of the study devoted to give an insight about the general objective, Justifies the problem of the study, to review some literatures related to identify the problem, and significance of the study and beneficiaries of the study and organization of the research will be present.

1.1 Background of the study

Project is a series of activities and tasks that have a specific objective to be completed within certain specification having a defined schedule, funding limit, and consume human and non-human resources (i.e., money and equipment) with multifunctional nature (i.e., cut across several functional lines) (Kerzner, 2009).

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements (PMBOK, 2013). Project management is accomplished through the application and integration of the project management processes of initiating, planning, executing, monitoring and controlling, and closing. It requires all of the skills of general management to secure the project success (PMBOK, 2013).

A project theory consists primarily from concepts and causal relationships that relate these concepts (Whetten 1989). It is possible to broadly characterize a target theory of production/operations management (Koskela 2000). This characterization applies also for project management, being a special type of production/operations management. A theory of project management should be prescriptive: it should reveal how action contributes to the goals set to it. On the most general level, there are three possible actions: design of the systems employed in designing and making; control of those systems in order to realize the production intended; improvement of those systems. Project management, and indeed all production, has three kinds of goal. Firstly, the goal of getting intended products produced in general. Secondly, there are internal goals, such as cost minimization and level of utilization. Thirdly, there are external goals related to the needs of the customer, like quality, dependability, and flexibility.

As many African countries, the common and dominant payment system used by the majority of people in Ethiopia is a cash payment system, whereby physical cash is used for purchase of goods in shops and to pay for various services. Although it seems convenient and easy, cash payment has some disadvantages as compared to non-cash payment such as revenue leakage for the government and business companies due to its anonymity, cash related crime, robberies, cost of handling cash, easily lost, difficulty in tracking and thus somehow facilitate money laundering.

Many developed countries are getting away with cash payment due to proliferation of banks and thus many of the citizens are well included in financially services. According to Credit Suisse, (2015) Nordics are in the lead and it is predicted that they will get rid of cash by 2030. Most of non-cash payments are done through cards credit cards, debit cards.

In today's competitive world, the service industry in the world is changing, thus new technology has changed the method of customer services provision in many service organizations, geographical distance has lost its meaning and service availability, convenience, and speed of service distribution will lead competitive advantage for organizations.

Ethiopia ranks among the lowest countries in the world in terms of the use of digital financial services, according to a recent survey by the World Bank. This is in part why GSMA, an organization representing mobile network operators which collects data on the sector, describes the country of 112 million "as one of Africa's sleeping mobile money giants."

"Sub-Saharan Africa will have more than 130 million new subscribers by 2025, half of which will come from just five markets, including Ethiopia," GSMA's acting head for sub-Saharan Africa Angela Wamola says. That makes the country "a key market for mobile" on the continent.

Ethio telecom is an integrated telecommunications solutions provider operating in Ethiopia. Which offers internet, data, VAS, International and voice services. Currently it provides telecom service in the entire country on both voice, internet & data, channels, with comprehensive plans in place to meet the requirements set out by the Ministry of Communications & Information Technology (MCIT) and peoples of Ethiopia.

Telebirr is a mobile payment and digital wallet service by Ethio telecom that lets customers make different financial transactions using their phones. The service mainly supports people living in

urban areas having different economic and social pressure. The service was launched in Ethiopia Addis Ababa on May 11,2021. Ethio telecom tele birr services enables to deposit, receive, transfer, and pay using a mobile number to have cashless transactions and receive international remittance that allows to make payment at convenient stores via QR codes, purchase goods. More than 1 million cellphone subscribers have registered for this new mobile money service less than a week after its launch by state controlled Ethio Telecom. (https://banksethiopia.com/news/telebirr-mobile-wallet-service-in-ethiopia/)

The interest in Ethiopia's first mobile money platform reflects "the huge pent-up demand for mobile money services in Ethiopia," a spokesperson for the World Bank said. Combined with the government's process to open up the telecom sector to foreign players, it expects soon "to see a wider range of digital financial services, such as online savings accounts, loans, and insurance services," the World Bank added in an emailed statement. "This will open up opportunities for partnership with banks and other financial services companies."

With its new but already popular mobile wallet, Ethiopia joins a growing number of African countries that have mobile money platforms, although the most successful and notable ones are privately run. Zimbabwe, with its EcoCash, and Kenya with Safaricom-owned M-Pesa, are among the African countries where mobile money has taken root.

1.2 Statement of the Problem

The adoption of mobile money services in developing country emerging economies is particularly important because increased financial access can have a positive impact on long term economic growth through reducing poverty and income inequality (Levine, 2005).

The development of the mobile money ecosystem in Ethiopia can generally be defined as early stage. The first mobile and agent banking directive was issued in late December 2012, and the first mobile money deployment for CVA (Cash and Voucher Assistance) programming was launched in mid-2015 under the Productive Safety Net Project (PSNP). The mobile money ecosystem in Ethiopia follows a bank-led model whereby banks and microfinance institutions (MFIs) partner with a technology provider to offer the service. As of December 2019, about 10 banks and eight MFIs – often through collaboration models where financial institutions use the

same technology platform provider to provide mobile money services to over 10 million mobile money accounts, through 10 mobile money services, nationwide. The industry is regulated by Ethiopia's central bank, the National Bank of Ethiopia (NBE), and infrastructure is provided by the publicly owned, telecom operator in the country, Ethio-Telecom.

Ethio Telecom launched a mobile phone-based financial service, seeking to boost growth by offering cashless transactions. Customers can deposit, receive, and transfer money using their mobile phones in areas where network service is available. The new service, tele birr, aims to extend mobile services to financially excluded sections of society.

Ethiopian population has reached more than one hundred million and 80.5% of them live in rural areas with poor level of infrastructure (UN, 2016) and according to NBE, 2017 financial institutions distributed unfairly across the country (most of bank branches are located in Addis Ababa and other cities) but in Ethiopia there are 56.2 million mobile subscribers, which is around 50% of the total population and 23.3 million internet subscribers. So to extract this advantage and to play key role in the development of the country by mobilizing money and by increase living standard, Tele Birr Mobile money service comes up as a remedial solution since it allows offering financial service outside the traditional bank premises to directly make cash transfer to beneficiaries through their mobile, deposit and withdraw cash from agents, buy airtime directly without scratching mobile cards and pay for goods and services.

However, despite this importance of this mobile money service, closer observation shows that there is still slow adaptation, problem of frequent network failure and inadequate awareness of available Mobile money services (Balanchandler, 2010).

So, this research tries to identify factors that affect Telebirr-mobile money project implementation in Ethio telecom and it tried to answer the following research questions

1.3 Basic Research Questions

The study basically answers the following questions

- How does internal factors Technical team and Top Management Support affect Tele birr-Mobile Money Project implementation at Ethio Telecom?
- How does external factors Financial Regulation, customers awareness and attitude to change

and Covid 19 influence the implementation of Tele birr mobile money project in Ethio telecom?

- How technology affects Tele birr- Mobile Money Project implementation at Ethio Telecom?
- How Compatibility affects Tele birr- Mobile Money Project implementation at Ethio Telecom?

1.4 Objectives

1.4.1 General Objective

Generally, this essay assesses the Factors Affecting Telebirr-Mobile Money Project implementation in the case of Ethio telecom.

1.4.2 Specific Objectives

Specifically, this study intends to address the following objectives:

- To examine how internal factors Technical team and Top Management Support affect Tele birr- Mobile Money Project implementation at Ethio Telecom
- To explore the influence of external factors Financial Regulation, customers awareness and attitude to change and Covid 19 on the implementation of Tele birr-Mobile money project implementation in Ethio telecom
- To assess how technology affects Tele birr- Mobile Money Project implementation at Ethio Telecom
- To examine how Compatibility affects Tele birr- Mobile Money Project implementation at Ethio Telecom

1.5 Significance

Mobile Money is a highly growing mechanism of addressing the un-banked society. In addition, it also has a competitive advantage for financial institutions. Furthermore, it contributes to the development of financially inclusive economy, and it makes financial services accessible to the society.

This study is important to the factors that affects Mobile money project. As a result, it will benefit different stakeholders, such as, ethio telecom, the government, regulatory bodies, financial institutions, agents, other organizations, and further researchers. Therefore, the study's outcomes will benefit ethio telecom to improve and to evaluate its electronic Money performance; the concerned government body will know how the project performance is in line with the targeted mission and objectives of the government on the sector. Future more, researchers can use this research's out come as a base to investigate more about Tele birr Mobile Money Project.

1.6 Scope of the study

In order to study all the factors Affecting Tele birr-Mobile Money Project implementation in the case of Ethio telecom. It would require extensive research, more time, detail information. this study focused on seven factors how Financial Regulation, technical team, customers awareness and attitude to change, technology, compatibility, Top management support and Covid 19 affect Tele birr-Mobile Money project implementation by using census survey to gather information from all the total number of project team located at Legahar branch and Melka Tower.

1.7 Limitation

The study has limited itself on assessing only factor affecting Tele birr- Mobile Money Project implementation at Ethio Telecom, But Ethio Telecom is affected by different project implementation factors like Network projects. The lack of previous study and experience in the area of ICT and Tele birr itself in Ethiopia hinders the comparison of the results with those studies and other operator's experience. The possible limitations of the study are inability to incorporate all projects implemented in ethio telecom. The study focused on Tele birr project only due to time constraint and other resource limitations. Therefore, it is difficult to generalize the findings and results to the whole implemented project in Ethio Telecom.

1.8 Organization of the Study

The study is composed of five chapters. Chapter one discusses the background, problem statement, scope, significance, and objectives for undertaking this research project. Chapter Two looks at existing literature related to the study to gain an understanding of the research topic. Chapter Three

presents the research methodology that the researcher used to undertake the study. Chapter Four comprises the findings and discussions of the findings to the study. Chapter five summarize the findings of the study and make recommendations that would contribute to solving the problem raised, as well as a recommendation for furthermore study.

CHAPTER TWO

2. Literature Review

2.1 Overview

A project is a one-time, multitask job with a definite starting point, definite ending point, a clearly defined scope of work, a budget, and usually a temporary team. A project is defines as 'A unique set of coordinated activities, with definite starting and finishing points, undertaken by an individual or organization to meet specific objectives within defined schedule, cost and performance parameters.' It is "A temporary endeavor undertaken to create a unique product or service" (PMBOK; Project Management Institute, 2004, p. 5).

The PMBOK definition of project management is ". Application of knowledge, skills, tools and techniques to project activities to achieve project requirements. Project management is accomplished through the application and integration of the project management processes of initiating, planning, executing, monitoring and controlling, and closing" (PMBOK 2004, p. 8).

Project management is a set of principles, methods, and techniques that people use to effectively plan and control project work. It establishes a sound basis for effective planning, scheduling, resourcing, decision-making, controlling, and re-planning. Project management principles and techniques help complete projects on schedule, within budget, and in full accordance withproject specifications. At the same time, they help achieve the other goals of the organization, such as productivity, quality, and cost effectiveness. The objective of project management is to optimize project cost, time, and quality.

The application of modern management techniques and systems to the execution of a project from start to finish, to achieve predetermined objectives of scope, quality, time and cost, to the equal satisfaction of those involved. Essentially, project management is a set of skills and tools that will help to get the project right in every way.

2.2 Definitions of Project management

Project management is a set of tools, techniques, and knowledge that, when applied, helps to achieve the three main constraints of scope, cost and time. (Charvat,2003)

According to Gray and Larson (2006), project management is a task derived from an organization that enables professional project managers to use their skills, tools and knowledgeto plan, execute and control a unique project within a limited lifespan by meeting the specification requirements of the organization.

Another definition of project management by (APM, 2006) is the process by which projects (unique, complex, non- routine, one-time effort limited by time, budget, and resources) are defined, planned, monitored, controlled and delivered such that the agreed benefits are realized.

Project management is the application of knowledge, skill, tools and techniques to project activities in order to meet or exceed stakeholder needs and expectations from project. Meeting and exceeding stakeholder needs and expectations invariably involves balancing competing demands among scope, time, cost and quality; stakeholders with differing needs and expectations and identified needs and unidentified expectations (PMBOK 1996, Wideman 2002).

2.3 Project implementation Measurements

Project management effectiveness is a measure of the quality of attainment in meeting objectives. It is the extent to which the goals of a project are attained, or the degree to which a system can be expected to achieve a set of specific requirements (Wideman 2002).

Shenhar et al. (2001) state that project success is commonly judged by time and budget goals criteria, whereas in some cases this does not apply to any projects. Lewis (2005) states that project success can be defined as meeting the required expectation of the stakeholders and achieving its intended purpose. This can be attained by understanding what the end result would be, and then stating the deliverables of the project.

Commonly, the attitudes on project success have developed gradually over the years from simpleexplanations that were restricted to the implementation phase of the project life cycle to explanations that reflect the gratitude of success over the whole project and product life cycle (Jugdev and Muller, 2005).

There are common dimensions of projects acknowledged by different scholars, time, budget and specifications of projects. However, time, budget and specifications are not sufficient to measure project management success as dimensions. Thus, the quality of the project management process and the satisfaction of the project stakeholder's expectations also need to be considered (Baccarini 1999, Schwalbe 2004).

Therefore, extending the traditional triangle to include the quality of the management process, the integration, the scope, the communication, the procurement, the risk and stakeholder management process will be able to provide a more complete view of project management success. That is why this study benchmarks the project management knowledge areas defined by PMBOK as a means for an effective project management.

Effectiveness is defined as being "a measure of the quality of attainment in meeting objectives;to be distinguished from efficiency which is measured by the volume of output achieved for the input used" (Wideman, 2001:1). Hence, effective project management is very important in such unpredictable business environment.

Measuring the success of a project and defining the suitable metrics in implementing this is crucial in any project performed by an organization. Some may find project success as a trivial matter to look into and only evaluate it one time whenever there is a formal meeting related to performance appraisal. This is not a good thing. Performance success measurement could even be done informally. That aside, it is also suggested to constantly measure the success so that any small flaw could be addressed immediately. We also consider measuring success even when the project is still ongoing.

Measuring the success of a project benefits in terms of further boosting the performance in the future. Doing this will help to detect any flaws or lacking that could be improved on. This will sustain the longevity as well as ensuring the success of said projects if the organizations intend to repeat the project execution in the future. Failure could be prevented if measuring success is done efficiently.

Project success could be defined according to numerous factors. In this article, the researcher explained five criteria that are commonly used in measuring success along with the metrics for every criterion. The five criteria are scope, schedule, quality, budget, and customer satisfaction.

2.3.1 Scope

Scope refers to how the project meets the expectations and goals established for the project. Does the result brought by the project after a certain period achieve the intended performance or objectives aligned in the framework? Does it abide by the budget allocated?

In most cases, the scope is the primary metric, but it may comprise of other indicators that are more narrowed down. Some project does not provide a complete scope at the beginning of the project. In this case, we may omit scope from the performance success indicators. Bear in mind that a larger project's scope requires a large budget as well. If we intend to increase the scope, we should be sure to increase the budget too. This situation, known as scope creep, might be a challenge to one company if not handled well.

There are several ways in monitoring the scope of a project. collaborate with stakeholders in tracking project scope, determining all the requirements set for the project, Next, chunks the requirements into several specific deliverables. These deliverables are then noted with the key resources and the necessary tasks to complete it. After that stage has been completed, outline the timeframe for each task. Last, state the critical path of that project.

After all these necessary processes have been accomplished, it is time to map out project scope in a presentation. We use charts when visualizing the project, such as the Gantt chart. It will display either project's requirements are on track with the allocated budget and time. Gantt chart is one of the effective tools preferred by most companies due to its concise and presentable data.

2.3.2 Schedule

The schedule is related to the arranged time-related criteria of the project when it is in planning or when executed. When planning a project, determine the timeframe or milestones expected for the project. Define what are the expected objectives that need to be met within a certain period of

time. It is not only about the final delivery date but also the important dates along the developing process. This schedule could be segregated into long-term or short-term depending on the nature of the project.

Keeping to the initial schedule is challenging. Even experienced project managers cannot deny that there were numerous times where they have to constantly adapt the schedule due to time constraints in achieving the goals. It is challenging but not impossible. If we diligently evaluate the progress, using the original timeline until the end is a possible task. Keep project schedule updated frequently. The suggested period is weekly but is subject to other options depending on the project needs. This measurement could be followed with a more formal schedule evaluation which is commonly done annually in company meetings.

The simplest way to track project schedule is by presenting it in a visual report. The Gantt chart is an example. Doing this helps to compare if the current status of the project is aligned with the intended milestones set in the initial schedule. As simple as it sounds, it gives the bigger picture of project's current pace.

Schedule variance is a commonly used metric in measuring success. It is to find out what is the difference between the scheduled tasks with the completed one. The units are monetary.

The formula is as follow: **Schedule Variance (SV) = Budgeted Cost of Work Performed – Budgeted Cost of Work Scheduled**

If the SV is in positive form, then you are ahead of the schedule. If the answer is in negative form that means the schedule is falling behind. It is time to quicken the pace a bit. Zero SV indicates that the project is right on schedule.

2.3.3 Quality

One of the most important things to determine how good the product is quality. Sometimes, meeting the objectives is not sufficient in gaining a secure spot in the market. It is also recommended and fundamental to exceed ones' expectations. Quality is relatively ambiguous compared to other criteria. Regardless, it is a notable aspect of a product or project.

Quality assurance is one of the most sought criteria in evaluating a project or product. From this, it is obvious that quality could be one of the criteria in measuring a project's success. A quality review should be done rigorously to avoid any unwanted problems from arising. It is safe to say that it does not stand alone. There are many branches that could be related to project quality. Quality could be defined by the number of features matching the requirements. Another aspect of quality could be looked at the customers' acceptance of the project. That aside, it may also be evaluated by the constant improvement done on the said project.

Besides the factors influencing the quality of the project, it is fundamental to jot down the cost of the quality of the mentioned project.

The formula of cost of quality (COQ) is written below: **Cost of Quality = Cost of Good Quality + Cost of Poor Quality**

This formula could be further specified as follows: **Cost of Quality (COQ) = Prevention Costs + Appraisal Costs + Internal Failure Costs + External Failure Costs**

Utilizing this formula helps companies to differentiate the costs used for good or poor-quality output. This will provide a clearer appraisal of the product and further improvisations to lower the costs could be addressed properly. Doing this would be advantageous if the company strive to survive in the business world for a long time.

2.3.4 Budget

During the planning stage of a product or project, one of the points that should be clearly written is the budget specified for the project. The budget could be one of the indicators in determining the success of a project. Success in delivering a project without exceeding the budget could be considered as one of the biggest accomplishments in any company.

In measuring a project's success under the budget criterion, several aspects could be paid attention to. This includes direct and indirect costs, fixed and variable costs, manpower, resources, tools, and any other things that may influence the expenses of the project.

When measuring budget, always provide two different columns: planned and actual. This may effectively ease the comparison process. A clear and visible data presentation may avoid any unnecessary off-track expenditure which will negatively influence the project.

- **Gross Profit Margin**

This refers to how much the project contribute profits to the business. The larger the margin measured, the higher the profit gained from the product. **Gross Profit Margin = (Total Profit – Total Costs)/100**

- **Earned Value**

Earned value (EV) compares the value of completed work with the allocated budget.

Earned Value (EV) = % of Completed Work / Budget at Completion (BAC)

- **Actual Cost**

Using this formula will provide an accurate count on how much expenses are used on a project.

Actual Cost (AC) = Total Costs per Time Period × Time Period

- **Cost Variance**

This is one of the most important formulas that ought to be applied by every business company. The formula will provide the difference between the planned budget with the actual costs used within a specific period. If the cost is in negative form, it means that the project has exceeded the intended budget. Positive CV, on the contrary, means that the project is on track.

Cost Variance (CV) = Budgeted Cost of Work – Actual Cost of Work

- **Cost Performance**

This formula is the metric for cost efficiency.

Cost Performance Index (CPI) = Earned Value / Actual Costs

2.3.5 Customer Satisfaction

The most visible criteria to evaluate project success is customer satisfaction. Once the project has been conducted, we may want to ask for feedback from customers. Not only the customers, but it is also likewise important to find out stakeholders' satisfaction.

Sometimes, while the project team successfully manages to produce a product as closely as possible to the initial plan, that does not mean that the product/service is what customers are looking for. Even if the service seems perfect at a glance, there are still the risks of customers switching to other providers. Some may even stop using the service altogether. The customers' satisfaction does not solely revolve around the project, but the whole processes in delivering the product/service to the customers.

Finding out customers' opinions regarding the project helps a lot in pinpointing what are the aspects that could be improved. This could help in providing the best experience for the customers. It could ensure the longevity of dependence towards the said product/service, hence sustaining high demands from the customers.

Customer Satisfaction Index (CSI) is one of the most known systems in evaluating customer satisfaction. Some other systems, like Net Promoter Score (NPS), may even provide the probability of a customer recommending the product used. NPS could be calculated in any application or tool. we may want to start utilizing these systems even if the company exclusively provides metric, there is a suggested formula in measuring this aspect. It may provide clearer and presentable data to compare the level of satisfaction according to the variables that we have outlined.

The formulas are as follows:

Customer Satisfaction Score = (Total Survey Point Score / Total Questions) × 100

Net Promoter Score = % Promoters – % Detractors

A more comprehensive and elaborated NPS measurement could be found in the net, depending on the tools we are using to measure it. (https://www.projectpractical.com/5-ways-to-measure-project-success-what-metrics-to-use/)

2.4 Theoretical Reviews

2.4.1 Theory of Reasoned Action (TRA)

As a part of social psychology, TRA is one of the most fundamental and influential theories of human behavior. Theory of Reasoned Action is a psychological theory that tries to explain an individual's action that is determined by his/ her behavioral intention to perform it. Ajzen and Fishbein (1975). It has been used to predict a wide range of behaviors According to their theory, behavioral intention (use technology), is explained by people's attitudes toward that behavior and subjective norms. People's attitude toward a behavior includes behavioral beliefs; assess the consequences of behavior, subjective norms, normative beliefs, and motivations that must be answered Riivari, (2005). Puschel et al, (2010). According to their theory, behavioral intention is explained by people's attitudes toward that behavior and subjective norms. People's attitude toward a behavior includes behavioral beliefs; assessment of the consequences of behavior, subjective norms, normative beliefs and motivations that must be answered. Riivari (2005). Thistheory, as long as the behavior is voluntarily controlled by the individual, can accurately explain the factors influencing technology adoption (Laukkanen and Cruz, 2009). Thus, TRA is a useful model that will be used to investigate factors affecting project implementation.

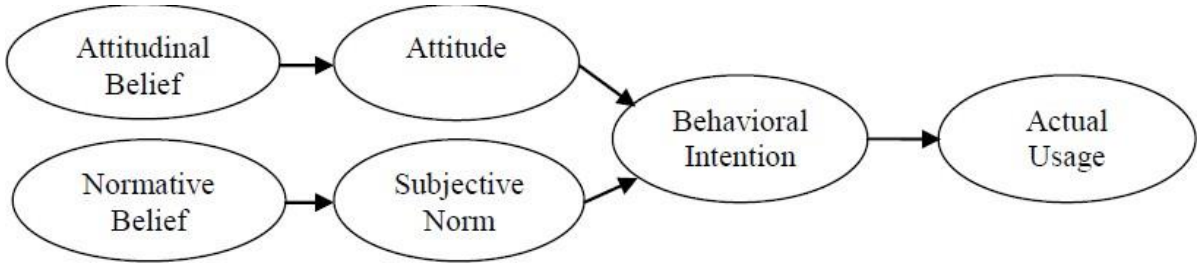

Figure 2.1: Theory of Reasoned Action (TRA) Hossien et al. 2013

Limitation of Theory of Reason Action (TRA)

TRA was criticized for neglecting the importance of social factors that real life could be determinates for individual behavior (Grandon & PETER p. Mykytyn 2004; Werner 2004). Social

factor means all the influences of the environment surrounding the indivdal such as norms which may influence individual behavior (Ajzen 1991). TRA and TPB have some limitations in predicting behavior (Werner, 2004). The first limitation is that intention determinants are not limited to attitudes, subjective norms, and perceived behavioural control (Ajzen 1991). There may be other factors that influence behavior. Empirical studies showed that only 40% of the variance of behavior could be explained using TRA (Ajzen 1991; Werner 2004). The second limitation is that there may be a substantial gap of time between assessment of behavior intentionand the actual behavior being assessed (Werner 2004). In that time gap, the intention of an individual might change. The third limitation is that TRA is predictive models that predict an individual's action based on certain criteria. However, individuals do not always behave as predicted by those criteria (Werner 2004). In terms of IT adoption, TRA have been used toexplain the adoption process from individual perspectives. TRA was modified into TAM to predict user acceptance of new technology (Chin& Marcolin 2001; Karahanna & Straub 1999; Legris, Ingham & Collerette 2003). TAM uses the same principles as TRA in predicting acceptance of IT (behavior) from an individual's intention to accept IT. Furthermore, Voluntariness was not included in the original TRA.

2.4.2 Technology Acceptance Model (TAM)

In 1989, Fred Davis proposes the technology acceptance model (TAM), TAM is an information system theory that models how users come to accept and use a technology. The model suggests that when users are presented with a new technology, a number of factors influence theirdecision about how and when they will use it. But TAM itself is an extension of theory of reasoned action (TRA) model. TRA was developed by developed by Fishbein and Ajzen 1975, 1980. TAR is a model for the prediction of behavioral intention, spanning predictions of attitude and prediction of behavior.

TAM replaces many of TRA's attitude measures with the two technology acceptance measures: ease of use, and usefulness. This means that the attitude of any technology user mainly influenced by simplicity of the technology or usefulness of the technology (Davis, 1989). The original TAM proposed by Davis is illustrated as follows in figure 2.2

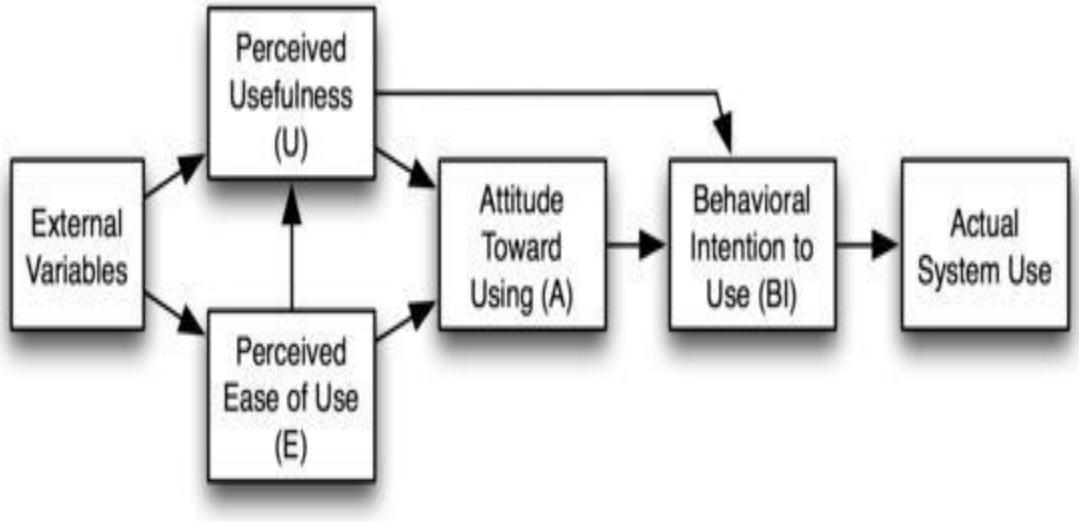

Figure 2.2 TAM model by Davis 1989

If the technology is not easy to use it or if it is complex to understand, then it will probably not be perceived as useful. According to devise model the behavioral intention to use or not to use the technology is determined by usefulness of the technology and easiness of the technology.

In fact So many researches' have been done using TAM model for the study of factor affecting the adoption of mobile banking in different countries. For instance, in Taiwan 180 respondents surveyed at an e-commerce exposition and symposium using the extended TAM model and the researcher found that Perceived self-efficacy, financial costs, credibility, easy-of-use, and usefulness had remarked influence on intention to adopt mobile banking Luarn and Lin [2005]. In Malaysia also 156 respondents obtained via convenience sampling the finding indicates Perceived usefulness, easy-of-use, credibility, amount of information, and normative pressure significantly influence the adoption of mobile banking using TAM model for the study Amin et al. [2008]. Furthermore, in Brazil the cost barrier and perceived risk are highest rejection motives, following are unsuitable device, complexity, and lack of information were the finding by surveying 3585 in online using TAM and theory of resistance to innovation Cruz et al.2010. In Africa specifically in Sudan 181 bank's customers were sampled the results revealed that customers' intention to use M-banking in Sudan is influenced strongly by perceived trust, perceived ease of use and perceived risk. Perceived usefulness was found to be with no influenceon the intention to use M-banking service among customers of Sudanese banks. By surveying of 67 customer in Kenya using TAM model researcher revealed that the risks found to have the greatest influence

were fear of sending money to wrong account or phone number and loss of personal or account information. On the other hand, perceived convenience was found to positively affect adoption of M-banking by being easy to use and being useful in various ways Hannah Wangari, 2014.

Limitation of TAM

TAM are model applicable to a variety of technologies, yet they have been criticized for not providing adequate information on individuals' opinions of information systems (Mathieosn, 1991b; Moon and Kim, 2001; Monsuwe et al., 2004). TAM make assumptions related to the use of technology that may not apply outside of the workplace (e.g., university); such as, all individuals have access to adequate equipment and an information system and are mandatorily required to use the system. In other words, TAM are designed for measuring usage in the workplace where voluntariness of use may not be under an individual's control or Voluntariness was not explicitly included in the TAM . As to external variables, Davis et al. (1989) observed that external variables enhanced the ability of TAM to predict acceptance of future technology, which means the constructs of TAM need to be extended by incorporating additional factors depending on the target technology, main users, and context (Moon and Kim, 2001). Also, Wanget al. (2003) noted that variables relating to individual differences played a vital role in the implementation of technology. Another commonly reported limitation of TAM is the measurement of usage by relying on respondents' self-reporting usage and assuming that self- reported usage reflects actual usage (Mathieosn, 1991b). Other limitations, such as a variety of types of respondents or the sample choices that made generalization difficult, and, limited guidance about how to influence usage through design and implementation. Furthermore, perceived ease of use and perceived usefulness may not fully explain behavioral intentions towards the use of mobile banking, necessitating a search for additional factors that can better predict the acceptance of mobile banking. Because Davis (1989) noted, future technology acceptance research must address how other variables affect usefulness, ease of use and user acceptance.

2.4.3 The Unified Theory of Acceptance and Use of Technology (UTAUT) Model

Venkatesh et al. (2003) proposed and tested a unified information technology acceptance and use research model, called the Unified Theory of Acceptance and Use of Technology (UTAUT). The

model integrates significant elements across eight prominent user acceptance models and formulates a unique measure with core determinants of user behavioral intention and usage. In this model the original UTAUT aims to explain user intentions to use an IS and subsequent usage behavior. Furthermore, UTAUT model suggests that there are a set of factors that influence the intention of the individual user acceptance (Feras, Mohammad, 2012). Venkatesh 2003, pp 446, in their research article theorized that, four constructs play a significant role as direct determinants of user acceptance and usage behavior:

I. Performance expectancy,

II. Effort expectancy,

III. Social influence, and

IV. Facilitating conditions

Gender, age, experience, and voluntariness of use are said to mediate the impact of the four key constructs on usage intention and behavior. Venkatesh et al. (2003)

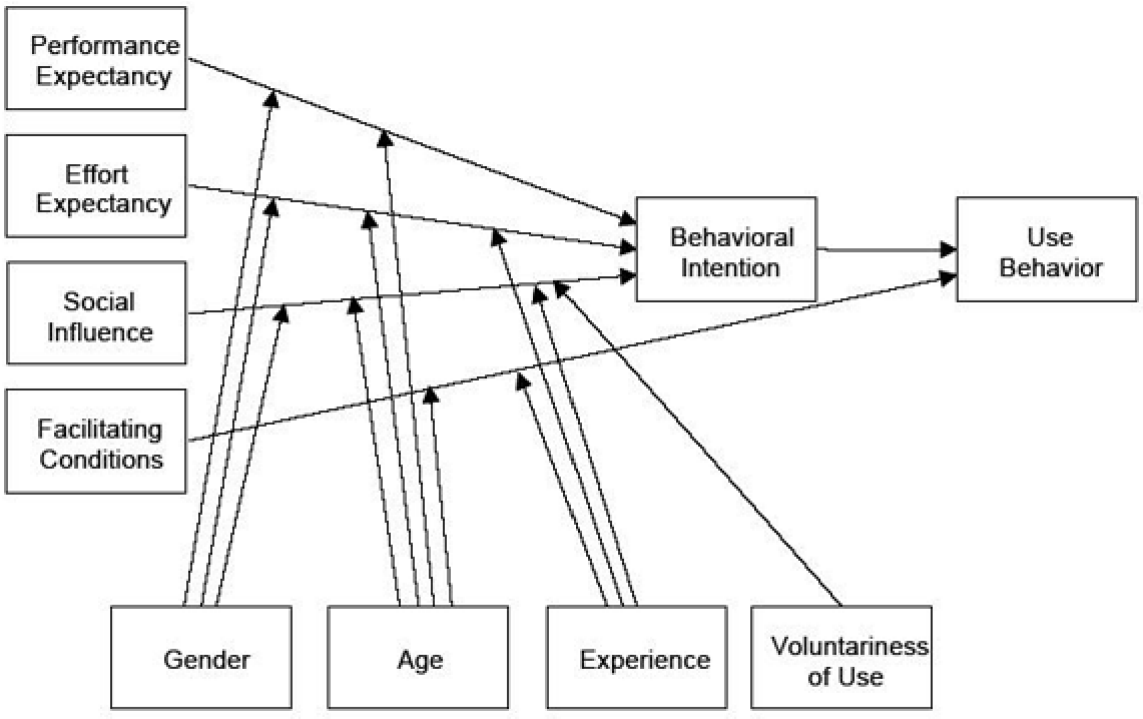

Figure 2.3: Research Model proposed by *Venkatesh et al*, 2003

I. Performance Expectancy (PE)

Performance expectancy (PE) is defined as "the degree to which an individual believes that using the system will help him or her to attain gains in job performance". Venkatesh et al, 2003. PE Is the strongest predictor of intention and remains significant at all points of measurement in both voluntary and mandatory settings however from a theoretical point of view, there is reason to expect that the relationship between performance expectancy and intention will be moderated by gender and age. Perceived usefulness, relative advantage, outcome expectation, job fit, and extrinsic motivation are the constructs of performance expectancy (PE) from different models TAM, Innovation Diffusion Theory (IDT), Social Cognitive Theory (SCT), Model of PC Utilization (MPCU), and Motivational Model (MM) respectively. Venkatesh et al, 2003. Researchers have demonstrated a positive relationship between performance expectancy and behavioral intention (Venkatesh et al., 2003). Hence, adapting performance expectancy to the context of mobile learning suggests that individuals will find mobile learning useful due to convenient access to information without the restriction on physical locations and time.

II. Effort Expectancy

The concept of Effort expectancy is developed from perceived ease of use, complexity, and ease of use from existing models which are TAM, MPCU, and IDT respectively. Effort expectancy found to be significant in the early time periods, but became insignificant over time (Venkatesh et al., 2003). As individuals became more familiar with the technology, the effort needed to use the technology declined. Previous research supported that the effort necessary to learn and use a new technology affected its acceptance and use (Gefen & Straud, 2000). In other word the easier a system is to use, the more likely it will be accepted and used. Sungwoo, 2009. To the extent that promoted effort expectancy leads to improved performance, previous studies indicated that effort expectancy had a direct effect on performance expectancy and intention to use mobile learning (Carlsson et al., 2006).

III. Social Influence

Social influence is defined as the degree to which an individual perceives that important others believe he or she should use the new system. Social influence has an impact on individual behavior through three mechanisms: compliance, internalization, and identification. Venkatesh and Davis,

2000. Previous models showed that gender moderated this relationship as the effect was stronger for females than males. Sungwoo, 2009. However, current results showed that gender failed to moderate this relationship when testing the proposed model. Experience also was not a significant moderator of this relationship, which fails to support the UTAUT findingsin which non-users showed a stronger effect than users. Venkatesh et al., 2003.

IV. Facilitating Conditions

Facilitating conditions are defined as the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system Venkatesh et al., 2003. This definition captures concepts embodied by three different constructs: perceived

behavioral control from (TAM), facilitating conditions from (MPCU), and compatibility from (IDT)

2.5 Tele Birr- Mobile Money Service

Tele birr is a mobile based banking whereby Ethio Telecom selects, trains and authorizes agents to provide mobile money services on behalf of the bank through a mobile phone. Tele Birr is believed to contribute a lot to build up saving culture of the public and streamline financial transaction and payment system of the country.

Tele birr is an agent banking service introduced by Ethio telecom in accordance with NBE directive number FIS/01/2012 (https://nbebank.com/payment-system/). It was in development phase for long period of timeand became live in 2021.Tele Birr customers can self-register, transfer money to subscribed or unsubscribed users, deposit and withdraw cash from agents, receive payment, buy airtime directly without scratching mobile cards, receive international remittance, donate, pay bill, pay utility, buy ticket, pay traffic penalty, contribute for Great Renaissance Dam, have credit service , transfer to bank and pay for goods and services (Pay for merchant).

Tele Birr Service includes money deposit, money withdrawal, domestic money transfers to both registered and non-registered users, Mobile airtime Top-up (Ethio telecom credit), checking account balances, other administrative services (PIN change, language change, and statement),

loan repayment, bulk disbursement and payment of goods. Once money has been deposited on his/her account, it is very convenient for the Subscriber to transfer money anywhere within Ethiopia. Of course, the recipient must either be a Subscriber or simply have a mobile phone. It is much faster and more convenient than going to a bank: If a Subscriber lives in Addis Ababa and wants to send money to his family back in Dire Dawa, it's as easy as sending a text: typing some numbers on a mobile phone, and within a few seconds, the recipient gets a message in his/her mobile. He/she then goes to his local Agent (shop, supermarket, etc.) and collects the money right away. The user can use for mobile card payment system.

According to the national bank of Ethiopia directives (2012), Once registered on the Tele Birr System, subscriber can access the Tele Birr service by dialing*127# and hit send, like a normal phone call. To select the operation, with a very simple method of navigation, the user shall type in the number of the menu, he/she wishes to access. All Tele birr Mobile customers' accounts have debit and balance limits set by the National Bank of Ethiopia. A maximum daily debit limit of 6,000birr and a maximum account balance of 25,000birr.

2.6 Factors Affecting Tele Birr-Mobile Money Project

2.6.1 Financial Regulation

The financial regulation also has a huge impact on the performance of Mobile Money. The governing body decides about every aspect and agreement between service provider, Agent and customers. However, if the regulations are too tight, it may affect the rate of agent banking penetration in the market.

National bank of Ethiopia is the regulatory body in Ethiopian financial market, and it regularly controls and instructs financial institutions. Regarding Mobile banking, NBE has certain rules than can affect agent banking performance in one way or another. For example, maximum amount of deposit that a customer can have is limited to 25,000 birr and according to NBE directive no. FIS/01/2012 only financial institutions can provide agent banking service.

2.6.2 Technical Team

The team members are usually involved in developing the plan and are often able to contribute specialist knowledge and expertise. The building of this team and its motivation and leadership also continue until the project is finished.

The importance of information and communications technologies (ICTs) as powerful tools for socio-economic development is now widely acknowledged not only among large corporations but small business enterprises as well. However, for ICT to be effectively deployed as engines of economic development existing IT skills gap both in developed and developing countries must be addressed. The Digital Opportunity Task Force (DOT FORCE, 2001) emphasizes human resources development through systematic training and education as critical if countries have to reap digital dividends. Additionally, pervasive use of ICT in the economy depends on well trained human resources for developing relevant applications, supporting and maintaining systems. Moreover, investment in human capital, research and development is becoming increasingly recognized as a critical factor in preparing citizens to participate in the digital age.

The International Labor Organization (ILO, 2001) states that countries with the right mix of skills stand a better chance of becoming important locations in global markets. However, for maximum gains to emerge, the development of essential ICT skills is necessary because without such skills, the technologies can neither be maintained nor adapted to local use. The promotion of education and literacy in general and digital literacy, remains a major challenge facing most countries especially those in the developing world. ILO (2001) observes that adoption of ICT in business environments creates two types of skill needs. The first is related to the variety of foundation skills such as the ability to communicate, analyze and solve problems. The other skills relate to technical component which extends beyond the ICT sector to the economy as a whole. The project should be the top and only priority and the workload should be manageable. As far as possible, teams should be collocated together at an assigned location to facilitate working together (Wee, 2000). The team should be given compensation and incentives for successfully completing the project on time and within the assigned budget (Wee, 2000). The team should be familiar with the business requirements and products so that they know what needs to be done to support business processes (Rosario, 2000).

2.6.3 Customer awareness and attitude to change

Awareness is the know-how of the product usage. This includes technology of the new service, complexity of the usage of the new service and level of performance of the new service (Alkhunaizan & Love, 2012). If the technology of the service is superior and users are unable to adopt that with individual's level of education background it is highly unlikely that users will develop positive intention of using the service. Similarly, if the product or service is too complex to use or has advanced features which can't be absorbed by the individuals then there is a high potential to build negative attitude towards it. Similarly, Garcia-Murillo &Annabi, (2002) highlighted that knowledge helps the consumers to trade products or services easily, this is because users with high level of understanding will use services better, more efficiently and be able to avoid the risks. Further, knowledge and awareness help to recognize the innovation, the desire from new technologies, thereby applying the service faster and easier (Schreier and Prügl, 2008). Similar, findings of Marcketti and Shelley (2009) highlighted that consumers' knowledge of products has a significantly positive effect on their perceived ease to use.

Customer's attitude towards risk and uncertainty affects the decision and rate of use of e-banking services. Studies show that often people are conservative to adopt e-money products and those who are reluctant to use improved practices and technologies are categorized as risk averse. Such risk aversion behavior is affected by different factors, including the level of income and wealth, asset ownership, level of trust on the e-money product, availability of insurance et

2.6.4 Technology

Recently, Williams and Clark (2007) reported that most companies are investing heavily and are fundamentally dependent on their ICT infrastructure. However, these companies have struggled

to find the best ways to successfully introduce ICT into their domain (Brady et al., 2008).

Consequently, it is often the case that these ICT-related investments do not deliver value or business objectives (Fitzgerald, 1998), especially when a company adopts ICT without clear understanding of the scope and implications of that adoption (Pires and Aisbett, 2003). This may often be because the new technology introduces new problems by replacing the old problems with the expectations that there will be some benefits out of it. ICT failure in organizations isn't a new problem; it is a long-standing problem reflecting incapacity to deliver (Fincham, 2002).

Gibson (2003) reports the reasons for underperformance in ICT being related to technology, i.e. expanding the project, unable to cope with the complexity of integrating different systems. Although companies face other challenges such as inability to develop new workflow processes, or adapt the structure of organization or change from old to new cultural practices, this research realizes that the potential of these SMEs could be maximized if there is some means to achieve a successful and sustainable adoption of ICT in their businesses. The importance of the need for SMEs to develop robust, responsive and more sustainable means to adopt ICT to support their business planning and control has been accepted (Irani, 2002; IAI, 2000) by many companies. As a consequence, ICT is not regarded as "just another option" but as a critical resource (Kohli and Devaraj, 2004) that determines SME growth and survival.

Additionally, a clear business plan and vision to steer the direction of the project is needed throughout the ERP life cycle (Buckhout et al, 1999). A business plan that outlines proposed strategic and tangible benefits, resources, costs, risks and timeline is critical (Wee 2000). This will help keep focus on business benefits.

There should be a clear business model of how the organization should operate behind the implementation effort (Holland et al. 1999).There should be a justification for the investment based on a problem and the change tied directly to the direction of the company (Falkowski. G, etal, 1998). Project mission should be related to business needs and should be clearly stated (Roberts and Barrar, 1992). Goals and benefits should be identified and tracked (Holland et al. 1999) while business plan would make work easier, (Rosario, 2000).

System quality is the desirable characteristics of an information system. For example, ease of use, system flexibility, system reliability, ease of learning, intuitiveness, sophistication, response time (Petter et al, 2008). Ease of use is the degree to which the users perceived that by using IS they need less effort to use the system. In addition, a quality of IS needs to be flexible enough in order for the user to use the system. Flexible IS meaning the ability to customize the system based on the conditions and the internal and external changes. The lower the flexibility of the system, the lower the user's satisfaction which later impacts the user's engagement to the system. Moreover reliability is important indicators of quality IS.

Reliability is defined as degree of which the users can trust the IS. In addition, ease to learn is important indicators of quality IS. Ease to learning is the degree to which users perceived that the system easy to learn. As well as system features of intuitiveness, sophistication, and response times are important an indicator of quality IS. Response time is the length of time taken by a system to response to an instruction. Longer system response times may cause lower satisfaction of users.

2.6.5 Compatibility

Compatibility is the degree to which an innovation is perceived as being consistent with the existing values, needs, and past experiences of potential adopters (Worku, 2015). Perceived compatibility is the degree to which an innovation fits the values, previous experiences and needs of the potential adopter (Rogers 1995). Based on the definition thus an attempt has been taken to explore the significance of compatibility on attitude toward adoption (or continuing to use) mobile banking from three dimensions as follows: Compatibility with individual values, Compatibility with experience, enough to integrate with other systems and Compatibility with finance needs. Vijayasarathy (2004) identified Perceived compatibility as the best perception-based indicator of attitude towards online transactions.

Compatibility refers to the degree to which a service is perceived as consistent with users‟ existing values, beliefs, habits, and present and previous experiences (Chen, 2004).

Compatibility is defined as the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and the needs of potential adopters. An innovation can be compatible or incompatible with socio-cultural values and beliefs; with previously introduced ideas; or with client needs for innovations (Rogers, 2003). The compatibility of an innovation, as perceived by members of a social system, is positively related to its rate of adoption. Compatibility is a vital feature of innovation as conformance with user's lifestyle can propel a rapid rate of adoption.

2.6.6 Top Management Support

(Imtiaz et al, 2013) carried out a study on critical success factors of information technology projects. The goal of this study was to review past critical success factors research relevant to IT project. This was done by searching the full text of articles within Google Scholar, Science Direct, IEEE Explorer, ACM and Emerald databases published within 1999 to 2012. The study enlisted 15 factors that were believed to be critical for the success of IT projects based on strong evidence given in their corresponding studies.

In the list was Top management support, selecting a project manager with the required technical expertise management experience and interpersonal skills to successfully manage the project, provide adequate resources for the project and provide incentives to the team members. The findings of the study pointed out that Top management support strongly affects the success of IT projects, Top Management is required to conduct regular review meetings to ensure and monitor the progress of the project, follow up with customers to determine general customer satisfaction and finally to recognize and reward the project team members upon the successful completion of the project.

Top management support ensures the availability of resources and employee commitment towards the project. Based on the study it is determined that top management support is essential for the success of an IT Project.

2.6.7 Covid 19

COVID-19 was described as an infectious disease that is caused by severe acute respiratory syndrome and the disease has greatly slowed down economic activities across the world, with many countries coming under partial or total lockdown. The pandemic has not only brought entire socio-economic structures into a halt but has challenged the globalization and global operations of enterprises. (Ozili P &Arun T, 2020). Due to the Covid-19 pandemic, the world's economy was shut down almost overnight (UNWTO, 2020). The pandemic has confronted the hospitality industry with an unprecedented challenge. Strategies to flatten the COVID-19 curve such as community lockdowns, social distancing, stay-at-home orders, travel and mobility restrictions have resulted in temporary closure of many hospitality businesses and significantly decreased the demand for businesses that were allowed to continue to operate (Bartik et al, 2020).

For project managers, the impact of COVID-19 on operations has been catastrophic. A reliance on remote work has obstructed the collaborative approaches often seen within a traditional team environment. Lockdowns and border closures have caused a major disruption to supply chains, and the risk of operating a business and managing projects have skyrocketed.

Also Covid 19 slowed down the implementation of Telebirr project through high cost infrastructure equipment shipment from China to Addis Ababa which used for data center establishment, also affected by lack of internal and external expertise who are needed for the project since there were cancelled flights based on each countries' COVID code of conduct and after launch it was not suitable to made physical business assessment also to give training for the respective stakeholders.

2.7 Empirical Review

The researcher tried to review related research works pertaining to the topic in order to demonstrate through understanding of the research topic. Based on main findings of each research works under consideration, the review tries to make a link between the Challenge & prospects of electronic banking service in commercial bank of Ethiopia which mainly focuses on agent banking.

Lehman (2010) "Operational Management Challenges of Agent Banking System" has studied operational challenges of agent banking system in a global level focusing on the challenges on building agent network, managing of liquidity and managing of the channel. The study finds out that how building consistent customer experience is important towards bringing success in agent networking indicating the success of Safaricom-Kenya (M-PESA) and the failure of MTNUganda that followed inconsistent customer experience. With respect to liquidity managementthe study finds out how managing liquidity plays fundamental role in ensuring system viability. In this regard the experience of Vodacom-Tanzania was taken as a real experience which allows Agent Aggregators who perform the task of agent recruitment, managing their floats and transporting cash to the agent. The aggregator receives a flat fee for each new agent and a percentage of the agent commissions which provides an incentive to sign up high-quality agents who will actively transact. From the perspective of channel management, the study finds out that outsourcing or using third parties for agent channel management is recommended since with the expansion of agent network, it would be difficult for providers to manage the business and covers the "last mile" of the distribution chain (Lehman, 2010).

Tilahun (2017) has made study on "Opportunities and Challenges of Agent Banking. The case of selected commercial banks in Ethiopia" the finding confirms that, despite the significant progressregistered, the implementation and delivery of agent banking service in Ethiopian banking sector was unsatisfactory due to lack of attention and support of commercial banks, the level of managerial skills, financial networks among banks, telecom network and internet access and awareness creation among the society. It is recommended

that commercial banks should facilitate continuous training and awareness creation, enhancement of telecom service and collaboration of institutions to have a technological linkage among them (Tilahun, 2017).

Tamirat (2017) focused his study on "An assessment of factors affecting adoption of agent banking. The case of Lion International Bank S.C. (Agent perspective)".The findings of the research revealed that major challenges facing up the successful implementation of Agent banking system in the selected bank were trustworthiness of the technology, simplicity, resource,commitment of top level management, training, government support, legal framework, belongingness of Agent and public awareness regarding agency banking system. After due consideration of those findings the researcher recommend on major issues like awareness and customer sensitization, continues training , security and liquidity management for the stakeholders, the bank, the agent, Ethio-telecom and National Bank of Ethiopia in connection with their roles (Tamirat, 2017).

Yikeber (2018) in Ethiopia has made a study on "challenge and prospects of mobile and agent banking adoption in Ethiopian banking industry". The main objective of the study was assessing the challenge and prospects of mobile and agent banking adoption in Ethiopian banking industry.The study revealed that environmental (lack of adequate ICT infrastructure, poor quality of internet and mobile network, inconsistent power & network supply in rural areas of the country), organizational (lack of support & commitment of top level management, lack of availability of well-trained manpower to build agent network, lack of skill of IT personnel, lack of technical and managerial skill of staffs), and technological (lack of confidence with the security aspect, customer's fear of risk of new technology innovation, and lack of availability of physical security) are challenges of adopting mobile and agent banking. The study also revealed that, the major prospects of adopting mobile and agent banking classified under perceived ease and perceived usefulness are simplicity to perform banking tasks, easiness to understand and use, friendliness with the existing service offering, improving customer service being a solution for banks closing their doors early, motivates fast small cash movers to put their extra

money intothe banking system, creating wider market coverage for the bank, increases the productivity of banks, enhance customer service, and accessibility of service without limit of time and place. The study recommended banks to consider technology-based competition, regulatory body to issue suitable legal frameworks to ease the adoption of mobile and agent banking system while

the government should support banking sector by investing on ICT infrastructure development and financial (Yikeber, 2018).

Henos (2018) has made study on "Challenges and Prospects of Agent Banking in Ethiopia: the case of M-BIRR and CBE-BIRR" and the result identifies different factors grouped in five constructs of technology acceptance model. These factors and sub-factors are Perceived Economic factor (Cost of using bank account), Perceived usefulness (Actual /practical benefits) Perceived ease of use (illiteracy, Awareness, mobile network quality), Perceived Trust (trust to the bank, trust to the agents, trust to the technology), Perceived Risk (Vulnerability to Errors and Vulnerability to Hackers). Challenges regarding development of agent banking are also discussed with service providers and agents. To this end, different challenges are raised and discussed during the interview including awareness of customers and agents, availability of limited services, NBE regulations and limitations, lack of budget, poor advertisement, illiteracy and mobile network quality (Henos, 2018).

Yeshitila (2019) made study on "Assessing opportunities and challenges of CBE-Birr mobile money service: case study on commercial bank of Ethiopia" The result found that limitation in building effective agent network and lack of reliable customer support service are the main challenges for implementation and expansion of CBE – BIRR mobile money service. The most ranked opportunities identified in this study that large number of respondents agreed on opportunities of implementing and expanding CBE – BIRR mobile money service in commercialbank of Ethiopia is that Commitment of the government to strengthen the banking industry, late adopter opportunities, Increment of educated potential customer and Improvement in the bankinghabit of the society

2.8 Research Gap

When technology is rapidly growing and the numbers of participant increasing, the banking sector needs up-to-date studies to identify challenge and prospects of the adoption. However, there is quite literature gap and no studies are conducted for commercial bank of Ethiopia. As perthe knowledge of the researcher, there is a little research work on agent banking which include commercial bank of Ethiopia. Tilahun (2017) "Opportunities and Challenges of Agent Banking the case of selected commercial banks in Ethiopia" used employee and agents as a primary source. Henos (2018) "Challenges and Prospects of Agent Banking in Ethiopia: the case of M- BIRR and CBE-BIRR" focused on customer perspective, and Yikeber (2018) study on "challenge and prospects of mobile and agent banking adoption in Ethiopian banking industry" focused on employee perspective. And Yeshitila (2019) made a study on challenge and prospect of CBE-Birr mobile service and focused on customers' perspectives. This shows the previous studies don't use both customer and employee. Therefore, more studies are still required to assess challenges and opportunity of agent banking in commercial bank of Ethiopia. To bridge the gap towards the literature on agent banking in commercial bank of Ethiopia, this study estimated to contribute its part through identifying the basic challenges and prospects by using both employee and customer perspective

2.9 Conceptual Framework of the Study

The conceptual framework indicates the vital process, which is useful to illustrate the track of the study. The study demonstrates the relationship between variables (Financial Regulation, Technical team, customer awareness and attitude, Technology, Compatibility, Covid 19 and Top management support) and Tele Birr Mobile-Money Project.

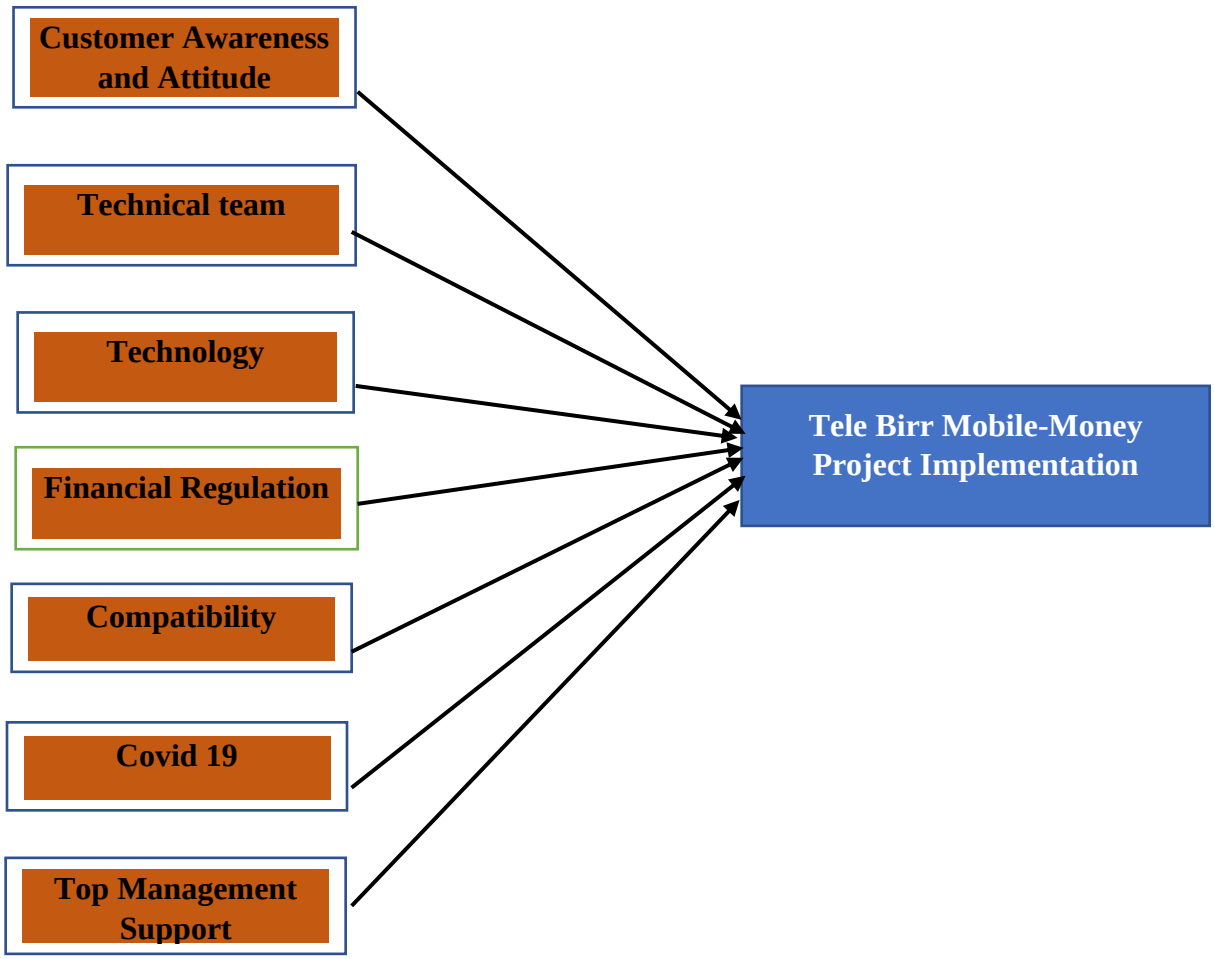

Figure 2.4 Conceptual Framework

Source: Researcher own work (2022)

CHAPTER THREE

3. Research Design and Methodology

3.1 Research Design

In order to achieve the objective of this paper, using of appropriate methodology that helps to approach the research scientifically is the priority attention will give by the researcher. Thus this chapter includes research design, sample and sampling technique, instrument for data collection, and procedure of data collection.

Adopting a certain research method depends on a range of factors. Some of these are the nature of the problem under study, the situation in which the research is conducted, availability of sources, and the background and inclination of the researcher. In this regard, the relationship between methodology and research objectives is the fundamental factor to determine the quality of the data (Denzin & Lincoln, 1994).

The major concern of the study is to assess factors affecting Tele birr-Mobile Money Project implementation in the case of Ethio telecom. Therefore, descriptive design is appropriate to emphasize on analyzing and explaining the actual situation.

According to Creswell (2003) there are three approaches that are used in conducting a given research. These are quantitative, qualitative, and mixed research approach. Quantitative research approach focuses primarily on the construction of quantitative data, and quantitative data is a systematic record that consists of numbers constructed by researcher utilizing the process of measurement and imposing structure. The quantitative research approach employ measurement that can be quantifiable while qualitative cannot be measured. In mixed research approach inquirers draw liberally from both qualitative and quantitative assumptions. In order to answer the study questions, this study adopted the quantitative research approach.

3.2 Population and Sampling Techniques

The target population of this research are permanent employees of Ethio telecom who work under project team at Legahar and Melka Tower office located in Addis Ababa. because they have experience of Tele birr-Mobile Money in the Project.

At Legahar and Melka Tower office the project teams are 42 and 41 respectively, in general the researcher took 83 as total population of this study. For this study, the researcher used Census survey.

3.3 Types of Data and Instruments of Data Collection

3.3.1 Types of Data

The data for the study included both primary and secondary data. Responses of samples on questionnaires distributed the primary source of information. The questionnaire designed to have both Likert scale model and other open-ended questions to get a reliable quantitative data and interview used.

3.3.2 Data Collection

A. Questionnaires and Interview

For this research, the primary data collected through the use of a self-administered questionnaire Legahar and Melka Tower office of the project teams, and the Interview held with the project manager. Employees selected as a sample because they directly participated during the project implementation also considering their uninterrupted contact with merchant/agents and customers.

After identifying and receiving a willingness to cooperate with the researcher, the questionnaire emailed to the respondents also the questionnaire delivered physically travels to the respondent's office. The researcher used email due to its cost effectiveness, extremely fast delivery and response turnaround and enough time had been given to respond to all of the items in the questionnaire carefully. The questions in the questionnaire were closed-ended or structured with a pre-

determined 5-point Likert scale for response to ease the process of analyzing the data from the respondents.

B. Secondary Data Collection

To strengthen the reliability of research data and supplement the information missing in the primary data, secondary data collected from the ethio telecom, unpublished and published documents such as annual reports made by the ethio telecom, Baseline survey, and concerned government report.

3.4 Procedures of Data Collection

According to William, et al., (2010), there are two types of data, primary and secondary. The primary data are those which are gathered for the first time and afresh and thus collected for the case at hand Kothari, (2004). Secondary data is defined as data that has been previously collected for some purpose other than the one at hand. For this study in order to obtain relevant information both primary and secondary data was used.

For collecting primary data, the study used questionnaire and interview from the employees of the Ethio telecom. The questionnaire was based on those variables that are stated above and the mentioned research questions. This is because questionnaire is advantageous in collecting large amount of data from large number of respondents and help respondents to fill the questionnaire at their convenient time without the interview bias. And the study also used interview because interview would have a higher response rate and it clarifies the questions well if the questions are not clear, since questionnaire doesn't.

3.5 Methods of Data Analysis

Data analysis for questionnaires is in descriptive statistics which involves mean, frequency, percentage, and standard deviation. The questionnaire designed in a structured way still containing an open ended questions and Likert-scale indicating measurement used on the basis of survey

1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. Responses of the questionnaire summarized and presented with the use of SPSS software version 23.

3.6 Ethical Consideration

The researcher has consent of the organization for the study. Employees who are complete the questionnaires were informed about the purpose of data collection, analysis and the covenant to maintain privacy of their responses. Regarding published and unpublished materials use in the literature review and throughout the study, all citations from copy right holder has been made properly.

3.7 Validity and Reliability

As Joppe M. (2000), stated, instrument validity pertains to the ability to accurately measure what it intends to measure based on the objective of the study. It is used to make sure that all the relevant variables are included, and irrelevant ones were excluded. It also assures all the variables considered are accurately measured.

In this regard, a universally accepted sampling method will use to draw a representative sample of the population. Due emphasis is given to making the questions objective type and understandable so that the employees can answer the questions properly based on what they know. Vague and confusing wordings were avoided so as not to mislead the employees at the time of filling the questionnaires. The questionnaire was organized and finalized with close consultation with my advisor and expertise in the subject. To address Ambiguous claims, the same spirited questions forwarded to project teams for triangulation purposes. Furthermore, secondary documentation reviewed to verify factual claims made by respondents.

Cronbach's alpha is a coefficient (a number between 0 and 1) that is used to rate the internal consistency (homogeneity) or the correlation of the items in a test. A good test is one that assesses different aspects of the trait being studied. Cronbach's alpha will generally increase as the inter correlations among test items increase and is thus known as an internal consistency estimate of reliability of test scores. Because inter correlations among test items are maximized when all items

measure the same construct, Cronbach's alpha is widely believed to indirectly indicate the degree to which a set of items measures a single construct (Gleam & Rosemary , 2003). George and Mallery (2003) provide the following rules of thumb: — > .9 Excellent, > .8 – Good, > .7 Acceptable, > .6 Questionable, _ > .5 Poor, and < .5 Unacceptable p.231 (as cited in Gleam & Rosemary, 2003). If correlations between items are too low, it is likely that they are measuring different traits and therefore should not all be included in a test that is supposed to measure one trait.

Cronbach's Alpha coefficient of 0.803 shows good internal consistence of the items in the Scale used (George & Mallery 2003). The below reliability measures show that the internally consistent measure results are greater than the acceptable level, which is 0.70.

Table 3.1 Reliability Test (Cronbach's Alpha)

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.803	.813	45

Source: Questionnaire and SPSS output (2022)

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

4. Introduction

Under this section the data collected from respondents were presented and analysis was made based on the collected primary and secondary data through questionnaires and Interviews.

4.1 Response Rate

The questionnaires were distributed to a total of 83 respondents. Among them 75 (91.4%) were returned back. Out of distributed questionnaires 7 (8.43%) questionnaires were not returned back. The questionnaires include the direct question to assess factors Affecting Telebirr-Mobile Money Project Implementation. Each questionnaire was accompanied by a further covering letter explaining the purpose of the study to the prospective respondent.

4.2. Analysis of the Result related to participants Information

The general information for the study comprised of the respondents' educational qualification, employee level, years of working in the company, years of working in the project, and department.

4.2.1 Project Team Profile

Table 4.1 Result of the question related to General Profile of Respondents

Education		Frequency	Percent	Valid Percent	Cumulative Percent
1	Certificate/Diplomas	8	10.7	10.7	10.7
	Bachelor's degree	58	77.3	77.3	88.0
	Post Graduate degree	9	12.0	12.0	100.0
Employee Level		**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
2	Chief Officer	3	4.0	4.0	4.0
	Supervisor	7	9.3	9.3	13.3
	Staff	56	74.7	74.7	88.0
	Officer	9	12.0	12.0	100.0

	Company Work Experience	Frequency	Percent	Valid Percent	Cumulative Percent
3	1-5	30	40.0	40.0	40.0
	6-,10	20	26.7	26.7	66.7
	11-15	15	20.0	20.0	86.7
	Above ,15	10	13.3	13.3	100.0
	Project work Experience	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
4	Below One Year	4	5.3	5.3	5.3
	,1-5	31	41.3	41.3	46.7
	6-,10	20	26.7	26.7	73.3
	11-,15	13	17.3	17.3	90.7
	Above 15	7	9.3	9.3	100.0
	Department	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
5	Business System Rollout	8	10.7	10.7	10.7
	Information System Design	30	40.0	40.0	50.7
	Back Office Operation Support	1	1.3	1.3	52.0
	Compliance and Risk Management	4	5.3	5.3	57.3
	Finance	6	8.0	8.0	65.3
	Marketing	8	10.7	10.7	76.0
	Information Security	4	5.3	5.3	81.3
	Agent and Partner Management	14	18.7	18.7	100.0

Source: Questionnaire and SPSS output (2022)

From the above table 4.1 , it is evidenced that the employees of ethio telecom hold a range of educational qualification from Certificate Diploma to post graduate Degree level. The majority of the respondent 77.3 % (58 in number) of the participants were bachelor's degree holders, 12.0 % (9 in numbers) of the participants were master's degree holders and the rest 10.7 % (8 in number) of the participants were at the level of Certificate/Diploma. Apparently, this shows that majority of respondents working in Ethio Telecom have bachelor's degree qualifications. This implies that they are capable of conceptualizing and respond authoritatively on issues and practices.

This finding was in line with Katz (1992) finding that those with higher education are more

successful as they have more knowledge and have modern managerial skills making them more conscious of the reality of the business work. And the majority of the respondents (60%) have more than 5 years' experience. Table 4.1 portrays the roles of the respondents' Chief officer 3 (4.0 %), Supervisor 7 (9.3 %), Staff 56 (74.7%), and Officer 9 (12.0%) respectively. This indicated that more information is collected from staff regarding to the assessment of factors affecting Telebirr-Mobile Money project implementation in ethio telecom.

The above table indicates that respondents have significant levels of project management experience. The details show that about 31 (41.3 %) of the respondents have 1-5 years of project experience. Some 20 (26.7 %) indicates their project experience was between 6-10 years. This shows that majority of the respondents have between 1 to 5 years of project experience in the company which in turn points that they are quite experienced to Telebirr-Mobile Money project implementation.

To get more information from the respondents participating in implementation of Telebirr-Mobile Money project the respondents were also asked their department. Table 4.1 indicates that 40% of respondents are from Information system design and majority of the project work implemented through this departments.

4.3 Descriptive Statistics of Variables

Analysis of the data related to Telebirr Project implementation, relating to the questionnaires, presents and analyzes the collected data regarding how Telebirr project implementation affected in the case of ethio-telecom. seven parts are included: Customers Awareness and Attitude to Change, Technical Team, Technology, Financial Regulation, Compatibility, Covid 19 and Top Management Support.

The standard deviation measures how concentrated the data are around the mean; the more concentrated, the smaller the standard deviation and according to Zaidaton & Bagheri (2009) the mean score below 3.39 was considered as low, the mean score from 3.40 up to 3.79 was considered

as moderate and mean score above 3.8 was considers as high. A 5-point Likert scale was used to rate the various indicators whereby 1 point was accorded to 'Strongly disagree', 2 points as 'Disagree', 3-point as 'Neutral', 4-point as 'Agree', and 5-point as 'Strongly Agree'. Thus, detail of the mean value and standard deviation value for each variable were presented together as follows:

4.3.1 Descriptive statistics on Customers Awareness and Attitude to Change

In this section, the responses of the respondents on Customers Awareness and Attitude to Change, were evaluated as below

Table 4.2 Result of the question related to Customers Awareness and Attitude to Change

	SD		D		N		A		SA		Mean	St. Deviatio
Customers Awareness and Attitude to Change	F	%	F	%	F	%	F	%	F	%		
Customers are well aware of Telebirr	-	-	12	16.0	30	40.0	24	32.0	9	12.0	3.40	.900
There is resistance to changes in technology by the society regarding Telebirr Service	6	8	12	16.0	34	45.3	16	21.3	7	9.3	3.08	1.037
Lack of using technology habits are challenges for Telebirr contribution	-	-	10	13.3	17	22.7	35	46.7	13	17.3	3.68	.918
Customers/Partners find Telebirr mobile money service easy to use and a useful way of making payment	11	14.7	19	25.3	30	40.0	15	20.0	-	-	2.65	.966
The registration procedures are easy for customers and Partners (Agents and Merchants)	-	-	15	20.0	13	17.3	47	62.7	-	-	3.43	.808
It is easy for the customer to become skillful at using Telebirr mobile money service and the interface is user friendly	12	16.0	16	21.3	36	48.0	11	14.7	-	-	2.61	.928
Using Telebirr services enables customers/Partners (Agent and Merchant) to accomplish financial task more quickly and helps to save time	-	-	5	6.7	20	26.7	43	57.3	7	9.3	3.69	.735

There is lack of availability of appropriate Tele Birr Agents Shop	10	13.3	12	16.0	29	38.7	19	25.3	5	6.7	2.96	1.108
Customers/Partners believe their transactions and privacy is secure	3	4.0	10	13.3	28	37.3	28	37.3	6	8.0	3.32	.947
Customers/Partners are satisfied with Telebirr and will continue to use it	2	2.7	14	18.7	17	22.7	41	54.7	1	1.3	3.33	.890
Customers intend recommending Telebirr mobile money service to others			12	16.0	30	40.0	24	32.0	9	12.0	3.40	.900
Tele birr has proper Know Your Customer (KYC) ID verification measures during registration process	3	4.0	14	18.7	31	41.3	20	26.7	7	9.3	3.19	.982
Agents are aware of the legal actions to be considered in Telebirr agent function	-	-	5	6.7	20	26.7	43	57.3	7	9.3	3.69	.735

Source: Questionnaire and SPSS output (2022)

SD=Strongly Disagree, D=Agree, N=Neutral, A= Agree, SA= Strongly Agree, F=Frequency

As table shown regarding to customer's awareness towards Telebirr 16% of the respondents disagreed, 40% neutral, 32% agreed and 12% strongly agreed respectively. About the resistance to changes in technology by the society regarding Service, the respondent 8% strongly disagreed, 16% disagreed, 45.3% neutral,21.3% agreed, and 9.3 % strongly agreed respectively.

Lack of using technology habits are challenges for Telebirr contribution 13.3% disagreed, 22.7% neutral 46.7% agreed and 17.3 % strongly agreed from this we found a conclusion that both strongly agree and agree respondents were higher in frequency and percentage than the other choices. Regarding Telebirr mobile money service easiness to use when Customers/Partners making payment 14.7% strongly disagreed ,25.3% disagreed,49% neutral, and 20% of them agreed also considering registration procedures are easiness 20 % of the respondent disagreed, 17.3 % neutral and 62.7% are agreed.

Regarding Telebirr easiness for the customer to become skillful at it 16% of the respondents strongly disagreed, 21.3 % of them disagreed, 48% neutral and 14.7 % of agreed. Considering Using Telebirr services enables customers/Partners (Agent and Merchant) to accomplish financial

task more quickly and helps to save time, among the respondents 6.7% disagreed,26.7 % neutral,57.3% agreed and 9.3 % of the strongly agreed.

Among the respondent 13.3% strongly disagreed,16 % disagreed,38.7% neutral,25.3% agreed and 6.7 strongly agreed on the lack of Telebirr agent shop availability. Whereas regrading to customer/partner believes their transactions and privacy is secure 4.0 % of the respondents strongly disagrred,13.3 % disagreed,37.3% neutral,37.3 % agreed and 8% strongly agreed respectively. About customer's satisfaction to continue using it and intention on recommending the service to others 2.7 % strongly disagreed,18.7% disagreed,22.7% neutral,54.7% agreed,1.3% strongly agreed and 16% disagreed,40% neutral,32 % agreed,12% strongly agreed respectively.

4.0 % of the respondent strongly disagreed,18.7 % disagreed, 41.3% neutral,26.7% agreed and 9.3 % strongly agreed on Tele birr has proper Know Your Customer (KYC) ID verification measures during registration process whereas 6.7% of the respondent Disagreed,26.7 % neutral, 57.3 % agreed, 9.3 % strongly agreed on Agent's awareness of the legal actions to be considered in Telebirr agent function.

Based on Table 4.2, in regard to Customers Awareness and Attitude to Change, both Using Telebirr services enables customers/Partners (Agent and Merchant) to accomplish financial task more quickly and helps to save time and Agents are aware of the legal actions to be considered in Telebirr agent function have scores of the highest mean (Mean=3.69 SD= .735) and the lowest mean (Mean=2.61, SD=.928) which indicated Telebirr is not easy for the customer to become skillful at using its service and neither it's interface is user friendly.

4.3.2 Descriptive statistics on Technical Team

In this section, the responses of the respondents on technical team, were evaluated as below

Table 4.3 Result of the question related to Technical Team

	SD		D		N		A		SA		Mean	St. Deviat
Technical Team	F	%	F	%	F	%	F	%	F	%		

Necessary trainings /workshops were conducted for technical team to foster teamwork	10	13.3	12	16.0	29	38.7	19	25.3	5	6.7	2.96	1.108
The project technical team members were experienced, knowledgeable and skilled for delivery of the project	-	-	15	20.0	14	18.7	44	58.7	2	2.7	3.44	.842
Project technical team showed commitment and achieved their targets and goal in time	-	-	12	16.0	30	40.0	24	32.0	9	12.0	3.40	.900
Project team was all inclusive and representative of all key stakeholders	-	-	8	10.7	27	36.0	32	42.7	8	10.7	3.53	.827
Structures were in place to ensure effective project communication - within the project technical team and at all levels of the company	-	-	5	6.7	20	26.7	43	57.3	7	9.3	3.69	.735
Goals/objectives for ICT project was communicated to all technical team	4	5.3	15	20.0	16	21.3	38	50.7	2	2.7	3.25	.988
All technical team members understood their roles and what was expected of them	-	-	12	16.0	30	40.0	24	32.0	9	12.0	3.40	.900
Project technical team received necessary support and tools required for the project necessary to achieve their targets and goals	10	13.3	12	16.0	29	38.7	19	25.3	5	6.7	2.96	1.108

Source: Questionnaire and SPSS output (2022)

SD=Strongly Disagree, D=Agree, N=Neutral, A= Agree, SA= Strongly Agree, F=Frequency

As shown above 13.3% of the respondent strongly disagreed, 16 % disagree, 38.7 % neutral,25.3 % agreed and 6.7% strongly agreed on necessary trainings /workshops were conducted for technical team to foster teamwork. on the other hand, 20% disagreed ,18.7% neutral,58.7% agreed and 2.7 % strongly agreed on project technical team members experience, knowledgeable and skill for the delivery of the project which indicates there is adequate knowledge and experience resource. About Project technical team commitment and achievement of their targets in time 16% disagreed, 40 % neutral, 32 % agreed and 12% strongly agreed. Also, project team inclusiveness 10.7% disagreed, 36% neutral ,42.7% agreed and 10.7 % strongly disagreed which implies the is better inclusiveness of all the respective stakeholders.

Structures were in place to ensure effective project communication - within the project technical team and at all levels of the company, among the respondents 6.7 % disagreed,26.7 neutral,57.3 % agreed and 9.3 % strongly agreed on it which is indicates there is proper placement of structure. in addition, concerning Goals/objectives communication of ICT project among all technical team, 5.3 % strongly disagreed,20 % agreed,21.3 % neutral,50.7 % agreed and 2.7% strongly agreed. Then regarding technical team members understating of their roles 16% Disagreed,40% neutral,32% agreed and 12 % strongly agreed. At last, about Project technical team received necessary support and tools required for the project necessary to achieve their targets and goals, 13.3% strongly disagreed, 16.0 % disagreed, 38.7 % neutral, 25.3 % agreed and 6.7 % strongly agreed as respondent's result respectively.

According to Table 4.3 the highest mean (Mean=3.69 SD= .735) implied that Structures were in place to ensure effective project communication within the project technical team and at all levels of the company and the lowest mean (Mean=2.96, SD=1.108) which indicated Necessary trainings /workshops were not conducted for technical team to foster teamwork and Project technical team didn't receive necessary support and tools required to achieve their targets and goals of Telebirr project implementation.

4.3.3 Descriptive statistics on Technology

Here, the responses of the respondents on Technology factor, were evaluated as below.

Table 4.4 Result of the question related to Technology

	SD		D		N		A		SA		Mean	St. Deviat
Technology	F	%	F	%	F	%	F	%	F	%		
Poor mobile network is a challenge that currently affects Telebirr practice	-	-	15	20.0	18	24.0	39	52.0	3	4.0	3.40	.854
Telebirr is a responsive system	-	-	3	4.0	17	22.7	49	65.3	6	8.0	3.77	.649
Telebirr has proper Fraud management feature	--		12	16.0	30	40.0	24	32.0	9	12.0	3.40	.900
There a flexibility issues regarding API integration with the third-party system	10	13.3	12	16.0	29	38.7	19	25.3	5	6.7	2.96	1.108

There are limitations in availability and quality of infrastructure (e.g., Modular data Center)	-	-	5	6.7	20	26.7	43	57.3	7	9.3	3.69	.735
There a flexibility issues regarding API integration with the third-party system	-	-	12	16.0	30	40.0	24	32.0	9	12.0	3.40	.900
There is lack of proficient skill from third parties during integration process	8	10.7	12	16.0	31	41.3	20	26.7	4	5.3	3.00	1.040
Telebirr update triggers from app itself. Customers/partners should click update button easily to update the application in addition to app store/play store.	9	12.0	11	14.7	30	40.0	20	26.7	5	6.7	3.01	1.084
Telebirr is flexible enough to update itself with the upcoming global innovation	-	-	12	16.0	30	40.0	24	32.0	9	12.0	3.40	.900

Source: Questionnaire and SPSS output (2022)

SD=Strongly Disagree, D=Agree, N=Neutral, A= Agree, SA= Strongly Agree, F=Frequency

As shown above 20% of the respondents disagreed ,76% agreed and 4.0 % strongly agreed that Poor mobile network affects Telebirr practice, whereas based on the survey 4% of the respondents disagreed, 22.7 % neutral and 73.3 & agreed that Telebirr as a responsive system. on the other hand, about Fraud management feature of Telebirr 16% of the respondent disagreed, 40 % neutral and 44 % agreed. Regarding Telebirr flexibility to API integration with the third-party system the respondent survey result is 29.3 % of them disagreed, 32 % of them agreed and 38.7 % neutral. On limitations in availability and quality of infrastructure, among the respondent 6.7 % disagreed, and 66,6% agreed, and this indicates that there is a limitation in availability of quality infrastructure. Then lack of proficient skill from third parties during integration process, here 26.7 % of the respondents disagreed and 32 % of them agreed. About Telebirr update triggers from app itself and to become flexible enough to update itself with the upcoming global innovation the respondents survey is mentioned here respectively, 26.7 % disagreed,40% neutral, 33.4 % agreed and 16% disagreed, 40 % neutral, 44% agreed the feature is capable enough to cop uo with the upcoming change and competition.

As the result depicted in the above table 4.5, Telebirr project respondents mentioned that Telebirr is a responsive system; weighted mean (Mean=3.77, SD=.649) of the at high level. and the lowest mean (Mean=2.96, SD=1.108) which indicated that Tele birr has a flexibility issues regarding API integration with the third-party system.

4.3.4 Descriptive statistics on Financial Regulation

In this section, the responses obtained from Project team through questionnaire on the effect of financial regulation on Telebirr-Mobile Money Project implementation were discussed below. Three items were included on the survey questionnaire to measure the project implementation.

Table 4.5 Result of the question related to Financial Regulation

	SD		D		N		A		SA		Mean	St. Deviation
Financial Regulation	F	%	F	%	F	%	F	%	F	%		
Customers and Partner (Agent and Merchants) have awareness on the NBE directive of Mobile Money and agent banking service	-	-	17	22.7	17	22.7	40	53.3	1	1.3	3.33	.844
Cash Withdrawal Limit Directive discourages of digital financial services	10	13.3	12	16.0	29	38.7	19	25.3	5	6.7	2.96	1.108
I believe that agency related laws, regulations and procedures have restricted the implementation of the Mobile Money/ Telebirr activities in general	-	-	5	6.7	20	26.7	43	57.3	7	9.3	3.69	.735

Source: Questionnaire and SPSS output (2022)

SD=Strongly Disagree, D=Agree, N=Neutral, A= Agree, SA= Strongly Agree, F=Frequency

As mentioned in the above table 22.7% of the respondents disagreed and 54.4 % agreed on Customers and Partner (Agent and Merchants) awareness on the NBE directive of Mobile Money and agent banking service. In addition, 29.3 % of the respondent disagree and 32 % agreed on

Cash Withdrawal Limit Directive discouragement of digital financial services which implies that the directive is impacting the financial activities. Whereas 6.7 % of the respondent disagreed and 66.6 % agreed o that agency related laws, regulations and procedures have restricted the implementation of the Mobile Money/ Telebirr activities in general.

As the result shown in the above table 4.5, project team respondents believed that agency related laws, regulations and procedures have restricted the implementation of the Mobile Money/ Telebirr activities; weighted mean (Mean=3.69, SD=.735) of the at high level. and the lowest mean (Mean=2.96, SD=1.108) indicated that cash withdrawal limit directive doesn't discourage digital financial services.

4.3.5 Descriptive statistics on Compatibility

Here, the responses of the respondents on Compatibility, were evaluated as below.

Table 4.6 Result of the question related to Compatibility

	SD		D		N		A		SA		Mean	St. Deviation
Compatibility	F	%	F	%	F	%	F	%	F	%		
Telebirr fits the values and needs of the current financial and business aspect	-	-	5	6.7	20	26.7	43	57.3	7	9.3	3.69	.735
Tele birr system is compatible enough to integrate with other third-party systems	-	-	12	16.0	16	21.3	46	61.3	1	1.3	3.48	.777

Source: Questionnaire and SPSS output (2022)

SD=Strongly Disagree, D=Agree, N=Neutral, A= Agree, SA= Strongly Agree, F=Frequency

Based the above table among all the respondents 6.7 % of them disagreed and 66.7 % agreed that Telebirr fits the values and needs of the current financial and business aspect which is good indicator for the business activity facilitation. On the other hand, 16% of the respondent disagreed and 62.6 % agreed on the system is compatibility enough to integrate with other third-party systems.

Table 4.6 Compatibility, Respondents agreed that Telebirr fits the values and needs of the current financial and business aspect which has the highest mean (Mean=3.69, SD=.735) and the lowest

mean i.e., Tele birr system is compatible enough to integrate with other third-party systems, scoring (Mean=3.48 SD=.777) which indicates that respondents believe that Telebirr less compatible enough to integrate with other third-party systems (e.g. Merchant API, Partner API, Mini APP API, etc….)

4.3.6 Descriptive statistics on COVID 19

In this section, the responses obtained from Project team through questionnaire on the effect of COVID 19 on Telebirr-Mobile Money Project implementation were discussed below. Five items were included on the survey questionnaire to measure the project implementation.

Table 4.7 Result of the question related to COVID 19

	SD		D		N		A		SA		Mean	St. Deviation
COVID 19	F	%	F	%	F	%	F	%	F	%		
Covid 19 slowed down Tele-birr PIP (Project Implementation Plan	-	-	5	6.7	20	26.7	43	57.3	7	9.3	3.69	.735
Covid 19 led to high cost of infrastructure equipment	-	-	12	16.0	30	40.0	24	32.0	9	12.0	3.40	.900
Lack of internal and external expertise during the pandemic season	-	-	12	16.0	30	40.0	24	32.0	9	12.0	3.40	.900
Unable to perform physical business assessment	-	-	12	16.0	30	40.0	24	32.0	9	12.0	3.40	.900
Unable to deliver training for Agent and Merchant	-	-	5	6.7	20	26.7	43	57.3	7	9.3	3.69	.735

Source: Questionnaire and SPSS output (2022)

SD=Strongly Disagree, D=Agree, N=Neutral, A= Agree, SA= Strongly Agree, F=Frequency

As the above table mentioned among all the respondents 6.7 % of them disagreed and 66.6 % agreed that Covid 19 slowed down Tele-birr PIP (Project Implementation Plan. And about high cost of infrastructure, Lack of internal and external expertise during the pandemic season, and Unable to perform physical business assessment, 16 % of them disagreed and 42 % of them agreed equally for all the three statements. At last, regarding unable to deliver Physical training for the agents and merchants 6.7 % of them disagreed and 66.6 % believe that it hindered the training.

As the result depicted in the above table 4.7, respondents mentioned that Covid 19 slowed down Tele-birr PIP (Project Implementation Plan) and it hindered training delivery for Agent and Merchant; weighted mean (Mean=3.69, SD=.735) of the at high level. and the lowest mean (Mean=3.40, SD=.900) which indicated that the respondents believed that it's effect on high cost of infrastructure equipment, lack of internal and external expertise and on physical business assessment at lowest level.

4.3.7 Descriptive statistics on Top Management Support

The study sought to investigate the influence of top management support on the performance of Telebirr-Mobile Money project in Ethio Telecom. Specifically, the study focused on allocation of financial capital resources, allocation of human capital resources, allocation of physical capital resources, recognition and reward.

Table 4.8 Result of the question related to Top Management Support

	SD		D		N		A		SA		Mean	St. Deviatio
Top Management	F	%	F	%	F	%	F	%	F	%		
The Financial capital resources are fully allocated in Tele Birr project	-	-	16	21.3	19	25.3	38	50.7	2	2.7	3.35	.846
There are adequate human capital resources available in Telebirr project	-	-	14	18.7	32	42.7	22	29.3	7	9.3	3.29	.882
There are adequate physical capital resources available in IT projects in ethio telecom.	-	-	5	6.7	20	26.7	43	57.3	7	9.3	3.69	.735
The selection of project manager is based on required technical expertise, management experience and interpersonal skills to successfully manage the Telebirr project	10	13.3	12	16.0	29	38.7	19	25.3	5	6.7	2.96	1.108
Adequate recognition and reward is given to the project team members upon the successful completion of the project.	-	-	12	16.0	30	40.0	24	32.0	9	12.0	3.40	.900

Source: Questionnaire and SPSS output (2022)

SD=Strongly Disagree, D=Agree, N=Neutral, A= Agree, SA= Strongly Agree, F=Frequency

About Top Management support analysis result, the above table mentioned that among all the respondents 16 % of them disagreed and 53.4 % agreed financial capital resources are fully allocated in Tele Birr project, where as 18.7 % disagreed and 38.6 % agreed on adequate human capital resources available in the project. In addition, 66.6 % of the respondent agreed that there is adequate physical capital resources available in IT projects in ethio telecom.

About the selection of project manager based on required technical expertise, management experience and interpersonal skill and Adequate recognition and reward to the project team members the respondents survey is here as mentioned respectively, (23.3 % disagreed ,32 % agreed) and (16% disagreed and 44 % agreed).

Table 4.8: in regard to Top Management Support, Respondents agree that there is adequate and available physical capital resources for IT projects in the case of Ethio telecom scores of the highest mean (Mean=3.69 SD= .735) and the lowest mean (Mean=2.96, SD=1.108) which indicated that a low rate of project manager selection based on required technical expertise, management experience and interpersonal skills.

4.4. Result of KII Analysis

- The main reason for the initiation of Telebirr project customers to send, store and receive money using only their phone number. It also aims to extend mobile services to financially excluded sections of society

- There are different factors that affect Telebirr-Mobile Money project implementation Some of them are unclear requirement and scope, poor participation of respective stakeholder during requirement gathering, Technology limitation, lack of business need identification, lack of more than one vendor participation, Technical team, Financial regulation, compatibility, top management support, lack of third party (Partner stakeholder's expertise) on integration and also as we all know COVID 19 is also one of the external factors.

- National bank of Ethiopia's Financial regulation (Directive No.FIS/01/2012) sets maximum amount of deposit that that should be avilable in a mobile account of a person with a financial institution at any time shall not exceed Birr 25,000. also daily mobile banking transaction that involves debiting of an account by a person with a financial institution shall not exceed Birr 6,000. This regulation hinders Telebirr-Mobile Money to penetrate that business market as expected.

- Technical team members from different stakeholder (e.g Business System Rollout, Information System Design, Back-office Operation Support, Information Security, etc) are usually involved in developing the plan and are often able to contribute specialist knowledge and expertise. The building of this team and its motivation and leadership also continued until the project is implemented.

- Technology plays a vital role in any ICT project implementation. Building/designing APIs certainly requires insight into how they might be used by other developers. throughout Telebirr- Mobile Money project implementation standard API is needed in order to integrate with the third party.

CHAPTER FIVE

5. SUMMARY OF FINDINGS, CONCLUSIONS & RECOMMENDATIONS

This chapter discussed on the summary of the research findings with regard to the objectives of the study and illustrated the conclusions that have been reached. Recommendation that focuses on how the problem identified could be addressed is also included in this chapter.

5.1 Summary of Major Findings

The main objective of this study was focused on analyzing the factors that affects Telebirr-Mobile Money project implementation in the case of Ethio telecom In order to attain the intended objective, basic questions were prepared. These were the extent to which Customers Awareness and Attitude to Change, Technical Team, Technology, Financial Regulation, Compatibility, Covid 19, Top Management Support affects Telebirr-Mobile Money project in ethiotelecom.

In this study, a descriptive survey research design was used and to perform it, permanent employees of Ethio telecom who work under project team at Legahar and Melka Tower office who are directly participating in the implementation of Telebirr project selected , these are employees and management members. A total of 83 sample respondents from the project participated in the study. To obtain the data required for the study, the researcher employed a questionnaire, an interview and document review. The collected data were analyzed and discussed both quantitative and qualitative data approaches. Using these tools, the following basic questions were answered:

- How does Financial Regulation affect Tele birr- Mobile Money Project at Ethio Telecom?
- How does the technical team influence the implementation of Tele birr mobile money project in Ethio telecom?
- How customers awareness and attitude to change affects Tele birr- Mobile Money Project implementation at Ethio Telecom?
- How technology affects Tele birr- Mobile Money Project at Ethio Telecom?
    - How Compatibility affects Tele birr- Mobile Money Project at Ethio Telecom?
    - How Covid 19 affects Tele birr- Mobile Money Project at Ethio Telecom?

- How Top Management Support affects Tele birr- Mobile Money Project at Ethio Telecom?

Finally, after questionnaire distributed and data collected from 75 respondents who are directly participating in the implementation of Telebirr project. The data obtained from the respondents were sorted, coded, tabulated, generalized, analyzed and interpreted using descriptive statistics such as percentage, Frequency, and standard deviation. Open-ended questions, interviews, and observation analyzed and narrated. Consequently, the analysis and interpretation made so far, the following major findings of the study were set out.

1) **Finding related to "How does Financial Regulation affect Tele birr- Mobile Money Project at Ethio Telecom? "**

The finding proved that agency related laws, regulations and procedures have restricted the implementation of the Mobile Money/ Telebirr activities and Customers/Partner (Agent and Merchants) have awareness on this NBE directive of Mobile Money and agent banking service, where as Cash Withdrawal Limit Directive discourages of digital financial services at low level.

2) **Finding related to technical team influence on the implementation of Tele birr mobile money project in Ethio telecom?**

The research finding indicates Structures were in place to ensure effective project communication - within the project technical team and at all levels of the company and Project team was all inclusive and representative of all key stakeholders. On the other hand necessary trainings /workshops were not conducted for technical team either or received necessary support and tools required for the project necessary to achieve their targets and goals.

3) **Finding related to the effect of customers awareness and attitude to change towards Tele birr- Mobile Money Project implementation at Ethio Telecom?**

The finding proved that ,Using Telebirr services enables customers/Partners (Agent and Merchant) to accomplish financial task more quickly and helps to save time also, agents are aware of the legal

actions to be considered in Telebirr agent function considering where there is still lack of using technology habits that highly challenged Telebirr service contribution and made difficult for customers to become skillful at using Telebirr mobile money service in addition to that the interface issues which makes it non user friendly.

4) **Finding related to the effect of technology towards Tele birr- Mobile Money Project implementation at Ethio Telecom?**

Comparison of the mean value of all Telebirr project implementation factors indicates that the mean score of "Technology feedback" (m=3.77) is the highest among others which indicates Telebirr is designed well to respond effectively to the behavior of the users and the environment depending on the size of the screen, orientation, and platform. A responsive app design has a wide range of flexible layouts, grids, and images. On the contrary there a flexibility issues regarding API integration with the third-party system. (e.g., Merchant APP, Mini AP, Partner APP. ...etc.….)

5) **Finding related to the effect of Compatibility towards Tele birr- Mobile Money Project implementation at Ethio Telecom?**

The researcher finding indicates Most of the respondent agreed that Telebirr fits the values and needs of the current financial and business aspect whereas still needs improvement to be compatible enough to integrate with other third-party systems.

6) **Finding related to "How does COVID 19 affected Tele birr- Mobile Money Project at Ethio Telecom?** "

The finding proved that it was difficult to deliver training for Agent and Merchant in person and there was k of expertise from abroad (e.g., Vendor (Huawei)), because of country's covid code of conduct and lockdown which slowed down the PIP (Project Implementation Plan).

7) **Finding related to "How Top Management Support affects Tele birr- Mobile Money Project at Ethio Telecom?"**

The finding state that there are adequate physical capital resources available in IT projects in ethio telecom, but the selection of project manager is based on required technical expertise, management experience and interpersonal skills is at low level to successfully manage the project

5.2 Conclusion

The purpose of this study was to investigate the factors affecting Telebirr-Mobile Money Project in the case of Ethio telecom, the following are the conclusions made based on the findings and discussions. The study concluded that, Ethio telecom has independent mobile money payment service department which implement mobile money digital service to improve features and satisfy its customers and most of respondents agreed by the availability of the service. According to the survey result Customers Awareness and Attitude to Change, Technical Team, Technology, Financial Regulation, Compatibility, Covid 19, Top Management Support are the Factors for Telebirr-Mobile Money project implementation.

The result further revealed It is not easy for the customer to become skillful at using Telebirr mobile money service since the interface is not user friendly, lack of necessary support and tools required for the project team which is necessary to achieve their targets and goals, Lack of Necessary trainings /workshops , lack of compatibility enough to integrate with other third-party systems and Lack of project manager selection based on required technical expertise, management experience and interpersonal skills are the other factors affecting Telebirr-Mobile Money project implementation in the case of Ethio telecom.

5.3 Recommendation

Building financially inclusive economy is a key for the development of every country. Regardless of their location all citizens should contribute and get benefit from the financial sector. However, in developing countries like Ethiopia this can't be achieved through the conventional way of banking. Mobile Money is a new technology for Ethiopia. Currently many financial institutions are interested in this technology, and they are entering to the market. However, because of many reasons, some of which are explained earlier, the service is not advancing as expected. Based on the collected information, the researcher recommends the following points:

- At this time the service is provided only with APP, USSD, SMS channel which requires reading and writing skills. In order to tackle this problem, the service should be available with voice or other channel to illiterate customers who can't read and write.
- A user-friendly app and interface that is easy to use should be developed to provide a great user experience, whether online or offline.
- Ethio telecom should launch campaigns to create direct awareness to customers, potential adopters, issues such as fear of the lack of privacy and security, together with relative advantages of using mobile banking services.
- There is need to address security issues associated with Telebirr technology to ensure success. It is important for the feature higher security when providing agency banking services and let its customers know how the security issue is reveled to yield higher customer's acceptance.
- Telebirr needs to have proper API development enhancement to be flexible enough to integrate with the third-party system. (e.g Merchant, partner ..etc)
- Financial Regulation has to be revised based on the business demand considering fraud management features (e.g AML, CFT, etc..) in order to maintain the transaction flow and avoid other fraud activities.
- The project should incorporate experienced personnel on the project team for setting detailed expectation, enhance efficient decision-making process and knowledge transfer in

order to limit the scope change and minimize impact of these changes on the overall timeline.

- The project should devise a detail project plan that include clearly defined deliverables, specific delivery dates, clear responsibility for each role and explicit ownership enable the project to be delivered on time, on expected quality, on expected cost and with expected deliverables.
- The study further recommends setting up redundant network infrastructures to improve network accessibility. This will enhance network reliability drastically reducing system down times and network unavailability thus improving service delivery.
- The future of ICT service delivery in Ethio telecom appears bright, but it will require hard work and careful consideration of the benefits and drawbacks, as well as learning from the successes and failures of other countries so as to cop up with the coming competition from other service providers entering the business (e.g., Safaricom)

5.4 Recommendations for Future Research

Although this study is conducted in assessing the factors affect Telebirr-Mobile Money project implementation in the Ethio telecom. The research findings show Customers Awareness and Attitude to Change, Technical Team, Technology, Financial Regulation, Compatibility, Covid 19 and Top Management Support effect on the project implementation. Further research can be done by participating customers from different parts of the country and other mobile money service providers to identify additional factors. so further study on this is needed to clarify this issue.

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Appendix I: Questionnaire

ADDIS ABABA UNIVERSITY
SCHOOL OF COMMERCE

PROJECT MANAGEMENT DEPARTMENT

Dear respondents,

My name is Wubalem Tadesse. A post graduate student in project management at Addis Ababa University School of Commerce. The purpose of this questionnaire is to gather data on **THE FACTORS AFFECTING TELEBIRR-MOBILE MONEY PROJECT IMPLEMENTATION IN THE CASE OF ETHIO TELECOM**. The study is purely for academic purpose and confidential. So, your genuine, and timely response is vital for successfulness of the study. Therefore, I kindly request you to respond to each item of the question very carefully.

To investigate the factors affecting Telebirr project implementation in the case of Ethio telecom, the researcher prepared the following questions, please tick (√) on the appropriate question number to indicate the extent to which you agree or disagree with each statement.

The item has five-point Likert type scales, the scales have the following meaning

1 = Strongly Disagree 2 = Disagree

3 = Neutral 4 = Agree

5 = Strongly Agree

General Instructions

- There is no need of writing your name
- Where answer options are available, please tick (√) in the appropriate box.

Contact Address

If you have any query, please do not hesitate to contact me and I am available as per your convenience at (Mobile: **0930-01-17-33** or e-mail: **'wubalem3721@gmail.com')**

Thank you in advance for scarifying your precious time!

Part I: General Information of Respondent

1. Educational Qualification:

- Certificate/Diploma ☐
- Bachelor's degree ☐
- Post Graduate degree ☐
- Doctorate degree ☐

2. Employee Level

- Staff ☐
- Supervisor ☐
- Manager ☐
- Officer ☐
- Chief office ☐

3. Years of working experience in the company

- Below One Yea ☐
- 1-5 ☐
- 6-10 ☐
- 11-15 ☐
- Above 15 ☐

4. Years of working experience in project

- Below One Yea ☐
- 1-5 ☐
- 6-10 ☐
- 11-15 ☐
- Above 15 ☐

5. Your department

Business System Rollout ☐
Information System Design ☐
Back-office Operation Support ☐
Compliance and Risk Management ☐
Finance ☐
Marketing ☐
Information Security ☐
Agent and Partner Management ☐

Part II: Questions on the factors Affecting Tele birr-Mobile Money project Implementation

	1. Customers Awareness and Attitude to Change	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
1.1	Customers are well aware of Telebirr					
1.2	There is resistance to changes in technology by the society regarding Telebirr Service					
1.3	Lack of using technology habits are challenges for Telebirr contribution					
1.4	Customers/Partners find Telebirr mobile money service easy to use and a useful way of making payment					
1.5	The registration procedures are easy for customers and Partners (Agents and Merchants)					
1.6	It is easy for the customer to become skillful at using Telebirr mobile money service and the interface is user friendly					
1.7	Using Telebirr services enables customers/Partners (Agent and Merchant) to accomplish financial task more quickly and helps to save time					
1.8	There is lack of availability of appropriate Tele Birr Agents Shop					

1.9	Customers/Partners believe their transactions and privacy is secure					
1.10	Customers/Partners are satisfied with Telebirr and will continue to use it					
1.11	Customers intend recommending Telebirr mobile money service to others					
1.12	Tele birr has proper Know Your Customer (KYC) ID verification measures during registration process					
1.13	Agents are aware of the legal actions to be considered in Telebirr agent function					
2. Technical Team		**Strongly Disagree (1)**	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
2.1	Necessary trainings /workshops were conducted for technical team to foster teamwork					
2.2	The project technical team members were experienced, knowledgeable and skilled for delivery of the project					
2.3	Project technical team showed commitment and achieved their targets and goal in time					
2.4	Project team was all inclusive and representative of all key stakeholders					
2.5	Structures were in place to ensure effective project communication - within the project technical team and at all levels of the company					
2.6	Goals/objectives for ICT project was communicated to all technical team					
2.7	All technical team members understood their roles and what was expected of them					
2.8	Project technical team received necessary support and tools required for the project necessary to achieve their targets and goals					
3. Technology		**Strongly Disagree (1)**	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
3.1	Poor mobile network is a challenge that currently affects Telebirr practice					
3.2	Telebirr is a responsive system					
3.3	Telebirr has proper Fraud management feature					

3.4	There a flexibility issues regarding API integration with the third-party system					
3.5	There are limitations in availability and quality of infrastructure (e.g., Modular data Center)					
3.6	There a flexibility issues regarding API integration with the third-party system					
3.7	There is lack of proficient skill from third parties during integration process					
3.8	Telebirr update triggers from app itself. Customers/partners should click update button easily to update the application in addition to app store/play store.					
3.9	Telebirr is flexible enough to update itself with the upcoming global innovation					
4. Financial Regulation		**Strongly Disagree (1)**	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
4.1	Customers and Partner (Agent and Merchants) have awareness on the NBE directive of Mobile Money and agent banking service					
4.2	Cash Withdrawal Limit Directive discourages of digital financial services					
4.3	I believe that agency related laws, regulations and procedures have restricted the implementation of the Mobile Money/ Telebirr activities in general					
5. Compatibility		**Strongly Disagree (1)**	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
5.1	Telebirr fits the values and needs of the current financial and business aspect					
5.2	Tele birr system is compatible enough to integrate with other third-party systems					
6. Covid 19		**Strongly Disagree (1)**	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
6.1	Covid 19 slowed down Tele-birr PIP (Project Implementation Plan)					

6.2	Covid 19 led to high cost of infrastructure equipment					
6.3	Lack of internal and external expertise during the pandemic season					
6.4	Unable to perform physical business assessment					
6.5	Unable to deliver training for Agent and Merchant					
7. Top Management Support		**Strongly Disagree (1)**	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
7.1	The Financial capital resources are fully allocated in Tele Birr project					
7.2	There are adequate human capital resources available in Telebirr project					
7.3	There are adequate physical capital resources available in IT projects in ethio telecom.					
7.4	The selection of project manager is based on required technical expertise, management experience and interpersonal skills to successfully manage the Telebirr project					
7.5	Adequate recognition and reward is given to the project team members upon the successful completion of the project.					

Appendix II Interview Questions

ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE

PROJECT MANAGEMENT DEPARTMENT

The interview has been designed to seek information purely for academic purposes. The main purpose of the study is to gather data on the topic. ASSESSEMENT OF THE FACTORS AFFECTING TELEBIRR-MOBILE MONEY PROJECT IMPLEMENTATION IN THE CASE OF ETHIO TELECOM." Thus, as Telebirr Project Manager of the company It's hoped that the success of the study depends on the information you provide.

1. What is the main reason for the initiation of the project?
2. What are the factors affecting Telebirr Project implementation?
3. How financial regulations affect the project and what are the major limitations of the existing directive on the regulation of Mobile and Agent Banking (Directive No.FIS/01/2012)?
4. How technical team affect the project implementation?
5. How technology affects Telebirr project implementation?
6. What is the effect of customer awareness and attitude towards change tele birr Project Implementation?
7. How Top management support affect Telebirr project management?
8. What is the effect of compatibility in Telebirr project implementation?
9. To what extent COVID 19 affects Telebirr project implementation?