Factors Affecting Implementation of Interest Free Banking Services in Ethiopia: The Mediating Role of Customer Involvement

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Submitted by:

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YitbarekTakele (Phd.)

Date

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DECLARATION

I declare that the thesis entitled **"Factors Affecting Implementation of Interest Free Banking Services in Ethiopia: The Mediation Role of Customer Involvement"** is a recored of independent research work carried by me under the supervision and guidance of Dr. Yitbarek Takele (Associate Professor). This has not been previously submitted for the award of any other diploma, degree or other similar title.

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SUPERVISOR'S CERTIFICATION

Certified that the thesis entitled **"Factors Affecting Implementation of Interest Free Banking Services in Ethiopia: The Mediation Role of Customer Involvement"** submitted to the Addis Ababa University, Addis Ababa City for the award of degree of Masters of Business Administration is a record of independent research work carried out by Mr.Nobel Demissie, under my supervision and guidance. This has not been previously submitted for the award of any diploma, degree or other similar title.

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ADDIS ABABA UNIVERSITY
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Abstract

Purpose – *The purpose of this paper is to investigate major factors affecting the implementation of Interest free banking services among customers in recognizing factors that need consideration in implimenting IFB service in Commercial Bank of Ethiopia, Addis Ababa, Ethiopia.*

Design/methodology/approach- *The research used innovation diffusion theory to investigate factors affecting implimenation of IFB services in doing so it integrates customer involvement and religious belifs modifying Rogers Model to investigate its effect robustly. Both primery and secondary data were used. Simple random sampling was used to solicit response from selected 366 respondents. The study used standardized questionnaire on selected branches of CBE in Addis Ababa, Ethiopia. The study employed exploratory and confirmatory factor analyses. An exploratory factor analysis was conducted using principal component analysis while confirmatory factor analysis was conducted using structural equation modeling techniques that fulfills measurement construct validity (both convergent and discriminant validity) and reliability through AMOS version 23 software.*

Findings- *Results showed that, except relative advantage, all the other variables: Awareness, compatibility, complexity, observability, perceived risk, religious beliefs and customer involvement were significant on the implementation of IFB services. Moreover, the finding indicated customer involvemet mediates the relationship between compatibility, complexity and perceived risk on implementation of IFB service. On the other hand, religious belifs moderates the relationshipship between compatibility, complexity, observability and perceived risk on implementation of IFB service.*

Research limitations/implications *- The study area was limited to Addis Ababa districts of CBE. Thus the results from this case might not be generalized to customers of other banks and to customers of CBE out of Addis Ababa districts. Furthermore, this study could not observe variable extensively due to the short tenure of the services implimentation which makes it difficult to get adequate references that has similar scope in the subject.*

Social implications- *This Study suggested the importance for bank providers to understand factors influencing implementation of IFB service, customers' preference and view from the customers' perspective, in order to attract and retain customers, as well as leop forward.*

Originality/value- *Upon validating the framework, findings from the study provides useful insight and especially first hand information on the role of customer involvement. That would be useful to the providers in gaining and retaining the existing customer, and to the policy makers, regulators and other relevant stakeholders to strategize inaccordance with their respective roles towards development and sustainment of the industry.*

Keywords: *IFB, IDT, religious belief, customer involvement,*

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LIST OF ACRONYMS

The researcher would also like to outline the interpretations of the acronyms used in the proposal and the prospective report;

AAOIFI: Accounting and Auditing Organization for Islamic Financial Institutions

AMOS: Analysis of Moment Structure

ATM: Automated Teller Machine

BBP: Banking Business Proclamation

CBE: Commercial Bank of Ethiopia

DTPB: Decomposed Theory of Planned Behavior

IDT: Innovation Diffusion Theory

IFB: Interest Free Banking

IFBWS: Interest Free Banking Window Service

IFSB: The International Financial Services Board

MIS: Management Information System

NBE: National Bank of Ethiopia

PC: Personal Computer

SCT: Social Cognitive theory

SEM: Structural Equation Modeling

SPSS: Statistical Package for the Social Sciences

TAM: Technological Acceptance Model

TPB: Theory of Planned Behavior

TRA: Theory of Reasoned Action

TTF: Task Technological Fit

UTAUT: Unified Theory of Acceptance and Use of Technology

CHAPTER ONE

1. INTRODUCTION

Islamic banking is a rapidly growing sector within global banking industry that has become systemically essential in a 75 countries over 300 Islamic financial operating in a varied range of regions (Hearn, Piesse, & Strange, 2012). It is projected to continue to increase in response to economic growth in countries with considerable and relatively unbanked Muslim populations. Islamic banking is one of the most rising trends in the global economies is the idea of Interest free banking and Finance (Ahmad, 2000), that emerged in the global landscape as an alternative banking system which is in line with values and ethos of Islam, and governed by the principles of Sharia Law (Gait and Worthington, 2008).

Interest free banking is inseparable of Islamic economics which aimed at realization of a greater justice in human endeavor, which is achievable only with participation of all human institution inclusive of financial system (Adeniran, 2013). On the principle that prohibits interest and other unethical and non shariah compliant activities, Islamic banking set to achieve this gigantic objective. In addition, it strive on increasing all *Halal* aspect of business through provision of products and services base on shariah principle with implementation of legitimate profit and loss sharing, paying Zakah, prohibition of interest, monopoly and other forms of unethical trade and transaction such as dealing with pork, alcohol and gambling (Ayub, 2007; Gait & Worthington, 2008; Sanusi, 2012). Hence, Islamic banking method of financing and or products structure is based on the tract to redress the inherent injustice tied with interest based dealing. These principles, albeit paving the way to achieving social economic progress in the society (Metawa & Almossawi, 1998) have also provided an alternative mode of finances capable of competitively breaking the long established monopolistic position posed by conventional financial system (Aliyu, 2012; Gumel & Othman, 2013).

The reality of Islamic banking emergence as an alternative to conventional banking, and its contribution in propelling the development of the global economy has been proven in the international financial outlook (Tahir, Bakar, Ismail, & Wan, 2006). According to Fakhrul-Ahsan (1998) and Usman (2003), the role and functions of Islamic banking within the banking system in a modern economy are very important, and in fact, it is at the heart of every robust

economy. For the fast four decade, Islamic banking sector has grown in a large scale with a double digit annual growth rate and recently by almost 20 percent (Rustam, Bibi, Zaman, & Rustam, 2011). The institution has witnessed an unprecedented expansion and its effect was observable within the Muslims countries and has extended to all nooks and crannies of the globe. Loo, (2010) and Perry & Rehman (2011) observed that the Institution gained momentum and world recognition for its resistance to the global financial crisis that mars the major financial players of the world. This gave the Islamic finance industry opportunity to widen its horizon to new investors (Quadri, 2011). And hence penetrated the western countries where their presence is also remarkable. For instance, in Denmark, United Kingdom, and USA, and in Luxembourg Islamic banking was in operation since 1978 (Perry & Rehman, 2011). The number of Islamic financial institutions is at rise and established in more than 75 countries (Ayub, 2007; Fatai, 2012; Khan & Bhatti, 2008).As at 2005, the total assets managed under the Islamic banks were $500 billion this figure rose to $700 billion two years later in 2007. The growth of Islamic finance was estimated at $1.8 trillion in 2013 and presently anticipated to hit over $2.2 trillion by the end of 2016(Muslimmirrow.com, 2017). Being the core of the Islamic financial system, and also accounting for 80 percent of its total assets, Islamic banking sector's assets are expected to exceed $3.8 trillion by the end of 2022 (Saudigazette.com, 2017). Islamic banks were indeed successful in the provision of innovative products and services to their customers irrespective of their faith.

For its noticeable achievements, Islamic banking has become attractive so much that many countries are yarning and or struggling to have it in operation like the case of Ethiopian from sub-Saharan Africa that have just embraced and started enjoying the system. Being it a newly established phenomenon, the interest free banking in Ethiopia needs to be steady and prepared to compete with the historically dominance conventional commercial banks that are in existence for almost a century. According to the 2007 national census, the Muslim population comprises 33.9% of the total population in Ethiopia CSA (2018), offers the opportunity for substantial customers that would patronize Islamic banking products. As such investigating the factors affecting the implementation of the Interest free banking products and services in the country is paramount and timely.

1.1 BACKGROUND OF THE STUDY

In Ethiopia, numbers of citizens that have bank accounts are not more than 9% of the population in 2012. Lower access to formal financial services among others stem from people's culture and belief. Responding to a strong public demand, the National Bank of Ethiopia (NBE) was expected to approve a directive that paves the way for the establishment of what was deemed as the first Islamic bank in Ethiopia. A circulated draft of the NBE directive has allowed Ethiopian nationals to establish a bank exclusively engaged in interest-free banking," however, that hope was short living as the finally issued directive does not allow the establishment of full-fledged Islamic financial institution. The final directive has only opened the door for "existing commercial banks" to create an interest-free banking window (Mohammed, 2012).

As per the Directives of National Bank of Ethiopia SBB/51/2011, all commercial banks that are licensed to engage in the Conventional Banking Business are privileged to engage in Interest Free Banking (IFB) business through the existing branch offices only after securing independent license for running the business, which is subject to fulfillment of some 10 to 11 terms and conditions set out thereof, among others, the directive also orders banks not to go past the maximum share of interest-free banking business in their consolidated balance sheet without prior approval from the National Bank. A violation of this could lead to the closure of an interest-free banking window. Preparation of separate financial reports, keeping all data and ensuring the segregation of activities from conventional banking are also some of the requirements set by the directive.

Subsequent to the issuance of the working directive, the NBE has granted the IFB service license to Oromia International Bank S.C on September 16, 2013. Same license is granted to the Commercial Bank of Ethiopia on September 17, 2013. Accordingly CBE using its 23 pilot branches and OIB using its 24 branch offices launched IFB operation on October 24, 2013 and December 16, 2013 respectively. On May 1, 2014, United Bank S.C. began providing IFB service and recently, Cooperative Bank of Oromia, Nib International Bank, Abay Bank and Wegagen Bank have joined the IFB business by giving depository products for the time being. However, Initially, Zemzem, a prospective new bank, requested to join the banking industry as a full-fledged interest-free bank, was unable to start operations as the directive requires that

interest-free banking be given alongside conventional banking services. As per Senait, (2015) Zemzem Bank was floating shares with the sole intention of operating interest-free banking, since December 2010. It was able to raise 137 million Br in paid-up capital and 337 million Br in subscribed capital from 6,800 shareholders.

Thus, currently, there is no bank which gives full-fledged IFB banking services in Ethiopia as the regulatory organ has only allowed the existing conventional banks, to give the services through separate windows.

1.2 STATEMENT OF THE PROBLEM

The empirical evidence shows that Interest free banking have rapidly spreading and developing across the world. Some factors appear to be correlated with the diffusion of IFB, namely the principles of risk-sharing that underlie financing, the growth of oil-rich economies, the presence of Muslims in the population, an enabling legal framework, and economic integration with Middle Eastern countries or proximity to Islamic financial centers (Alam, et al 2011). Wherever there is a sizable Muslim community and is not restricted to Muslim countries, the probability for Islamic banking to spread in a given country rises with the share of the Muslim population. According to Ibrahim (2012), trading with the Middle East and economic stability are also conducive to the diffusion of Islamic banking.

Almost half of Ethiopian banking commercial industry out of eithteen banks has commenced Interest free banking service within less than three years while some others banks are also showed initiation to commence it. The rapid diffusion of interest free banking adoption by banking organization reflects their understanding of the importance and untapped demand it is as an alternative financing intermediary in stiff banking competition. In return, banking sectors investigation of factors influencing customers' behavioral intention to adopt interest free banking product and service, identifying resistance to adoption for product modification and frequently collecting feedback can help banks to mobilize significant amount of deposit thereby divert to financing that can create active economic circulation. Besides, interest-free banking deposit market share is very low compared to conventional banks deposit & Customer Base; banks are increasingly making an effort to attract customers by through awareness campaign to attract potential customers .Islamic banking studies are largely conducted in Muslim ccountiries and to

a smaller extent among non-Muslims countries. Studies in Ethiopia on IFB have been very few due to the infancy of the industry. Studies in Ethiopia include; Mohammed (2012) has identified the potential challenges of IFB before commencement of the service. This study was undertaken before the practical introduction of the IFB in the country. Therefore, it was not based on actual observation of facts on the ground. While, Teferi (2015) has identified that introduction of IFB does not only create inclusive financial system for the Muslim population but also has a potential to influence and enhance the economic development of the country through resource mobilization and employment creation by encouraging people to use the banking system. It is only limited to IFB's contribution and prospects. On the other hand, there is a work on Customer's Intention (Debebe A., 2015), but the study was based on the model of Decomposed Theory of Planned Behavior (DTPB).

Besides few research has been limited to the Prospect and challenges of introducing Interest free Banking in Ethiopia"(Mohamed, 2012; Akmel, 2015; & Kerima, 2016), Their work has identified the potential challenges as: lack of awareness, regulatory and supervisory challenges, institutional challenges, lack of support and link institutions, gap in research and development in Islamic studies, lack of qualified human resource as well as wrongful association with specific religion and the global terrorism & targeting only bank officials and bank employees as a study population which excluded customers' domain.

Abraham (2017) has conducted a study on Determinants of Customers' Intention to Use Interest Free Banking Products and Factors Affecting Employees' Product Knowledge, the study on customers' intention contributes towards a better understanding of the customers' expectation. The management of the bank can now comprehend better the factors that effect customers' decision in adopting IFB in order to intensive marketing strategies to attract customers. On the other hand, the study on employees' product knowledge suggests that the bank should train well its employees in order to cope with the current dynamics of the banking industry.

To best of my knowledge, there is no earlier work in the country in context of Interest free banking which tries to model proper implementation of interest free banking service based on the Innovation Diffusion Theory (IDT). Additionally, the researcher modified this model by introducing two relevant factors: customer involvement and religious belief and also tested the

mediating role of customer involvement and moderating effects of religious belief on implementation Of IFB services by employing Structural equation modeling (SEM).

At International level there are several empirical studies on Islamic banking and finance. The studies investigated several factors affecting the proper implementation faced by the Islamic banks in various contexts. Few of these studies are given below.

According to the findings of Tooraj Sadeghi et al (2011), Thambiah et al. (2012) Lukman et al (2012), Binta, et al (2014), Dariyoush, et al (2014), Akhtar et el (2016), Yahya, et al (2017) applies the Rogers diffusion model (2003) in the study IFB adoption is subject to Relative Advantage, Complexity, compatibility, Attitude, Behavioral intention, Actual Use, Social Influence, Religiosity and perceived behavioral control are found to have significant relationship with customers' adoption of Islamic banking products and services.

Huang & Liu (2017) examined customer involvement mediates the relationship between brand equity and customer loyalty. The results had significant and positive relationship with customer loyalty, while customer involvement has partial indirect on customer loyalty in path analysis. Conterary a study conducted by Johra Fatima (2013) investigates different roles (antecedent, mediator and moderator roles) of customer involvement in rapport and satisfaction. It is also designed to reveal the comparative effect of three types of relational benefits (confidential, social and special treatment benefits) on customer involvement. FindingsResults suggest that customer involvement does have antecedent and mediated effect on rapport-satisfaction link while the mederation effect of customer involvement is not supported. In contrast, social treatment benefit is found as the most important relational benefit for developing customer involvement.

The study conducted by Thambiah, et al (2013) examined the moderating of religious beliefs, difference against the intention to use Islamic Retail Banking (IRB) products and services .Thire study comprises of eight independent variables: Customer awareness of IRB, relative advantage, compatibility, complexity, uncertainty, observability, promotional efforts and perceived information quality. Their findings reveal religious reasons are still instrumental in influencing the intention to use IRB products and services to certain extend. Based on the findings, although, religion does not significantly moderates all the factors, obviously there seemed be a certain degree of interaction with customers' perceived relative advantages, compatibility, complexity

and the willingness to use IRB products and services. Conversely Kareem & Afiff (2006), Dusuki & Abdullah (2007) and Khattak & Rehman (2010) findings results suggest that religios belifs is not the main reason for people to support Islamic Banks.

At international level Researchers have identified and investigated several factors considered as relevant in influencing customers as well as attracting them towards the adoption of the products and services. These studies have revealed that though there are some determinant factors common to many countries, there are also factors which are unique to each country due to social, cultural, economical, technological, political, religion and other factors. Furthermore, the study environment of the international researches were on Moslem-dominated and or Arab countries; therefore, it could be difficult to implement policy recommendations of the respective researches directly in to the Ethiopian context. This, study, therefore, attempts to fill this research gap by investigating the major factors faced by service providers and users of IFB products and scope of service provided by Ethiopian banking through IFBW.

In nutshell, the strong interest of Commercial banks to commence IFB as alternative financing intermediary, existence of large Muslim community in the country versus low market share of IFB compared to Conventional banks, absence of literature on factors affecting implementation of IFB were the major area of this research Gap.

Therefore, early exploring factors affecting implementation of Interest Free Banking help all stakeholder of IFB to address the problem and speed up implementation of IFB product and service that has important contribution for economic development.

1.3 OBJECTIVES OF THE STUDY

1.3.1 GENERAL OBJECTIVE

The general objective of conducting this research is to investigate and find out major factors affecting the implementation of Interest free banking window service and to recognize those factors that need more consideration to develop Interest free Banking in Ethiopian economy, with specific reference to Commercial bank of Ethiopia.

1.3.2 SPECIFIC OBJECTIVE

The specific objectives of the study were

- To determine the effect of awareness on implementation of interest free banking service.
- To find out how relative advantage affect the implementation of interest free banking service.
- To examine the association of compatibility with implementation of interest free banking service.
- To determine the effect of complexity on implementation of interest free banking service.
- To examine the relationship of observability with implementation of interest free banking service.
- To assess the relationship perceived risk has with implementation of interest free banking service.
- To assess the of customer involvement on implementation of interest free banking service.
- To determine the effect of religious belief on implementation of interest free banking service.

1.4 RESEARCH QUESTIONS

This study was an attempt to answer mainly the following research questions to achieve the intended objectives of the study and to address the research problem properly in accordance to with theory of Innovation Diffusion.

1. What are the key factors affecting the implementation of Interest Free Banking service in commercial Bank of Ethiopia?
2. Does customer involvement mediate the relationships between Key factors on implementation of IFB service?
3. Do religious beliefs moderate the relationships between Key factors on implementation of IFB service?

1.5 SCOPE OF THE STUDY

Even though there are eighteen commercial banks in Ethiopia there are only eight commercial banks that have adopted interest free banking service as per own computation from secondary

data (see Appendix F) and out of those commercial banks that are currently providing the service commercial bank of Ethiopia that comparatively found to have the large portion of interest free banking customers data is selected (see Appendix F). Therefore, Commercial Bank of Ethiopia that have adopted interest free banking service and that constitute 60% of the total IFB users in March 31, 2018 is selected.

1.6 SIGNIFICANCE OF THE STUDY

IFB is a relatively new business model in Ethiopian banking system. It is also growing in its applicability among Muslim as well as non-Muslim countries to accommodate the Muslim population, who otherwise, are excluded from financial services due to religion factor. It is believed that including this section of the population into financial service provision will expand the financial frontier and bring about economic benefit both to the country and the beneficiaries. It is, therefore, the results of this study will be significantly practical and helpful for;

- **Policy Makers:** It will give significant direction to review the current policy for the ive development of IFB activities in Ethiopia
- **Practical:** It will provide a road map for the Interest free banking and financial institutions by studying what criteria that significantly affecting the implementation on Interest free banking. Thus, the interest free banking and financial institutions will come out with a new strategy and strengthen their institutions. And the bank management as well as marketers to target their actions and strategies more ively can act upon this study to understand its gap (if any) and act upon it so that it meets its original purpose or reason of starting business. These individuals can help banks to implement new strategies or to readjust their existing strategies to tap the potential Interest free banking sector in Ethiopia.
- **Theoretical:** Finally, it will also serve as a reference material a good basis to carry out for subsequent research activities on IFB and related topics.

1.7 LIMITATION OF THE STUDY

The study area was limited to Addis Ababa districts of CBE. Thus the results from this case might not be generalized to customers of other banks and to customers of CBE out of Addis

Ababa districts. The second limitation is lack of sufficient references due to the reccency of commencement of interest free banking service in Ethiopia.

Thus, to minimize the effect of the limitation encountered the researcher defined the scope properly and the inavailability of adequate scholarly work in the countries context were effectively delt with through use of relevant developing countries litreatures as well as consultation of the industry specialists in Ethiopia.

1.8 OPERATIONAL DEFINITIONS

Considering the fact that the interest-free banking convention is an emerging concept in Ethiopian context, the researcher was introduce some important key terms and concepts used in the study along with their spirits and contexts for ease of understanding of the research subject.

- **Gharar**: Any act of uncertainty.
- **Hadeeth**; A report of the sayings or actions of Muhammad or his companions together with the tradition of its chain of transmission, or the collective body of these traditions.
- **Haram**: is a forbidden activity and is considered as a major sin. A haram activity is punishable by Allah, and avoidance of haram activities, such as gambling and drinking, is rewarding.
- **Halal:** Things permissible by the Sharia'
- **Hawala**: Remittance that involves a transfer of funds/debt from the depositor's/ debtor's account to the receiver's/creditor's account; a commission may be charged for the service.
- **Ijaraha Financing**: Lease financing.
- **Istisna Financing**: Building and plant construction financing.
- **Mudharabah**: (trust financing) is a partnership between a bank and a customer in which the bank provides the capital for a project and the customer or entrepreneur uses his or her expertise to manage the investment.
- **Mudarib:** Entrepreneurial manager in Mudharabah (trust financing) partnership.
- **Murabaha Financing**: Working capital financing on a cost plus a profit margin basis.

- **Musharakah/Musyarakah**: (partnership financing) refers to an investment partnership in which all partners share in a project‟s profits on the basis of a specified ratio but losses are shared in proportion to the amount of capital invested.
- **Prohibition**: business engagements forbidden in compliance with the Sharia Principle.
- **Qarad**: Interest-free financing.
- **Restricted Investment Deposits**: Deposits to be deployed for investment by the bank for economical financing based on the recommendation of the depositor customer.
- **Riba/Usury**: Interest.
- **Salam Financing**: Agricultural products financing. Standalone: a banking convention operating independently.
- **Sharia Committee**: a team of an independent Sharia Scholars in charge of monitoring compliance aspect of the IFB.
- **Sharia Principle**: Islamic law.
- **Sunna**: The way of life prescribed in Islam, based on the teachings and practices of Muhammad and on exegesis of the Qur‟an, or Muhammad's way of life viewed as a model for Muslims.
- **Unrestricted Investment Deposits:** Pool of deposits to be independently deployed by the bank for any economical financing without any intervention of the depositor.
- **Wadiah Deposit**: Return-free safekeeping deposit.
- **Wakalah**: Agency service.

1.9 ORGANIZATION OF THE STUDY

This study comprises of five chapters. In the first chapter, the back ground of the study, statement of the problem, significance of the study, scope and limitations of the study, general and specific objectives, research questions, hypothesis of the study and operational definitions were included. In the second chapter, reviews of theoretical and empirical literatures were incorporated. In the third chapter, the methodology part of the study is clearly detailed and in the fourth and fifth chapters the result & discussion and summary, conclusion & recommendations of the study were presented consecutively.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

Chapter two is structured along several themes. First section of the study is theoretical literature review, explains, the general concepts and definition of interest free banking and theory and models for adoption, comparisons of the model and finally justification of the model used are discussed. Second, Empirical literatures which provides insight into origin evolution & growth and principles of Islamic banking, Islamic and conventional banking are described. Innovation Diffusion Theory and their constructs are discussed to develop a research model to help investigate factors affecting the implementation of Interest free banking service in Addis Ababa, Ethiopia.

2.1 THEORETICAL LITERATURE REVIEW

2.1.1 GENERAL CONCEPTS AND DEFINITION

The term "Interest Free/Islamic banking" has no single definition. Many scholars" gives various meaning to this term Islamic banking. It refers to a system of banking or banking activity that is consistent with the principles of the Shari'ah (Islamic rulings) and its practical application through the development of Islamic economics. The principles which emphasize moral and ethical values in all dealings have wide universal appeal. Shari'ah prohibits the payment or acceptance of interest charges for the lending and accepting of money, as well as carrying out trade and other activities that provide goods or services considered contrary to its principles. While these principles were used as the basis for a flourishing economy in earlier times, it is only in the late 20th century that a number of Islamic banks were formed to provide an alternative basis to Muslims although Islamic banking is not restricted to Muslims. (www.islamic-banking.com).

According to Kamarulzaman & Madun (2013) defined Islamic banking is a system of banking or banking activity that is consistent with the Principles of Islamic Law (Sharia). Sharia prohibits interest charged on loans, the practice of giving or accepting additional money for money that is borrowed and the business involved directly or indirectly in alcoholic drinks, gambling-related

business, or any type of business that is considered harmful or that could cause disruption to the welfare of the society.

The general secretariat of the Organization of the Islamic Conference, defines an "Islamic bank as a financial institution whose statutes, rules, and procedures expressly state its commitment to the principle of sharia and to the prohibiting of the receipt and payment of interest on any of its operation" (Ali and Sarkar 1995).

In Accordance with NBE's Directive SBB/51/2011 "Interest Free Banking Business" refers a banking business in which mobilizing or advancing of funds taken in a manner consistent with Islamic Finance Principles and mode of operation that avoids receiving or paying interests.

"Implementation" refers Successful application of interest-free banking into a conventional system. The following four areas in particular have paramount importance. Compliance with Shari'ah, segregation of Interest-free and conventional funds, accounting standards, and awareness (Juan Sole, 2007).

2.1.2 EVOLUTION OF THEORIES AND MODELS OF ADOPTION

Theories provide a set of explanatory variables which can be used to predict a particular phenomenon. A model, on the other hand, is defined as a systematic description of a system, a theory or a phenomenon that accounts for its known or inferred properties which may be used for further study of its characteristics. Also a model is any abstract representation of some portion of the real world, constructed for the purpose of understanding, explaining, predicting or controlling a phenomenon being investigated (Burch 2003). A number of theories have proposed to explain consumers' acceptance of new technologies and their intention to use. These included, but were not restricted to, the Fishbein`s multiattribute model (Fishbein's 1967), also called learning theory (Kassarjian & Robertson 1991), the Theory of Reasonable Action (TRA) (Fishbein and Ajzen, 1975), The Social Cognitive Theory (Bandura, 1986), Technical Adoption Model (Fred D Davis 1989), Theory of Planned Behavior (Ajzen, 1991), The Model of PC Utilization (Thompson et. al. 1991), Task-technology Fit (Goodhue et al. 1995), Decomposed Theory of Planned Behavior (Taylor and Todd 1995), Extended TAM2 model (Venkatesh and Davis, 2000), Unified Theory of Acceptance and Use of Technology (Venkatesh, 2003).

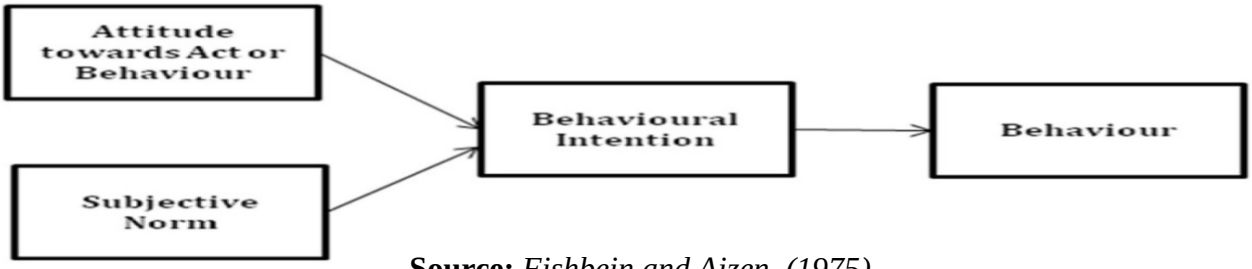
2.1.2.1 FISHBEIN`S MULTIATTRIBUTE MODEL

Fishbein`s multiattribute model (Fishbein's 1967) suggests that a person's attitude to any object/behaviour is based on individual's belief about the object/behaviour and the evaluation of the object/behaviour. Attitude towards object/behaviour = ∑bi x ei, where: - bi is as belief component that expresses the probability that object/behaviour has a certain attribute i/consequence i. In other words, it is a belief that object possesses specific characteristics or that the behaviour has certain consequence. - ei is evaluation component associated with the attribute i/consequence i. This means the customer's evaluation, liking or disliking, of the attribute i, or evaluation of the consequence of the behaviour.

2.1.2.2 THEORY OF REASONED ACTION

Theory of reasoned action is an extension of Fishbein's multiattribute model to account for the relationship between attitudes and behaviour. Theory of Reasoned Action (TRA) has its roots in social psychology setting. The theory proposes three general constructs, namely "behavioral intention, attitude and subjective norm". According to TRA behavioral intention of a person depends on his attitude and subjective norms. Mathematically, it can be interpreted that behavioral intention is the summation of attitude and subjective norms. Moreover, intention of a person likely to convert to action if there is the intention to behave in a specific manner is strong enough.TRA is intended to predict behaviour in situations where the customer controls his own behaviour and he is thoughtful about it. TRA states that the most important determinant of consumer actual behaviour is the intention to behave. The behavioural intention is affected by attitude towards behaviour and subjective norms, which are two new contributions to Fisbein's previous model. Attitude to behave is defined as an individual's positive or negative feelings about performing the target behaviour (Fishbein & Ajzen 1975).

Figure 2.1.2.2-1 : Theory of Reasoned Action



Source: *Fishbein and Ajzen, (1975)*

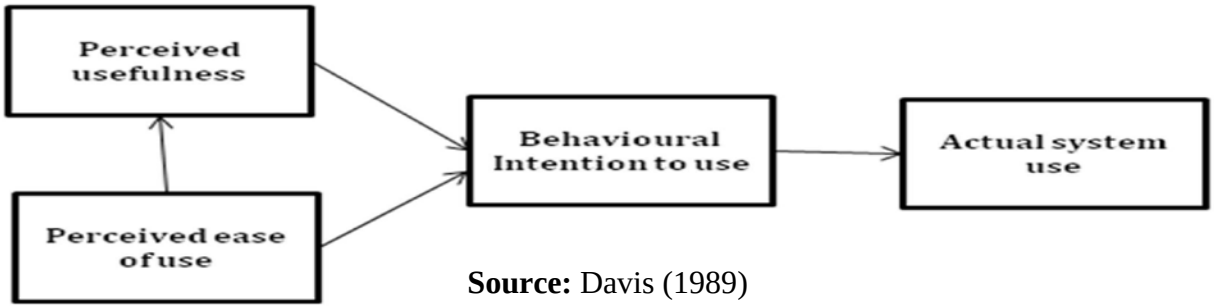
2.1.2.3 THE SOCIAL COGNITIVE THEORY

Focus of the Social Cognitive Theory developed by Bandura (1986) is on the concept of self-efficacy which is defined as "the judgment of one's ability to use a technology to accomplish a particular job or task" (Compeau and Higgins, 1995). According to SCT, behavior of the user is effectd by expectations of outcome related to personal as well as performance-related gains. Self-efficacy, in turn, effects the expectation of outcome of both types. While esteem of the person and his sense of achievement relate to personal outcome expectations, out-come expectations related to performance on the job lead to performance related expectations. According to SCT, there are two opposing factors that effect behavior of the users. Positive contribution is made by the factor "affect" which is the extent to which an individual likes his job. On the other hand, negative contribution to desired behavior is made by the factor "anxiety" which is the anxious reaction of the person while performing a job such as trying to use a computer with which the person is not very familiar. This theory has been widely used in adoption studies.

2.1.2.4 TECHNICAL ADOPTION MODEL

The model was originally developed by Fred D Davis (1989) in order to predict and measure user's acceptance of computers. Davis Proposed two theoretical constructs, "Perceived Usefulness" and "Perceived Ease of Use", which are theorized to be fundamental determinants of Information Technology use. He then studied the of these two constructs on actual information technology usage behavior of users (self-reported current usage and self-predicted future usage). TAM has been employed in itself or by incorporating it with other models in almost all kinds of researches related with technology adoption. Particularly, TAM is the common model for most researchers in the area of Electronic banking adoption. Based on two separate empirical studies conducted by Davis, he found out that "Perceived Usefulness" is significantly correlated with both self-reported current usage and self-predicted future usage. "Perceived Ease of Use" is also found to be correlated with current and future usage behavior (Davis, 1989,). Technology Acceptance Model (TAM) was introduced by Fred Davis in 1986 for his doctorate proposal as shown bellow. An adaptation of Theory of Reasonable Action, TAM is specifically tailored for modeling users' acceptance of information systems or technologies.

Figure 2.1.2.4-1 Technology Acceptance Model

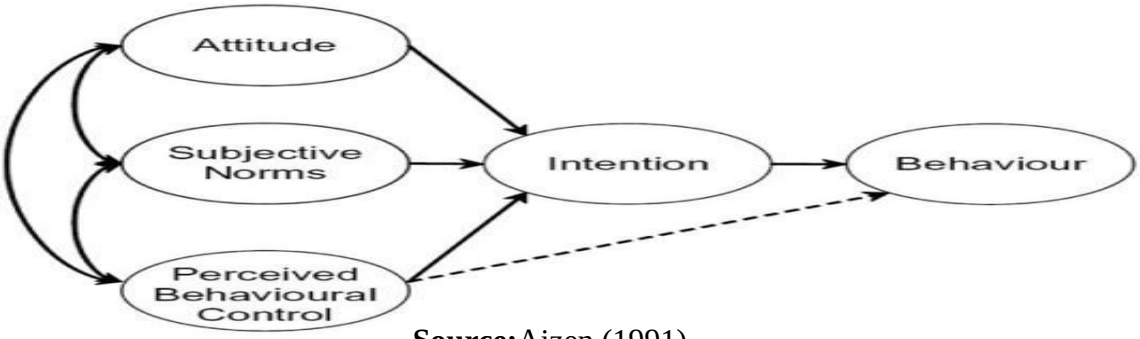


Source: Davis (1989)

2.1.2.5 THEORY OF PLANNED BEHAVIOR

The Theory of Planned Behavior (TPB) was proposed by Icek Ajzen in 1991 and was developed from the Theory of Reasoned Action (TRA) which was pro-posed by Martin Fishbein and Ajzen in 1975. TPB adds the concept of Perceived Behavioral Control (PBC) to the constructs attitudes and subjective norms which make the TRA. Perceived behavioral control refers to "people's perception of the ease or difficulty of performing the behavior of interest". It differs from Rotter's (1966) concept of perceived locus of control because it is not constant and varies with different situations faced by the individual. Locus of control is considered to be a more generalized expectancy of the individual that remains fairly stable across situations. In this way, the criticism faced by TRA that it is based on relatively static construct of attitude and thus cannot be used for prediction of behavioral outcome has been addressed by TPB. The roots of concept of PBC are grounded in the Self-Efficacy Theory proposed by Bandura (1977) which in turn came from the Social Cognitive Theory. Bandura (1986) defined self-efficacy as "the judgments of how well one can execute courses of action required to deal with prospective situations". According to the theory, self-efficacy is the most important determinant for behavioral change since it leads to building up of coping behavior.

Figure 2.1.2.5-1: Theory of Planned Behavior

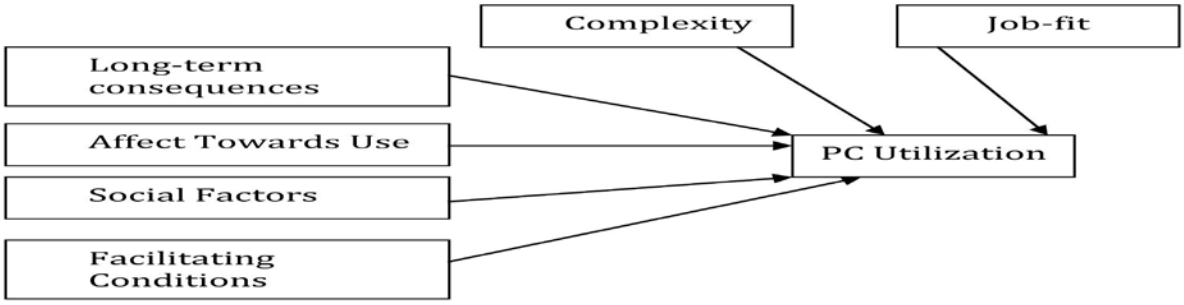


Source: Ajzen (1991)

2.1.2.6 THE MODEL OF PC UTILIZATION

The model is developed by Thompson et. al. (1991) based on the Theory of Human Behavior by Triandis (1977) which differs in some ways from the Theory of Reasoned Action because it makes a distinction between cognitive and affective components of attitudes. Beliefs belong to the cognitive component of attitudes. According to this theory "Behavior is determined by what people would like to do (attitudes), what they think they should do (social norms), what they have usually done (habits), and by the expected consequences of their behavior". This theory primarily deals with extent of utilization of a PC by a worker where the use is not mandated by the organization but is contingent on the option of the user. In such a setting, the theory posits that the use of computer by the worker is likely to be effectd by several factors such as his feelings (affect) toward using PCs, prevalent social norms regarding use of PC at the work-place, general habits related to use of the computer, consequences expected by the user by using the PC and extent of conditions that are present at the work place for facilitating use of PC.

Figure 2.1.2.6-1: The Model of PC Utilization



Source: *Thompson et al. (1991)*

2.1.2.7 THE MOTIVATION MODEL

Davis applied the motivational theory to study information technology adoption and use. The main premise of the Motivation Model is that there are extrinsic and intrinsic motivations that shape the behavior of the user. Extrinsic motivation is defined as the perception that users want to perform an activity "because it is perceived to be instrumental in achieving valued outcomes that are distinct from the activity itself, such as improved job performance, pay, or promotions" (Davis et al., 1992). Examples of extrinsic motivation are perceived usefulness, perceived ease of use, and subjective norm. On the other hand, if performing an activity leads to a feeling of pleasure and results in satisfaction for the individual, such behavior can be classified as intrinsic

motivation. (Vallerand, 1997). Users want to perform an activity "for no apparent reinforcement other than the process of performing the activity per se" (Davis et al., 1992).

2.1.2.8 TASK-TECHNOLOGY FIT

According to Goodhue et al. (1995), Task-technology Fit (TTF) emphasizes individual effect. Individual effect refers to improved efficiency, iveness, and/or higher quality. Goodhue et al. (1995) assumed that the good fit between task and technology is to increase the likelihood of utilization and also to increase the performance effect since the technology meets the task needs and wants of users more closely. As shown in Figure, this model is suitable for investigating the actual usage of the technology especially testing of new technology to get feedback. The task-technology fit is good for measuring the technology applications already release in the marketplace like in the Google play store or apple store app (iTunes) etc.

Figure 2.1.2.8-1: Task-technology Fit

Source: *Goodhue and Thompson, (1995)*

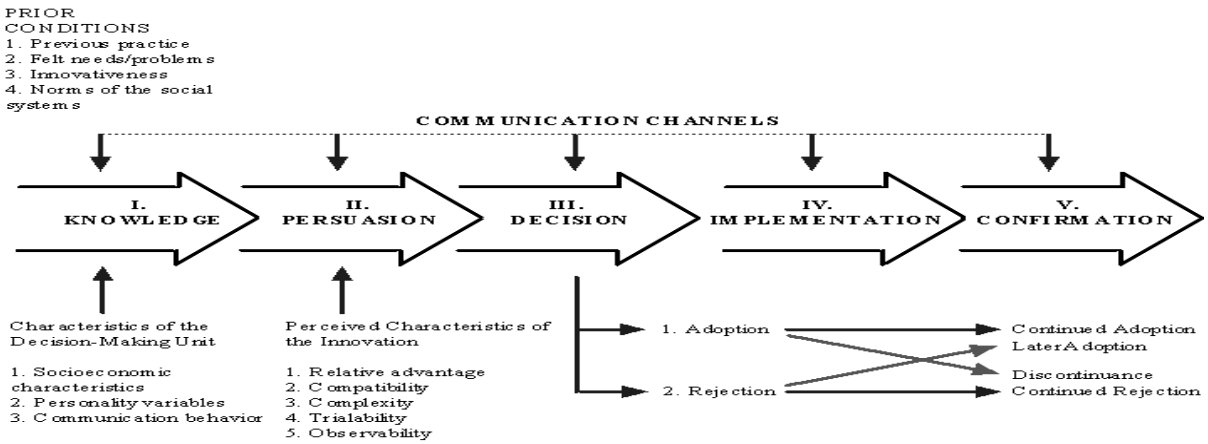
2.1.2.9 DECOMPOSED THEORY OF PLANNED BEHAVIOR

Decomposed Theory of Planned Behavior (Decomposed TPB) was introduced by Taylor and Todd (1995). The Decomposed TPB consists of three main factors influencing behavior intention and actual behavior adoption which are attitude, subjective norms and perceived behavior control. Shih and Fang (2004) examined the adoption of internet banking by means of the TPB as well as Decomposed TPB.

2.1.2.10 INNOVATION DIFFUSION THEORY

Everett M. Rogers, in his book titled " Diffusion of Innovations" (1995), developed a model for Innovation-Decision process, Rogers defined this process as " the process through which an individual (or other Decision making unit) passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a Decision to adopt or reject, to implementation of the new idea, and to confirmation of this Decision" (Rogers, 1995).

Figure 2.1.2.10-1: Innovation Diffusion Theory

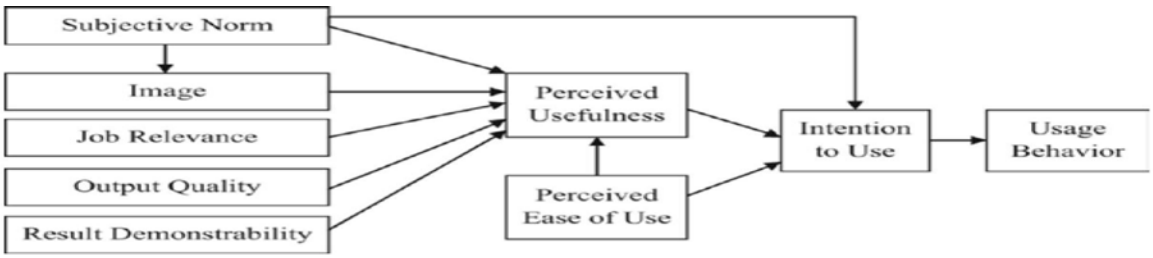


Source: *Rogers (1995)*

2.1.2.11 EXTENDED TAM2 MODEL

Venkatesh & Davis (2000) modified TAM to include additional key determinants of TAM's perceived usefulness and usage intention constructs in their extended TAM model. The additional constructs included social effect processes (subjective norm, voluntariness and image) and cognitive instrumental processes (job relevance, output quality, result demonstrability and perceived ease of use) which are depicted in Figure bellow.

Figure 2.1.2.11-1: Extended Technical Adoption Model

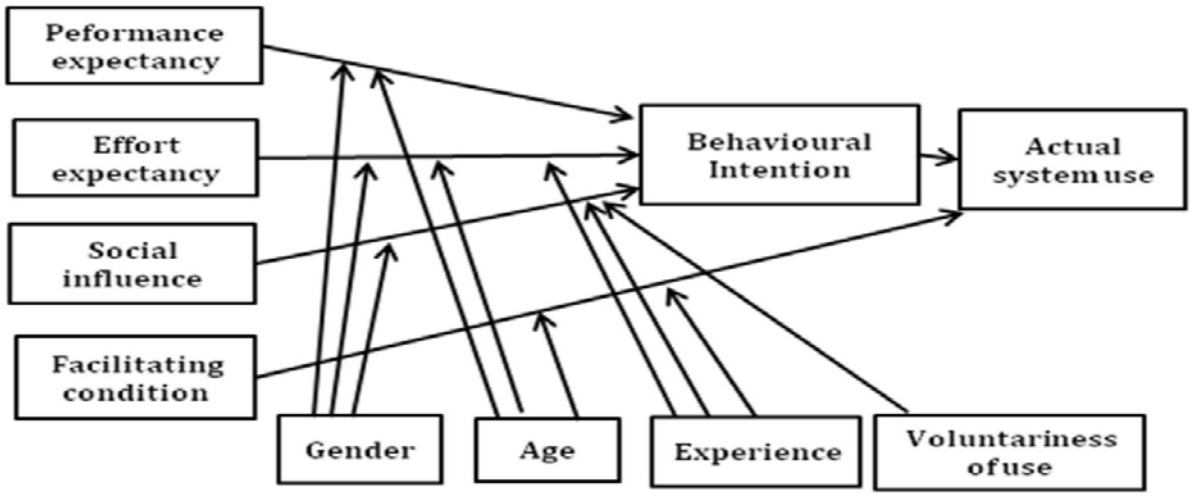


Source: Venkatesh & Davis (2000)

2.1.2.12 UNIFIED THEORY OF ACCEPTANCE AND USE OF TECHNOLOGY

This theory, popularly referred as UTAUT was postulated in 2003 by Venkatesh et.al. By a systematic review and consolidation of the constructs of earlier eight models (TRA, TAM, MM, TPB, TAM2, DOI, SCT and model of personal computer use). It is meant to serve as a comprehensive model that can be applied across a range of applications. It has four key constructs namely "performance expectancy, effort expectancy, social effect and facilitating conditions" which are depicted in Figure below.

Figure 2.1.2.12-1: The UTAUT Model



Source: *Venkatesh (2003)*

2.1.3 COMPARISON OF THE MODELS

There has been a great deal of research on the Fishbein's multiattribute model (Shiffman & Kanuk 1994; Onkvisit & Shaw 1994), Theory of Reasoned Action (Ajzen & Fishbein, 1980; Sheppard, Hartwick, and Warshaw, 1988) Theory of Planned Behavior (Ajzen, 1991) and Decomposed Theory of Planned Behaviour, (Taylor and Todd, 1995) but mostly used for products already in the marketplace and included the view of society (Subjective norm). An adaptation of Theory of Reasonable Action, TAM and UTAUT are specifically tailored for more popular technology acceptance theories/ models that are being used worldwide in different settings more especially in IS literature.

2.1.4 JUSTIFICATION OF MODEL SELECTED

Islamic banking has emerged as a new reality in the global financial outlook since the 1970s (Tahir, Bakar, Ismail, & Wan, 2006).Behind any adoption process there must be something new, being it product (s) and or service, idea or way of doing things. This suggests that there could be existing product(s) initially and comes the need to improve it or switched to another one (new). Kotler (1994) posits that new products incorporate original products, products modification and products improvement. It also includes the products ready to be launched in to the market and those that are perceived as new in comparison to others by the potential adopters (Blackwell, MInard, & Engel, 2006).

The mirror through which most of the researchers used to study the adoption and development of new ideas as well as behavior prediction study is typically known as Innovation Diffusion Theory (Couros, 2003; Jamshidi & Hussin, 2013; Thambiah et al 2011b). In its basic form, Diffusion is defined as the process by which an innovation is adopted and gains acceptance by individuals or members of a community (Couros, 2003). According to Rogers (2003) Diffusion of Innovation Theory remained as the one of the most widely used models in innovation adoption studies. Over half a million studies were reported to have used the innovation diffusion theory (Rogers, 2003; Thambiah et al, 2011b; Jamshidi & Hussin, 2012). It has been consistently encouraging research in the area of adoption of an innovation Thambiah et al, (2010). Anuar, Adam, and Mohamad (2012) observed that innovation diffusion model was helpful in providing the researchers with a suitable platform for studying the adoption of product and services among varied individuals.

The sizeable number of studies of adoption has been more on the contexts other than Islamic banking, mostly on internet banking, technology, agriculture and health sectors (Al-Ghaith, Sanzogni, & Sandhu, 2010; Hoffmann, Franken, & Broekhuizen, 2012; Pannell, 2003; Rogers, 2003; Sadeghi & Farokhian, 2011). Very few but growing studies were concentrated to financial services and Islamic banking in particular (Amin, Abdul- Rahman, & Abdul-Razak, 2013; Echchabi & Aziz, 2012a; Jamshidi & Rezaei, 2012; Thambiah, Ismail, & Malarvizhi, 2011b). Gait & Worthington (2009) opined that in spite of the growing literature in the context of Islamic finance, much study using sophisticated modeling techniques are still needed especially on test Islamic banking implementation. It was further noted that notwithstanding the efforts made by

the researchers in the context of Islamic banking however, the studies about customer's implementation toward Islamic banking product and services are still insufficient (Hidayat & Al-Bawardi, 2012). And even the few studies were mostly conducted in Asia- Bangladesh, Malaysia, Pakistan, European Singapore; Middle East- Jordan, Libya, Morocco, Saudi- Arabia; and Europe and America- UK, USA. In Africa, particularly in Ethiopia such studies were scarce.

The current study has therefore adopted the research framework based on diffusion of innovation Model developed by Rogers 2003. The researcher modified this model by introducing two relevant factors: customer involvement and religious belief. Besides, that the study also examines the mediating of customer involvement and moderating s of religious beliefs on the relationship between –Awareness, relative advantage, compatibility, complexity and perceived risk and the Implementation of interest free banking services.

2.2 EMPIRICAL LITERATURE REVIEW

2.2.1 ORIGIN, EVOLUTION AND GROWTH OF ISLAMIC BANKING

The first attempt at Islamic banking system can be seen in Pakistan in the late 1950s with the establishment of Local Islamic Bank in the rural area. During that time, the owners of the land who were obedient to the Islamic teachings deposited their money to the bank, which was later loaned to other land owners for the purpose of agriculture development. The borrowers during that time were not charged for lateness in paying back their loans, other than a small amount for the purpose of bank operation. However, the operation of the bank was met with failure due to a number of factors such as the increase in the number of borrowers compared to the money being kept there, which resulted in vast difference between available capital and credit demanded, as well as the problem of the bank employees not having autonomous power on the bank operation. This was because the depositors of that time were hoping to get more benefits as a return for the money that they lent out (CIFP, 2006).

The second attempt was through setting of banking basic principle and Islamic finance that are to be practiced. The endeavor took place in Egypt from 1963 until 1967 through the establishment of Mit Ghamr Savings Bank in the town of Mit- Ghamr. The establishment of the bank was fully through the effort of Dr Ahmad al-Najjar and was done in a disclosed manner and did not use the

Islamization platform as it might wrongly be interpreted as a manifestation of Islamic fundamentalism (Mustafa, 2005).This attempt was a result of a combination of the idea of German Savings Bank that was based on rural banking, with a general framework of Islamic values. The operation of the bank of that time was based on Islamic principles that are free from elements of interests, either to the depositors or from the borrowers (Joni and Hadenan,2006) The success of Mit Ghamr received praise and recognition from the Ford Foundation through its report in June 1967 because it had gained the support of the majority of the countryside residents, especially the farmers who regarded the bank as their own (El-Ashker, 1987).

In 1975, a number of Islamic banks that were trade oriented and aimed to offer an alternative in form of Islamic banking and replace the current conventional banking system were established in a few Islamic countries. There were two types of Islamic institutions as well as Islamic principle companies and investments. The first group of institutions was Dubai Islamic Bank, founded in 1975 (Mumin, 1999). From there in 1977 three Islamic banks were established as public limited companies, which were Kuwait Finance House in Kuwait, Faisal Islamic Bank in Egypt and Faisal Islamic Bank in Sudan by Pangeran Muhammad al-Saud. In the same year the International Islamic Bank Association was founded and based in Jeddah for the purpose of advancing the cooperation and coordination all the activities between the Islamic banks (Dakian, 2005).Since the establishment of Dubai Islamic Bank as the pioneer of Islamic trading bank, the world of Islamic banking and Islamic finance has grown rapidly and functioning successfully.

The evidence can be seen around 1980s and 1990s, when the establishment of new Islamic banks were a common phenomenon in the Islamic and non-Islamic countries. The most significant development for Islamic banking can be seen from the granting of license to a big firm which was Al-Rajhi Corporation that conducted foreign money exchange and trading with assets of more than USD 5 billion in Saudi Arabia (Mustafa, 2005).

In the 1977, a multinational investment company under the name Islamic Investment Corporation (ICC Limited) was established in Bahamas (CIFP, 2006). This company owned two branches in Sharjah, United Arab Emirate (UAE) and in Pakistan. In the following year, another public limited company was established in Jordan and became known as Jordan Islamic Bank for Finance and Investment (Cheah, 1994). The purpose of the establishment was to prepare funding and investment. Later in 1979, two more Islamic finance institutions that acted as public limited

company came into reality, which were Bahrain Islamic Bank and United Arab Emirate Islamic Investing Corporation (Siddiqi, 1988). In the consecutive year, International Islamic Bank for investment and development of Egypt was established, followed by International Islamic Bank of Dakka and Masyraf Faysal al-Islami, Bahrain in 1982 (Traute, 1983).

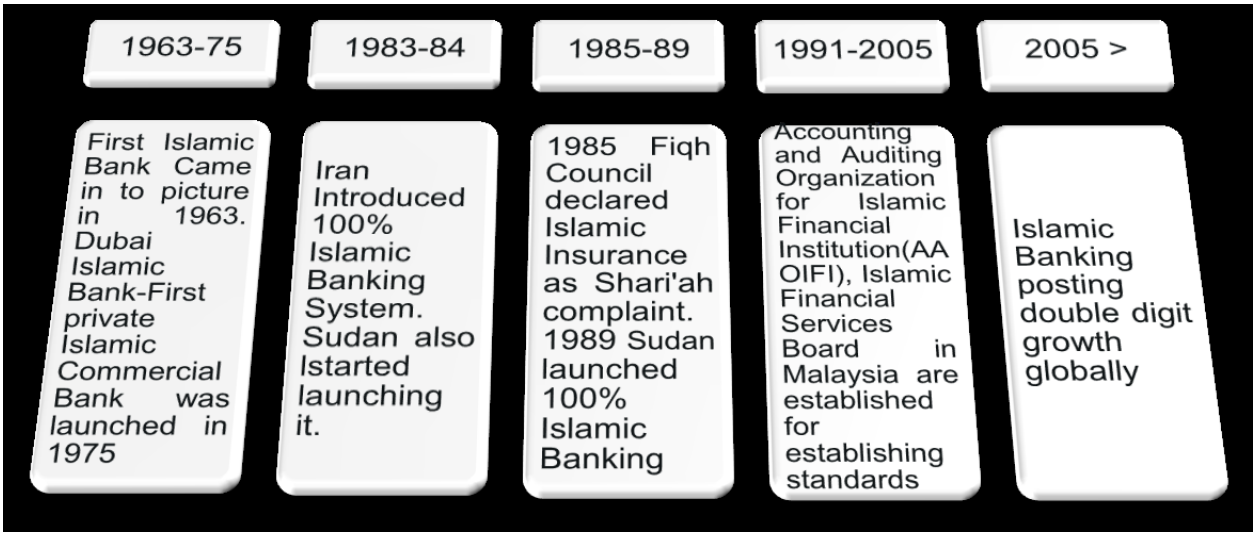
Apart from Islamic countries, the growth of Islamic banks and banking institutions also took place in non-Islamic world, especially in the west and in the countries with Muslim minorities. An example can be seen when Philippines Trust Bank and International Islamic Bank of Denmark were established in 1973, followed in 1978 by the Islamic Banking International Holding in Luxemborg (Ausaf, 1995). The purpose of this bank was to create Islamic banks in different areas that have Muslims communities, as well as to involve in investment projects in both Islamic and non-Islamic countries. The operation of the investment company was further developed when another of its branch was opened in the city of London in June 1983 under the name Islamic Finance House, and another in Denmark, known as Islamic International Bank of Denmark. The growth became steady in 1990s; the market attracted the attention of public lawmakers and institution interested in introducing innovative products.

In 1991 Accounting and auditing organization for Islamic financial institutions (AAOIFI) established in Bahrain and responsible for developing and issuing standards for the Islamic finance industry. AAOIFI has 88 standards including: 48 Sharia; Accounting; Auditing; Governance; Ethics AAOIFI has over 200 members in more than 40 countries. Members include regulatory and supervisory authorities, international/intergovernmental organizations and market players, professional firms and industry associations.

The International Financial Services Board (IFSB) was launched in 2002 and serves as an international standard setting body that provides prudential standards and guidelines for regulatory and supervisory agencies to ensure soundness and stability of the Islamic Financial industry including: retail banking, capital markets and Takaful (Islamic insurance). The IFSB has13 standards, 5 guide notes, 1 technical note. As of September 2014, the IFSB comprises of 184 members from 41 jurisdictions, including 32 members from the African continent. IFSB has 55 regulatory and supervisory authorities, 8 international/intergovernmental organizations and 121 market players, professional firms and industry associations.

Today that Islamic banking industry showing an average growth rate of 17%-20% annually and comprises around 500 institutions in 80 countries, with an asset under management ranging between US $1.66-2.1 trillion, with expectations of market size to be $3.4 trillion by end of 2018 (Ernst & Young), according to Standard & Poor's Ratings Services the potential market is $4 trillion worldwide.

Figure-2.2.1-1: Historical Emergence of Interest-Free Banks



***Source**: Sharia Fortune, December 2011*

2.2.2 UNDERLYING PRINCIPLES OF INTEREST-FREE BANKING

Banking The IFB is governed by the following pillars that basically align to the Sharia Law as articulated by different authors;

2.2.2.1 THE IFB BUSINESS IS BASED ON ISLAMIC (SHARIA) LAW

According to Abdul-Rahman (2010), Shanmugam and Zahari, (2009,) and Hassan and Lewis (2007) the main characteristic of these financial instruments is that they are compliant with the shari‟a – the Islamic legal system. The Sharia Law compliance aspect of the IFB is monitored by team of independent Sharia Scholars called Sharia Committee. These laws as referred to the convention are consolidated in (Shari'a Standards for Islamic Financial Institutions, 1432 H-2010). The principles and sources of Shari'a are: the Qur'an, which is the unchangeable and the

proven inculcation of all God's messages to all His prophets, including the Torah and the Gospel; and the way of life and example of living (Sunnah) and sayings (Hadeeth) of Prophet Muhamma. Moreover, they articulate the necessity of independent Sharia Board in that is entrusted give reasonable assurance of the Sharia Compliance aspect of the IFB.

2.2.2.2 PAYING OR RECEIVING INTEREST (RIBA) IS FORBIDDEN (HARAM)

As Islamic banking is interchangeably call interest-free banking paying or receiving interest (riba) is forbidden and this is considered as one of the governing principles of the banking convention. As articulated by Lina (2004) and Shanmugam and Zahari (2009,), lending money at interest has been condemned by men like Plato, Aristotle, Plutarch, Seneca and Cicero, early fathers of the Christian church; the majority of popes and councils up to 1830; likewise modern authors such as Goethe and Wagner. The author then underscores the fight against usury (interest) goes back to the earliest beginnings of civilization. (Ethica‟s Handbook of Islamic Finance, 2013 ed.,) stated that the concept of riba was widely recognized among the addressees of the Holy Quran, and it is that concept which is reflected in the legal definition provided for riba either in the hadith or in the later literature of Islamic jurisprudence. According to this definition, any transaction of loan where the payment of an additional amount on the principal is made conditional to the advance of such a loan is called riba and hence forbidden in Islamic banking. As the convention basis on Sharia Principle that bases on Holy Quran, riba is considered as one of the prohibitions in IFB.

2.2.2.3 UTMOST FAIRNESS IN ALL BUSINESS DEALINGS

Fairness I all business dealings is a peculiar feature of the convention irrespective of religion background. According to Meezan bank (2014), if we consider the injunctions of the Holy Quran, it would appear that the system for the distribution of wealth laid down by Islam envisages three objects:

- The establishment of a practicable system of economy,
- Enabling everyone to get what is rightfully due to him, and

- Eradicating the concentration of wealth. It further synthesizes that, of these three objects of the distribution of wealth, the first distinguishes Islam economy from Socialism, the third from Capitalism, and the second from both the same time.

2.2.2.4 TRANSPARENCY, CONSENSUS AND CONTRACTUAL AGREEMENT BETWEEN PARTIES IN ALL BUSINESS DEALINGS

In all business dealings transparency, consensus is a precondition so as all parties make informed decision that will subsequently is substantiated by contractual agreement. Contractual agreements set out the terms and conditions upon and subject to which the person has agreed to purchase the Goods/Service from time to time from the Suppliers and upon which the Institution has agreed to sell the same to the client from time to time by way of facility Shanmugam and Zahari (2009) and Ethica‟s Handbook of Islamic Finance (2013 ed.).

2.2.2.5 PROFIT-AND-LOSS SHARING

The return allocation from IFB is governed by the concept of sharing profit as agreed but loss as per the capital contributed for both the fund mobilization and the financing dimensions. According to Hassan and Lewis (2007), the main difference between an Islamic or interest-free banking system and the conventional interest-based banking system is that, under the latter, the interest rate is either fixed in advance or is a simple linear function of some other benchmark rate, whereas, in the former, the profits and losses on a physical investment are shared between the creditor and the borrower according to a formula that reflects their respective levels of participation. In Islamic finance, interest-bearing contracts are replaced by a return-bearing contract, which often takes the form of partnerships.

2.2.2.6 FORBIDDEN (HARAM) BUSINESS ACTIVITIES

There are many prohibitions of business activities to engage in IFB convention, but the following will make aqads or contracts invalid as per Islamic Banking Handbook (2010 ed.):

- Businesses that adversely affect public interest;
- Businesses that involve usury/interest(riba);
- Alcohol related trade,
- Producing and selling goods that are of no use therefore of no value;

- Gharar, i.e. ambiguity or uncertainty;
- Maisir(gambling), i.e. anything that involves betting;
- Pornography; and Pork.

2.2.3 ISLAMIC AND CONVENTIONAL BANKING

Islamic banking is operating in the same society where conventional banks are operating and perform all those functions which are expected from a financial institution. However, the philosophy and operations are different. The basic principles underlying Islamic financial transactions are that the purpose of financing should not involve an activity prohibited by Shariah. Islamic banking and finance (IBF) is an ideological discipline that draws on Shariah principles to expunge interest and other exploitative elements from the economic and financial spheres of human society (Khan & Bhatti 2008).

The main difference between Islamic and conventional banks is the use of money. In conventional banks, money is used as a commodity that is bought and sold through the interest‟s usage (Pasha 2014).

Just like conventional, Islamic banks are dependants on their depositors‟ money as a major source of funds, with the exception that they are not allowed guaranteeing any rate of return on the basis of interest. Moreover, the nominal value of some deposits accounts cannot even be guaranteed, because they are reliant upon the profit- and loss-sharing scheme. While the conventional banks guarantee the capital and rate of return, the Islamic banking system, based on the principle of profit and loss sharing, cannot, by definition, guarantee any fixed rate of return on deposits. In some cases the capital is not guaranteed either, because if there is a loss it has to be de ducted from the capital (Mounira 2008).

Although profit sharing and interest-based lending may seem alike, the differences are clearly more than semantic ones. The yield is not guaranteed in the profit-sharing mode. In addition, in interest-based lending the loan is not contingent on the profit or loss outcome, and is usually secured, so that the debtor has to repay the borrowed capital plus the fixed (or predetermined) interest amount regardless of the resulting yield of the capital. Thus, with interest-based lending, the financial losses fall most directly upon the borrower (Kettell, 2011).

The utilization of the funds from the institution by a business house or an enterprise is on a profit and loss sharing basis. Gains from the business as well as losses earned due to the business are shared between the institutions and the enterprise. Investing in Islamic banks may provide more profit and less risk because the financial institution has its own interest as it acts as a partner (Mohammed 2013).

Each and every investment based on PLS leads to asset creation rather than debt creation. Islamic banking does not allow the creation of debt through direct lending and borrowing because credit can only be provided through lease or sale-based financing. Consequently, Shariah compliant investments follow the structure of an exchange of ownership in tangible assets or services where money's role is to facilitate the payment mechanism to implement the transfer. Moreover, risks are supposed to be shared among all parties: investors and entrepreneurs bear the business risk for a share in the profits. This contrasts with conventional banking where transactions involving interest payments are common (Chong and Liu, 2009, Kahf, Ahmad, and Homud, 1998).

Islamic banks use the same tools and procedures as conventional banks in those areas where there is no conflict between banking operations and Islamic principles. These activities include foreign exchange transactions, domestic and international transfers, letters of credit and availing safe custody (Al-sultan 1999).

Table 2.2.3-1: The difference between Islamic and conventional Banking

S.No	Characteristic	Islamic Banking System	Conventional Banking System
1	Business framework	Functions and operating modes are based on Sharia'h. Islamic banks must ensure that, and all business activities are in compliance with Sharia'h requirements	Functions and operating modes are based on secular principles, not religious laws or religious guidelines
2	Interest charging	Financing is not interest (Riba) oriented and should be based on risk-and-reward sharing	Financing is interest oriented, and a fixed or variable interest rate is charged for the

			use of money
3	Interest on deposits	Account holders do not receive interest (Riba) but may share risk and rewards of investments made by the Islamic bank, not guarantee principal amount in, i.e, Mudarabah Deposits	Depositors receive interest and a guarantee of principal repayment
4	Risk sharing in equity financing	Islamic banks offer equity financing with risk sharing for a project or venture. Losses are shared on the basis of the equity participation, whereas profit is shared on the basis of a pre-agreed ratio, in Musharakah finance	Risk sharing is not generally offered but is available through venture capital firms and investment banks, which may also participate in management
5	Restrictions	Islamic banks are allowed to participate only in economic activities that are Sharia'h compliant. For example, banks cannot finance a business that involves impermissible business activities.	Conventional banks may finance any lawful product or service.
6	Penalty on default	Islamic banks are not allowed to charge penalties for their enrichment. They may, however, allow imposition of default or late payment penalties on the grounds that these penalties discourage late payments or defaults, which impose administrative costs on banks for processing and collecting the amount owed. Penalties are donated to a charity organization, not income of the Islamic Banks.	Conventional banks normally charge additional money (compound interest) in case of late payments or defaults.
8	Avoidance of Gharar	Transactions with elements of gambling or speculation are discouraged or forbidden.	Speculative investments are allowed
9	Customer relationships	The status of an Islamic bank in relation to its clients is that of partner and investor.	The status of a conventional bank in relation to its clients is one of creditor and

			debtor.
10	Sharia'h supervisory	Each Islamic bank must have a supervisory board to ensure that all its business activities are in line with Sharia'h requirements.	Conventional banks have no such requirement.
11	Statutory requirements	An Islamic bank must be in compliance with the statutory requirements of the central bank of the country in which it operates and also with Sharia'h guidelines.	A conventional bank must be in compliance with the statutory requirements of the central bank of the country in which it operates and in some places, the banking laws of state or other localities.

Source: Shanmugam, B. and Z.R. Zahari, 2009.

2.2.4 EMPIRICAL REVIEW AT INTERNATIONAL LEVEL

At International level there are several empirical studies on Islamic banking and finance. The studies investigated several factors affecting the proper implementation faced by the Islamic banks in various contexts.

Rugimbana and Iverson (1994) carry out a study on the usage of ATM by banking customers in Australia. They survey samples of customers from two banks and conclude that the bank marketers' capability to increase the usage of ATM is highly dependent on the strategy to focus on the relative advantage attributes of the ATM. The respondents who perceived ATMs to be convenient, reliable, and, generally, risk free, are more willing to use them.

Using the cluster sampling method, Olatokun and Igbinedion (2009) employ the principal factor analysis and multiple regressions to analyze 428 questionnaires respondents in Nigeria. Their study reveals that the constructs of relative advantage, complexity, compatibility, observability and trialability have significant effect on the attitude of bank's consumer toward the usage of ATM, which in turn, has a significant effect on the intention to use it.

Findings by Brown et.el . (2003) depict that relative advantage and trialability have significant effect on the attitudes of customers in adopting cell phone banking in South Africa. This signifies the customers' requirement for cell phone banking services to be (or perceived to be) of lower risk before it is being adopted. However, factors such as compatibility, complexity and self-efficacy do not exhibit any effect on cell phone banking adoption.

Al-Ghait, Sanzogni, &Sandhu, (2010) examined the effect of the perceived attributes of innovation suggested by Rogers (2003) in their study of the adoption and usage of online services in Saudi Arabia. The authors included, apart from the five attributes (relative advantage, compatibility, complexity, trialability and observability) other variables in the model, perceived trust, security, privacy, service quality and loyalty. Survey questionnaires were used in a random sample of six hundred and fifty one (651) respondents where T-test and regression was used for the analysis. The result suggested that the perceived attributes of innovation were the most important predictors of adoption. This was in support of Ostlund, (1974) who posited that the perceived attributes are better indicators of adoption compared to personal characteristic of the consumers. Incorporating the personnel characteristics as venturesomeness, cosmopolitanism, social integration, social mobility, privilegedness, interest polymorphism, general self-confidence (self-esteem) in problem-solving and in psychosocial matters, family income, respondent education, social status of the husband's occupation, and respondent age along with the perceived attributes, Ostlund sampled 605 housewives (respondents) in the survey conducted in Boston. The study was phased in to two stages with the aimed of comparing the two results i.e. before and after introducing the products in the market. In both studies consumers personal characteristic were found to be weaker predictors of purchased intention/behavior as compared to the perceived attributes of innovation. Hence the perceptual attributes are generally stronger predictors than personal characteristics of the consumers (Ostlund, 1974).

Findings by Al-Jabri and Sohail (2012), suggest that 'compatibility' is found to be the most significant factor to predict mobile banking adoption, followed by 'relative advantage' and 'observability'. All these factors show positive effect on the adoption of mobile banking in Saudi Arabia. However, 'perceived risk' is found to have a negative relationship with the adoption of mobile banking. This implies that customers observe risk as the main barrier to the adoption of

new innovation. Nonetheless, this study finds that 'complexity' and 'trialability' are perceived to be negligible in the decision whether to adopt or not mobile banking services in Saudi Arabia. Mian and Rizwan (2013) combine two conceptual perspectives to investigate the main factors that affect the adoption of mobile banking in Pakistan. They reveal that 'perceived compatibility', 'perceived ease of use' and 'perceived relative advantage' have significant positive effects on the attitude towards mobile banking adoption.

Research done by Gerard and Cunningham (2003) identifies eight characteristics that affect the rate of adoption. Results from this study indicate that adopters of internet banking perceive the service to be less complex, more convenient, more suited to those who are computer proficient. Apart from that, Kolodinsky e t a l. (2004) applies the theory of Technology Acceptance Model (TAM) and DOI theory to explore the predictors that affect the intention of US consumers to adopt internet banking. Their study finds that 'relative advantage' and 'compatibility' have significant and positive effect on e-banking products adoption. Rambocas and Arjoon (2012) use the DOI theory and SEM analysis and conclude that 'perceived relative advantage' and, to a lesser extent, 'government support' as the two primary factors of internet banking loyalty among 137 students in Trinidad and Tobago.

In the Islamic banking context, Yusof (1999) applies the Rogers diffusion model (2003) in the study on the introduction of Islamic banking to the Muslim community in Singapore. The data is collected from two different sources, Association of Muslim Professional (AMP) and mosques. Six perceived characteristics of innovations (PCI), namely relative advantage; social desirability, complexity, compatibility, result demonstrability and perceived risk are employed as the independent variables. The study finds that three factors; compatibility, complexity and result demonstrability serve as the main reasons for customers' intention to adopt Islamic banking in Singapore. Raman (2010) utilizes this theoretical framework in the context of Malaysia. His study employs four PCIs namely economic advantage, compatibility, social desirability, and complexity as independent variables. The result of logistic regression finds that only 'economic advantage' significantly effects Islamic banking adoption in the northern part of Peninsular Malaysia.

Thambiah et al . (2012) expand the scope of the study to cover several states in Peninsular Malaysia including Kuala Lumpur, Selangor, Johor, Ipoh, Kelantan, Terengganu and Negeri Sembilan. In addition to PCIs, this study incorporates three additional variables to determine the factors that effect the usage of Islamic retail banking (IRB). They are; awareness on IRB attributes promotional efforts and perceived information quality. The results of multiple linear regression imply that 'relative advantage', 'compatibility', 'promotional efforts', 'complexity' and 'consumer awareness' have significant relationships with the usage of Islamic retail banking (IRB) products. However, perceived attributes of innovation - relative advantage, compatibility, complexity, perceive risk does not received much attention with exception of the work of Thambiah et al, (2010, 2011 & 2013) and Echchabi& Aziz, (2012).

Malisah Latip, M.H. Yahya, Muhammad Junaina (2017) identify the influential factors that are associated with Islamic banking adoption between the Muslim and non - Muslim populations in Malaysia. With the Adoption of Islamic banking as a dependent variable, this study studies its relationship with seven independent variables. They are, four attributes of innovation, namely; relative advantage, compatibility, observability and complexity, and three additional variables namely; perceived risk, Perceived trust and customers involvements. The instruments used for this study (which is structured questionnaire) is based on three previous research papers and are modified to suit the current research content (Yusof, 1999; Raman, 2010 and Moore and Benbasat, 1991) .A convenient sampling method were used whereby a questionnaire is administered to 436 respondents in Sarawak, Malaysia. Using the legit regression method four factors; compatibility, relative advantage, observability and complexity are found to have significant relationship with customers' adoption of Islamic banking products and services.
There are three factors found to be statistically not significant in the respondents' decision to adopt Islamic banking. They are, 'Perceived Risk', 'Perceived Trust', and 'Customer Innovativeness.

Table 2.2.4-1: Summery of four areas of studies with IDT

Type of Product Innovation	Year	Author/Researcher	Theory
Automated Teller	1994	Rugimbana and Iverson	**Diffusion of**

Machine	2009	Olatokun and Igbinedion	**Innovation (DOI) Theory, Rogers**
Cell Phone/Mobile Banking	2003	Brown et al.	
	2012	Al-Jabri and Sohail	
	2013	Mian and Rizwan	
Internet Banking	2000	Tan andTeo	
	2003	Gerard and Cunningham	
	2004	Kolodinsky, Hogarth and Hilgert	
	2010	Al-Ghait, Sanzogni, &Sandhu,	
	2012	Thambiah, Ramanathan and Mazumder	
	1999	Yusof, M.Y.R	
	2010	Raman, R.	
Islamic Banking	2012	Thambiah, Ramanathan and Mazumder	
	2014	Jamshidi, Hussin, Hashemi, Hosseini and Rostami	
	2017	Malisah Latip, M.H. Yahya1, Muhammad Junaina	

Source: Self Extracted

The above table shows the summery of four areas of studies with regard to innovations in banking that have been conducted by researchers using Rogers's Diffusion of Innovation theory.. Overall; looking at the above literature review most of the research works have been done in Muslim countries with (greater than 50% of the population). Yet in Ethiopia only very little research has been done with regards to interest free banking. So to fill this gap this research is conducted in Ethiopia where there are significant number of Muslims and non Muslims living together in harmony.

2.2.5 EMPIRICAL REVIEW AT NATIONAL LEVEL

Interest free banking is an infant stage in Ethiopia banking industry is not a well studied area, through; few studies were conducted on the attributes of IFB. Mohammed (2012) has studied the "Prospects, Opportunities and Challenges of Islamic Banking in Ethiopia" and his work has

identified the potential challenges as: lack of awareness, regulatory and supervisory challenges, institutional challenges, lack of support and link institutions, gap in research and development in Islamic studies, lack of qualified human resource as well as wrongful association with specific religion and the global terrorism.

On the other hand Teferi's (2015) study about the "Contribution of IFB to economic development and its prospect in Ethiopia". He assessed the contribution of the inclusion of the Muslim population in the banking (financial system) to the economic development and GDP growth.

Another study by Debebe (2015) has conducted a study on "Factors Affecting Customers to Use Interest Free Banking in Ethiopia". The study is centered on "customer" intention and willingness to use interest free banking". The result showed that perceived relative advantage, perceived compatibility, customers" level of awareness and subjective norm have a significant positive effect on the attitude towards interest free banking in commercial bank of Ethiopia. This study is about effect assessment on the attitude towards IFB usage which does not address the factors determine on implementation of Interest free Banking products and service in Ethiopian.

Akmel (2015) the study focused on assessing challenges and prospects of Islamic banking service in resource mobilization efforts in three commercial banks in Ethiopia. This study is more concentrated on the challenges in the banks' operational activity of resource mobilization.

The research made by Kerima (2016) finds out the following challenges: lack of capacity to deliver IFB product at full rage, lack of awareness of customer about IFB products, lack of trust and confidence of customers, inadequate marketing and promotion, double taxation, nature of IFB products, unavailability of IFB products in all of its branches and the IFB being delivered in a Window model. Accordingly, the following recommendations were forwarded by her aggressive promotion and marketing campaign about IFB products, provide sustainable and continuous training to build the capacity of the manpower, the bank shall increase accessibility of its products with the expected services attached to the products, the bank has to have Sharia'h Advisor, give the required attention and focus for the business and the bank has to be transparent in its IFB business undertaking, in addition to these NBE directives, tax and ECX law shall include exceptions for IFB business.

Finally a research conducted by Abraham (2017) has studied "determinants of customers' intention to use interest free banking products and factors affecting employees' product knowledge". Unstructured questionnaire was used to collect qualitative data on customers' use intention. In general, eight and three hypotheses were developed and tested on customers' intention (the study was conducted by TRA Model) and employees' product knowledge of the CBE with a sample size of 369 and 77 individuals respectively. Both descriptive and inferential analytical techniques were used. To analyze the relationships among the variables, on the other hand, multiple regression and structural equation modeling (SEM) were employed. The results that of the study on customers' intention showed that, except for Knowledge, all the other variables: Attitude, Social Effect, Perceived Financial Cost and Religious Belief have significant on IFB use intention. Moreover, except for Underlying Arabic Terminology, the other two variables: Underlying Sharia' Principles and Training have significant on Product Knowledge of employees. Furthermore, chi-square test was used to analyze the association between selected demographic factors and IFB usage intention. The findings of this study have shown that, except for educational level, all other demographic factors found to have an insignificant on IFB adoption intention.

2.3 RESEARCH GAP

- Based on the foregone review of literature at international level Researchers have identified and investigated several factors considered as relevant in influencing customers as well as attracting them towards the adoption of the products and services. These studies have revealed that though there are some determinant factors common to many countries, there are also factors which are unique to each country due to social, cultural, economical, technological, political, religion and other factors. Furthermore, the study environment of the international researches were on Moslem-dominated and or Arab countries; therefore, it could be difficult to implement policy recommendations of the respective researches directly in to the Ethiopian context. This, study, therefore, attempts to fill this research gap by investigating the major factors faced by service providers and users of IFB products and scope of service provided by Ethiopian banking through IFBW.

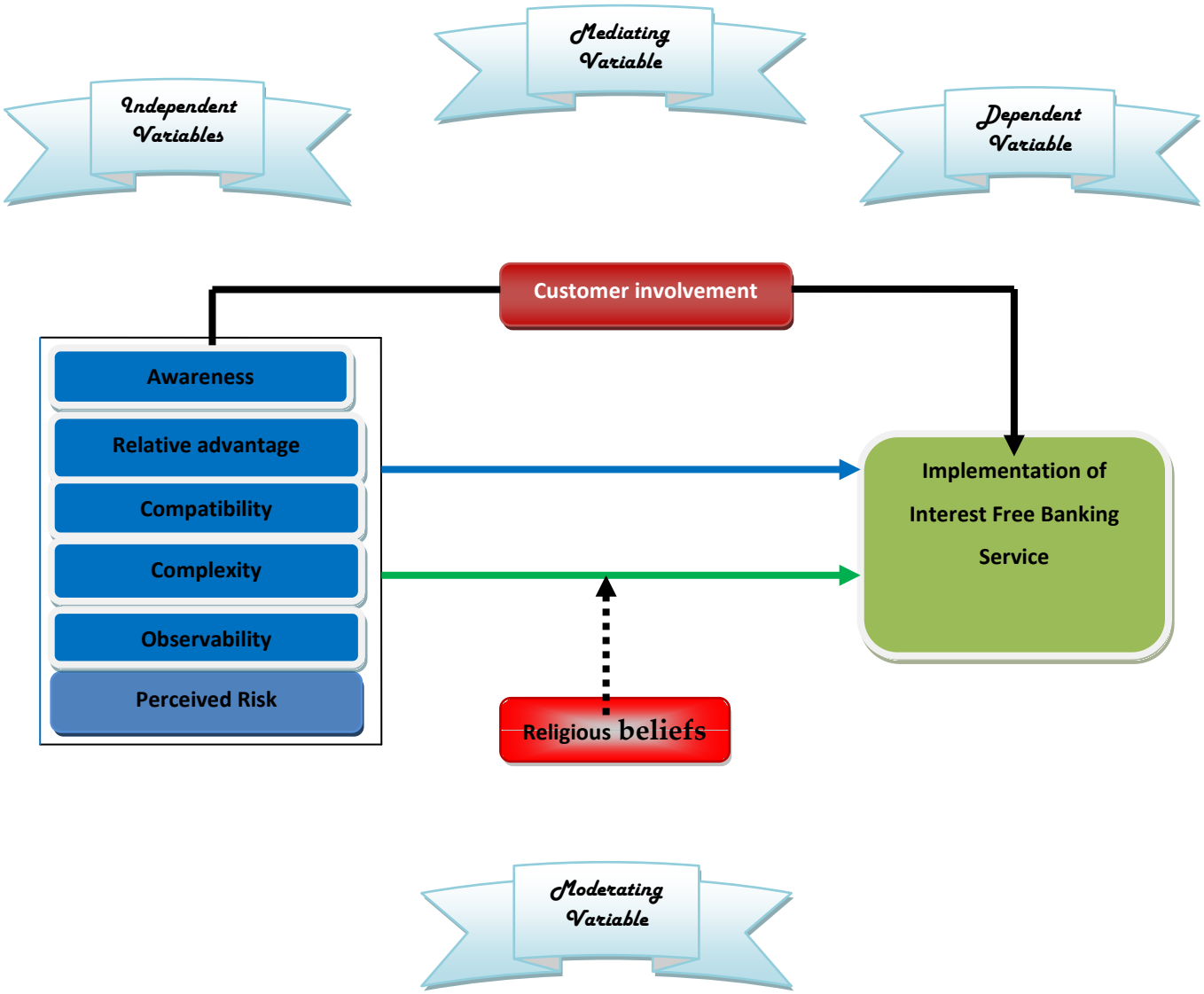
- Interest free banking is an infant stage in Ethiopia banking industry is not a well studied area, through; few studies were conducted on the attributes of IFB. Debebe (2015) has conducted a study on "Factors Affecting Customers to Use Interest Free Banking in Ethiopia". The study is centered on "customer" intention and willingness to use interest free banking". On the other hand Teferi's (2015) study is about "Contribution of IFB to economic development and its prospect in Ethiopia". While little research has been limited to the Prospect and challenges of introducing Interest free Banking in Ethiopia" (Mohamed, 2012; Akmel, 2015; Teferi, 2015 & Kerima, 2016). Finally Determinants of Customers' Intention To Use Interest Free Banking Products And Factors Affecting Employees' Product Knowledge June 2017. Thus, none of the above studies have addressed the factors that affect the implementation of Interest free Banking products and service in Ethiopia.
- To best of my knowledge, there is no earlier work in the country in context of Interest free banking which tries to model proper implementation of interest free banking service based on the Innovation Diffusion Theory (IDT). Additionally, the researcher modified this model by introducing two relevant factors: customer involvement and religious belief.
- There is, no study so far has tested the mediating s of customer involvement and moderating of religious belief with the framework of IDT model by employing Structural equation modeling (SEM). This study therefore intends to investigate the factors affecting the implementation of Interest free banking Window services in Ethiopia and to recognize those factors that need more consideration to develop Interest free Banking in Ethiopian economy.

2.4 CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Based on the existing theories and ideas in the literature, the research formulated an inclusive research framework.

2.4.1 CONCEPTUAL FRAMEWORK

Figure 2.4.1-1 Schematic Diagram modified IDT conceptual framework showing relationships between variables



Source: - Self extracted based on the literature review.

N.B Items encircled with Blue colors are the original constructs of IDT.

2.4.2 HYPOTHESIS DEVELOPMENT

2.4.2.1 THE PROPOSED RESEARCH MODEL

From Several theories this paper will discuss Rogers' Diffusion of Innovation theory/model which was selected for the main research study. Rogers' Innovation Diffusion Theory is known as one of the most useful models concerning adoption behavior prediction in different area of social science context studies. Diffusion of Innovation model affords the ability in which different scholars inspect the way a new innovation, expand among diverse individuals groups (Anuar et al., 2012). In view of that, whereas Rogers is working on 5th edition of his text, more than 5200 adoption and diffusion studies in multiple contexts. Particularly, this Diffusion of Innovation model has been empirically experienced in an extensive number of researches associated to new innovations (Hernandez et al., 2009). Hence, Rogers (2003, 1995) believed that five characteristics of an innovation (relative advantage, complexity, compatibility, trialability and observability) are the most important determinants of adoption rate of an innovation. These five attributes are known as crucial factors concerning acceptance, usage and adoption behavior of latent adopters (Liao and Lu, 2008, Kim and Park, 2011, Hameed et al, 2012).

Additionally, these innovation attributes have been used in different framework solely or incorporation with other models as the important indicators of adoption decision rate in multiple adoption area including, online shopping adoption intention (Vijayasarathy, 2004), internet banking adoption (Nor et al., 2010), smart phone adoption (Chen et al., 2009), electronic grocery shopping adoption (Verhoef and Langerak, 2001) and mobile payment usage intention (Kim et al., 2010). Moreover, Rogers (2003) emphasized that from 49 to 87 percent of the variance in innovation adoption rate in different innovations studies has been elucidated by these five characteristics.

Besides, many researchers have used the IDT in a modified form to suit their frame work. In addition to these sex variables awareness has been included in the framework. Limited awareness or uninformed customers on the attributes of Islamic banking service can be a pertaint factor that restricts the adoption of Islamic retail banking in Malaysia (Dusuki and Abdullah, 2007; Rosely,2008; Thambiah et al 2011a.,). The most closely similar (Thambiah, Ismail, Ahmed and

Khim, 2013; and Sani Yahaya, Ibrahim Abdul Hamid, Ahmad Fauzi Bin Idris, Yusuf Haji-Othman, 2016),was modified the model by including Customer awareness and customer involvement with latter being a moderating variables as well. Moreover, Kotler and Armstrong (2003) and even Rogers (2003) have stressed that adoption of an innovation begins with awareness. Perceived risk was considered important due to the nature of the Islamic banking products. The factor was first suggested by Bauer (1960) as cited in Ostlund (1974). And since then perceived risk was considered as important variable in consumer adoption of an innovation. Many studies therefore have incorporated perceived risk in their studies (Gerrard & Cunningham, 2003; Zhao, Koenig-Lewis, Hanmer-Lloyd, & Ward, 2010). However, due to the intangible attributes of banking products and services perceived trail ability and observability was excluded from the study. The nature of banking products and services it does not allow for prior trail ability but is experienced whilst it is produced (Metawa and Almossawi, 1998; Yusof, 1999).

This study uses the six major construct of IDT model, namely, awareness, relative advantage, complexity, compatibility and perceived risk as the most significant factors for an explanation of the rate of innovation implementation (Sadiq Sohail and Shanmugham, 2003). Additionally, the researcher modified this model by introducing two relevant factors: customer involvement and religious believe to investigate its effect on the implementation of interest free banking products and service. Besides, the study also examines the mediating of customer involvement and moderating and s of religious beliefs respectively on the relationship between –Awareness, relative advantage, compatibility, complexity observability and perceived risk and the Implementation of interest free banking services. Below is the proposed research framework.

- **Awareness**

In this study, Awareness was viewed as an attempt to explore how the customers established the knowledge of the products or services of the Islamic bank and to what extent they lacked the information about it. The first stage of adoption of any product or service is the awareness (Rogers, 1963, 2003). It is therefore inconceivable for the implementation of any product to occur without the individual becoming first aware of that product. Hence awareness is indispensable in the adoption process. In fact, awareness is the foundation of usage of the Islamic

banking products and services as it paves the way for arousing the customers' curiosity about Islamic banking and consequently leads to the adoption of the products and services. Without the awareness there would be no initiative from the customer to use the products and the services of an Islamic bank. Lai (1991) identified awareness as a strong factor that guided customer's assessment toward the acceptance or rejection of a particular product. Accordingly, Kotler and Amstrong (2001) opined that creating awareness among the consumers about the product or service remained a key factor in its adoption. Literature reports the linked between variables awareness and customers' acceptance and or adoption of a particular product, services or idea. Some of the studies that established a relationship between awareness and adoption include (Lai, 1991; Naser, Jamal, & AlKhatib, 1999; Rammal & Zurbruegg, 2007).

H1: *There is positive relationship between awareness and implementation of Interest free banking window services.*

- **Relative Advantage**

According to Rogers (2003), relative advantage is the degree to which consumers perceived using a new product or service as better than using its substitutes. The choice of relative advantage in the current study was informed by the fact that literature has revealed its effect related to adoption as consistently significant. For example it was considered as the best predictor of behavioral intention toward adoption of an innovation or its usage (Choudhury & Karahanna, 2008). Relative advantage was found as a greatly significant factor determining the adoption of a new idea (Tornatzky& Klein, 1982). The positive relationship between, perceived relative advantage of an innovation and its rate of adoption was generally advocated by Rogers (2003) and in more specific term, quite array of studies of innovation adoption and usage in different context confirmed the importance of the factor "relative advantage" (Thambiah et al, 2011b, 2013; Gerrard& Cunningham, 2003; Tan &Teo, 2000; Kolodinsky et al, 2004; Choudhury & Karahanna, 2008).

Different groups of scholars in numerous adoption of innovation, product or service researches argued that relative advantage as a perceived attributes of innovation is one of the most extraordinary predictors regarding adoption rate of innovations (Tan and Teo, 2000, Lu et al., 2011, Brown et al., 2003, Tung and Rieck, 2005, Hsu et al., 2007). However, a study by Duan et

al., (2010) proved that relative advantage do not have any significant effect on adoption of e-learning among Chinese students.

The current study would consider relative advantage in the context of economic benefits that covers elimination of interest burden, low bank/administration charges, profit and loss sharing and ethical banking system.

***H2**: There is positive relationship between relative advantage and implementation of Interest free banking window services.*

- **Compatibility**

In this study, compatibility refers to the degree in which the Islamic bank products and services were perceived to be consistence with the customers' belief and values. It is further viewed as the conformity of the banking products and services to human justice, habit of banking and belief of the adopters. Perceived compatibility has been predicted to provide an effect on the innovation adoption. The direct of this variable was reported on individual adoption behavior. Many studies reported the relationship between compatibility and adoption of product or services. The relationship was confirmed mostly as positive and significant. The study conducted by (Agarwal & Prasad, 1997; Al-Ghaith, Sanzogni, & Sandhu, 2010; Echchabi & Aziz, 2012; Thambiah et al., 2010) revealed a positive relationship between compatibility and adoption. It is generally expected that the more compatible an innovation with the individual needs, habit, belief and values, the more likely they adopt it (Rogers, 2003). Hence in accordance with the Rogers model and the extant literature, this study hypothesized that:

***H3**: There is positive relationship between compatibility and implementation of Interest free banking window services.*

- **Complexity**

Complexity refers to the extent to which an innovation is considered by its users as difficult to understand and use (Rogers, 2003). Some innovation tend to be clearly understandable in such a way that the potential adopters find it easy to use while some turn to be difficult and the potential adopter rule it as complex and hence affect its usage in a negative direction. Arts et al (2011) argued that complexity had a positive in the initial stage as the adopters' intent to adopt a certain innovation but the suddenly reverse to a negative one on the actual usage. Most of the studies

found complexity with a significant negative relation with adoption of a particular product or service with exception of Tan and Teo (2000). They reported perceived complexity as not having any remarkable effect on the users' intention toward adoption of internet banking service. Contrary to the finding of Tan &Teo Ostlund, (1974) have earlier found complexity as the most effecting variable on consumer adoption and usage of online service. The American banker (2000) cited in Kolodinsky et al, (2004) reported that one-third of consumers who had signed up for e-banking had stopped using it due to unsatisfactory customer service or the complexity of using the service. The of complexity was further reported by Butt et al (2012) where ambiguity in products and transaction and perceived complex transaction procedure were collectively discovered as the hindrance factors responsible for distancing the non-users of Islamic bank to its products and service.

Perceived complexity affect customers' understanding and hence lead to skepticism on their adoption of a particular products and or services. On this note Thambiah et al (2011b) viewed that the level of understanding could help to reduce customers' perceived complexity. In their study on the role of innovativeness of consumer in relationship between perceived attributes of new products and intention to adopt, Ho and Wu (2011), revealed that lower perception of complexity is strongly associated with higher rate of adoption. In another dimension, Thambiah et al., (2010) surveyed customers' perception on Islamic retail banking in Malaysia. They compared between urban and rural customers and the findings indicated how varied the two groups were. The respondents from the rural group perceived Islamic bank products as complex, hence affected their participation negatively. A similar conclusion was arrived at by Akbar et al (2012) where they posit that the customers of Islamic bank in UK were hesitant concerning its advantage due to the perceived complexity. This study therefore intends to test the perceived complexity as it affects Ethiopian banking customers and hence the hypothesis to be tested is:

***H4**: There is a negative relationship between complexity and implementation of Interest free banking window services.*

- **Observability**

According to Rogers (2003) observability is the degree to which results of using an innovation could be visible to other people. According to Lin and Chen, (2012), observability is associated to visibility of doing well other practices and cases. While, some ideas, products or services are

easily observed by other group of people, however some types of these innovations are not easy to be observed by other individuals (Thambiah et al., 2011b). It should be noted that, per se observability do not signify benefits or advantage of an innovation, but it would be able to help latent users to assess the potential benefits of adoption; meanwhile, perceived observability will be able to confirm key outcome which stimulate motivation of adopters to receive latent profit of new innovation (Meuter et al., 2005). Bank consumers who adopt Islamic banking as new innovation may suppose that they have participated in novel method of implementing their banking activities. Accordingly, they may consider themselves in a more suitable technological and social situation. Lee et al., (2011) point that perceived observability has significant positive effect on usage intention e-learning service among Taiwanese business employees. In addition, Wei and Zhang (2008) revealed that Chinese rural respondents who have further optimistic insight relating to observability of services of mobile phone would adopt it faster. In Islamic banking adoption studies, it will be likely that bank clients perceive it is easy to elucidate and form evaluative feedback to other possible users concerning Islamic banking services usage benefits which would lead to adoption of these Islamic services.

***H6**: There is positive relationship between observability and implementation of Interest free banking window services.*

- **Perceived risks**

Perceived risk has been defined as the nature and the amount of the uncertainty faced by the consumer in his effort to make use of a particular product or service (Cox & Rich, 1964). Islamic banking does not accommodate interest which conferred risk on one side at the detriment of the other. Trading is permitted but interest was banned and as such there should be risk sharing in trade and investment. For a client to claim a benefit in the form of return as propagates by the Islamic principle, he should equally assume some risk (Ghayad, 2008; Kamarulzaman & Madun, 2013). Perceived risk therefore plays an important role in trade and investment decision of Islamic banking consumers.

Researches in different contexts reveal the of perceived risk on the consumer decision (Gerrard & Cunningham, 2003; Ostlund, 1974; Zhao et al., 2010). For example, Zhao et al, (2010) in their study, online banking services adoption in China; investigated the effect of perceive risk and found it as having a significant negative on the online banking services adoption. Unlike in

conventional banking where the depositors assume less risk due to the prior knowledge of the return, Islamic banking depositor faces a relatively high risk as the amount to be earned is not known rather depends on the outcome of the business. Thambiah et al (2011b) noted that the basic nature of Islamic banking products and services makes it more risky to the eyes of the potential adopters as of using it tend to be invisible to the clients in the short-range. Whereas customers of Islamic banks face high risk due to the uncertainty arising from the business, and which is inversely proportionate to the rate of adoption Rogers, (2003), they also have a better chance of gaining high return compared to the conventional bank customer who receives a fixed return no matter what the business or investment achievement was. Perry &Rehman (2011) noted that in conventional system the capital of the financial institution is at risk before that of the depositors. But in Islamic financial institutions the reverse seems to be the case. This, according to Thambiah et al, (2011b) affects the level of confidences of the users of Islamic banking products and services.

The predictive power of risk on the consumer behavior could be better understood through examining the various categories of risks and how they relate to the particular product and or service intended by a consumer. Low perceive risk increases the chance of customers' acceptance of a particular product and service while high perceive risk reduces the chance of the acceptance and this formed the rational of established link between the perceive risk and adoption of a product or service (Srivastava & Sharma, 2011). Hence, researchers have identified several risks dimension in relation to financial products to have includes; psychological, financial, operational and performance risks (Kaplan et al, 1974; Howcroft, Hamilton & Hewer, 2007; Srivastava& Sharma 2011). Performance risk according to (Harton, 1975) cited in Srivastava & Sharma (2011), is defined as the loss incurred when a product does not perform as expected. And financial risk refers to the economy outlay that may be lost if a product does not perform adequately (Grewal et al, 1994) cited in Srivastava& Sharma, (2011). In dealing with Islamic banking product and services, the customer may be concern with the business outcome in the line of the investment he participates. This study would be concerned with financial and performance risk based on uncertainty and trust.

H5*: There is negative relationship between perceived risk and proper implementation of Interest free banking window services.*

- **Consumer involvement**

Islamic banking is principles based on the embargo on interest payment or receipt founded in religious adherence rather than economic motives (Ghannadian & Goswami, 2004), and this form the major separation between the two banking system. Though the main difference between Islamic banking and conventional banking is interest-based business or Usury in the later, the extent of customer involvement could be another important variation between the two parallel banking systems. in spite of the increasing number of researches on consumer and financial products and services, the understanding of consumer behavior remained limited in this context (Aldlaigan & Buttle, 2001). This implies that getting acquainted with the factors influencing the customers' usage of the variety of financial products and services is crucial not only to the practitioners but also to academicians; and hence the level of Customer involvement was suggested as one of the essential elements in discovering the usage of financial products and services (Aldlaigan & Buttle, 2001).

The importance of involvement is well established in the consumer research and marketing literature for more than two decades (Michaelidou & Dibb, 2008). It has a crucial role in prediction of consumer behavior (Beatty, Homer, & Kahle, 1988). Though there was no consensus on the comprehensively unified definition of the concept consumer involvement, Zaichkowsky, (1985), there was agreement in categorizing it to lower involvement, and higher involvement (Michaelidou & Dibb, 2008; Zaichkowsky, 1985). This because the involvement can vary according to frequency and duration (Howcroft, Hamilton, & Hewer, 2007) and perhaps due to the different dimensions it is being applied. The multidimensionality of the concept was explained by many researchers. For example, the term involvement as suggested by different scholars may be with product, with purchase and or with advertisement (Krugman, 1962; Howart & Shelt, 1969; Hupter & Gardner, 1971; Clark & Belk, 1978) which was classified in three categories as enduring, situational and response involvement (Michaelidou & Dibb, 2008).

Customer involvement was studies on different consumer products (Espejel, Fandos, & Flavián, 2009; Filieri, 2013) and in financial product (Aldlaigan & Buttle, 2001; Beckett et al., 2000). Thus, the present study determined to investigates its effect on the customer involvement both as Independent variable as well as a potential mediating variable between the attributes (Relative

advantage, compatibility, complexity perceived risk and Observability) and implementation of IFB products and services.

The capability of the variable as both independent and moderating variable was tested in previous studies (Fatima & Razzaque, 2013; Srivastava & Sharma, 2011). Encouragingly, Aldliagan & Buttle, (2001) recommends for studying customer involvement in financial services and investigating its s on bank customer behavior. This study therefore proposed to extent its usage on the Islamic banking products and services adoption.

Customer involvement in Islamic banking reflects the principles upon which the bank was founded i.e. prohibition of interest in all forms and resorting to profit and loss sharing. In this way bank finance the business of the client as enterpriser engages the resource in to business venture or alternatively bank serves as the enterprises and in any way the outcome of the business is shared. This reflects the Islamic view that the burden of loss or failure should not be directed entirely to one party except otherwise where one of the parties was found wanting. This arrangement results in a balanced distribution of income thereby preventing monopolizing the economy by the capital provider (Aliyu, 2012). This study would use customer involvement in the context of purchase involvement and products involvement.

H7*: Customer involvement has a positive effect on implementation of Interest free banking window services.*

- **The Mediating Role of Customer Involvement**

There has been very little empirical study testing of rmediating variables through which, customer involvement affect the different types of implementation.

Dr. Yun-Chin Huang, Dr. Feng-Ming Liu (2017) examined customer involvement mediates the relationship between brand equity and customer loyalty. The participants for this research were selected as the consumers having the shopping experience for smart phone in Taiwan, resulting in 182 individual surveys for this research. The results supported hypothesis and revealed brand equity and customer involvement had significant and positive relationship with customer loyalty, while customer involvement has partial indirect on customer loyalty in path analysis.

A study conducted by Johra Fatima (2013) investigates different roles (antecedent, mediator and moderator roles) of customer involvement in rapport and satisfaction. It is also designed to reveal the comparative effect of three types of relational benefits (confidential, social and special

treatment benefits) on customer involvement. Design/methodology/approach – Structural equation modeling (using Amos) is used for analyzing the data, collected from a survey of 212 sample respondents of the private commercial banking sector. FindingsResults suggest that customer involvement does have antecedent and mediated effect on rapport-satisfaction link while the moderation effect of customer involvement is not supported. In contrast, social treatment benefit is found as the most important relational benefit for developing customer involvement in Bangladesh followed by confidence and special treatment benefit. Consequently, the researcher developed the following hypothesis.

H7a*: Customer involvement will have a mediating role between awareness and implementation of Interest free banking window services.*

H7b*: Customer involvement will have a mediating role between relative advantage and implementation of Interest free banking window services.*

H7c*: Customer involvement will have a mediating role between perceived compatibility and implementation of Interest free banking window services.*

H7d: *Customer involvement will have a mediating role between perceived complexity and implementation of Interest free banking window services.*

H7e: *Customer involvement will have a mediating role between perceived complexity and implementation of Interest free banking window services.*

H7f: *Customer involvement will have a mediating role between perceived risk and implementation of Interest free banking window services.*

- **Religious beliefs**

Kirkpatrick (2005) expressed religion as psychological connection, dominant emotional relationship to things. Religion is a cause, principle, or a system of beliefs, practices held to with ardor and faith. Islamic bank has a spirit and philosophy of Islam, regarding interest-free transactions and risk sharing. Metawa and Almossawi (1998) found the religion as the main factor affect customer perception in the selection of Islamic banking system and not the yield on their investment. In addition he found religiosity is ranked highest factor affecting selection criteria followed by profitability. In UK, the volume of deposits of Muslims in Islamic financial institutions in primarily effectd by religious reasons (Omer, 1992).The same finding is supported

by Othmen and Owen (2001); Walkhid and Afrita (2007): Haron et al (1994), where religion is major influential factor of IB adoption.

Conversely, a Jordan based study found that religion did not play significant role to adopt an Islamic bank, but profit driven criteria was an important factor to choose a bank (Erol, C. and El.B. Radi, 1989). Regarding the Islamic banking selection criteria most of the customers have adopted Islamic banking due to the religious reasons, but there are some other factors that motivate the customers for the adoption of the Islamic banking system such as, bank efficiency in the transaction, their confidentiality to its customers, its working hours etc. (Khattak and Rehman., 2010). Studies by Hegazy (1995) on Egypt, Naser et al., (1999) on Jordan, Kareem and Afiff (2006) and Rohmah (2006) on Indonesia and Dusuki and Abdullah (2007) on Malaysia are agree with the findings that religiosity is not the main reason for people to support Islamic Banks. Marimuthu et al., (2010) taking Muslims and non-muslims as sample population concluded that cost-benefit, service quality, convenience and effectd by friends are more important variables than religion in selection criteria. Hasan et al. (2012), concluded "religious motives is the second most influencing construct when customer go for selecting Islamic Banks". Thus, the present study determined to investigates its effect on the implementation of Islamic bank products and service both as Independent variable as well as a potential moderating variable between the attributes (Relative advantage, compatibility, complexity observability and perceived risk) and implementation of interest free banking products and service.

H8: *There is positive relationship between religious belief and implementation of Interest free banking window services.*

- **The Moderating effects of religious belief**

The study conducted by Seethaletchumy Thambiah, Hishamuddin Ismail, Elsadig Musa Ahmed and Aye Aye Khin(2013) examined the moderating of religious beliefs, difference against the intention to use Islamic Retail Banking (IRB) products and services in Malaysia. Thirei study comprises of eight independent variables: Customer awareness of IRB, relative advantage, compatibility, complexity, uncertainty, observability, promotional efforts and perceived information quality. Their findings reveal religious reasons are still instrumental in influencing the intention to use IRB products and services to certain extend. Based on the findings, although, religion does not significantly moderates all the factors, obviously there seemed be a certain

degree of interaction with customers' perceived relative advantages, compatibility, complexity and the willingness to use IRB products and services. Therefore, religious reason could be the contributing factor for the Muslim banking customers in particular to perceive IRB products and services as fair and economically advantages, a banking system instilled with religious principles. Contradictingly, for the non-Muslims since IRB products and services are new, it is perceived as complex. Therefore, it affects their intention to use IRB products and services. However, these studies neglected to examine the moderating of religious beliefs on awareness, relative advantage, perceived compatibility, perceived complexity, observability and perceived risk of attributes and implementation of IFB service. Thus, the following hypotheses were tested in this study:

***H8a**: Religious beliefs moderate the relationship between awareness and implementation of Interest free banking window services.*

***H8b:** Religious beliefs moderate the relationship between relative advantage and implementation of Interest free banking window services.*

***H8c:** Religious beliefs moderate the relationship between perceived compatibility and implementation of Interest free banking window services.*

***H8d**: Religious beliefs moderate the relationship between perceived complexity and implementation of Interest free banking window services.*

***H8e**: Religious beliefs moderate the relationship between observability and implementation of Interest free banking window services.*

***H8f**: Religious beliefs moderate the relationship between perceived risk and implementation of Interest free banking window services.*

CHAPTER THREE

3. RESEARCH METHODOLOGY

This chapter presents the underlying principles of research methodology and design. The purpose is to choose the appropriate research method for the study. Keeping the purpose of this study, the researcher has adopted both quantitative and qualitative approach. Conducting mixed methods research involves collecting, analyzing, and interpreting quantitative and qualitative data in a single study or in a series of studies that investigate the same underlying phenomenon (Onwuegbuzie & Leech as cited in Debebe, 2015). The study employed descriptive research based on survey and the data are of cross sectional type to construct an empirical finding on the implementation of interest free banking service in Ethiopia with particular reference to CBE.

3.1 RESEARCH PURPOSE

Research can be categorized into different types depending on the nature of the purpose or research problem .The purpose of the academic research can be exploratory (ambiguous problem), descriptive (aware of problem), or explanatory (clearly defined problem) (Yin, 1994; Zikmund, 2000). Saunders et al. (2000) argue that more than one purpose can be employed in a study Yin (1994) highlights that the boundaries between the categories are not always clear.

- **Exploratory Research**

According to Zikmund 2000, exploratory research is conducted to clarify and research a better understanding of the nature of the problem. Consequently, exploratory research is appropriate to use when there is little prior knowledge of the problem researched. Exploratory study is a valuable means of founding out “what is happening; to seek new insight; to ask questions and to assess phenomena in a new light” .The purpose of the exploratory research is to provide insight and understanding, not conclusive evidence. Saunders and Thornhill (2003) argue that exploratory research is advantageous because it is flexible and adaptable to change. An explorative investigation is appropriate when research problem is instructed and difficult to delimit. (Erikson and WiedersheimPaul, 1999).

Descriptive Research

The objective of the descriptive is to "portray an accurate profile of a person, event or situation" (Robson, 1993), and may be an extension of, or forerunner to, a piece of exploratory research. Zikmund (2000) elucidates descriptive research as, when research problem is known but the researcher is not fully aware of situation. When a particular phenomenon of the nature is under study, it is understandable that research is needed to describe it, to explain its properties and inner relationship (Huczynski and Buchanan, 1991). According to Zikmund (2000), descriptive research will answer who, what, where and how questions and not give any explanation for the cause of the findings.

Explanatory Research

The emphasis of explanatory researches is on studying a problem or a phenomenon in order to establish causal relationship among variables (Saunders et al., 2000). Explanatory research is sometimes referred to as causal research (Zikmund, 2000). Normally, Exploratory and descriptive research is conducted first and then explanatory research tries to establish and explain patterns related to phenomenon of interest (Saunders et al., 2000). The starting point of our research purpose is the research problem, what is the Factors Affecting the Implementation of Interest Free Banking Service in Ethiopia, depending on research problem literature review has been conducted in order to specify research questions and construct framework. The research purpose and research question reveal that this study is both descriptive and explanatory type.

3.2 RESEARCH DESIGN

Research Design refers to the framework into which the research fits depend on the theory and nature of the research problem. This will underpin all of the research activities (Walliman, 2006). According to Creswell (2009), there are three research designs. These are – Qualitative, Quantitative, and Mixed designs. Quantitative research approach has two types of research design – Survey and Experimental (Creswell, 2009). A survey design provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population. From sample results, the researcher generalizes or makes claims about the population (Creswell, 2009, p. 137). Moreover, qualitative data was collected directly from the source

(Observations, Interviews & document analysis). This study aims to find out and analyze the factors affecting the implementation of Interest Free Banking Service, on sample basis so that the results can be generalized to the population i.e. to CBE's customers in Addis Ababa. Therefore, this study used quantitative research design.

3.3 DATA SOURCE

Basically there are two sources of information used for research purposes – primary and secondary sources. Primary sources are those in which require to conduct a new survey for gathering information at different levels with regard to the inquiry. Secondary sources are those which are made available or have been collected for other research purposes (Adams, Khan, Raeside, and white, 2007).

In order to meet the objective of this study, the researcher have used various secondary sources in a bid to understand the afore stated determinants including books, journal articles, various postgraduate studies, academic conference proceedings, the web particularly Google Scholar, Emerald, Science Direct, NBE report and internal documents of the CBE like IFB - Divisions Procedure and Training documents of the bank. So as to analyze the of the identified factors, primary data is collected from selected customers of the CBE in Addis Ababa.

3.4 STUDY AREA/ORGANIZATION

In research methods, population is the entire aggregation of items from which samples can be drawn. In this study, the target population is comprised of customers of commercial banks in Addis Ababa, Ethiopia. CBE is a state-owned institution established in 1942 and it is the biggest bank in the country. It currently has over 1,225 branches nationwide constituted in 15 districts. It provides both conventional and IFB products and services to its customers. The bank has started providing IFB services since October 28, 2013. The bank provides these products through its selected 906 branches and has over 820,400 customer accounts with total deposit amount of Birr 8.5 billion, as of March 31, 2018.

3.5 TARGET POPULATION

The study target populations were CBE IFB account holders of IFB windows. Customers are targeted because they are the main stakeholders for which the IFB service is to be implemented; therefore IFB account holder of bank clients in Addis Ababa city would be considered as sample frame of current research although The bank's districts are divided into two: Addis Ababa districts and outlying districts with a total number of 15 districts. The Addis Ababa city districts are four in number while the outlying districts are eleven. The Addis Ababa city districts of the bank are considered for this research, which has 400 branches in its domain. On the other hand, the number of branches offering IFB services in these four districts stood at 317 branches.

3.6 SAMPLING METHODS AND SAMPLE SIZE

3.6.1 SAMPLING METHODS

It is extremely important to choose a sample that is truly representative of the population so that the inferences derived from the sample can be generalized back to the population of interest. Improper and biased sampling is the primary reason for divergent and erroneous inferences (Bhattacherjee 2012, pp, 66).

By using appropriate sampling techniques which best suites the purpose and situation, sampling has been performed to select representative sample from sampling unit from branch, customer population. This study used multistage sampling techniques (both probability and non-probability techniques) to reach at the specific respondents. As stated above, the districts are selected on a purposive base which we can consider them as strata. The same technique was employed by previous researches (Debebe, 2015; Kerima, 2016; Abraham, 2017) Thus, here we have four strata.

3.6.2 SAMPLE SIZE DETERMINATION

Determining sample size is a very important issue because samples that are too large may waste time, resources and money, while samples that are too small may lead to inaccurate results.

Sample size of branch from the districts and of respondents-customer has been determined using the following techniques and the detail is presented as follows.

3.6.3 BRANCH SAMPLE SIZE

A method developed by Carvalho (1984) has been used to determine the branch sample size. This sampling technique has been used by; (Kerima, 2016; Abraham, 2017) while determining sample size of bank's branch. The researcher has used bank's March 31, 2018 report to obtain the total branches in Addis Ababa districts and accordingly as of this date there were 317 branches that have IFB windows.

Table 3.6.3-1: Sample size determination

N	51-90	91-150	151-280	281-500	501-1,200	1,201-3,200	3,201-10,000	10,001-35,000	35,001-150,000
Small	5	8	13	20	32	50	80	125	200
Medium	13	20	32	50	80	125	200	315	500
Large	20	32	50	80	125	200	315	500	800

Source: Carvalho (1984)

Therefore, based on Carvalho sample size determination method the researcher has selected a large sample size which is 80 branches of CBE with IFB windows in Addis Ababa districts from the population of 317 bank's branches wherein the larger number is considered to increase the accuracy of the data. Since the number of branches in each stratum is different, the researcher was used proportional computation to the size of each stratum, that is to determine the number of branches from each district, the proportion of each district's branch in relation to the total number of branches has been considered. Thus, the numbers of branches from the respective districts have been computed as follows.

Table 3.6.3-2: Number of Sample IFB offering Branches from Each District

No.	Name of Addis Ababa Districts	Number of Branches (N) in each District	Proportion (in percentage)	Number of sample branches (n) in each District
1	East Addis	75	24%	18
2	North Addis	72	23%	16
3	South Addis	76	24%	18
4	West Addis	94	30%	28
Total		**317**	**100%**	**80**

Source: Own Computation from CBE - MIS data March 31/2018.

After determining the appropriate number of sample branches from each district, simple random sampling method has been used and 80 branches have been selected with highest number of customers given priority to collect data from respondents (Appendix E).

A. Customers' Sample Size

Sample size determination is an important element in any survey research. According to Israel (2009), there are four strategies to determine sample size – using a census for small population, using the sample size of similar studies, using published tables like the table of Krejcie and Morgan (1970), or using formulas to calculate a sample size.

For instance, Krejcie and Morgan (1970), using a formula, came up with a table for sample size determination. According to them, for a population greater than 1,000,000 and confidence level of 95%, the sample size should be 384. According to Hair, Anderson, Tatham, and Black (1998) a sample size between 200 and 400 is usually acceptable as critical sample size for attitude studies.

In order to determine number of sample from the population of customers, the formula form the book of Kothari (2004) has been used for finite population. This sampling method is also used by (Debebe, 2015) and (Abraham, 2017). Accordingly, the minimum sample size is $n = Z^2.p(1-p).N /e^2 (N-1) + Z^2.p(1-p)$ where n is sample size, N is total population size, p is estimated variability

in the population, z is standard error associated with chosen level of confidence and e is the acceptable errors.

The sample size of IFB account holder customers is determined in accordance with the following assumptions: proportion (p) equals to 50%, this is the safest possible assumption, the confidence level of 95% which corresponds to Z -value of 1.96 and an error or precision (e) of 5% and N is 190,126 from 317 branches. Given the above assumption, the sample size is estimated by: $n = Z^2.p(1-p).N/e^2(N-1)+Z^2.p(1-p)=1.96^2(0.5)(1-0.5)(190,126)/(0.05)^2(190,126-1)+1.96^2(0.5)(1-0.5)=384$ Therefore, minimum sample size for this research should be 386. Moreover, since the number of customers in each district is different, the researcher will use proportional computation in order to get the number of respondents (customers) from the respective district, as shown below;

Table 3.6.3-3: Number of Sample IFB - Customers from Each Addis Ababa districts

No.	Name of Addis Ababa Districts	Number of Customers (N) in each District	Proportion (in percentage)	Number of sample customers (n) in each District	Number of sample branches (n) in each District	Number of sample customers from each selected branches
1	East Addis	19,695	10%	40	18	2
2	North Addis	25,371	13%	51	16	3
3	South Addis	19,222	10%	39	18	2
4	West Addis	125,838	66%	254	28	11
Total		**190,126**	**100%**	**384**	**80**	

Source: Own Computation from CBE - MIS data March 31, 2018.

Finally, convenience sampling method was used to collect data from the sample of 384 customers/respondents. Convenience sampling is a non-probability sampling technique in which a sample is drawn from that part of the population that is close to hand, readily available, or convenient. Thus, in the selected branches questionnaire was distributed to customers on a walk in basis i.e. questionnaire is given to a customer who just arrived to get the service until the expected number of sample from the selected branch has been satisfied.

In general, for the purpose of this study the researcher has used Multi stage sampling technique and 384 IFB customers from 80 IFB offering branches have been sampled and data were collected accordingly.

Table 3.6.3-4: Summery of the proposed Sampling Unit, Sample Size Determination and Sampling Techniques

Sampling Unit	Sample Size Determination	Sampling Techniques
Commercial Bank of Ethiopia	-	Purposive
Addis Ababa Districts	-	Purposive
Number of sample branches	Carvalho (1984)	-
Selection of branches from each district	-	Simple Random sampling
Number of sample branches in each District	-	Quota Sampling
Number of sample customers	$Z^2.p(1-p).N / e^2 (N-1) + Z^2.p(1-p)$	-
Selection of customers from sample branches	-	Convenience sampling
Number of sample customers in each District	-	Quota Sampling

3.7 DATA COLLECTION METHOD

There are two kinds of data sources, primary and secondary sources. This study has used both sources to obtain data

3.7.1 PRIMARY DATA COLLECTION

A questionnaire was designed for sampled customers of Commercial Bank of Ethiopia in the Addis Ababa districts. The questionnaire was developed based on previous empirical literature and its consistency is tested using Cronbach Alpha. Closed ended questionnaires were used for the study. To ensure the content validity of the questionnaire used to assess each constructs depicted in Appendix A, all items regarding the measurement of constructs were adapted from previous studies and carefully reworded to fit the mobile banking adoption context in Ethiopia. The close-ended questions were developed on a five point Likert scales ranging from 5 (strongly agree) to 1 (strongly disagree). The questionnaire began with an introductory statement, which

specified the purpose of the research as purely academic. Respondents were encouraged to be objective in their responses since they were assured of confidentiality.

3.7.2 SECONDARY INFORMATION

The study used secondary data that is obtained from Books, journal articles, various post graguate study, Google Scholar, Emerald, Science Direct, CBE's procedures, MIS data.

3.8 DATA ANALYSIS

Data Analysis, particularly in case of survey or experimental design, involves estimating the values of unknown parameters of the population and testing of hypotheses for drawing inference. Analysis may be categorized as descriptive analysis and inferential analysis (statistical analysis). Descriptive analysis is largely the study and description of one variable (Kothari, 2004). Inferential analysis is used to analyze the relationship between two or more variables and to assess how the independent variables explain the dependent variable (Bisrat, 2015). Unlike descriptive analysis, with inferential statistics, conclusions to be reached extend beyond the immediate data alone (Trochim, 2000). For the study at hand, descriptive and inferential analysis was used to see the relationships on variables.

Data analysis of the study involves several stages. The first stage involves data screening process and tests to satisfy multivariate assumption. The purpose of this stage is to test whether the data is suitable to be used for the purpose of statistical analysis. After passing the first stage, the second stage is to do exploratory factor analysis to identify the underlying structure of the variables involved (Hair, Tatham, Anderson, & Black, 2006). In the third stage, the data is run using structural equation model (SEM). SEM is a well-known method to analyze a survey data. It is a statistical methodology that takes a confirmatory approach to the analysis of a structural theory bearing on some phenomenon (Byrne, 2001) and a comprehensive statistical approach to testing hypotheses about relations among observed and latent variables (Hoyle, 1996). Nowadays, SEM is used by social, behavioral and educational scientist as well as biologists, economists, marketing and medical researchers. The advantage of this approach is that it is able to estimate measurement model and structural model simultaneously. The measurement model is done using validity factor analysis in order to validate measurement scale of a construct (Hair et

al., 2006). Variables that pass this analysis test are then applied to structural model analysis in order to examine the relationships between the endogenous variables and the exogenous variables of the study.

To establish the relationship between the independent variables and the dependent variable of the study, an inferential analysis which involved multiple regressions, a coefficient of determination, and correlations analysis were involved.

3.9 MODEL SPECIFICATION

The following model was formulated for this research in order to test the research Hypothesis.

IMP= f (AWS, REA, CPT, CPX, OBV, PCR, REB, CIN)

$IMP= \beta_o + \beta_1 AWS + \beta_2 REA + \beta_3 CPT + \beta_4 CPX + \beta_5 OBV + \beta_6 PCR + \beta_7 REB + \beta_8 CIN + \varepsilon$

(Where IMP is the dependent variable of the respondents' perception of the "implementation of IFB services"; AWS, REA, CPT, CPX, PCR, REB and CIN represent the independent variables (AWS – Awareness, REA – Relative Advantage, CPT – Compatibility, CPX – Complexity, OBV - Observable, PCR – Perceived Risk, REB – Religious Belief, CIN – Customer Involvement); and ε denotes the error terms. Moreover βo = intercept/constant, $\beta_{1\text{-}8}$= slope coefficients,)

3.10 MEASUREMENT OF CONSTRUCTS

The main goal of this study is to find out the factors affecting the implementation of interest free banking from customer point of view. As we mentioned before survey is the strategy of this research. Based on extended literature review we have developed an appropriate research construct which had been validated in prior studies. Following table presents constructs and their corresponding measurements sources used for questionnaire.

Table 3.10-1: Conceptual definition of constructs

Constructs	Conceptual Definition	Number of Items	Source of Questionnaire Items
Implementation (IMP)	Refers Successful application of interest-free banking into a conventional system. (Researcher's own Definition)	6	*(Self-developed by the researcher)*
Awareness (AWS)	Awareness was viewed as an attempt to explore how the customers established the knowledge of the products or services of the Islamic bank and to what extent they lacked the information about it	7	*Bashir (2012) Fada, et al., (2012); Gerrard and Cunningham (1997)*
Relative Advantage (REA)	Referred to the Islamic banking users subjective evaluation of the benefit brought to them by the Islamic bank (products and services) they used as against the conventional banking	5	*Yahaya et al,(2016) Bashir (2012), Alam et al. (2012), Faisal et al. (2014)*
Compatibility (CPT)	Refers to the degree in which the Islamic bank products and services were perceived to be consistence with the customers' belief and values	5	*Yahaya et al, (2016) Gounaris and Koritos(2008), Jansson (2011)*
Complexity (CPX)	Refers to the extent to which an innovation is considered by its users as difficult to understand and use (Rogers, 2003)	5	*Yahaya et al,(2016) Mansumitrchai and Chiu (2012)*
Observable (OBV)	Defined as the degree to which results of using an innovation could be visible to other people.	4	*Taib et al., 2008; Amin et al., 2011; Ali et al., 2015*
Perceived Risk (PCR)	Defined as the nature and the amount of the uncertainty faced by the consumer in his effort to make use of a particular product or service (Cox & Rich, 1964)	5	*Yahaya et al, (2016) Laroche et al. (2004)*
Religious Belief (REB)	Refers to the role of religion in affecting one's choices and activities. (Amin et al., 2011)	4	*Amin et al. (2011) Hanzaee et al, (2011), Salleh et al., 2014)*
Customer Involvement (CIN)	Involvement is viewed as the degree of interest and the general importance that the customers attached to the products and services and his/her feeling of being committed and part of the Islamic banking.	6	*Yahaya et al,(2016) Awan et al. (2011) Varki & Wong, (2003) Mittal & Lee, (1989) and Flynn, Goldsmith & Eastman, (1996)*

3.11 ETHICAL CONSIDERATIONS

As suggested by (Trochim, 2000; Sekaran, 2006), the researcher has ensured the strict adherence of the following ethical conducts:

- Respondents take part in the research voluntarily and data was collected based on the consent of the individual.
- The purpose of the research was clearly explained to respondents.
- Information provided by respondents was treated with strict confidentiality and the researcher ensured that participants will remain anonymous throughout the study.
- There was no misrepresentation or distortion of the actual data collected from respondents.

CHAPTER FOUR

4. RESEARCH FINDINGS AND DISCUSSIONS

The purpose of this chapter is to present finding which were collected from the actual questionnaire survey data analysis according to the research methodology discussed in the previous chapter. Accordingly, descriptive analysis of respondents' profile, descriptive analysis of implementation IFB service, correlation analysis and inferential analysis of customer's data by making use of Structural Equation Modeling and multiple regression models respectively is presented and discussed. At last, a detailed discussion on research hypotheses, in light of similar studies, was also presented.

4.1 SAMPLE AND RESPONSE RATE

It is likely that data may not fully collect if the instrument is questionnaire. Test for non-response bias needs to be conducted if there are questionnaires distributed but not collected. The sample size of this study was 384, however, for contingency purpose, a total of 415 questionnaires were distributed to the customers of the Commercial bank of Ethiopia which 401 were retrieved and 368 found valid for further analysis (response rate of 95.8 %). Moreover, two questionnaire responses with critical values above 137.6 Mahalnobis Distance (MD) were considered as outliers and excluded from further analysis. Therefore, 366 questionnaires, which are 95% of the sample size, found to be valid for further statistical analysis.

4.2 QUESTIONNAIRE PILOT TESTING

In business research, a questionnaire is a common tool used to collect data. This questionnaire should be piloted. The pilot test aims to refine the questionnaire to ensure that respondents have no problems answering the questions. It assesses, also, the validity and reliability of the questions (Saunders et al., 2009). A pilot study should be undertaken for pre-testing the questionnaire.

A pilot study was conducted prior to the beginning of the full study. The objectives of the pilot study were to establish that the respondents understand the questions in the survey, to solicit feedback for improvements to the instrument. The responses showed the general ease of completion of the questionnaire, and there were no comments or improvement suggestions from

the respondents. Therefore, no further adjustments were needed. In addition, a reliability test was conducted to examine the internal consistency of the instruments employed in this study.

4.2.1 VALIDITY

Validity is the strength of conclusions, inferences or propositions. It involves the degree to which one is measuring what is supposed to be measured; more simply, validity is the accuracy of measurement (Adams et al., 2007).

There are four types of validity commonly examined in research undertakings and these are Internal, External, Construct and Conclusion Validity. Internal validity refers to the approximate truth about inferences regarding cause- or causal relationships (Trochim, 2000). Thus, internal validity is only relevant in studies that try to establish a causal relationship. External validity refers to the ability to generalize the results of the study to other settings (Adams et al., 2007). Construct validity refers to the degree to which inferences can legitimately be made from the operationalizations in the study to the theoretical constructs on which those operationalizations were based (Trochim, 2000).

In order to ensure the validity of this study and data collection instrument, the following actions are taken:

1. Developing the questionnaire from the relevant literature
2. By applying Confirmatory Factor Analysis (CFA) the construct validity was assessed with due attention.
3. A pilot survey was conducted on randomly selected 50 customers by making use of the questionnaire developed for this study in order to ensure that the questionnaire is appropriate and statements are generally understandable.
4. The questionnaire was translated to Amharic by professional translators

4.2.2 RELIABILITY

Reliability is the statistical measure of the equivalence, consistency, and stability of the survey instrument (Sekaran, 2006). Reliability can be determined by three different ways: test-retest, alternate forms, and internal consistency.

According to Trochim (2000), among the four estimates of reliability, internal consistency reliability is the widely used one. Internal Consistency Reliability used to assess the consistency of results across items within a test. In internal consistency reliability estimation, single measurement instrument administered to a group of people on one occasion to estimate reliability. In the reliability of the instrument can be judged by estimating how well the items that reflect the same construct yield similar results (Trochim, 2000, p. 97).

There are variety of internal consistency measures that can be used including average Inter-Item Correlation, Average Item Total Correlation, Split-Half Reliability and Cronbach's Alpha (Trochim, 2000). Cronbach's Alpha is the most common measure of internal consistency. It is most commonly used on multiple Likert-scale questions in a survey questionnaire to determine if the scale is reliable (Lund Research Ltd, 2007).

In Interpreting Cronbach's Alpha, George and Malley (2003, cited in Matkar) provide the following techniques:

Table 4.2.2-1:Cronbach"s alpha reliability coefficient

Cronb	α >0.8	0.8≤ α	0.7≤α	0.6 ≤	0.5≤α	α < 0.
consistency	Excellent	Good	Acceptable	Questionable	Poor	Unacceptable

In order to achieve Cronbach's alpha, the study may use a smaller sample (Ahmed 2014). Therefore, 58 initial questionnaires was delivered to and collected from four Addis Ababa districts office in order to obtain some assessment related to the questions' reliability and validity. 50 usable questionnaires were returned (a response rate of 86 %.). This was an acceptable response rate according to Saunders et al. (2009) who recommended that a 30% response rate was reasonable for questionnaires delivered and collected for pilot test.

This study used the following three criteria to evaluate reliability: First, Cronbach's alpha ought to be above 0.70 (Hair et al., 2010). Second, corrected item-total correlations ought to be retained if the value not less than 0.35 (Netemeyer et al., 2003). Correlated item-total correlations should not be less than 0.3 (Bernstein, 1994).This value revealed the extent to which, within a scale, an item correlated with the other items. It was employed to determine the items which ought to be retained in a scale to support construct validity. For better reliability, this study used 0.35 as

cutoff point. Third, inter item correlation should not exceed 0.8 for all pairs of items (Bernstein, 1994).

As can be seen in Table 4.1 shows that the measure of IMP & AWS began with 6 &7 items respectively. Two of each item was dropped because their correlated items total correlations were 0.24 & 0.30 respectively which is below 0.35. Hence, Cronbach alpha for IMP and AWS were 0.815 & 0.877 respectively. CPT & CPX began with both 5 items, each of 1 items were dropped because their correlated item total correlations were below 0.35 as a result; Cronbach alpha for CPT & CPX was 0.812 & 0.757 respectively . REB & CIN dropped three items for similar reason and Cronbach alpha for REB & CIN was 0.799 & 0.893 respectively. REA and PCR retained all of their items since their items satisfied all criteria.

Table 4.2.2-2 Instrument Reliability

Constructs	No. of items proposed	No. of items dropped	No. of items retained	Cronbach's Alpha
Implementation of IFB services (IMP)	6	2	4	0.815
Awareness (AWS)	7	2	5	0.877
Relative Advantage (REA)	5	-	5	0.825
Compatibility (CPT)	5	1	4	0.812
Complexity (CPX)	5	1	4	0.757
Observable(OBV)	4	1	3	0.830
Perceived Risk (PCR)	5	-	5	0.845
Religious Belief (REB)	4	1	3	0.799
Customer Involvement (CIN)	6	3	3	0.893
Total Scale Reliability	43	10	33	0.899

4.3 DESCRIPTIVE ANALYSIS

In the questionnaire (see Appendix A), section I, was designed to capture some basic demographic details of the respondents involved in this study. And section II was designed to capture data on Implementation of IFB service and Awareness, Relative advantage, compatibility, complexity, Perceived Risk, Religious Belief and Customer involvement.

4.4 DEMOGRAPHIC INFORMATION OF THE RESPONDENTS

Demographics are characteristics of a population that are used in research exercise such as the one included in this dissertation (Pennsylvania State University, 2006). The demographic information was included in the questionnaire in order to ensure that valid and useful results were obtained and to ensure that the respondents were fairly representative of stakeholders that is customer base. Personal and demographic information such as gender, age, education level, Occupation and income status are presented in the following table (Table 4.4-1).

Table 4.4-1: summarizes the demographic Profile of the respondents.

Variables	Categories	Frequency	Percent
Gender of Respondent	Male	241	65.5
	Female	127	34.5
Age of Respondent	less than 30 years	236	64.1
	30-45 years	102	27.7
	46 and Above	18	4.9
	Missing	12	3.3
Educational Level Respondent	Primary School	21	5.7
	Secondary School	70	19.0
	Diploma and Equivalent	71	19.3
	BA/BSC	173	47.0
	Masters Degree	19	5.2
	Others	8	2.2
	Missing	6	1.6
Occupation of Respondent	Government Sector	154	41.8
	Private Sector	126	34.2
	Self Employed	59	16.0
	Others	24	6.5
	Missing	5	1.4
Monthly Gross Income of Respondent	Below Birr 2000	60	16.3
	Birr 2000-4999	127	34.5
	Birr 5000-6999	85	23.1
	Birr 7000-10000	45	12.2
	Above Birr 10000	43	11.7
	Missing	8	2.2

There were considerably more males than females, with the majority of respondents' age was below the age of 30-year accounts for 64.1% of the total respondents followed by the age group

30-45 which comprise 27.7% of valid responses and the rest 4.9% respondents were 46 year and above. Descriptive analysis illustrates Majority of respondents are Graduate and Employed. Furthermore, nearly 50% of the respondents have Income level below Birr 5,000.

4.5 DATA ANALYSIS: ASSESSING THE QUALITY OF DATA

4.5.1 ASSESSING THE SAMPLE SIZE

The researcher adopted Exploratory Factor Analysis (EFA); Confirmatory Factor Analysis (CFA) to reach the final research results. The sample size affected the accuracy of all the statistical estimates. Many researchers suggested rules of thumb for sample size minimums which relied on the number of measured variables. For example, the cases/parameter ratio should be 5:1 (Bentler and Chou, 1987; Kline, 2011), 10 or 15: 1 (Garson, 2009). The sample size should involve at least 100 to 200 cases in order to conduct structural equation modeling (Loehlin, 2004). The cases/parameter ratio was 5.37: 1 which is almost 5:1 and it is in between 5:1 and 10:1 plus the sample size used for this study was 366 which are suitable for performing the EFA; the CFA; and the structural model.

4.5.2 ASSESSING COMMON METHOD BIAS

Common method bias assumes that a single factor explains the majority of variance. Researchers rely on the same respondent who provides information about all the variables (Podsakoff et al, 2012). Common method bias is a problem because it is considered to be a main source of measurement error which has a negative on the validity of the measure (Podsakoff et al, 2003). Due to the method bias, correlations are inflated (Meadeet al, 2007). This study investigated this method because of using one questionnaire to measure all constructs. The unrotated factor analysis showed that the first factor accounted for 20.44% of the total variance. Therefore, the results suggested that there were no common variable since its value was not above 50 % (Podsakoff et al, 2012) to threaten the data to be analyzed further (see Table 4.5.2-1).

Table 4.5.2-1: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.564	20.442	20.442	7.564	20.442	20.442	4.382	11.842	11.842
2	4.992	13.491	33.934	4.992	13.491	33.934	3.907	10.559	22.402
3	3.708	10.023	43.956	3.708	10.023	43.956	3.551	9.597	31.998
4	3.016	8.152	52.109	3.016	8.152	52.109	3.143	8.495	40.493
5	2.325	6.285	58.393	2.325	6.285	58.393	3.034	8.199	48.692
6	1.831	4.948	63.342	1.831	4.948	63.342	2.718	7.346	56.038
7	1.715	4.636	67.978	1.715	4.636	67.978	2.441	6.598	62.636
8	1.592	4.303	72.281	1.592	4.303	72.281	2.389	6.457	69.093
9	1.033	2.792	75.073	1.033	2.792	75.073	2.213	5.980	75.073
10	.749	2.023	77.096						
11	.640	1.729	78.826						
12	.606	1.637	80.463						
13	.584	1.579	82.041						
14	.545	1.473	83.514						
15	.498	1.345	84.860						
16	.477	1.290	86.150						
17	.430	1.163	87.312						
18	.386	1.042	88.355						
19	.367	.991	89.346						
20	.342	.925	90.271						
21	.335	.906	91.177						
22	.317	.857	92.033						
23	.301	.813	92.846						
24	.297	.803	93.649						
25	.270	.730	94.379						
26	.252	.681	95.060						
27	.249	.674	95.735						
28	.240	.649	96.384						
29	.220	.596	96.980						
30	.211	.571	97.551						
31	.192	.518	98.069						
32	.181	.489	98.558						
33	.163	.441	98.999						
34	.153	.414	99.413						
35	.126	.340	99.753						
36	.063	.170	99.923						
37	.029	.077	100.000						

Source: Survey Result (2018)

4.5.3 ASSESSING MISSING DATA

Although the data were collected from a probability sample, the missing data procedure was conducted for more accurate and statistically valid data, even though the findings are ignorable according to Hair et al. (1998). The reasons were; first, a probability sample approach is likely to cause missing data. Second, with likert scale rated items it is quite possible to have missing data issues, but missing data were not considered as a vital problem, especially with 10% of missing values (Coleman, 2011). On the other hand, missing data may cause the following two negative s on the research results: (1) it may produce biased estimates' and (2) it reduces the model's fit (Ahmed 2014).

With the above being stated, the result of the missing data analysis in SPSS 23 revealed that there were no missing data in this study. This can be explained by the hard, careful work and time put into collecting usable questionnaires. Please refer to Appendix B for an illustrative table of missing data analysis findings by questionnaire items, which indicate the completeness of data within the regarded usable surveys. After assuring clarity of the entered data, a more detailed descriptive analysis was conducted in the next section of the study.

4.5.4 ASSESSING THE OUTLIERS

Outliers are extreme values which are either on one or a set of variables (Tinsley and Brown, 2000). Outliers can cause negative s on data analysis. For example, data can contain collinearities and non-normality which can lead to negative variance estimates (Brown, 2006). These s can deform statistical results which cannot be generalized. Outliers can occur as "a result of an error in the data file (e.g., entry of an incorrect value), a programming error (e.g., an error in recoding or transforming variables or a failure to identify missing data values correctly), or the presence of a valid but exceptional data point" (Tinsley and Brown, 2000).

Outliers' findings are categorised into two types; first, outliers that have cases with unusual values for only one variable, called univariate outliers; second, outliers that have cases with an unusual mix of values for more than one variable, called multivariate outliers (Field, 2009; Pallant, 2010).

In order to find univariate outliers, the researcher used the frequency distributions of z scores. If the Z score is greater than 3.29 with p< .001, it indicates that there is a univariate outlier (Tinsley and Brown, 2000). Accordingly, based on the previous rule, there were some outlier cases (2.62% of the data point) in this study.

There are two common techniques of dealing with outliers namely trimming and winsorizing. Trimming is eliminating data points from analysis usually done when data is out of range or entry error and winsorizing is assigning outlier the next highest or lowest value found in the sample that is not an outlier done when small amounts of scores are legitimate outliers. Trimming or winsorizing less than 5% of the data points will not likely affect the hypothesis testing outcome (Rocky Mountain University, 2015). In order to address these outliers the questionnaires were reviewed to ensure that the data of outliers' cases was entered correctly and there were no data entry errors and winsorizing techniques was applied because all the outliers were legitimate and after that all outliers were completely cleaned from the original data set.

This section, as the second part of the outliers'assessment, focuses on the steps that were followed to assess the second type of outliers, multivariate. The multivariate outliers analysis was achieved by employing the criterion that the D2 (Mahalanobis distance) value should be p< 0.005 as recommended by Kline (2010). The cases with P1 value < 0.005 were removed, from the data set to improve the normality and suitability of the data. Therefore, the original data set of this study was 366 which means that two cases were removed which was 99% of the original usable collected data.

4.5.5 ASSESSING LINEARITY ASSUMPTION

Linearity defines the dependent variable as a linear function of the predictor (independent) variables. Standard multiple regression can only accurately estimate the relationship between dependent and independent variables if the relationships are linear in nature. As there are many instances in the social sciences where non-linear relationships occur (e.g., anxiety), it is essential to examine analyses for non- linearity. If the relationship between independent variables and the dependent variable is not linear, the results of the regression analysis will under-estimate the true

relationship. This under- estimation carries two risks: increased chance of a Type II error for that independent variables, and in the case of multiple regression, an increased risk of Type I errors (over- estimation) for other independent variables that share variance with that independent variables. If linearity is violated all the estimates of the regression including regression coefficients, standard errors, and tests of statistical significance may be biased (Keith, 2006).

The study conducted curve estimation for all the relationships in the model and all the relationships were sufficiently linear to be tested using a covariance based structural equation modeling algorism.

4.5.6 ASSESSING MULTICOLINEARITY ASSUMPTION

Multicolinearity refers to the assumption that the independent variables are uncorrelated. The researcher is able to interpret regression coefficients as the s of the independent variables on the dependent variables when collinearity is low. This means that we can make inferences about the causes and s of variables reliably. Multicollinearity occurs when several independent variables correlate at high levels with one another, or when one independent variable is a near linear combination of other independent variables. The more variables overlap (correlate) the less able researchers can separate the s of variables (Keith, 2006). If this assumption is not satisfied, autocorrelation is present. Multicollinearity can result in misleading and unusual results, inflated standard errors, reduced power of the regression coefficients that create a need for larger sample sizes (Jaccard et al., 2006; Keith, 2006).

Widely used technique of identifying the existence of multicollinarity is calculating variance inflation factor (VIF) between all independent variables. The VIF is an index of the amount that the variance of each regression coefficient is increased over that with uncorrelated independent variables (Keith, 2006). This assumption can be checked with tolerance and VIF statistics (Field, 2009). According to Landau and Everitt(2004), Variance Inflation Factors (VIFs) above 10 or Tolerances below 0.1 are seen as a cause of concern. In this study Variance Inflation Factors (VIFs) are below 10 and Tolerances are greater than 0.1 In this study Variance Inflation Factors (VIFs) are below 10 and Tolerances are greater than 0.1 (Table 4.5.6-1.).

Table 4.5.6-1 Statistics of Multicollinearity Test

Coefficients [a]

Independent Variables	Collinearity Statistics	
	Tolerance	VIF
Awareness	.940	1.064
Relative Advantage	.761	1.314
Compatibility	.786	1.272
Complexity	.855	1.170
Observablity	.850	1.176
Perceived Risk	.524	1.909
Religious Belief	.873	1.146
Customer Involvement	.552	1.812

a. Dependent Variable: Implementation of IFB services

Source: Survey Result (2018)

On top of using VIF to diagnosis multicollinearity, the correlation matrix of observed variables provides the correlation coefficients between a single variable and the other variables. In this study, the diagonal of this matrix contained 1 because it reflected the correlation between a variable and itself. All correlation coefficients were less than 0.70 and were significant ($p<0.05$) (Ahmed, 2014). Therefore, the data is free from multicollinearity problem.

4.5.7 Assessing Normality Assumption

Normality focuses on the extent to which the sample data distributes according to normal distribution (Hair et al., 2010). The researcher used skewness and kurtosis to evaluate the normality of the observed items. Skewness is "a measure of the asymmetry of the probability distribution of a real-valued random variable". On the other hand, kurtosis refers to "the peaked or flatness of the distribution compared to the normal distribution" (Landau and Everitt, 2003). Values of skewness can be positive, negative, or zero. Skewness's value, which is zero, indicates a perfectly symmetrical distribution, whilst a positive skewness value indicates that the tail on the right side is longer. On the contrary, a negative value refers to left- tailed. On the other hand, a kurtosis value is zero for normal distributions, whilst it is negative for flat distributions (low kurtosis) and a positive value for peaked distributions (high Kortosis).

Finally, to assure the accuracy of the normality test findings, tests of Skeweness and Kurtosis were conducted. These two tests were conducted in similar previous studies (e.g. Tay, 2006) in order to calculate the normality of the raw data. Additionally, the recommendations of Hair et al (1998) were that Skewness and Kurtosis values should range between 2.00 and 7.00, and the recommendations of Kline (2010) were that the Skewness and Kurtosis values should range between +/- 3.0 and +/- 10.0. The data of the present study was regarded as normally distributed based on Kline's (2010) recommendations of since the Skewness and Kurtosis of the current data ranged between -1.31 and 4.88 (see Table 4.5.7-1).

Table 4.5.7-1 Normality of Data Distribution

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Implementation of IFB services	366	-1.283	.128	1.686	.254
Awareness	366	1.497	.128	4.862	.254
Relative Advantage	366	.063	.128	-.456	.254
Compatibility	366	-1.162	.128	1.282	.254
Complexity	366	.998	.128	.899	.254
Observability	366	-1.506	.128	3.691	.254
Perceived Risk	366	.918	.128	.517	.254
Religious Belief	366	-1.316	.128	1.982	.254
Customer Involvement	366	1.089	.128	.607	.254

Source: Survey Result (2018)

4.6 DATA ANALYSIS: FACTOR ANALYSIS

Factor analysis is the oldest and best-known statistical technique for explaining the relationship between a set of observed and construct variables (Tinsley and Brown, 2000; Byrne, 2010). Factor analysis can be used for different purposes. Firstly, through calculating the factor loading, factor analysis can be employed for evaluating the validity of measurements. Secondly, factor analysis can be used to confirm or develop a theory through investigating the observed variables which belong to latent ones (unobserved variables). Thirdly, factor analysis is used to produce a smaller group of latent variables which consist of a larger set of observed variables (manifest variables) (Thompson, 2004; Albright and Park, 2009; Field, 2009).

Factor analyses are divided into two types. Firstly, Exploratory Factor Analysis (EFA) is described as the early stages of research to discover the interrelationships between a set of observed variables (Carrington, 2009). EFA is designed to explore the relationship between observed and latent variables when this relationship is uncertain or unknown. Therefore, it aims to determine the degree to which the observed variables are linked to their fundamental factors (latent variables). It is designed only to suggest and not to confirm groups or dimensions. Secondly, Confirmatory Factor Analysis (CFA) is a more complex set of techniques than EFA which is used to confirm specific hypotheses when the researcher knows that these measures correlate with the latent variable (Carrington, 2009). Based on a theory, the researcher suggests relationships (hypothesized structure) between the observed items and their factors which are tested statistically (Byrne, 2010).

4.6.1 EXPLORATORY FACTOR ANALYSIS (EFA)

EFA aims to obtain a set of dimensions (factors) which explain the structure of the interrelationships (correlations) between items which should relate to each other for the purpose of producing an appropriate structure model (Hair et al., 2010). The EFA's primary objectives are to find the factors, which consist of a set of measures; to discover the strength of the relationship between each factor and each observed measure; and to reduce a data set to a more manageable size whilst retaining as much of the original information as possible (Field, 2009). Using SPSS version 23.00, this study performed EFA and reliability analysis.

According to the results of the univariate analysis, which mentioned all univariate kurtosis and skewness values and supported the univariate normality, the researcher used the principal components method for factor extraction and used Variamax rotation to carry out factor interpretation.

There were, also, two SPSS generated statistical measures to evaluate the factorability of the data. These were: Kaiser-Meyer-Olkin (KMO); and Bartlett's test of Sphericity (Pallant, 2003). The KMO measure of overall sampling adequacy assesses the degree to which indicators are valid or appropriate for factor analysis. A KMO value is between 0 (Factor analysis is likely to be inappropriate) and 1 (Factor analysis yield reliable factors).

Kaiser (1974) recommended that the KMO value might be excellent, great, good, middling and unacceptable (above 0.9, between 0.8 and 0.9, between 0.7 and 0.8, between 0.5 and 0.7 and less

0.5, respectively). In this study, Table 4.5 showed that KMO was 0.836 (great) indicating that this data was suitable for conducting factor analysis or this sample was factorable. Moreover, Bartlett's test of Sphericity tests a null hypothesis; this supposed that the population correlation matrix was an identity matrix. This test depended on the assumption of normality which was proved above. Table 4.5 reported that Chi-Square was 9674.821 with (df = 630, p<0.001) which means that variables were related to one another. Therefore, the study was able to continue to complete the remaining steps of the factor analysis.

Table 4.6.1-1: KMO and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.836
Bartlett's Test of Sphericity	Approx. Chi-Square	9674.721
	Df	630
	Sig.	0.000

Source: Survey Result (2018)

4.6.1.1 Factor Extraction

Factor extraction is concerned with finding “the smallest numbers of factors that can be used to best represent the inter-relations among the set of variables” (Pallant, 2003). The two methods for this issue are as follows.

4.6.1.2 Communality

For any variables, the variances can be divided into two components. These are called common variances which are shared with other variables and the unique variance which is specific to that measure. The communality was interested in common variances (Field, 2009). Therefore, the communality related to how much of the variance in the variables had been explained or was accounted for by the extracted factors. Through the common source with others, the communality estimates a part of the variance in a variable. Low communality (below .5) may lead to its variable being omitted (Thompson, 2004). Principal component analysis starts with 51 variables and common factors. Initially, it assumes that all variances are common. Hence, the communalities equal 1 before extraction. This means that there are common factors which, after extraction, represent the common variance in the data structure. The communalities after

extraction represented the amount of variance in each variable which could be explained by the retained factors. All the variables of in the data were above 0.5 indicating high communality (see in the appendix D).

4.6.1.3 Total Variance Explained

Total variance sets out by using Eigen values (Kim and Mueller, 1978), the aims in determining the number of factors which explain most variances in the data. Eigen values indicate the amount of variance explained by each factor. Eigenvectors are the weights which can be used to calculate factor scores which are called loads. Initially they were 47 variables with 47 Eigen values and nine factors explained 65.90% of the variance but later on these variables were reduced in to 37 because some variables which were unrelated to any of the factors and/or have low loadings were dropped. These nine factors explained 75.073% variance using Varimax rotation to conduct this analysis (see table 4.5.2-1).

4.6.1.4 Factor Rotation

As can be seen Table 4.6.1.4-1 in the appendix contains the rotated factor loadings which related to the correlations between each item and its construct. The loadings reflect the strength of the relationship between a scale item and a particular construct or factor. The higher the loading, the better the representation that particular item has on the factor. Hair et al., (2006) recommended that factor loadings greater than 0.30 are the minimum requirement; loadings of 0.40 are considered more important; and loadings of 0.50 or greater are considered significant. Based on this guideline, items that have factor loadings of lower than 0.50 should be discarded to get items more representatives for their respective factor. The researcher used the option blank (0.50) in order to let SPSS to print only the values greater than 0.50 (Field, 2005). In order to increase the significance of items to their respective factor the researcher used 0.50 as cutoff. Moreover, this technique initially divided the factors into nine factors but later they were reduced in to seven when some variables were dropped because they were unrelated to any of the factors and/or have low loadings (loadings below 0.5). The analysis was performed in an iterative way, until factor extraction rules were met.

As can be seen Table 4.6.1.4-1 in the appendix, under the first factor there are five questions representing REA. Under the second factor there are five questions of AWS. Under the third and

fourth factors there are four questions CPX and IMP each, fifth to nine there are three, four, three three questions respectively which belong toCIN, CPT, REB and OBS respectively In summary, the EFA results in s factors namely REA, AWS, PCR, CPX, IMP, CIN, CPT, REB and OBS, consisting of 5, 5, 4, 4, 4, 3, 4 and 3 questions respectively.

4.6.2 CONFIRMATORY FACTOR ANALYSIS

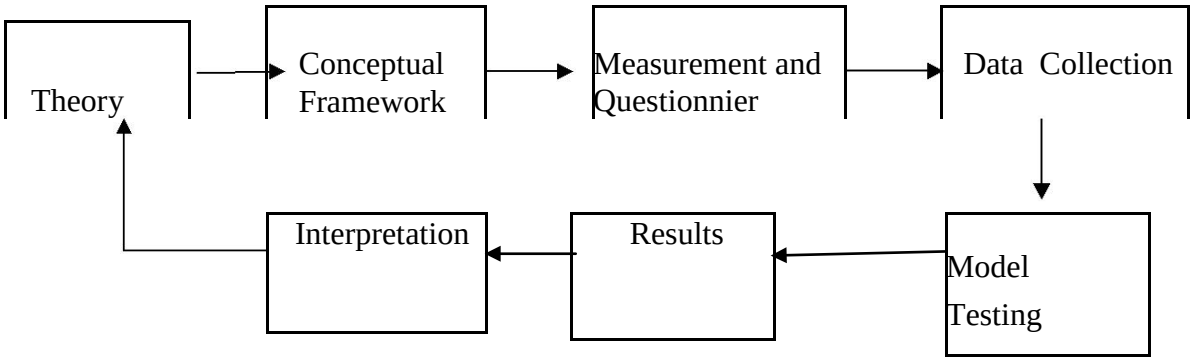
There are broad ranges of analytical tools available to analyze quantitative research results. As a second generation data analysis technique, structural equation modeling (SEM) stands out by offering benefits not provided by first generation statistical techniques such as correlation analysis, exploratory factor analysis, multiple regression, discriminant analysis, analysis of variance or logistic regression (Bagozzi and Yi 2012; Haenlein and Kaplan 2004). SEM has the ability to evaluate latent variables in the measurement model and simultaneously test multiple relationships of latent variables in the structural model. Factor analysis and hypotheses are tested in the same analysis, hence providing a more rigorous analysis of the proposed research model (Gefen et al, 2000).

After identifying the underlying structure using exploratory factor analysis with a method of principal component analysis, confirmatory factor analysis (CFA) through structural equation modelling (SEM) was used to assess construct validity through model fit indices (Tabachnick and Fidell, 2007). CFA demands the presence of a theoretical framework, and an a priori theory based assumption that defines how each variable loads on each factor and vice versa (Byrne 2001). CFA examines the link between factors and their measured variables. Hence, CFA represents what is termed a measurement model (Byrne, 2001). The measurement model is then evaluated for its ‘goodness of fit’to the sample data by statistical means (Byrne, 2001).

Structural equation modeling (SEM) is defined as “a statistical method that takes a confirmatory (i.e., hypothesis-testing) approach to the analysis of a structural theory bearing on some phenomenon”. This theory represents “causal” processes which generate observations on multiple variables (Byrne, 2010). SEM aims to test the relationships between one or more independent and dependent variables by assessing the extent to which the hypothetical constructs are suitable or fit with the obtained data. These variables may be measured (manifest or observed) or latent. The observed variable, such as income, heart rate or weight, is measured directly whilst the latent variable is not measured directly but through two or more observed

variables, for instance, buying behavior or personality (Kline, 2005). In achieving the results, a SEM analysis has many stages (see Figure 4.6.2-1).

Figure 4.6.2-1: The process of SEM results



When researches have complex relationships with multi-dimensions, SEM can test all these relationships simultaneously. SEM is considered to be the only statistical technique to perform this analysis (Hair et al, 2010). SEM is used to test a theory. SEM cannot work properly without prior knowledge. This means that a conceptual framework or relationships between variables must be built based on an extensive literature review (Tabachnick and Fidell, 2001).

SEM employs CFA rather than an exploratory approach to data analysis, and enables better inferential analysis (Hair et al, 2006). Secondly, although hypothesis testing is difficult in most multivariate techniques, SEM offers a less difficult means to test research hypotheses, and enables the analysis of relationships between dependent variables (Kline, 2005). Thirdly, SEM enables explicit estimates of error variance parameters, which is not possible in traditional multivariate techniques (Holmes-Smith, 2007; Kline, 2005).

The SEM method is a powerful multivariate analysis technique which can be used for two purposes. Firstly, similar to factor analysis, SEM provides a parsimonious summary of the interrelationships among variables. Expanding on the potential of EFA, SEM can include CFA that can test specific hypotheses about the structure of the factor loadings and inter-correlations (Holmes-Smith, 2007). Secondly, similar to path analysis, SEM can test hypothesized relationships among constructs with a linear equation system (Weston and Gore, 2006). Both applications mean that the SEM method can simultaneously assess the properties of the

underlying measurement model and test the theoretical propositions. For analytical purposes, the SEM method can be separated into two models: the measurement model and the structural model (Byrne, 2001). The measurement model is concerned with the variables that are supposed to measure the concept or, in other words, the measurement model represents the CFA model, and shows how the latent variables, or constructs, are represented by their respective indicators. As mentioned above, the SEM method thereby adopts a confirmatory approach. The subsequent structural model in SEM describes the relationships between the latent variables, or constructs. Both models together are called the composite, or full, structural model (Weston and Gore, 2006). This study conducted SEM process using Analysis of Moment Structures (AMOS) version 23.0 for both measurement and structural models.

4.6.2.1 MEASUREMENT MODEL

The main purpose of using SEM to assess the measurement model is to find the most parsimonious model which is well fitting and valid. A measurement model is employed to evaluate construct validity in terms of convergent and discriminant validity to discover the extent to which the measures have adequate internal consistency by conducting the necessary tests and the acceptance levels for goodness of fit. The full structural model will then only be valid and reliable when the measurement model is based on theory and well defined constructs, so that the subsequent structural model is based on a solid theoretical foundation (Paschke, 2009).

4.6.2.1.1 CONSTRUCT VALIDITY

Once the factor structure underlying each of the theorized research constructs was determined through EFA, it was necessary to assess construct validity further through CFA before assessing the structural model and testing the research hypotheses (Byrne, 2010; Hair et al, 2010). A critical consideration in using the CFA is sample size. A sample size above 200 is generally considered ‘good’ (Hair et al, 2010). Since the valid sample size for this study is 366, it meets the requirement.

Construct validity assesses the extent to which a set of measured items actually reflect the underlying factor model that those items are designed to measure (Hair et al, 2010). The construct validity focuses on the measurement of individual constructs. Two construct validity assessmentsconvergent and discriminantwas tested. The tests were undertaken for the full

measurement model (Lewis et al, 2005). This section provides an overview of convergent and discriminant validity and reports the results of the construct validity of the measurement model.

4.6.2.1.2 CONVERGENT VALIDITY

Convergent validity measures whether items of the same variable or construct measure the same thing and, therefore, reveal correlations to each other. In CFA, convergent validity measures whether items of the same latent factor share a proportion of variance (Hair et al, 2006). Convergent validity is, therefore, a direct measure of the extent of the relationship between an observed variable and a latent construct. According to Holmes- Smith (2007), convergent validity is achieved when this relationship, represented by factor loadings, is significantly different from zero. To assess the statistical significance of the factor loading, critical ratios and p-values were calculated for each factor loading. Critical ratios outside the -1.96 to +1.96 z-value range and p-values below $p<0.05$ indicate factor loadings that are significantly different from zero. This statistical test of the significant factor loading is the key criterion in assessing factor validity (Holmes-Smith, 2007).

Furthermore, regression weights, standardized regression weights and squared multiple correlations (SMC) can be calculated to assess convergent validity. Standardized regression weights should be above 0.5, with values of above 0.7 optimal (Hair et al, 2006). SMC are squared standardized factor loadings and represent the extent to which a measured variable's variance is explained by a latent factor (Hair et al, 2006). SMC can also be used to assess item reliability. An SMC between 0.3 and 0.5 indicates that the item is a weak but adequate measure of the construct (Holmes-Smith, 2007). An SMC of 0.5 calculates to a standardized loading of 0.7, which indicates that the item reflects the construct very well (Hair et al, 2006; HolmesSmith, 2007).

In sum, convergent validity is assessed through a variety of measures: firstly, with standardized regression loadings of higher than 0.5 (Hair et al, 2006); secondly, with significant p-values (at 95% confidence interval) (Anderson and Gerbing, 1988; Hair et al, 2006) and critical ratios outside the -1.96 to +1.96 z-range; and finally, SMC values below 0.4 are considered not to hold convergent validity. SMC values between 0.4 and .05 were scrutinized and accepted if all other convergent validity measures were well above the recommended thresholds. SMC above 0.5

were accepted. The standardized factor loadings, the critical ratio, p-value and SMC of each item are displayed for the measurement model.

4.6.2.1.3 DISCRIMINANT VALIDITY

Discriminant validity measures to what extent latent variables differ from each other. In contrast to convergent validity, which is a measure within latent variables, discriminant validity is a measure between variables. Discriminant validity can be assessed based on correlations between different constructs. High correlations (above 0.8 or 0.9) between constructs indicate a lack of discriminant validity (Holmes-Smith 2007). In addition to model fit statistics, discriminant validity measures will be presented for the measurement model.

4.6.2.1.4 NOMOLOGICAL VALIDITY

Nomological validity is an association with measures of other constructs that, according to theory, should be related to it; (Cronbach & Meehl, 1955). The relationships between constructs should be reflected in the relationships between measures or observations. It is a form of construct validity which assess the overall model validity. In this research both our convergent and discriminatory validity is established, therefore, the researcher assumes that the model does not violate nomological validity.

4.6.2.1.5 GOODNESS OF FIT

Whether a measurement model is considered valid is dependent on goodness of fit (GOF) indices. GOF indices indicate how well the model reflects the data, in other words, how well the specified model reproduces the covariance matrix among the indicator items (Hair et al. 2006). There are various GOF indicators, although usually only a couple of which are reported. Generally GOF indicators can be grouped into three categories: absolute measures, incremental measures and parsimonious fit measures. To ensure rigor in the empirical assessment, as suggested in the literature (Ho, 2006; Kline, 2005) multiple GOF indices are used. The literature is divided over the amount of fit indices that should be reported (e.g. Kline (2005) suggests at least four), which fit indices are most appropriate, as well as the acceptable cut-off threshold (Hair et al, 2006; Kline, 2005).

This study follows the advice by Weston and Gore, (2006); MacCallum and Austin, (2000); Hu and Bentler, (1998) and McDonald and Ho, (2002) and presents the following fit indices: chisquare, normed chi-square, RMSEA, RMR and CFI.

Table 4.6.2.1.5-1: An Illustration of Recommended Cut off Values of Indices from AMOS.

Category	Indices with Abbreviation	Definition	Cut off values	References
Chi-Square	Chi square (x2)	Difference between observed and estimatedcovariance matrices	p-value of >.05	Abdul Razak and Abduh (2012)
	Degrees of freedom (df)	Covariance in the observed matrix less thenumberof estimated coefficients		
	Probability statistic (p)	Probability that the observed and estimated covariance matrices are actually equal		
	Normed chi-square (x2 /df)	Ration of chi-square to degrees of freedom for a model	≤0.3	Kline,1998
			< 5	Schreiber et al. 2006
Absolute Fit measures	Goodness of fit index (GFI)	Measure indicating how well a model reproducesthe variance/covariance matrices of the observed Sample	≥0.90	Matsunaga,2010
			>0.85	Abdul Razak and Abduh (2012)
	Root mean square error of approximation (RMSEA)	Badness-of-fit index measuring how well a modelfits a population taking into account both modelcomplexity and sample size	<0.10	Matsunaga,2010
			<0.08	Abdul Razak and Abduh (2012)
	Root mean square residual (RMR)	Represents the average residual value derived from the fitting of the variance–covariance matrix for the hypothesized model	<0.05	Hair et al ,1988
			<1.00	Schreiber et al., 2006
Incremental fit	Normed fit index (NFI)	Assesses how well a specified model fits relative to some alternative baseline model (often a null model that assumes all observed variables are uncorrelated)	Values >= .90 and sample size	Hair et al, (2010)
	Comparative fit index (CFI)			
	Tucker-Lewis index (TLI)			
Parsimony fit indices	Parsimony comparative fit index (PCFI)	Evaluates the parsimony ratio of the model compared to the GOF such as CFI and NFI	Values >= .5	Hair et al, (2010)

Source: Hair et al, (2010)

Model Re-specification Considerations: A model is said to be correctly specified when it reproduces the sample covariance matrix well. When instances of specification error are noticed, the critical ratios (t-values), the squared multiple correlations (SMC) values, the standardized residuals and the modification indices (MI) were examined to re-specify the model. SMC values should be greater than 0.5. Standardized residual covariance should also be less than the benchmark value of |4| but preferably less than |2.58| (Hair et al, 2010). A large residual covariance between any two measurement items indicates that the association between these two items is not accounted for sufficiently by the model. This suggests a problem with one or both of the measurement items. A standardized residual value of |2| indicates that a particular covariance is not well reproduced by the hypothesized model (at $\alpha = 0.05$ significance level) and a standardized residual value of |4| relates to $\alpha = 0.001$ significance level. When a consistent pattern of large standardized residuals is associated with either a single item or several of the items within the factor, the necessary re-specification was made to account for this association between the variables, such as by dropping an item and re-running the measurement model (Hair et al, 2010).

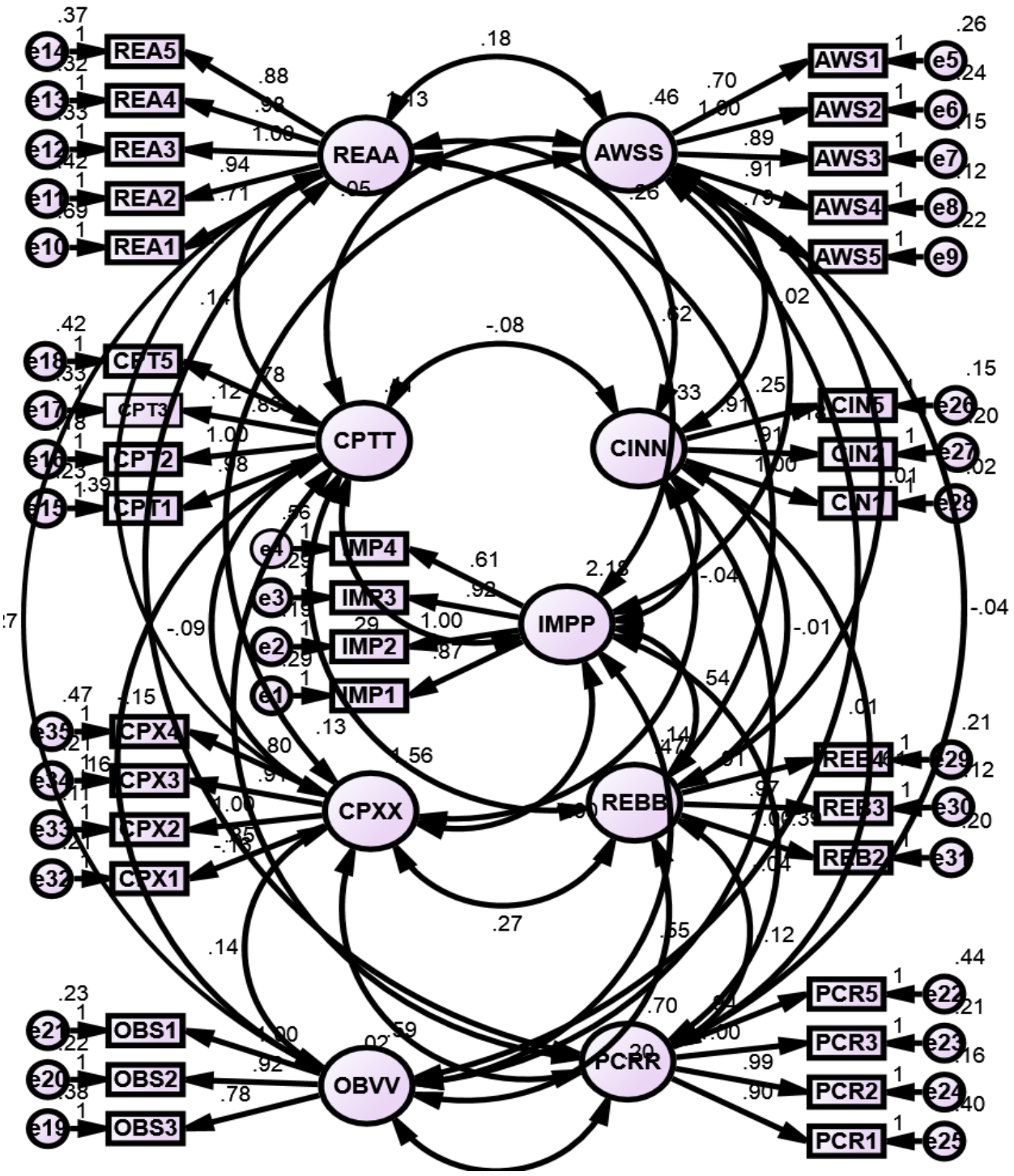
MI also suggests a potential source of model re-specification. A MI is calculated for each nonfree parameter and represents a possible decrease in X2 if the parameter is freely able to be estimated in the re-specified model. A chi-square of 3.84 with one degree of freedom has a p = 0.05 and a MI value greater than |4| suggests that the chi-square could be significantly reduced if the corresponding parameter were estimated. Based on this guideline, this study examined the measurement items that reveal high MI; that is, above |4| (Byrne, 2010; Hair et al, 2010), and made appropriate re-specification to the model.

The measurement model task begins with the final outputs of exploratory factor analysis which consists of latent variables with their respective indicators (observed variables) which are shown in the table 4.6.2.1.5-2 below and drawn in figure 4.4-1 of full measurement model.

Table 4.6.2.1.5-2: Proposed Latent variables and Indicators for EFA

No.	Latent variables (unobserved variables)	Indicators (observed variables)				
1	Implementation of IFB services (IMP)	IMP1	IMP2	IMP3	IMP4	
2	Awareness (AWS)	AWS1	AWS2	AWS3	AWS4	AWS5
3	Relative Advantage (REA)	REA1	REA2	REA3	REA4	REA5
4	Compatibility(CPT)	CPT1	CPT2	CPT3	CPT5	
5	Complexity(CPX)	CPX1	CPX2	CPX3	CPX4	
6	Observable(OBV)	OBS1	OBS2	OBS3		
7	Perceived Risk(PCR)	PCR1	PCR2	PCR3	PCR5	
8	Religious Belief(REB)	REB2	REB3	REB4		
9	Customer Involvement(CIN)	CIN1	CIN2	CIN5		

Figure 4.6.2.1.5-1 CFA result of the proposed CFA Measurement Model.



Source: researcher Amos output (2018)

Figure 4.6.2.1.5-1 presents the CFA result of the proposed CFA Measurement Model

Examination of the GOF statistics is summarized in table 4.6.2.1.5-3 below and the table reveals that the proposed measurement model is inadmissible.

Table 4.6.2.1.5-3: Statistics forProposed CFA Measurement Model.

Chi square		Absolute fit Indices		Incremental Fit Indices		Parsimony Fit Indices	
X^2 (*P* Valu	1366.820 (.000)	RMSEA	0.066	CFI	0.905	PCFI	0.799
Df	525			NFI	0.856		
X^2 /df	2.603	RMR	0.238	IFI	0.906	PNFI	0.755
				TLI	0.893		

GOF indices for the proposed structural model

Items	<---	Variabl	Estimate	S.E.	C.R.	P	SMC	Comment
IMP1	<---	IMPP	0.921	0.024	35.592	***	0.849	Convergent validity holds
IMP2	<---	IMPP	0.960				0.921	Convergent validity holds
IMP3	<---	IMPP	0.930	0.025	36.923	***	0.864	Convergent validity holds
IMP4	<---	IMPP	0.768	0.029	21.114	***	0.590	Convergent validity holds
AWS1	<---	AWSS	0.682	0.050	13.882	***	0.465	Convergent validity holds
AWS2	<---	AWSS	0.811				0.657	Convergent validity holds
AWS3	<---	AWSS	0.843	0.049	18.245	***	0.711	Convergent validity holds
AWS4	<---	AWSS	0.868	0.048	18.921	***	0.753	Convergent validity holds
AWS5	<---	AWSS	0.750	0.051	15.665	***	0.563	Convergent validity holds
REA1	<---	REAA	0.670	0.048	14.801	***	0.448	Convergent validity holds
REA2	<---	REAA	0.839	0.044	21.307	***	0.704	Convergent validity holds
REA3	<---	REAA	0.881				0.776	Convergent validity holds
REA4	<---	REAA	0.878	0.042	23.163	***	0.770	Convergent validity holds
REA5	<---	REAA	0.838	0.041	21.263	***	0.703	Convergent validity holds
CPT1	<---	CPTT	0.793	0.064	15.212	***	0.628	Convergent validity holds
CPT2	<---	CPTT	0.835				0.697	Convergent validity holds
CPT3	<---	CPTT	0.683	0.063	13.101	***	0.466	Convergent validity holds
CPT5	<---	CPTT	0.611	0.068	11.568	***	**0.373**	**Convergent validity doesn't ho**
OBS3	<---	OBVV	0.700	0.057	13.829	***	0.489	Convergent validity holds
OBS2	<---	OBVV	0.836	0.057	16.196	***	0.698	Convergent validity holds
OBS1	<---	OBVV	0.850				0.723	Convergent validity holds
PCR5	<---	PCRR	0.766	0.053	17.858	***	0.586	Convergent validity holds
PCR3	<---	PCRR	0.874				0.765	Convergent validity holds
PCR2	<---	PCRR	0.902	0.042	23.461	***	0.814	Convergent validity holds
PCR1	<---	PCRR	0.764	0.051	17.814	***	0.584	Convergent validity holds
CIN5	<---	CINN	0.939	0.020	45.765	***	0.882	Convergent validity holds
CIN2	<---	CINN	0.918	0.023	40.272	***	0.843	Convergent validity holds
CIN1	<---	CINN	0.991				0.982	Convergent validity holds
REB4	<---	REBB	0.808	0.051	17.722	***	0.652	Convergent validity holds
REB3	<---	REBB	0.888	0.050	19.495	***	0.788	Convergent validity holds
REB2	<---	REBB	0.842				0.708	Convergent validity holds
CPX1	<---	CPXX	0.919	0.023	36.24	***	0.844	Convergent validity holds
CPX2	<---	CPXX	0.967				0.935	Convergent validity holds
CPX3	<---	CPXX	0.928	0.024	37.847	***	0.861	Convergent validity holds
CPX4	<---	CPXX	0.823	0.032	25.23	***	0.678	Convergent validity holds

A row with blank space indicates a default indicator

Model Fit: Inadmissible

Factor Loadings: (* = p< 0.001, ** = p< 0.01, * = p< 0.05)**

Source: Researcher Amos output (2018)

As can be seen in thetable 4.6.2.1.5-3 above, the model fit indices shows, the value of X2/DF is 2.603 which is in the acceptable range (between 1 and 5), RMSEA has a value of .066 which is in the acceptable range (below .08/.1), RMR is .238 which is in the unacceptable range (above .09). CFI, TLI, and IFI values are .905, .893, and .906 respectively and all of these values fall within the acceptable range (above .90). The values of PCFI and PNFI are .799 and .755 respectively and both fall within the acceptable range (above .5). All standardized regression weights (estimates) are significant at p value of below 0.001(as described in ***). The critical ratios of the factor loadings are all significantly different from zero (above 1.96). Standardized regression weights (estimates) all are acceptable range (above .5). On top of that, in order to satisfy convergent validity squared multiple correlations (SMC) are not expected to be below .4 (Holmes-Smith, 2007)and the model shows that the SMC values for only CPT5 is lower than the 0.4 threshold, suggesting a problem of item reliability and convergent validity. Hence, the proposed full measurement model needs to be re-specified. To re-specify the proposed model, CPT5 was deleted from the model and the Amos regression was rerun.

Table 4.6.2.1.5-4: Statistics of Discriminant Validity of Proposed Measurement

Constructs	Factor Correlation (r)	Correlation Squared (r^2)	AVE1, AVE2 AVEs should be > r2		Comment
AWSS <--> REAA	0.244	0.060	0.705	0.675	Discriminant Vaidity Holds
AWSS <--> CPTT	0.133	0.018	0.705	0.597	Discriminant Vaidity Holds
AWSS <--> OBVV	0.015	0.000	0.705	0.682	Discriminant Vaidity Holds
AWSS <--> CINN	-0.03	0.001	0.705	0.763	Discriminant Vaidity Holds
AWSS <--> PCRR	-0.075	0.006	0.705	0.647	Discriminant Vaidity Holds
IMPP <--> AWSS	0.173	0.030	0.656	0.705	Discriminant Vaidity Holds
AWSS <--> REBB	0.013	0.000	0.705	0.735	Discriminant Vaidity Holds
AWSS <--> CPXX	0.138	0.019	0.705	0.739	Discriminant Vaidity Holds
REAA <--> CPTT	0.213	0.045	0.675	0.597	Discriminant Vaidity Holds
REAA <--> CINN	0.228	0.052	0.675	0.763	Discriminant Vaidity Holds
REAA <--> PCRR	-0.159	0.025	0.675	0.647	Discriminant Vaidity Holds
IMPP <--> REAA	0.389	0.151	0.656	0.675	Discriminant Vaidity Holds
REAA <--> REBB	0.344	0.118	0.675	0.735	Discriminant Vaidity Holds
REAA <--> CPXX	0.293	0.086	0.675	0.739	Discriminant Vaidity Holds
CPTT <--> OBVV	0.334	0.112	0.682	0.682	Discriminant Vaidity Holds
CPTT <--> CINN	-0.106	0.011	0.597	0.763	Discriminant Vaidity Holds
CPTT <--> PCRR	-0.307	0.094	0.597	0.647	Discriminant Vaidity Holds
IMPP <--> CPTT	0.333	0.111	0.656	0.597	Discriminant Vaidity Holds
CPTT <--> REBB	0.295	0.087	0.597	0.735	Discriminant Vaidity Holds
CPTT <--> CPXX	-0.094	0.009	0.597	0.739	Discriminant Vaidity Holds
OBVV <--> CINN	-0.034	0.001	0.682	0.763	Discriminant Vaidity Holds
OBVV <--> PCRR	-0.259	0.067	0.682	0.647	Discriminant Vaidity Holds
IMPP <--> OBVV	0.471	0.222	0.656	0.682	Discriminant Vaidity Holds
OBVV <--> REBB	0.372	0.138	0.682	0.735	Discriminant Vaidity Holds
OBVV <--> CPXX	0.141	0.020	0.682	0.739	Discriminant Vaidity Holds
PCRR <--> CINN	0.619	0.383	0.647	0.763	Discriminant Vaidity Holds
IMPP <--> CINN	-0.018	0.000	0.656	0.763	Discriminant Vaidity Holds
CINN <--> REBB	-0.007	0.000	0.763	0.735	Discriminant Vaidity Holds
CINN <--> CPXX	0.101	0.010	0.763	0.739	Discriminant Vaidity Holds
IMPP <--> PCRR	-0.316	0.100	0.656	0.647	Discriminant Vaidity Holds
PCRR <--> REBB	-0.207	0.043	0.647	0.735	Discriminant Vaidity Holds
PCRR <--> CPXX	0.017	0.000	0.647	0.739	Discriminant Vaidity Holds
IMPP <--> REBB	0.538	0.289	0.656	0.735	Discriminant Vaidity Holds
IMPP <--> CPXX	0.545	0.297	0.656	0.739	Discriminant Vaidity Holds
REBB <--> CPXX	0.324	0.105	0.735	0.739	Discriminant Vaidity Holds
REAA <--> OBVV	0.327	0.107	0.675	0.682	Discriminant Vaidity Holds

Source: researcher Amos output

As can be seen in the above table 4.6.2.1.5-4, Discriminant validity refers to the principle that the indicators for different constructs should not be so highly correlated as to lead one conclude that they measure the same thing. A demonstration of discriminate validity used in this study is provided through the comparison of the squared factor correlation outputs of Amos measurement model and AVE scores for each of the pair-wise constructs. Since the AVEs are greater than the values of the Squared Correlation (r^2), the model does not violate the assumption of discriminate

validity, as shown below in detail.

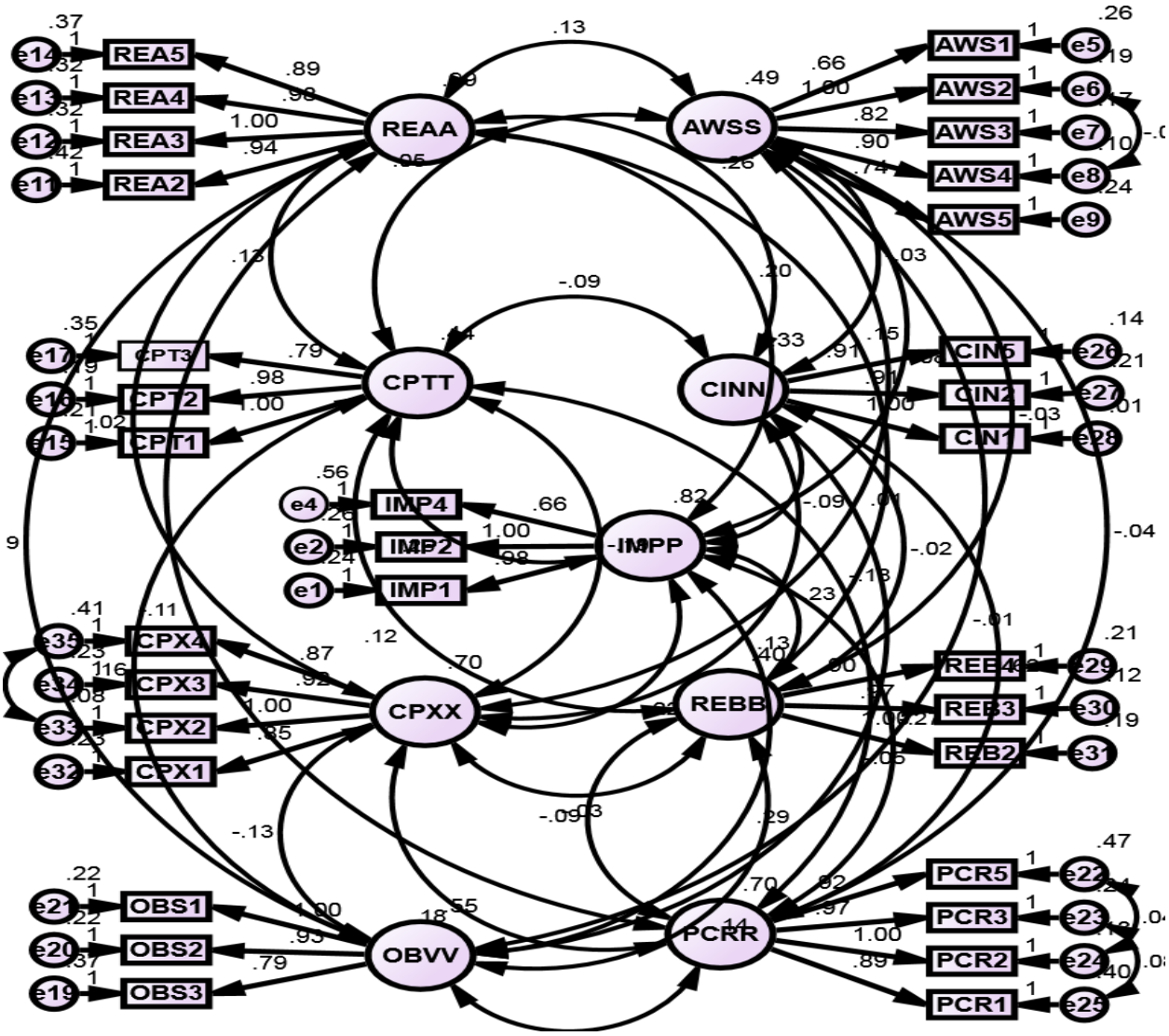
Table 4.6.2.1.5-5 Statistics of Modification Indices for CFA Measurement Model

	M.I.	Par Change
IMPP <--> CPXX	21.21	-0.217
e34 <--> AWSS	4.104	-0.037
e33 <--> e35	9.341	-0.051
e31 <--> CPTT	10.02	-0.051
e31 <--> IMPP	4.555	0.056
e31 <--> e34	4.816	-0.03
e30 <--> AWSS	5.034	-0.035
e29 <--> CPTT	5.25	0.038
e29 <--> IMPP	4.046	-0.054
e28 <--> CINN	5.207	0.03
e28 <--> PCRR	14.597	-0.037
e28 <--> IMPP	15.397	-0.064
e28 <--> e33	5.005	0.017
e26 <--> CPXX	4.164	-0.041
e26 <--> CINN	5.151	-0.039
e26 <--> PCRR	16.831	0.051
e26 <--> IMPP	21.957	0.094
e26 <--> e33	8.403	-0.027
e25 <--> e27	15.787	0.062
e25 <--> e26	4.449	-0.027
e24 <--> CINN	7.12	0.054
e24 <--> e28	21.103	0.035
e24 <--> e27	115.233	-0.121
e24 <--> e26	16.256	0.038
e23 <--> e28	37.133	-0.053
e23 <--> e27	120.929	0.141
e23 <--> e25	13.943	0.065
e22 <--> CINN	8.182	-0.088
e22 <--> e28	6.189	-0.028
e22 <--> e26	6.239	0.035
e22 <--> e24	8.253	0.047
e21 <--> e30	4.843	-0.03
e20 <--> REBB	4.488	0.038
e20 <--> AWSS	8.492	-0.058
e20 <--> e30	8.812	0.039
e19 <--> OBVV	4.193	0.049
e19 <--> CPTT	6.609	-0.054
e18 <--> CINN	4.418	-0.064
e18 <--> PCRR	5.255	0.05
e18 <--> e28	4.176	-0.023
e17 <--> CINN	7.36	0.074
e17 <--> e28	6.549	0.025
e17 <--> e21	8.412	0.055
e17 <--> e18	10.46	0.07
e16 <--> e22	5.066	-0.043
e15 <--> e18	7.639	-0.055
e14 <--> REBB	8.063	0.061
e14 <--> PCRR	7.375	-0.058
e14 <--> e32	4.39	0.037
e14 <--> e29	5.315	0.041
e14 <--> e28	5.408	0.025
e14 <--> e26	4.914	-0.03
e13 <--> CPXX	10.992	-0.113
e13 <--> IMPP	23.337	0.165
e13 <--> e32	8.516	-0.05
e13 <--> e31	6.566	0.044
e13 <--> e29	6.891	-0.046
e13 <--> e28	4.968	-0.024
e13 <--> e26	5.437	0.031
e13 <--> e19	5.805	-0.054
e12 <--> PCRR	8.269	0.06
e12 <--> e22	5.135	0.054
e12 <--> e19	5.008	0.05
e11 <--> CINN	4.69	0.068
e11 <--> OBVV	6.124	0.065
e11 <--> IMPP	6.154	-0.092
e11 <--> e26	4.012	-0.028
e11 <--> e25	5.304	0.054
e11 <--> e22	8.633	-0.075
e11 <--> e13	9.583	-0.072
e9 <--> e20	4.483	-0.031
e8 <--> e35	7.255	-0.042
e8 <--> e33	11.63	0.034
e8 <--> e31	7.571	0.03
e8 <--> e29	6	-0.027
e8 <--> e26	8.996	-0.025
e8 <--> e10	9.256	-0.056
e8 <--> e9	4.833	0.024
e7 <--> e34	4.325	0.024
e7 <--> e33	4.249	-0.022
e7 <--> e28	5.947	-0.017
e7 <--> e26	7.589	0.024
e7 <--> e10	6.435	0.049
e6 <--> e35	8.558	0.059
e6 <--> e33	7.992	-0.037
e6 <--> e32	4.331	0.03
e6 <--> e30	10.589	-0.041
e6 <--> e29	4.58	0.031
e6 <--> e8	5.443	-0.026
e5 <--> REBB	4.37	0.036
e5 <--> e34	7.155	-0.038
e5 <--> e26	4.026	-0.021
e5 <--> e12	8.461	-0.052
e5 <--> e10	8.202	0.067
e5 <--> e7	4.671	-0.026
e5 <--> e6	23.634	0.072
e4 <--> OBVV	4.951	0.064
e4 <--> e21	12.654	0.084
e4 <--> e20	9.386	-0.07
e4 <--> e5	4.168	-0.043
e3 <--> e33	5.828	-0.036
e3 <--> e16	4.289	-0.035
e2 <--> REBB	5.518	-0.043
e2 <--> e28	8.652	-0.027
e2 <--> e26	7.399	0.031
e1 <--> REBB	10.805	0.064
e1 <--> AWSS	11.048	0.072
e1 <--> e31	5.831	0.039
e1 <--> e8	4.108	0.027

Source: researcher Amos output (2018)

Unlike in the structural model, in the measurement model modification indices considered fromcovariance between error terms of observed indicators only within the same latentvariable and having a M.I. of above 4. Table 4.6.2.1.5-5 reveals the existence of covariance having a high M.I. within the same latent variable and these includes e6 with e8, e22 with e24, and e23 with e25 and e33 with e35. Consequently, the measurement model was unacceptable and rerun after deletion of CPT5 and is depicted in figure 4.6.2.1.5-2.

Figure 4.6.2.1.5-2 the Re-specified Structural Model and Final CFA Measurement Model



(Source: researcher Amos output)

Table 4.6.2.1.5-6: Statistics of Final CFA Measurement Model

Chi square		Absolute fit Indices		Incremental Fit Indices		Parsimony Fit Indices	
X^2 (*P* Value)	919.843 (.000)	RMSEA	0.057	CFI	0.940	PCFI	0.803
Df	424			NFI	0.894		
X^2 /df	2.169	RMR	0.034	IFI	0.940	PNFI	0.764
				TLI	0.929		

GOF indices for the proposed structural model

Items	<---	Variable	Estimate	S.E.	C.R.	P	SMC	Comment
IMP1	<---	IMPP	0.877	0.055	17.864	***	0.562	Convergent validity holds
IMP2	<---	IMPP	0.874				0.723	Convergent validity holds
IMP4	<---	IMPP	0.623	0.052	12.785	***	0.903	Convergent validity holds
AWS1	<---	AWSS	0.677	0.047	14.127	***	0.69	Convergent validity holds
AWS2	<---	AWSS	0.849				0.682	Convergent validity holds
AWS3	<---	AWSS	0.818	0.048	17.01	***	0.759	Convergent validity holds
AWS4	<---	AWSS	0.898	0.049	18.230	***	0.610	Convergent validity holds
AWS5	<---	AWSS	0.728	0.05	14.676	***	0.995	Convergent validity holds
REA2	<---	REAA	0.821	0.047	19.7	***	0.841	Convergent validity holds
REA3	<---	REAA	0.87				0.886	Convergent validity holds
REA4	<---	REAA	0.865	0.046	21.393	***	0.582	Convergent validity holds
REA5	<---	REAA	0.825	0.046	19.424	***	0.848	Convergent validity holds
CPT1	<---	CPTT	0.824				0.729	Convergent validity holds
CPT2	<---	CPTT	0.83	0.067	14.562	***	0.559	Convergent validity holds
CPT3	<---	CPTT	0.664	0.063	12.46	***	0.714	Convergent validity holds
OBS3	<---	OBVV	0.692	0.059	13.36	***	0.684	Convergent validity holds
OBS2	<---	OBVV	0.827	0.065	14.157	***	0.479	Convergent validity holds
OBS1	<---	OBVV	0.845				0.440	Convergent validity holds
PCR5	<---	PCRR	0.748	0.049	18.785	***	0.689	Convergent validity holds
PCR3	<---	PCRR	0.854	0.05	19.408	***	0.679	Convergent validity holds
PCR2	<---	PCRR	0.921				0.681	Convergent validity holds
PCR1	<---	PCRR	0.763	0.054	16.43	***	0.748	Convergent validity holds
CIN5	<---	CINN	0.941	0.019	48.829	***	0.756	Convergent validity holds
CIN2	<---	CINN	0.917	0.022	41.701	***	0.674	Convergent validity holds
CIN1	<---	CINN	0.997				0.530	Convergent validity holds
REB4	<---	REBB	0.781	0.057	15.969	***	0.807	Convergent validity holds
REB3	<---	REBB	0.871	0.056	17.24	***	0.670	Convergent validity holds
REB2	<---	REBB	0.826				0.721	Convergent validity holds
CPX1	<---	CPXX	0.831	0.038	22.232	***	0.458	Convergent validity holds
CPX2	<---	CPXX	0.95				0.488	Convergent validity holds
CPX3	<---	CPXX	0.85	0.039	23.173	***	0.763	Convergent validity holds
CPX4	<---	CPXX	0.75	0.053	16.355	***	0.769	Convergent validity holds

A row with blank space indicates a default indicator

Model Fit: Admissible

Factor Loadings: (* = p< 0.001, ** = p< 0.01, * = p< 0.05)**

(Source: researchers Amos output)

Table 4.6.2.1.5-6 reveals that all the model fit indices are within the acceptable range and all observed variables have a convergent validity.

Table 4.6.2.1.5-7 Statistics of Discriminant Validity of Final Measurement Model

Constructs	Factor Correlation (r)	Correlation Squared (r^2)	AVE1, AVE2 AVEs should be > r2		Comment
AWSS <--> REAA	0.242	0.059	0.705	0.675	Discriminant Vaidity Holds
AWSS <--> CPTT	0.133	0.018	0.705	0.597	Discriminant Vaidity Holds
AWSS <--> OBVV	0.023	0.001	0.705	0.682	Discriminant Vaidity Holds
AWSS <--> CINN	-0.027	0.001	0.705	0.763	Discriminant Vaidity Holds
AWSS <--> PCRR	-0.087	0.008	0.705	0.647	Discriminant Vaidity Holds
IMPP <--> AWSS	0.197	0.039	0.656	0.705	Discriminant Vaidity Holds
AWSS <--> REBB	0.018	0.000	0.705	0.735	Discriminant Vaidity Holds
AWSS <--> CPXX	0.159	0.025	0.705	0.739	Discriminant Vaidity Holds
REAA <--> CPTT	0.212	0.045	0.675	0.597	Discriminant Vaidity Holds
REAA <--> CINN	0.232	0.054	0.675	0.763	Discriminant Vaidity Holds
REAA <--> PCRR	-0.159	0.025	0.675	0.647	Discriminant Vaidity Holds
IMPP <--> REAA	0.390	0.152	0.656	0.675	Discriminant Vaidity Holds
REAA <--> REBB	0.343	0.118	0.675	0.735	Discriminant Vaidity Holds
REAA <--> CPXX	0.293	0.086	0.675	0.739	Discriminant Vaidity Holds
CPTT <--> OBVV	0.325	0.106	0.682	0.682	Discriminant Vaidity Holds
CPTT <--> CINN	-0.097	0.009	0.597	0.763	Discriminant Vaidity Holds
CPTT <--> PCRR	-0.312	0.097	0.597	0.647	Discriminant Vaidity Holds
IMPP <--> CPTT	0.325	0.106	0.656	0.597	Discriminant Vaidity Holds
CPTT <--> REBB	0.298	0.089	0.597	0.735	Discriminant Vaidity Holds
CPTT <--> CPXX	-0.101	0.010	0.597	0.739	Discriminant Vaidity Holds
OBVV <--> CINN	-0.030	0.001	0.682	0.763	Discriminant Vaidity Holds
OBVV <--> PCRR	-0.256	0.066	0.682	0.647	Discriminant Vaidity Holds
IMPP <--> OBVV	0.467	0.218	0.656	0.682	Discriminant Vaidity Holds
OBVV <--> REBB	0.369	0.136	0.682	0.735	Discriminant Vaidity Holds
OBVV <--> CPXX	0.133	0.018	0.682	0.739	Discriminant Vaidity Holds
PCRR <--> CINN	0.628	0.394	0.647	0.763	Discriminant Vaidity Holds
IMPP <--> CINN	-0.009	0.000	0.656	0.763	Discriminant Vaidity Holds
CINN <--> REBB	-0.002	0.000	0.763	0.735	Discriminant Vaidity Holds
CINN <--> CPXX	0.115	0.013	0.763	0.739	Discriminant Vaidity Holds
IMPP <--> PCRR	-0.314	0.099	0.656	0.647	Discriminant Vaidity Holds
PCRR <--> REBB	-0.198	0.039	0.647	0.735	Discriminant Vaidity Holds
PCRR <--> CPXX	0.023	0.001	0.647	0.739	Discriminant Vaidity Holds
IMPP <--> REBB	0.533	0.284	0.656	0.735	Discriminant Vaidity Holds
IMPP <--> CPXX	0.540	0.292	0.656	0.739	Discriminant Vaidity Holds
REBB <--> CPXX	0.314	0.099	0.735	0.739	Discriminant Vaidity Holds
REAA <--> OBVV	0.326	0.106	0.675	0.682	Discriminant Vaidity Holds

(Source: researcher Amos output)

As can also seen from table 4.6.2.1.5-7 Ademonstration of discriminate validity used in this study is provided through the comparison of the squared factor correlation outputs of Amos measurement model and AVE scores for each of the pair-wise constructs. Since the AVEs are

greater than the values of the Squared Correlation (r^2), the model does not violate the assumption of discriminate validity, as shown above in detail.

4.6.2.1.6 FINAL RELIABILITY

Once all the measurement factors underlying the research construct have been empirically derived and validated, the instrument is checked for reliability before proceeding with the structural model (Lewis et al, 2005). Reliability assesses how consistent the items measuring a construct are and as such ensures trustworthiness of the measurement instrument. A common statistic for evaluating reliability is the coefficient of internal consistency (Cronbach's Alpha). This statistic should be computed for each of the factors that passed all tests of validity. The recommended and widely accepted threshold in the literature is 0.7 (Hair et al, 2010). 4.6.2.1.6-1 provides the reliability estimates of each of the variables; they are all above 0.7, which satisfies the recommended threshold in the literature. Thus, the measurement instrument is reliable.

Table 4.6.2.1.6-1 Instrument Reliability

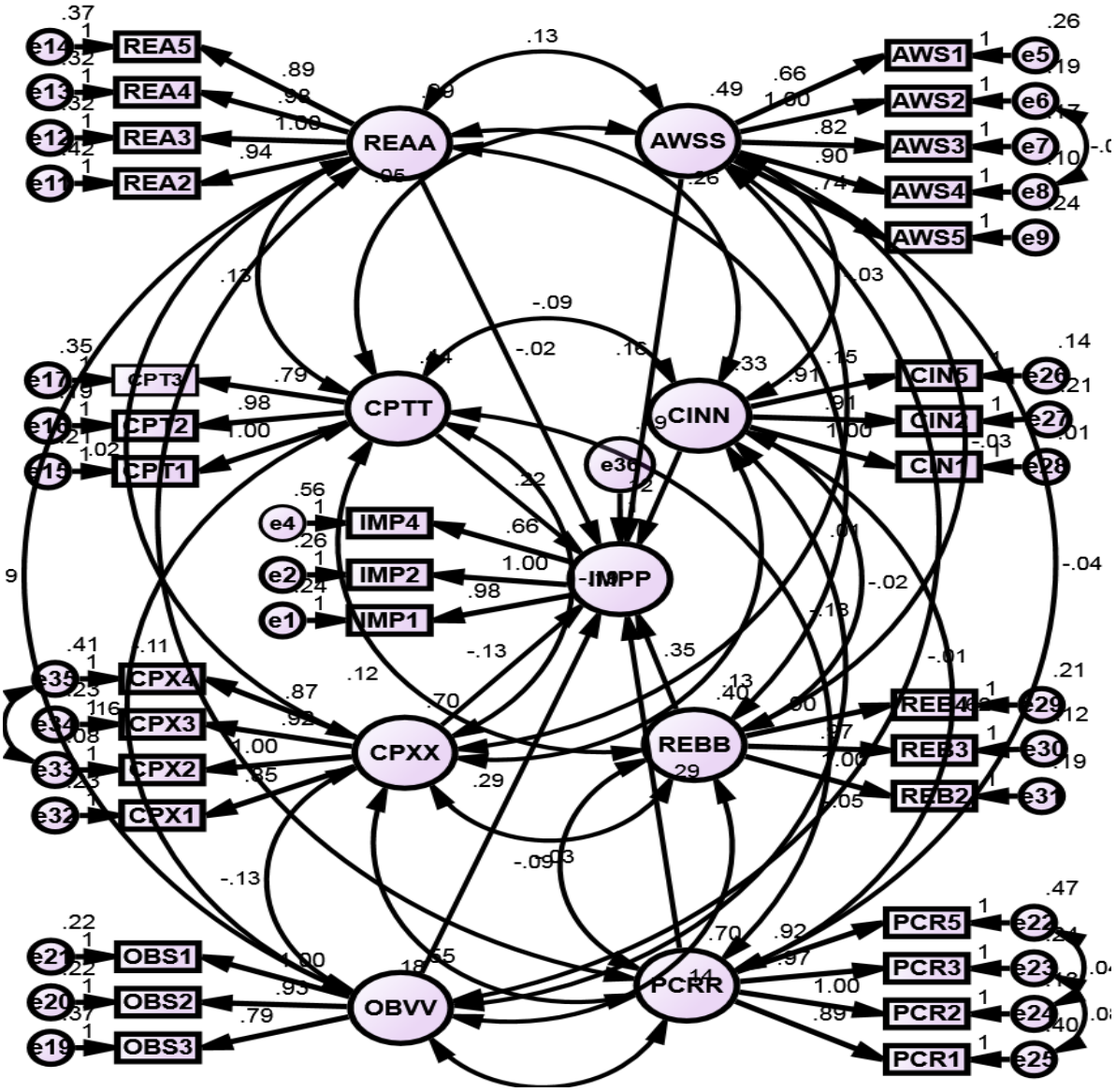
Constructs	Number of Items	Cronbach's Alpha
IMPP	3	.883
AWSS	5	.890
REAA	4	.904
CPTT	3	.815
OBVV	3	.832
PCRR	4	.900
CINN	3	.965
REBB	3	.864
CPXX	4	.900

4.6.2.2 STRUCTURAL MODEL

Assessment of model fit in SEM is a two-step process (Hair et al, 2006). First: step involves testing the full measurement model's fit, as well as its construct validity. The goal of testing the measurement model is to establish how well the observed variables of a hypothesized construct relate to one another. This was reported in the previous chapter and the result shows acceptable

model fit and validity. However, the test of the full measurement model does not investigate the nature of the relationships between constructs beyond simple correlations. As such, a measurement model is a means towards establishing the fit and validity of a structural model, rather than an end in itself (Hair et al, 2006). Second: requires testing of the structural model, including for the significance of the structural relationships. The structural model can be tested only after adequate measurement and construct validity are established, as the latter is the groundwork for the structural model. Hence, this section reports on the tests of the structural model. The validity and acceptability of the structural model can be evaluated in terms of (1) model fit, that is, GOF indices; (2) comparing factor loadings of the structural model to that of the underlying measurement model; (3) the magnitude of variance explained, that is, R^2; and (4) the size, direction and significance of the estimated structural parameters. The above provides a description of the above tests and the rule of thumb criteria for what constitutes as acceptable value based on recommendations of SEM literature. Tests for Structural Model Validity fulfil the following the first is to test Structural model fit, it is assesses extent of the structural model fit of the sample data using the GOF indices used for the measurement model (See Table 4.6.2.1.5-1). Secound is Comparison of loadings of the structural model and the measurement modelwhich is assesses closeness of the parameter loadings of the structural and measurement models the acceptable value difference in loading should be 0.05 or less. The third is Variance explained (R2), it is Extent to which variance is explained by the estimates of the model the acceptable value 0.70 and above = great; 0.50 and above = very good. The last is Size and significance of parameter which is to estimates sgnificance of the parameter estimates based on the corresponding the acceptable p-values $p<0.05$ and/or t-value above 2.00.

Figure 4.6.2.2-1 Structural model



(Source: researcher Amos output)

The structural model shown in Figure 4.6.2.2-1 which shows the relationship between constructs orlatent variables or unobserved variables that are easy to understand.32 items and PCR1 with PCR3, AWS2 with AWS4 and CPX2 with CPX4 were co-varied because they have high the highest modification indices (MI). Support for and the acceptability of the structural model is

evaluated based on the four criteria outlined in previous. First, the structural model's fit statistics are evaluated. The model fit statistics of the structural model are shown in Table 4.6.2.2-1.

Table 4.6.2.2-1: Model Fit Statistics for Structural Model

Chi square		**Absolute fit Indices**		**Incremental Fit Indices**		**Parsimony Fit Indices**	
X^2 (*P*Value)	949.843 (.000)	RMSEA	0.057	CFI	0.940	PCFI	0.803
Df	424			NFI	0.894		
X^2 /df	2.169	RMR	0.034	IFI	0.940	PNFI	0.764
				TLI	0.929		

(Source: researcher Amos output)

The model's normed chi-square (X2/DF) is within the acceptable range. All the incremental fit indices also meet the lower threshold value of 0.90 and the model is acceptable in terms of CFI, IFI and TLI. The model's absolute fit index value is also within the recommended range in terms of RMSEA (0.057). Regarding RMR (0.034), the result is within the threshold value. Further, the model's parsimony fit indices values are acceptable in terms of PCFI and PNFI, which show relatively higher value than the corresponding measurement model. Hence, the full structural model as indicated in Figure 4.6.1-1 is supported and accepted in terms of the selected fit indices in SEM literature. Second, the loading estimates of the structural model are compared against the loading estimates of the corresponding measurement model. The structural model is expected to show similar or close loadings to that of the measurement model (Hair et al, 2006).

In this regard, most of theloading estimates of the structural model are virtually unchanged from the measurement model. Only four standardized estimated loadings show change and the maximum change in standardized loadings is 0.037, which is not above the 0.05 limit (Hair et al, 2006). This indicates the existence of parameter stability among the measured items in the two models, which provides further support for the validity of the structural model. The third assessment of the structural model's validity is examined through the extent of the variance in product, process and organizational innovations, the ultimate dependent (endogenous) variables, which the model explains. The fourth set of criteria for assessing the validity of the structural model is investigating the size, direction and significance of the structural parameter estimates.

Table 4.6.2.2-2 presents the structural path estimates and seven of the eight paths are significant.

Table 4.6.2.2–2: Regression Weights

			Estimate	S.E.	C.R.	P
IMPP	<---	REAA	0.018	0.055	0.334	0.739
IMPP	<---	CPTT	0.223	0.086	2.588	0.010
IMPP	<---	CPXX	-0.129	0.058	-2.241	0.025
IMPP	<---	OBVV	0.293	0.072	4.069	***
IMPP	<---	REBB	0.348	0.081	4.324	***
IMPP	<---	PCRR	-0.286	0.086	-3.328	***
IMPP	<---	CINN	0.12	0.058	2.078	0.038
IMPP	<---	AWSS	0.162	0.065	2.476	0.013
IMP1	<---	IMPP	0.984	0.055	17.864	***
IMP2	<---	IMPP	1.000			
IMP4	<---	IMPP	0.659	0.052	12.785	***
AWS1	<---	AWSS	0.663	0.047	14.127	***
AWS2	<---	AWSS	1.000			
AWS3	<---	AWSS	0.822	0.048	17.01	***
AWS4	<---	AWSS	0.898	0.049	18.23	***
AWS5	<---	AWSS	0.735	0.05	14.676	***
REA2	<---	REAA	0.935	0.047	19.7	***
REA3	<---	REAA	1.000			
REA4	<---	REAA	0.982	0.046	21.393	***
REA5	<---	REAA	0.889	0.046	19.424	***
CPT1	<---	CPTT	1.000			
CPT2	<---	CPTT	0.977	0.067	14.562	***
CPT3	<---	CPTT	0.789	0.063	12.46	***
OBS3	<---	OBVV	0.787	0.059	13.36	***
OBS2	<---	OBVV	0.927	0.065	14.157	***
OBS1	<---	OBVV	1.000			
PCR5	<---	PCRR	0.918	0.049	18.785	***
PCR3	<---	PCRR	0.966	0.05	19.408	***
PCR2	<---	PCRR	1			
PCR1	<---	PCRR	0.889	0.054	16.43	***
CIN5	<---	CINN	0.911	0.019	48.829	***
CIN2	<---	CINN	0.911	0.022	41.701	***
CIN1	<---	CINN	1			
REB4	<---	REBB	0.904	0.057	15.969	***
REB3	<---	REBB	0.967	0.056	17.24	***
REB2	<---	REBB	1.000			
CPX1	<---	CPXX	0.850	0.038	22.232	***
CPX2	<---	CPXX	1.000			
CPX3	<---	CPXX	0.915	0.039	23.173	***
CPX4	<---	CPXX	0.866	0.053	16.355	***

(Source: researcher Amos output)

Note: A p value of less than 0.001, i.e., below 1%, in Amos indicated by ***

Table 4.6.2.2-3 Direct Effect of Revised Model:

Hypothesis	Endogenous	Exogenous	Std. Estimate	S.E.	C.R.	P	Status
H1	IMPP	<--- AWSS	0.162	0.065	2.476	0.013	Sig
H2	IMPP	<--- REAA	0.018	0.055	0.334	0.739	Not Sig
H3	IMPP	<--- CPTT	0.223	0.086	2.588	0.010	Sig
H4	IMPP	<--- OBVV	0.293	0.072	4.069	***	Sig
H5	IMPP	<--- PCRR	-0.286	0.086	-3.328	***	Sig
H6	IMPP	<--- CPXX	-0.129	0.058	-2.241	0.025	Sig
H7	IMPP	<--- REBB	0.348	0.081	4.324	***	Sig
H8	IMPP	<--- CINN	0.120	0.058	2.078	0.038	Sig

(Source: researcher Amos output)

Note 1: ***Significance at p < 0.001, ** Significance at p<0.05,

Note 2: **AWSS**: Awareness, **REAA**: Relative advantage, **CPTT**: Compatibility, **OBVV**: Observability, **PCRR**: Perceived risk, **CPXX:** Complexity, **REBB**: Religious Belifes, **CINN**: Customer involvement

- The model suggests that implementation of IFB service has the strongest on Religious beliefs (0.348) followed by Observable (0.293) and Compatibility (0.223).
- The results shows that the implementation of interest free banking is predicted by Awareness (β= 0.162, p=0.013), Relative advantage (β= 0.018, p=0.739) and compatibility (β= 0.223, p=0.739, Observability (β= 0.293, p<0.001), Perceived Risk(β= -0.286, p<0.001), Complexity (β= -0.129, p=0.025), Religious Belifes (β= 0.348, p<0.001) and Customer involvement (β= 0.671, p=0.038).

4.7 DISCUSSIONS OF EMPIRICAL FINDINGS

Hypothesis 1, Proposed that awareness has a positive effect on implementation of IFB service, As can be observed from the table above AWSS (Awareness) and IMPP (implementation of IFB service) have β estimate value of .162 and t-statics 2.476 with a p value of 0.013 found to be significant on Implementation. Hence, hypothesis 1 is supported. The results showed that awareness of Islamic banking services has significance effect on the implementation of interest free banking.

This finding is in accordance with the findings of the studies by (Abdullah and Abdul Rahman, 2007; Rammal and Zurbrugg, 2007; Thambiah et al., 2011; Echchabi and Aziz, 2012b; Ayinde and Echchabi, 2012; Bizri, 2014). Nevertheless, the result contradicts the findings of (Doraisamy et al., 2011; Abdul-Hamid et al., 2011; Aziz et al., 2015), Echchabi et al. (2014), which indicated that consumer's awareness did not have a significant relation with the implementation of Islamic Banking .

Hypothesis 2, Proposed that relative advantage has a positive effect on implementation of IFB service, As can be observed from the table above REAA (Related Advantage) and IMPP (implementation of IFB service) have β estimate value of 0.018 and t-statics 0.334 with a p value of 0.739 found to be insignificant on Implementation. Thus alternative hypothesis (H1) is rejected whereas the respective null hypothesis is not rejected. This finding supports Nain Tara (2014) and Echchabi et al. (2014) the perceived relative advantage emerged as the best predictor of consumer acceptance of Islamic banking services .This finding contradicts the results of Thambiah et al. (2012), Echchabi and Aziz (2012b), Amin et al. (2013) and Aziz et al. (2015) They indicated that relative advantage have a significant effect on the consumer intention to adopt Islamic Banking.

Hypothesis 3: Compatibility has a positive effect on the implementation of interest free banking adoption in Ethiopia significant at (β: 0.223, p=0.010). Hence, Hypothesis 3 is supported. This is in line with the findings of Echchabi and Aziz (2012b). This is in accordance with the findings of Tan and Teo (2000), Fisher and Chu (2009), Nor (2005), Puschelet al. (2010) and To et al. (2008). Nevertheless, it contradicts with the findings of Teo and Pok (2003), Shih and Fang (2004), Al-Majali and Nik Mat (2010) and Beiginaet al. (2011). Thus, much emphasis on the marketing and management strategies should be on the shariah complaint, religious value, and the specific financial needs and secured investment in line with the philosophy of doing banking businesses. Compatibility has the second highest weight in explaining the variation in the implimentaion of IFB service.

Hypothesis H4: Observability has positive effect on the implementation of interest free banking services in Ethiopia significant at (β: 0.293, p<0.001). Hence, hypothesis 4 is supported. This result is in line with those of Lee et al., (2011) and Zhang (2008) point that perceived

observability has significant positive effect on usage intention e-learning service among Taiwanese business employees. This finding contradicts the results of Thambiah et al., (2011b). It should be noted that, per se observability do not signify benefits or advantage of implimentation of IFB service. Thus, these dimensions have to be emphasized by the Ethiopian banking institutions offering interest free banking service.

Hypothesis H5: The complexity of an innovation affects how well customers view it and develops a certain attitude. The result shows as, have β estimate value of -0.286 and t-statiscs -3.328 with a p value of less than 0.001 perceived complexities negatively effects the attitude of customers towards Interest free banking. This is similar to the findings of Tan and Teo, 2000, while it contradicts with the findings of Fisher and Chu, 2009, Shih and Fang, 2004, Beiginia, 2011, as well as Taylor and Todd, 1995b. Although perceived complexity negatively effects the attitude of customers towards implementation of Interest free banking, it is statistically significant at 1 % significance level as shown in the above table that significant to support the null hypothesis which says, there is a negative relationship between complexity and implementation of Interest free banking window services complexity has been found as important.

Hypothesis H6: Hypothesized that perceived risk (PCR) has negative effects on implementation of IFB service. By validating this hypothesis, (PCRR and IMPP) have β estimate value of -0.286 and t-statiscs -3.328 with a p value of less than 0.001. As a result, the alternate hypothesis (H6) is not rejected, while the respective null hypothesis rejected. This finding supports (Gerrard & Cunningham, 2003; Ostlund, 1974; Zhao et al., 2010).

On the other hand, **Hypothesis H7** hypothesized that customer involvement has a positive relation with implementation of IFB service. By concurring with this hypothesis β estimate showed a positive value of 0.120 and t-statiscs 0.058 On the other hand, a p value of less than 0.001. Thus the alternative hypothesis (H7) is not rejected; this is due to the fact that literatures on the Islamic banking usage have investigated the influence of the customer involvement. Islamic banking advocates profit and loss sharing in contrast to interest dealing practiced by conventional banking system which formed the major separation between the two banking systems. Another important demarcation between the Islamic and conventional system of

banking has been the way and manner they relate with their customers. Whereas creditor-debtor relation is prevalent in the conventional banking, Islamic banking treats its customer in more than a creditor-debtor relationship but also as a partner in business and investment. This relation therefore made the customer involvement a potential factor and hence its influence on implementation of IFB service was investigated.

- **Testing the Medtational of Customer involvement (CINN)**

Mediation analysis was performed to test the mediating on CINN. This research has six major hypotheses on mediation and each major hypothesis has six sub hypotheses for mediating s.

Data analysis of the mediating hypotheses testing will investigate the effect of mediator on the relationship between independent variables and dependent variable. This study examines mediating on the direct path between the independent variables and the dependent variable using the Baron and Kenny's (1986) three step mediation analysis and chi square ($\chi 2$) difference test. The results of the mediating are further confirmed by Sobel's (1982) test, the Aroian's (1944) test, and the Goodman's (1960) test. A variable may be considered a mediator to the extent to w hich it carries the effect of a given Independent variable to a given dependent variable. Mediation can be said to occur when

(1) The independent variable significantly affects the mediator,

(2) The independent variable significantly affects the dependent variable in the absence of the mediator,

(3)The mediator has a significant unique on the dependent variable, and

(4)The of the independent variable on the dependent variable shrinks upon the addition of the mediator to the model.

These criteria can be used to informally judge whether or not mediation is occurring, but MacKinnon & Dwyer (1993) and MacKinnon, Warsi, & Dwyer (1995) have popularized statistically based methods by which mediation may be formally assessed by using the Sobel's (1982) test, the Aroian's (1944) test, and the Goodman's (1960) test. These tests consider the unstandardized regression and standard error for the association between Independent variable and mediator, and also the unstandardized regression and standard error for the association between mediator and the dependent variable.

Baron and Kenny's (1986) Three Step Mediating Analysis A variable may be considered a mediator to the extent to which it carries the effect of a given independent variable to a given dependent variable. Hence, a mediator accounts for the relationship between anindependentvariable and the dependent variable .Mediation can be said to occur when

1) The independent variable significantly affects the mediator,
2) The independent variable significantly affects the dependent variable in the absence of the mediator,
3) The of the independent variable on the dependent variable shrinks upon the addition of the mediator to the model.

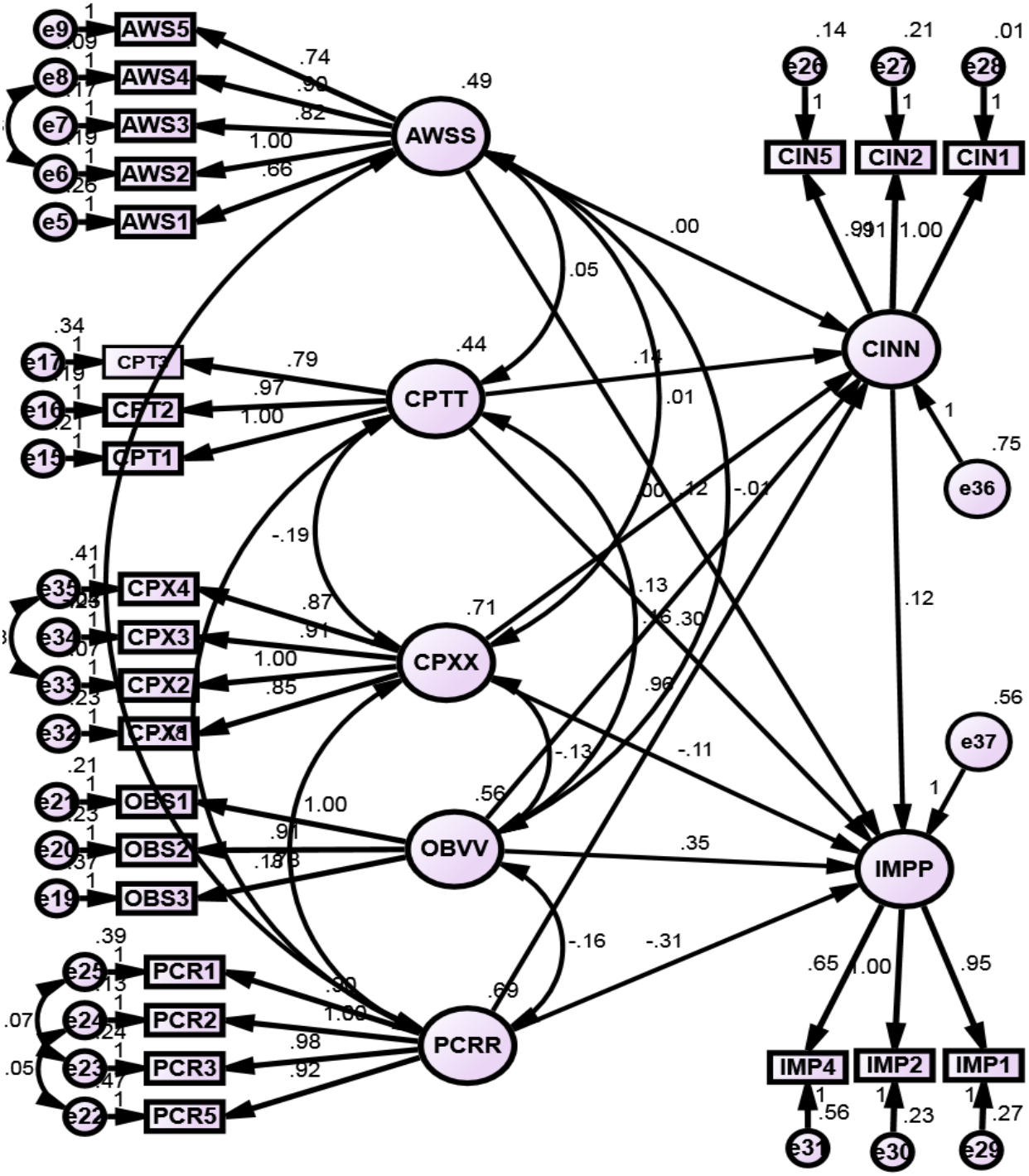
The following procedures were conducted to analyze mediation which is explained as follows. First, it is crucial to ide ntify the significance of the indirect to establish mediation and to decide between two major categories of mediation or non mediation. Prior to identifying the indirect, the path coefficients of both direct and indirect and their significance wereestimated simultaneously by using Amos version 23. The significance of indirect s was assessed by employing procedures. Second, the classification of mediation or non mediation is identified based on whether direct is significant or not. The p values for indirect s were obtained from the bootstrap result using bias corrected confidence intervals in Amos. Next, to determine the type ofmediations or non-mediation according to the criteria listed below (Zhao et al, 2010).

1. **Complementary mediation** occurs if both indirect and direct s are significant and have the same directions.
2. **Competitive mediation** occurs if indirect and directs is both significant and has opposite directions.
3. **Indirect only mediation** occurs if indirect is significant, but not direct.
4. **Direct only non mediation** occurs if direct is significant, but not indirect.
5. **No non mediation** occurs if both direct and indirect s is insignificant.

Complementary mediation is known as partial mediation in Baron and Kenny's approach. While the indirect only mediation is the same as full mediation. However, competitive mediation, direct only non mediation and no non mediation fall under a mediation category in Baron and Kenny's approach which may cause projects to be discarded (Zhao et al, 2010). There are several implications for the type of mediation or non mediation established. First, when the first three

cases; complementary, competitive and indirect only mediation occur, the data supports the hypotheses for mediation. Second, in both complementary and competitive mediation, the mediator identified is consistent with the hypothesized theoretical framework, and the significant direct signals that there is second possibly omitted mediator which can be examined in any future study. The sign of the direct signals for the sign of an omitted indirect path. Third, indirect only mediation implies that the mediator identified is consistent with hypothesized theoretical framework and there is no need to test for further indirect s. The sign of the direct in direct only non mediation implies that there is yet undiscovered mediators. Finally, the no non mediation is a failure for testing mediation (Zhao et al, 2010).

Figure 4.7-1: Hypothesis Testing of the Meditational of CINN



(Source: researcher Amos output)

Table 4.7-1: The summary of Mediation Estimates

Hypothesis	Exogenous	Mediator Variable	Endogenous	Beta Estimate	S.E.	C.R.	P	Results	Mediating Hypothesis
H7a	CINN	<---	AWSS	-0.063	0.089	-0.703	0.482	Insignificant	Non Mediation
	IMPP	<---	AWSS	0.151	0.078	1.934	0.053	Insignificant	
	IMPP	CINN	AWSS	0.143	0.078	1.836	0.066	Insignificant	
H7b	N.B Before the mediator variable IMPP enters the model, REAAwas statistically insignificant as stated Table 4.6.2.2-3, which violates the first assumption.								
H7c	CINN	<---	CPTT	-0.201	0.102	-1.963	0.05	Significant	Complementary mediation
	IMPP	<---	CPTT	0.621	0.086	7.196	***	Significant	
	IMPP	CINN	CPTT	0.611	0.086	7.07	***	Significant	
H7d	CINN	<---	CPXX	0.177	0.073	2.425	0.015	Significant	Complementary mediation
	IMPP	<---	CPXX	-0.329	0.063	-5.215	***	Significant	
	IMPP	CINN	CPXX	-0.319	0.063	-5.035	***	Significant	
H7e	CINN	<---	OBVV	-0.084	0.089	-0.94	0.347	Insignificant	Non Mediation
	IMPP	<---	OBVV	0.538	0.073	7.368	***	Significant	
	IMPP	CINN	OBVV	0.533	0.073	7.308	***	Significant	
H7f	CINN	<---	PCRR	0.873	0.067	13.002	***	Significant	Complementary mediation
	IMPP	<---	PCRR	-0.415	0.069	-5.98	***	Significant	
	IMPP	CINN	PCRR	-0.571	0.089	-6.447	***	Significant	

(Source: researcher Amos output)

There are Six sub hypotheses under H7 (H7a, H7b, H7c, H7d, H7e and H7f) which states that CINN has mediating between AWSS & IMPP, REAA & IMPP, CPTT &IMPP, CPXX & IMPP and OBVV & IMPP. As per the results of SEM using Amos, AWSS & OBVV are doesn't meet the condition (The independent variable should significantly affect the mediator) and CINN has statistically significant on CPTT, CPXX and PCRR. The standardized path coefficients are (β 0.611, $p<0.001$; β -0.319, $p<0.001$, and β -0.571, $p<0.001$) respectively. As per the mediation criteria forwarded by Zhaoet al, (2010), IMPP is Complementary mediator between CPTT & IMPP, CPXX and IMPP and PCRR & IMPP implying that the mediator identified is consistent with the hypothesized theoretical framework, Hence, H7c, H7d and H7e are accepted.

On the other hand, before the mediator variable CINN enters the model, REAA was statistically insignificant as stated obove, which violates the first assumption. Thus we can conclude that the

alternative hypothesis (H7b), which hypothesized that CINN mediate the relationship between relative advantage and implementation of IFB service is rejected.

Hypothesis H8: Proposed that Religious Belief has a positive effect on the Implimentation of interest free banking service. Supporting these statement variables REBB has β estimate value of 0.348 and t-statiscs 4.324 with a p value of less than 0.001. Thus the alternative hypothesis (H7) is not rejected this means the greater the religious belief, the more likely that IFB products will be utilized by bank customers. In contrary, the underlying null hypothesis i.e., Religious Belief does not have a positive effect on the implementation of IFB service is rejected. The same finding is supported by Othmen and Owen (2001); Walkhid and Afrita (2007): Haron et al (1994), where religion is major influential factor of IB adoption. Conversely, a Jordan based study found that religion did not play significant role to adopt an Islamic bank, but profit driven criteria was an important factor to choose a bank (Erol, C. and El.B. Radi, 1989).

- **Testing the Moderating of Religious beliefs (REBB)**

Researches in business, social sciences and other disciplines involve theories concerning moderating variables. Thus, researchers in these areas should know how to model the moderators and analyse them in their work. Moderating variable is the variable that "moderates the s" of an independent variable on its dependent variable. The social science researchers, in particular, define moderator as the variable that "interfere" in the relationship between an independent variable and its corresponding dependent variable. For illustration, let M be the moderator variable in the X-Y relationship. Then the moderation role of M is "to alter" the s of X on Y.
Before introducing a moderator into the model, the s of independent variable X on its dependent variable Y must exist and significant. Thus, when a moderator M enters the model, the causal s would change due to some "interaction" between independent variable X and moderator variable M that has just entered. As a result, the "s" of X on Y could either increase or decrease. In other words, of the independent variable on its dependent variable would depend on the level of moderator variable.

In order to confirm a third variable making moderation on the relationship between the two variables X and Y, we must show that the nature of this relationship changes as the values of the moderating variable M change. This is in turn done by including an interaction in the model and

checking to see if indeed such an interaction is significant and helps explain the variation in the response variable better than before. In more explicit terms the following steps should be followed: In more explicit terms the following steps should be followed:

1. The X-Y relationship (testing for **β1**) – we indicate as Hypothesis 1.
2. The M-Y relationship (testing for **β2**) – we indicate as Hypothesis 2.
3. The XM-Y relationship (testing for **β3**) – we indicate as Hypothesis 3.

The moderations of moderator variable M in the model occur if Hypothesis 3 (β3) is significant and Hypothesis 2 (β2) is not significant. As for Hypothesis 1 (β1), there are two possibilities that could occur:

1. If Hypothesis 1 is not significant – then the "**complete moderation**" occurs, or
2. If Hypothesis 1 is significant – then the "**partial moderation**" occurs.

Table 4.7-2: The summary of Moderation Estimates

Hypothesis	Endogenous		Exogenous	Beta Estimate	S.E.	C.R.	P	Results
H8a	ZIMPP	<---	REBB	0.487	0.179	2.725	0.006	Significant
	ZIMPP	<---	AWSS	0.456	0.402	1.134	0.257	Insignificant
	ZIMPP	<---	INTER(AWSS*REBB)	-0.125	0.144	-0.867	0.386	Insignificant
H8b	N.B Before the Moderator variable REBB enters the model, REAA was statistically insignificant as stated Table 4.6.2.2-3, which violates the first assumption							
H8c	ZIMPP	<---	ZREBB	1.458	0.265	5.499	***	Significant
	ZIMPP	<---	ZCPTT	1.569	0.281	5.577	***	Significant
	ZIMPP	<---	INTER(CPTT*REBB)	-0.436	0.095	-4.58	***	Significant
H8d	ZIMPP	<---	ZCPXX	-1.698	0.327	-5.19	***	Significant
	ZIMPP	<---	ZREBB	-0.209	0.126	-1.654	0.098	Insignificant
	ZIMPP	<---	INTER(CPXX*REBB)	0.420	0.093	4.529	***	Significant
H8e	ZIMPP	<---	ZOBVV	1.653	0.263	6.286	***	Significant
	ZIMPP	<---	ZREBB	0.216	0.047	4.565	***	Significant
	ZIMPP	<---	INTER(OBVV*REBB)	-0.327	0.063	-5.194	***	Significant
H8f	ZIMPP	<---	ZPCRR	-1.651	0.309	-5.342	***	Significant
	ZIMPP	<---	ZREBB	0.243	0.048	5.073	***	Significant
	ZIMPP	<---	INTER(PCRR*REBB)	0.313	0.069	4.518	***	Significant

(Source: researcher Amos output)

The moderating of the model was evaluated based on its statistical significance and examining the substantive significance of its moderating on the independent-dependent relationship. Statistical significance was assessed via the t-value and its significance level (p-value ≤ than 0.05). Whereas, a two-stage multiple regression which examines the moderating of religion and region was used. Stage one, includes the first-order s only (i.e., with implementation of IFB service; all six independent variables) and the second stage is with the product terms (each independent variable multiplied by religious beliefs) included.

The result reveals that religious beliefs seemed to have significant moderating s on the implementation of IFB. The analysis exhibited three (3) models. Model 1 depicts the first-order level (does not include the product term) thus ignores the moderating, Whereas, Model 2 shows the result after the product term, religious beliefs has been included. Subsequently, model 3, with the inclusion of religious beliefs as a moderating variable resulted; The present finding therefore, substantiated the following hypotheses, given that the p-value equal or less than 0.05 (significant level): religious beliefs did not moderate (p>0.05) the relationship between (H8a) awareness (P = 0.386) attribute of implementation of IFB insignificant coefficient values. Thus, the null hypotheses for these constructs are accepted and alternate hypotheses rejected. On the other hand, before the Moderator variable religious belifs enters the model, relative advantage was statistically insignificant as stated Table 4.6.2.2-3, which violates the first assumption. Thus we can conclude that the alternative hypothesis (H8b), which hypothesized that religious belifs moderate the relationship between relative advantage and implementation of IFB service is rejected, but the null hypothesis which proposes that religious belifs does not moderatee the relationship between relative advantage and implementation of IFB service is is not rejected.

On the other hand the relationship between (H8c) compatibility (with a p value of less than 0.001) attributes of Impilementation of IFB; (H8d) complexity (with a p value of less than 0.001) attributes of Impilementation of IFB; (H8e) observability (with a p value of less than 0.001) attributes of Impilementation of IFB and (H8f) perceived risk (with a p value of less than 0.001) attributes of Impilementation of IFB having significant coefficients values as shown in table 4.7-3. Thus, the null hypotheses for these constructs are accepted and alternate hypotheses rejected.

The present findings clearly imply that religious belifs reasons are still instrumental in influencing the implementation of IFB products and services to certain extend. Based on the findings, although, religious beliefs does not significantly moderates all the factors, obviously there seemed be a certain degree of interaction with awareness and customers' perceived relative advantages. Therefore, religious belifs reason could be the contributing factor for the interest free banking customers in particular to perceive IFB products and services as fair and economically advantages, a banking system instilled with religious principles. This result is consistent with the findings of Thambiah et al (2014) and Aye Aye Khin (2012).

CHAPTER FIVE

5. SUMMARY OF THE FINDINGS, CONCLUSIONS AND IMPLICATION OF THE STUDY

This chapter presents the final part of the study based on the result obtained in the study; a discussion of theoretical and practical implication will be presented on this chapter. Furthermore, some recommendations were suggested for banks and any concerned organs Contribution of this study, its limitations and future research also will be presented in this chapter. Further, this study intends to examine the applicability and adaptability of the IDT on IFB implementation in the Ethiopian context. Indeed, to my knowledge, these types of analysis are missing from the literature.

5.1 SUMMARY OF THE STUDY

The purpose of this research is to identify factors affecting implementation of interest free banking service by using the Innovasion diffusion theory (IDT) developed by Rogers (2003) to investigate the factors (relative advantage, compatibility, complexity, observability and perceived risk) on implimenation of interest free banking services. The study also intends to integrate customer involvement and religious belifs in the Rogers Model and investigate its effect on the implementation of interest free banking service. Besides that, the study also examines the mediating role of customer involvement and moderating of religious belifs on the relationship between - relative advantage, compatibility, complexity, observability and perceived risk and the implementation of interest free banking services. For this purpose the researcher able to collect 366 questionnaires from the total 386 sample size and the collected inserted into SPSS. To achieve the objective of the research the Structural Equation Model was applying factor analysis called exploratory factor analysis by reducing not producing useful factors. As result, 43 measurement items were reduced to 32 items using both principal component analysis and WarpPLS statistical tool. Principal component analysis has dual function in factor analysis (1) identify component and categorize (2) partial out weak loadings while warpPLS 5 help for identifying weak loading or weight and function a complex multivariate simultaneously. Before going into hypothesis testing, internal consistency measure such as Cronbach alpha reliability, composite reliability, Discrimant validity, convergence

validity, collinearly diagnostic, model fit and indices has adequately deal with. Apparently, all values for composite reliability and AVE calculated in this study meet the recommended threshold values. In conclusion, the statistical analyses obtained here are suggesting that the model exhibits adequate convergent validity and reliability.

Finally, the research findings are presented as follows:

- The major demographic results were 65.5% of the respondents were Male, 64.1% of respondent categorized less than 30, 47.0% of the respondents were having BA/BSC; 34.8% of the respondents were governmental sector; 11.70% of the respondents were monthly gross income of greater than 10,000;
- From the model, seven (7) factors were statistically significant in implementation of IFB service. These were: awareness; compatibility; observability; religious belifs and customer involvement. The model showed that the most significant predictor was perception of the religious belifs (β=0.34), followed observability (β=0.29), compatibility (β=0.22) and awareness (β=0.16). Customer involvement had the lowest influence in predicting and explaining implimentation of IFB services (β=0.12). While complexity (β= -0.12) and perceived risk (β= -0.28) have a negative influence on implementation of IFB service.
- Secondly, mediation role of customer involvement the findings yielded in chapter four that customer involvement fully mediate the relationship mediate between the three constructs of compatibility, complexity and perceived risk on implementation of IFB service.
- Finally, the moderating factor analysis findings show that religious belifs play an important role to certain extent in influencing the CBE customers' implementation of the IFB service. Subsequently, religiuos belifs does not moderate, the relationship between awareness and the implementation of IFB service. It is suggested that the same study should be conducted in a different time frame to obtain more reliable data.

5.2 CONCLUSION

This study was motivated by three questions: What are the key factors affecting the implementation of Interest Free Banking service in commercial Bank of Ethiopia? : Does customer involvement mediate the relationships between awareness, relative advantage, compatibility, complexity, observability and perceived risk on implementation of IFB service? And do religious beliefs moderate the relationships between awareness, relative advantage, compatibility, complexity, observability and perceived risk on implementation of IFB service?

- The answer to the first question is that awareness, compatibility, observability religious belifs and customer involvement have a significant positive, while both perceived complexity and perceived risk were significant negative impacts on implementation of interest free banking in Commercial bank of Ethiopia, relative advantage does not have any influence.
- This study was also the first to investigate the mediation role of customer involvement between awareness, relative advantage, compatibility, complexity, observability and perceived risk on implementation of IFB service. The findings yielded in chapter four that customer involvement fully mediate the relationship mediate between the three constructs of compatibility, complexity and perceived risk on implementation of IFB service.
- Finally, the moderating factor analysis findings show that religious belifs moderates, the interaction between compatibility, complexity, observability and the intention to percived risk on implementation of IFB service. This implies religious belifs play an important role to certain extent in influencing the CBE customers' implementation of the IFB service. Subsequently, religiuos belifs does not moderate, the relationship between awareness and the implementation of IFB services

5.3 IMPLICATIONS OF THE STUDY

The current study examines the implementation of interest free banking by focusing on the account holder in commercial bank of Ethiopia. Thus, it gives hindsight for the practitioner and stakeholders on the Commercial bank of Ethiopian and it will benefit those who want to establish Interest free bank or to open Interest free window. The overall results of the present study suggest that perception contribute toward the fast implementation of Interest free bank products. Thus, the following recommendations can make difference on the mplementation of IFB services;

- The bank should improve customers awareness through focusing and continuing the Awareness creation programs like Religious Institutions, Edirs, use different occasions, Family, Religious persons and making adjustment on the media used on their marketing and promotion strategy to create customers awareness on the Shariah position on business transaction, a concept of profit-and-loss–sharing practice and for whom it offered, teaching regarding the benefit they will get if they use the products and services, design product according to customers preference, transparency practice in transaction with customers and full compliance of product with Shariah practice, availability of Interest free banking products and government support on Interest free financing structure.
- The bank has to develop well planned and intensive marketing and promotion strategy like reaching the target market through the religious leader, use praying days where significant number of the target population easily available to advertise the IFB products in addition to the mainstream media and customer session.
- As showed in the study Customer involvement was one of the determinant factors in implementation of IFB service. This is due to the fact that in its nature interest free banking service needs Customer involvement than conventional banking. So to increase level of Customer involvement the bank should arrange customer's session on how to customer involve in usage of both financing and deposit product of interest free banking service.
- The present findings clearly imply that religious beliefs are still instrumental in influencing the implementation of IFB products and services. In order to properly implement the service

and solve religious issues commercial bank of Ethiopia needs to establish a clear set of frame work to control the establishment of the Shari"ah Committee of interest free banking services.

- The Bank need to consider on the intense regular training programs, Seminars, workshops on Islamic finance, and standards and procedures of Interest free banking must be organized for the officials and employees on the interest free counters of the commercial banks as a result they can aware customers through their daily activities on issues raised from the customer regarding the implementation of interest free banking service.
- Last but not least though the current NBE directive restricts IFBs to be given in windows of the conventional facility, in the meantime, the NBE should consider giving IFB products in separate facility, at least in dedicated branches of the conventional bank, in order to improve attitude and increase IFB adoption intention.

5.4 CONTRIBUTION

The findings of the this study have significant contributions that can be categorized under contribution to the body of knowledge, contribution to the practitioners and stakeholders, as well as the contribution to the policy makers and regulators. This research serves to offer valuable contributions to existing literature. First, this study has contributed to theoretically better understand the dynamics of interest free banking adoption by consumers of Ethiopian context. Second, the current study is based on IDT framework, whereby its boundary has been extended with two factors: customer involvement and religious belifs. However, both have significant effect on implementation of IFB service. Third, the current findings demonstrate that awareness, relative advantage, complexity and perceived risk are primarily important in IFB implementation.

5.5 LIMITATION & FUTURE AREA OF THE STUDY

This study has focused on users one bank only Addis Ababa districts of CBE. Thus the results from this case might not be generalized to customers of other banks and to customers of CBE out of Addis Ababa districts.

Therefore, future study should

- Carried out on sample of all banks and all regions of the country to investigate their proper implementation of such service.
- Focus on interview where the researcher can uncover the intention of the customer in addition to the quantitative measurement.
- A replica of this research can be carried out with longitudinal data and on a wider scale (nation-wide) so that cross-regional similarities and differences can be studied.
- The approach of this paper can be extended to analyze IFB by including variables such as culture, trust, and reward.
- A Comprehensive study of the IFB ecosystem can be conducted by concurrently analyzing the effect of individuals' perception, government regulations, infrastructure and organizational factors.

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Appendices

APPENDIX A-: AMHARIC AND ENGLISH

QUESTIONNAIRE-AMHARIC

አዲስ አበባ ዩኒቨርሲቲ

የቢዝነስ አመራር የማስተርስ ዲግሪ

ከወለድ ነፃ የባንክ አገልግሎት ተጠቃሚ ደንበኞች መጠይቅ

ክቡራትና ክቡራን ደንበኞች

ይህ መጠይቅ በአዲስ አበባ ዩኒቨርስቲ የቢዝነስ አመራር የማስተርስ ዲግሪ ተማሪ የተዘጋጀ ሲሆን ዓላማውም ለመመረቂያ ፅሑፍ ***ሚ*ሚ**ያነት በኢትዮጵያ ንግድ ባንክ ስለሚሰጠው ከወለድ ነፃ የባንክ አገልግሎት መረጃ ለማሰባሰብ ይሆናል፡፡ መረጃው የሚያገለግለው ለጥናቱ ርዕስ ***"ከወለድ ነፃ የባንክ አገልግሎትን በትክክለኛው መንገድ በተግባር ላይ በማዋል ሂደት ሊያጋጥሙ የሚችሉ ተግዳሮቶች"*** ለሚለው ነው፡፡ የሚሰበሰበው መረጃ ለጥናቱ አገልግሎት ብቻ የሚውል ይሆናል፡፡ ስለዚህም የእርስዎ ከ10 እስከ 15 ደቂቃ በመውሰድ መጠይቁን በትክክል መሙላት ጥራት ያለው የጥናት ውጤት ስለሚያስገኝ በትዕግስት የሚከተሉትን ጥያቄዎች እንዲመልሱልኝ እጠይቃለሁ፡፡

ከዚህ መጠየቅም ሆነ ከጥናቱ ርዕስ ጋር በተያያዘ ጥያቄዎች ቢኖርዎት ከታች በተጠቀሠው አድራሻዬ እንዲያሳውቁኝ እጠይቃለሁ፡፡ በመጨረሻም ለትብብርዎ ምስጋናዬንና አድናቆቴን በቅድሚያ እገልፃለሁ፡፡

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ማሳሰቢያ

- ስምዎትን መጻፍ አያስፈልግም
- ሁሉንም ጥያቄዎች በመመለስ ይተባበሩ

ክፍል አንድ፡ <u>የግል መረጃ</u>

እባክዎ ትክክለኛ ምርጫዎ ላይ ይህን ምልክት [√] በማስቀመጥ ይምረጡ፡፡

1. ፆታ

ሀ. ወንድ [ ] ለ. ሴት [ ]

2. እድሜ

ሀ. ከ30 ዓመት በታች [ ] ለ. ከ30-45 ዓመት [ ]
ሐ. ከ46 ዓመት በላይ [ ]

3. አሁን የደረሱበት የትምህርት ደረጃ

ሀ. የመጀመሪያ ደረጃ ትምህርት [ ] ለ. የሁለተኛ ደረጃ ትምህርት [ ]
ሐ. ዲፕሎማ [ ] መ. የመጀመሪያ ዲግሪ [ ]
ሠ. የማስተርስ ዲግሪ [ ] ረ. ሌላ [ ]

4. ሥራ

ሀ. የመንግስት ሠራተኛ [ ] ለ. የግል ሠራተኛ [ ]
ሐ. የግል ሥራ ተዳዳሪ [ ] መ. ሌላ [ ]

5. ወርኃዊ ጥቅል ገቢ

ሀ. ከ2,000 ብር በታች [ ] ለ. ከብር2,000 - 4,999.00 [ ]
ሐ. ከብር 5,000 - ብር 6,999.00 [ ] መ. ከብር7,000 -10,000.00 [ ]
ሠ. ከብር 10,000 በላይ [ ]

ክፍል ሁለት፤ <u>ከወለድ ነፃ የባንክ አገልግሎት ትግበራ ላይ ሊጤኑ የሚገባቸው ጉዳዮች</u>

ይህ ክፍል መደቦች የተከፋፈለ ሲሆን ስለደንበኞች ከወለድ ነፃ የባንክ አገልግሎት አተገባበር ጋር የተያያዙ ዓረፍተ ነገሮችን አካቷል፡፡ ስለዚህ የሚስማሙበትን ዓረፍተ ነገር በተቀመጠው አማራጮች መሠረት ይህንን ምልክት [√]ያድርጉ፡፡

በትግበራ ወቅት ሊያጋጥሙ የሚችሉ ችግሮች						
ተ.ቁ	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልስማማም (1)	አልስማማም (2)	ገለልተኛ (3)	እስማማለሁ (4)	በጣም እስማማለሁ (5)
1	የኢትዮጵያ ንግድ ባንክ በቂ እውቀት እና ልምድ ያለው ከወለድ ነፃ የባንክ አገልግሎት ን መስጠት የሚችል ሰራተኛ እንዳለው ግንዛቤ አለኝ					
2	የኢትዮጵያ ንግድ ባንክ ከወለድ ነፃ የባንክ አገልግሎትን ለብቻው መዝግቦ የሚይዝ የኮምፒዩተር ፕሮግራም/ሶፍት ዌር/አለው ብዬ አምናለሁ					
3	የኢትዮጵያ ንግድ ባንክ ከወለድ ነፃ የባንክ አገልግሎት የሚሰጥ በቂ ቅርንጫፍ ከበቂ መስኮት ጋር እንዳለው አምናለው					
4	የደንበኞችን አመኔታ ለማግኘት ከወለድ ነፃ የሆኑትን ሂሳቦች ከመደበኛ የባንክ ሂሳቦች ለይቶ የሚመዘግብበት አሰራር ባንኩ እንዳለው አምናለሁ					
5	ባንኩ በሸሪዓ ህግ እውቀት በበቂ ሁኔታ የታነፁ የሸሪዓ አማካሪዎች እንዳሉት አምናለሁ					

6	ባንኩ በሸሪዓ ህግ ደረጃውን የጠበቀ ከወለድ ነፃ የባንክ አገልግሎት መስጠት የሚያስችል የላቀ ክህሎት ያላቸው የኢስላሚክ ፋይናንስ ባለሙያዎች ያሉት ይመስለኛል					

1. የደንበኞች ግንዛቤ

ተ.ቁ	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልስማማም (1)	አልስማማም (2)	ገለልተኛ (3)	እስማማለሁ (4)	በጣም እስማማለሁ (5)
1	ባንኩ ስለሚሰጠው ከወለድ ነፃ የባንክ አገልግሎት በቂ ግንዛቤ አለኝ					
2	ባንኩ ስለሚሰጠው ከወለድ ነፃ የባንክ አገልግሎት ጠቀሜታ በቂ ግንዛቤ አለኝ					
3	ባንኩ የሚሰጣቸው ከወለድ ነፃ የባንክ አገልግሎቶች እንደስማቸው ከወለድ ነፃ ናቸው ብዬ አምናለሁ					
4	ባንኩ ስለሚሰጠው ከወለድ ነፃ የባንክ አገልግሎት በቂ መረጃ አገኛለሁ					
5	ባንኩ ስለሚሰጠው ከወለድ ነፃ የባንክ አገልግሎት አጠቃቀም በቂ መረጃ አገኛለሁ					
6	ባንኩ ስለሚሰጠው ከወለድ ነፃ የባንክ አገልግሎት ጥቅም በቂ ግንዛቤ አለኝ					
7	ባንኩ ስለሚሰጠው ከወለድ ነፃ የባንክ አገልግሎት ጨርሶ መረጃ አላገኝም*					

2. አንፃራዊ ጠቀሜታ

ተ.ቁ	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልስማማም (1)	አልስማማም (2)	ገለልተኛ (3)	እስማማለሁ (4)	በጣም እስማማለሁ (5)
1	ባንኩ የሚሰጠው ከወለድ ነፃ የባንክ አገልግሎት ያለኝን የገንዘብ አጠቃቀም አሻሽሎልኛል					
2	ከወለድ ነፃ የባንክ አገልግሎት ከመደበኛው የባንክ አገልግሎት የበለጠ አስተማማኝ ይመስለኛል					
3	ከወለድ ነፃ የባንክ አገልግሎት ከመደበኛ የባንክ አገልግሎት ያነሰ የአገልግሎት ክፍያ እንዳለው አምናለሁ					
4	የወለድ ነፃ የባንክ አገልግሎት ከመደበኛው የባንክ አገልግሎት የተሻለ ገቢ እንደሚያስገኝልኝ አምናለሁ					
5	ከወለድ ነፃ የባንክ አገልግሎት የተመቻቸ የገንዘብ አጠቃቀም ስርዓት እንደሚፈጥርልኝ አምናለሁ					

3. መጣጣምን በተመለከተ

ተ.ቁ	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልስማማም (1)	አልስማማም (2)	ገለልተኛ (3)	እስማማለሁ (4)	በጣም እስማማለሁ (5)
1	ከወለድ ነፃ የባንክ የአገልግሎት ያለኝን የባንክ አገልግሎት ፍላጎት ያሟላ ሆኖ አግኝቼዋለሁ					
2	ከወለድ ነፃ የባንክ አገልግሎት የዘወትር የባንክ አገልግሎት ፍላጎቴን የሚያሟላ ነው					

3	ከወለድ ነፃ የባንክ አገልግሎት ከሐይማኖቴ ጋር የተጣጣመ ሆኖ አግኝቼዋለሁ					
4	በባንኩ እየተሰጠ ያለዉ ከወለድ ነፃ የባንክ አገልግሎት እኔ እንደምፈልገው ሆኖ አግኝቼዋለሁ					
5	ባንኩ የሚሰጠው ከወለድ ነፃ የባንክ አገልግሎት በአጠቃላይ ከማህበራዊ ፍትህ መርህ ጋር የተጣጣመ ሆኖ አግኝቼዋለሁ					

4. ውስብስብነትን በተመለከተ

ተ.ቁ	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልስማማም (1)	አልስማማም (2)	ገለልተኛ (3)	እስማማለሁ (4)	በጣም እስማማለሁ (5)
1	ከወለድ ነፃ የባንክ አገልግሎትን ለመረዳት ከመደበኛ የባንክ አገልግሎት የተለየ እውቀት እና ልምድ ይጠይቃል					
2	ከወለድ ነፃ የባንክ አገልግሎት አሰራርን በቀላሉ ለመረዳት ያስቸግራል					
3	ከወለድ ነፃ የባንክ አገልግሎት አሰጣጥ ለአጠቃቀም ውስብስብ ነው ብዬ አምናለሁ					
4	ከወለድ ነፃ የባንክ አገልግሎት መመሪያ ከመደበኛው ይልቅ ውስብስብ ይመስለኛል					
5	ከወለድ ነፃ የባንክ አገልግሎት ለአጠቃቀም ቀላል ነው*					

5. ምልከታን በተመለከተ

ተ.ቁ	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልስማማም (1)	አልስማማም (2)	ገለልተኛ (3)	እስማማለሁ (4)	በጣም እስማማለሁ (5)
1	ከወለድ ነፃ የባንክ አገልግሎት ተጠቃሚ ደንበኞች ሲጠቀሙ ማየቴ የአገልግሎቱ ጥቅም እንድረዳ ተፅዕኖ አሳድሮብኛል					
2	ከወለድ ነፃ የባንክ አገልግሎት ተጠቃሚ ደንበኞችን ማየቴ በአገልግሎቱ የመጠቀምን በጎ ጎኖች እንድረዳ አስችሎኛል					
3	ከወለድ ነፃ የባንክ አገልግሎትን እኔ ከመጠቀሜ በፊት ሌሎች የአገልግሎቱ ተጠቃሚዎች እንዴት ይጠቀሙ እንደነበር አይቻለሁ					
4	ከወለድ ነፃ የባንክ አገልግሎት ተጠቃሚ ደንበኞች ሲጠቀሙ ማየቴ ያሳደረብኝ ተፅዕኖ የለም*					
5	ከወለድ ነፃ የባንክ አገልግሎት ተጠቃሚ ደንበኞች ሲጠቀሙ ማየቴ የአገልግሎቱ ጥቅም እንድረዳ ተፅዕኖ አሳድሮብኛል					

6. ታሳቢ ስጋቶች በተመለከተ						
ተ.ቁ	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልስማማም (1)	አልስማማም (2)	ገለልተኛ (3)	እስማማለሁ (4)	በጣም እስማማለሁ (5)
1	ከወለድ ነፃ የባንክ አገልግሎት እንደምጠብቀው አይሆንም ብዬ እሰጋለሁ					
2	ባንኩ በሚሰጠው ከወለድ ነፃ የባንክ አገልግሎት መጠቀሜም ችግር ይኖረዋል ብዬ አምናለሁ					
3	የአገልግሎት ተጠቃሚ መሆኔ ባንኩ ላይ በሚደርስ ኪሳራ ተጋሪ ሊያደርገኝ ይችላል ብዬ እሰጋለሁ					
4	ባንኩ ከወለድ ነፃ የሚሰጣቸው አገልግሎቶች ውጤት ትርፍ ይሁን ኪሳራ ለመገመት አስቸጋሪ ነው ብዬ አምናለሁ					
5	ከወለድ ነፃ የባንክ አገልግሎት መጠቀሙ የራሱ የሆነ ችግር የማድረስ እድል ይኖረዋል ብዬ እሰጋለሁ					
7. ሐይማኖታዊ አሥተሳሰብን በተመለከተ						
ተ.ቁ	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልስማማም (1)	አልስማማም (2)	ገለልተኛ (3)	እስማማለሁ (4)	በጣም እስማማለሁ (5)
1	በባንኩ ውስጥ እየተተገበረ ያለው ከወለድ ነፃ የባንክ አገልግሎት የሸሪዓ ፋይናንስ ህጎች ተከትሎ መሆኑን አምናለሁ					
2	ከወለድ ነፃ የባንክ አገልግሎት እመርጣለሁ ምክንቱም ማንኛውም ሰው ከ ወለድ ነፃ የንግድ አሰራር ላይ እንዲሰማራ ሀይማኖቴ ያዛል					
3	ከ ወለድ ነፃ የባንክ አገልግሎት የሸሪዓ የፋይናንስ መርሆችን /ህጎች/ የተከተለ በመሆኑ ለእኔ የተመረጠ ነው					
4	በሀይማኖቴ መርህ ልተፈቀዱ የሥራ ዘርፎች ላይ መሠማራት የተከለከለ ነው					
8. የደንበኞች የአገልግሎት ተጠቃሚነት ደረጃ በተመለከተ						
ተ.ቁ	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልስማማም (1)	አልስማማም (2)	ገለልተኛ (3)	እስማማለሁ (4)	በጣም እስማማለሁ (5)
1	ካለኝ ልምድ በመነሳት ከወለድ ነፃ የባንክ አገልግሎት ለደንበኞቹ እጅግ በጣም ጥሩ መስተንግዶ እንደሚያደርግ አውቃለሁ					
2	ለደንበኞች በሚደረገው የግንዛቤ ማስጨበጫ ዝግጅት ላይ በመሳተፍ ባንኩ ወጥ ዘላቂና የተሻለ አገልግሎት መስጠት እንዲያስችለው በዕለት					

	ተዕለት የስራ እንቅስቃሴ ሂደት የሚታዩ መሰረታዊ ችግሮች ወይም ገንቢ አስተያየት እሰጣለሁ					
3	በባንኩ የሚሰጠው ከወለድ ነፃ የባንክ አገልግሎት የደንበኞችን ተሳትፎ ያበረታታል ብዬ አምናለሁ					
4	ከወለድ ነፃ የባንክ አገልግሎት ጥሩ የፋናንስ አቅም እገዛ እንደሚደርግልኝ አምናለሁ					
5	ከወለድ ነፃ የባንክ አገልግሎት ጋር ያለኝን የደንበኝነት ግንኙነት/ አሳታፊነት/ ቀጣይነት ይኖረዋል ብዬ አምናለሁ					
6	ከወለድ ነፃ የባንክ አገልግሎት ጋር ተሳትፎ በማድረግ የበኩሌን ድርሻ ለማበርከት ከፍተኛ ፍላጎት ፍላጎት አለኝ					

አስተያየት ካለ

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QUESTIONNAIRE ENGLISH

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

MASTERS OF BUSINESS ADMINISTRATION

This questionnaire is organized by a student of Masters Degree in Business Administration at Addis Ababa University to collect information on Interest free financial products and services that provided by commercial bank of Ethiopia under separate window. The information gathered is meant to be used in conducting a research under the topic, *factors affecting implementation of Interest free banking in Ethiopia.* You are among those who have been chosen in the group of CUSTOMERS of the Commercial Bank of Ethiopia. I would be grateful if you would answer all the questions included in the questionnaire and write any comments and suggestions you think relevant on the last.

This questionnaire might take you about 10-15 minutes to complete. The contents of this questionnaire will be kept PRIVATE and CONFIDENTIAL and only the summarized data will be used in any publications.

Thank you in advance for taking your time in filling this questionnaire. If you require additional information or have questions, please contact me in the address below.

Yours faithfully,

Nobel DemissieAragaw

Email: nobeldemissie@gmail.com

Phone:+251-911-454154

Important aspects of the questionnaire

- There is no need to write your name
- Kindly respond to all questions
- Instruction for each part of the questionnaire is given at the beginning of the questions

PartOne- Demographic Information

Please provide the appropriate information by placing a [√] in the bracket provided to represent your answer.

1. **Gender:**
   i. Male [ ] ii. Female [ ]
2. **Age:**
   i. Less than 30 years [ ] ii. 30 – 45 years [ ] iii. 46 and above [ ]
3. **Highest Educational Level:**
   i. Primary school [ ] ii. Secondary school [ ] iii. Diploma & equivalent [ ]
   Iv. BA/BSC [ ] v. Masters Degree [ ] vi. Others [ ]
4. **Occupation:**
   i. Government Sector [ ] ii. Private Sector [ ] iii. Self Employed [ ]
   iv. Others [ ]
5. **Monthly Gross Income:**
   i. Below Birr 2,000 [ ] ii. Birr 2,000 –4,999 [ ] iii. Birr 5,000 –6,999 [ ]
   iv. Birr 7,000 –10,000 [ ] v. Above Birr 10,000 [ ]

Part Two: Factors affecting the proper implementation

Please read each of the statements in each section and rate your level of agreement or disagreement with each statement by using a tick mark "√"on one of the five alternatives.

Dependent Variable

Implementation of IFB services (IMP)						
S. No.	**Statements**	**Alternatives**				
		Strongly Disagree (1)	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
IMP1	I know the bank has knowledgeable and experienced manpower to provide interest free banking.					
IMP2	I think the bank has the necessary Islamic banking software to record interest free					

	banking Transaction.					
IMP3	I think that the bank provides its interest free banking products at convenient branches and adequate windows with the customer expectation					
IMP4	I think that Segregation of fund from the conventional banking service activity is mandatory to attract the potential customer of interest free banking service.					
IMP5	I believe that the bank has Well versed Shari'ah board members					
IMP6	I think the bank has enough qualified scholars in Islamic banking to ensure that Islamic banking Services are up to date and fully comply with Sha'riah law.					

Independent Variable

1. Awareness (AWS)						
S. No.	**Statements**	**Alternatives**				
		Strongly Disagree (1)	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
AWS1	I have an awareness of Interest free Banking products and services provided by CBE					
AWS2	I am aware of the usefulness of interest free Banking products and services					
AWS3	I know that all interest free banking products and services are free of interest					
AWS4	I receive enough information about Interest free banking products and services					
AWS5	I get enough information about how to proceed to get each Interest free banking products and services					
AWS6	I receive enough information about the benefit of interest free banking products and services					
AWS7	I NEVER receive information about interest free banking products and services*					

2. Relative Advantage (REA)

S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
REA1	Using Interest Free Banking products and services improved the quality of my financial dealings					
REA2	Interest Free Banking products and services are more reliable than conventional Banking services					
REA3	Interest Free Banking products provide cheaper cost of fund than conventional Banking services					
REA4	I feel using Interest Free Banking product will increase my revenue					
REA5	IFB is a convenient way to manage my finance					

3. Compatibility(CPT)

S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
CPT1	Interest free Banking products and services fit with my banking needs					
CPT2	Interest free Banking products and services fit with my habit of using bank					
CPT3	Interest free Banking products and services suite my religious belief					
CPT4	Interest free Banking products and services are completely compatible with my current situation					
CPT5	Interest free Banking products and services are compatible with social justice					

4. Complexity(CPX)

S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
CPX1	Understanding Interest free Banking products and services required relatively					

	more knowledge and Experience					
CPX2	Interest free Banking products and services are too difficult to understand					
CPX3	Interest free Banking products and services are complex to use					
CPX4	Interest free banking transactions involve complex procedures					
CPX5	It is simple to use Interest free banking products and services *					

5. Observable(OBV)

S. No.	Statements	Alternatives				
		Strongly Disagree (1)	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
OBV1	I was effectd by what I observed as the benefits of using Interest free banking products and service.					
OBV2	I observed others using IFB service and saw the advantages of doing so.					
OBV3	I have seen how others use IFBs before I use them.					
OBV4	Observing Interest free banking products and service users before using IFBs is unnecessary*					

6. Perceived Risk(PCR)

S. No.	Statements	Alternatives				
		Strongly Disagree (1)	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
PCR1	Interest free Banking products and services may not meet my expectation					
PCR2	It is risky to use Interest free banking products and services					
PCR3	I fear of losing much money in case of Interest free Banking business loss					
PCR4	The Interest free Banking products and services outcome were difficult to predict.					
PCR5	There is a chance that there would be something wrong with the choice of the Interest free Banking products and services					

7. Religious Belief(REB)						
S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
REB1	I believe IFB services is based on the Islamic principle financial implementation					
REB2	I prefer IFB because in my religious philosophy one should engage in transactions interest free financial system					
REB3	I Prefer Interest free banking products and services because they are Shariah-compliant					
REB4	In my belief transactions involving with impermissible business activities are prohibited					

8. Customer Involvement(CIN)						
S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
CIN1	Based on the exposure I have with the IFB service ,I know it cares about customers (Prime service)					
CIN2	I gave feedback during IFB product briefing session arranged by the bank					
CIN3	I believe Interest Free Banking products and services encourage involvement of customers					
CIN4	I believe my relationship with Interest Free Banking is for better investment support					
CIN5	I maintain good relationship with Interest Free Banking service.					
CIN6	I have strong interest to involve in Interest free banking products and service.					

Comments_____
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Sugesstions_____
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Thank you very much for your effort, time, opinion and comments.

APPENDIX B-: VALID QUESTIONNAIRE ENGLISH

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

MASTERS OF BUSINESS ADMINISTRATION

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Yours faithfully,

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Email: nobeldemissie@gmail.com

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Important aspects of the questionnaire

- There is no need to write your name
- Kindly respond to all questions

- Instruction for each part of the questionnaire is given at the beginning of the questions

PartOne- Demographic Information

Please provide the appropriate information by placing a [√] in the bracket provided to represent your answer.

6. **Gender:**
   ii. Male [ ] ii. Female [ ]
7. **Age:**
   ii. Less than 30 years [ ] ii. 30 – 45 years [ ] iii. 46 and above [ ]
8. **Highest Educational Level:**
   ii. Primary school [ ] ii. Secondary school [ ] iii. Diploma & equivalent [ ]
   Iv. BA/BSC [ ] v. Masters Degree [ ] vi. Others [ ]
9. **Occupation:**
   ii. Government Sector [ ] ii. Private Sector [ ] iii. Self Employed [ ]
   iv. Others [ ]
10. **Monthly Gross Income:**
    ii. Below Birr 2,000 [ ] ii. Birr 2,000 –4,999 [ ] iii. Birr 5,000 –6,999 [ ]
    v. Birr 7,000 –10,000 [ ] v. Above Birr 10,000 [ ]

Part Two: Factors affecting the proper implementation

Please read each of the statements in each section and rate your level of agreement or disagreement with each statement by using a tick mark "√"on one of the five alternatives.

Dependent Variable

Implementation of IFB services (IMP)						
S. No.	**Statements**	**Alternatives**				
		Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly**

		(1)	(2)	(3)	(4)	Agree (5)
IMP1	I know the bank has knowledgeable and experienced manpower to provide interest free banking.					
IMP2	I think the bank has the necessary Islamic banking software to record interest free banking Transaction.					
IMP3	I think that the bank provides its interest free banking products at convenient branches and adequate windows with the customer expectation					
IMP4	I think that Segregation of fund from the conventional banking service activity is mandatory to attract the potential customer of interest free banking service.					

Independent Variable

1. Awareness (AWS)						
		Alternatives				
S. No.	Statements	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
AWS1	I have an awareness of Interest free Banking products and services provided by CBE					
AWS2	I am aware of the usefulness of interest free Banking products and services					
AWS3	I know that all interest free banking products and services are free of interest					
AWS4	I receive enough information about Interest free banking products and services					

AWS5	I get enough information about how to proceed to get each Interest free banking products and services					

2. Relative Advantage (REA)

S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
REA1	Using Interest Free Banking products and services improved the quality of my financial dealings					
REA2	Interest Free Banking products and services are more reliable than conventional Banking services					
REA3	Interest Free Banking products provide cheaper cost of fund than conventional Banking services					
REA4	I feel using Interest Free Banking product will increase my revenue					
REA5	IFB is a convenient way to manage my finance					

3. Compatibility(CPT)

S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
CPT1	Interest free Banking products and services fit with my banking needs					
CPT2	Interest free Banking products and services fit with my habit of using bank					
CPT3	Interest free Banking products and services suite my religious belief					
CPT5	Interest free Banking products and services are compatible with social justice					

4. Complexity(CPX)

		Alternatives

S. No.	Statements	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
CPX1	Understanding Interest free Banking products and services required relatively more knowledge and Experience					
CPX2	Interest free Banking products and services are too difficult to understand					
CPX3	Interest free Banking products and services are complex to use					
CPX4	Interest free banking transactions involve complex procedures					

5. Observable(OBV)

S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
OBV1	I was effectd by what I observed as the benefits of using Interest free banking products and service.					
OBV2	I observed others using IFB service and saw the advantages of doing so.					
OBV3	I have seen how others use IFBs before I use them.					

6. Perceived Risk(PCR)

S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
PCR1	Interest free Banking products and services may not meet my expectation					
PCR2	It is risky to use Interest free banking products and services					
PCR3	I fear of losing much money in case of Interest free Banking business loss					
PCR5	There is a chance that there would be something wrong with the choice of the Interest free					

	Banking products and services					
7. Religious Belief(REB)						
S. No.	**Statements**	**Alternatives**				
		Strongly Disagree (1)	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
REB2	I prefer IFB because in my religious philosophy one should engage in transactions interest free financial system					
REB3	I Prefer Interest free banking products and services because they are Shariah-compliant					
REB4	In my belief transactions involving with impermissible business activities are prohibited					
8. Customer Involvement(CIN)						
S. No.	**Statements**	**Alternatives**				
		Strongly Disagree (1)	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
CIN1	Based on the exposure I have with the IFB service ,I know it cares about customers (Prime service)					
CIN2	I gave feedback during IFB product briefing session arranged by the bank					
CIN5	I maintain good relationship with Interest Free Banking service.					

TABLE 4.6.1.4-1ROTATED FACTOR LOADINGS

Rotated Component Matrix[a]									
	Component								
	REA	AWS	PCR	CPX	IMP	CIN	CPT	REB	OBV
Using Interest Free Banking products and services improved the quality of my financial dealings	**.765**								
Interest Free Banking products and services are more reliable than conventional Banking services	**.820**								
Interest Free Banking products provide cheaper cost of fund than conventional Banking services	**.874**								
I feel using Interest Free Banking product will increase my revenue	**.857**								
IFB is a convenient way to manage my finance	**.832**								
I have an awareness of Interest free Banking products and services provided by CBE		**.754**							
I am aware of the usefulness of interest free Banking products and services		**.849**							
I know that all interest free banking products and services are free of interest		**.852**							
I receive enough information about Interest free banking products and services		**.879**							
I get enough information about how to proceed to get each Interest free banking products and services		**.808**							

Interest free Banking products and services may not meet my expectation			**.779**						
It is risky to use Interest free banking products and services			**.814**						
I fear of losing much money in case of Interest free Banking business loss			**.797**						
There is a chance that there would be something wrong with the choice of the Interest free Banking products and services			**.826**						
Understanding Interest free Banking products and services required relatively more knowledge and Experience				**.877**					
Interest free Banking products and services are too difficult to understand				**.891**					
Interest free Banking products and services are complex to use				**.875**					
Interest free banking transactions involve complex procedures				**.793**					
I know the bank has knowledgeable and experienced manpower to provide interest free banking.					**.802**				
I think the bank has the necessary Islamic banking software to record interest free banking Transaction.					**.879**				
I think that the bank provides its interest free banking products at convenient branches and adequate windows with the customer expectation					**.845**				
I think that Segregation of fund from the conventional banking service activity is mandatory to attract the potential customer of interest free banking service.					**.703**				
Based on the exposure I have with the IFB service ,I know it cares about customers (Prime service)						**.902**			
I gave feedback during IFB product briefing session arranged by the bank						**.855**			
I maintain good relationship with Interest Free Banking service.						**.862**			

Interest free Banking products and services fit with my banking needs							**.767**		
Interest free Banking products and services fit with my habit of using bank							**.797**		
Interest free Banking products and services suite my religious belief							**.785**		
Interest free Banking products and services are compatible with social justice							**.740**		
I prefer IFB because in my religious philosophy one should engage in transactions interest free financial system								**.862**	
I Prefer Interest free banking products and services because they are Shariah-compliant								**.870**	
In my belief transactions involving with impermissible business activities are prohibited								**.840**	
I was effectd by what I observed as the benefits of using Interest free banking products and service.									**.816**
I observed others using IFB service and saw the advantages of doing so.									**.803**
I have seen how others use IFB before I use them.									**.858**

APPENDIX C: TABLE OF MISSING DATA PROCEDURE FINDINGS BASED ON FREQUENCY DISTRIBUTION

Communalities		
	Initial	**Extraction**
IMP1	1.000	.791
IMP2	1.000	.847
IMP3	1.000	.805
IMP4	1.000	.575
AWS1	1.000	.601
AWS2	1.000	.746
AWS3	1.000	.747
AWS4	1.000	.780
AWS5	1.000	.658
REA1	1.000	.606
REA2	1.000	.747
REA3	1.000	.792
REA4	1.000	.801
REA5	1.000	.756
CPT1	1.000	.681
CPT2	1.000	.735
CPT3	1.000	.680
CPT5	1.000	.603
CPX1	1.000	.803
CPX2	1.000	.849
CPX3	1.000	.812
CPX4	1.000	.667
PCR1	1.000	.679
PCR2	1.000	.819
PCR3	1.000	.816
PCR4	1.000	.814
PCR5	1.000	.714
REB2	1.000	.800
REB3	1.000	.818
REB4	1.000	.766
CIN1	1.000	.964
CIN5	1.000	.916
CIN6	1.000	.892

Extraction Method: Principal Component Analysis

Model Summary

APPENDIX D: TEST FOR COMMUNALITIES

Communalities

	Raw		Rescaled	
	Initial	Extraction	Initial	Extraction
IMP1	1.041	.823	1.000	.791
IMP2	1.082	.925	1.000	.855
IMP3	1.136	.939	1.000	.827
IMP4	.923	.503	1.000	.546
AWS1	.476	.280	1.000	.588
AWS2	.688	.537	1.000	.781
AWS3	.501	.370	1.000	.738
AWS4	.495	.378	1.000	.763
AWS5	.506	.325	1.000	.643
REA1	1.181	.734	1.000	.622
REA2	1.287	.991	1.000	.770
REA3	1.312	1.062	1.000	.810
REA4	1.278	1.037	1.000	.811
REA5	1.151	.873	1.000	.758
CPT1	.649	.433	1.000	.668
CPT2	.611	.440	1.000	.721
CPT3	.623	.413	1.000	.663
CPT5	.691	.426	1.000	.617
CPX1	.739	.580	1.000	.785
CPX2	.782	.654	1.000	.836
CPX3	.818	.663	1.000	.810
CPX4	.943	.662	1.000	.702
OBS1	.770	.609	1.000	.792
OBS2	.691	.520	1.000	.753
OBS3	.711	.536	1.000	.755
PCR1	.954	.669	1.000	.700
PCR2	.829	.685	1.000	.826
PCR3	.901	.726	1.000	.806
PCR4	.908	.730	1.000	.803
PCR5	1.059	.787	1.000	.743
REB2	.591	.479	1.000	.811
REB3	.497	.393	1.000	.792
REB4	.540	.403	1.000	.747
CIN1	1.336	1.295	1.000	.970

CIN2	1.310	1.184	1.000	.904
CIN5	1.245	1.147	1.000	.922

Extraction Method: Principal Component Analysis.

APPENDIX E: NUMBER OF SAMPLE IFB OFFERING BRANCHES FROM EACH ADDIS ABABA DISTRICT

West Addis District			East Addis District		South Addis District		North Addis District	
Number of Selected Sample	Number of Account in each Branch	Branch Name	Number of Account in each Branch	Brach Name	Number of Account in each Branch	Brach Name	Number of Account in each Branch	Branch Name
1	7,039	Werabe	2,670	Ayer Amba Micheal	1,578	Nefas Silk	2,181	Burayu
2	6,526	Kebet	746	Meri	1,066	Gofa Sefer	1,774	Wingate
3	6,059	Alem Bank	715	Gerji	988	Mekanissa	1,585	Gundo Meskel
4	4,786	Butajira	700	Legetaffo	872	Akaki	1,184	Shegolle
5	4,069	Atena Terra	680	Sendafa	841	Jemu	1,144	Degolo
6	3,846	Torra	668	Korean Hospital	567	Bishoftu	1,116	Gullele
7	3,815	Lera	648	CMC	524	Lafto	1,084	Asko
8	3,552	Anwar Mesgid	646	Kotebe	489	Sengatera	872	Ambo
9	3,431	Dalocha	620	Tefera Degife	454	Finfine	857	Rufael
10	3,335	Abakoran	549	Kara	389	Lideta	829	Addis Ababa
11	3,329	Asrasiminit Mazoriya	536	Gurd Sholla	386	Gara Duba	784	Leku Keta
12	3,117	Enseno	532	Bole Michael	378	Balcha Abanefso	604	Theodros
13	3,108	Torhailoch	515	Debre Berhan	378	Furi	583	Arat Kilo
14	3,102	Keranio	509	Goro Adebabay	352	Lebu	581	Arada Ghiorgis
15	2,678	Kolfe	451	Sefera Akababi	347	Kotari Condo	566	Mikililand
16	2,497	Mehal Gebeya	415	Africa Avenue	345	Saris 58 Mazoria	506	Legedima
17	2,180	Addis Ketema	414	Sholla Gebeya	344	Gofa Gebriel		
18	2,122	Lomi Meda	399	Beshalie	337	Joshansson		
19	2,079	Eresha						
20	2,074	Sankura						
21	1,984	Bekur						
22	1,919	Alicho Weriro						
23	1,883	Tekle Haimanot						
24	1,844	Reppi						
25	1,839	Wolkite						
26	1,786	Betel						
27	1,699	Gare Bolo						
28	1,664	Girar						

Source: CBE MIS Quarter Performance report as of March 31, 2018

APPENDIX F: List of Banks Lounching IFB service

Bank Wise Share of Customer Base in Interest Free Banking Industry

List Of Banks Lounching IFB service
As at March 31, 2018

No.	List of banks in Ethiopia	Year of Est.	Began providing IFB service	Number Of customers	Mkt. Share (Percentage)
1	Commercial Bank of Ethiopia	1963	2013	1,080,662	60%
2	Oromia International Bank	2008	2013	196,220	11%
3	United Bank	1998	2014	33,144	2%
4	Wegagaen Bank	1997	2015	27,272	2%
5	Nib International Bank	1999	2015	32,178	2%
6	Cooperative Bank of Oromia	2005	2015	383,121	21%
7	Awash International Bank	1994	2016	13,140	1%
8	Abay Bank S.C.	2010	2016	21,115	1%
9	Bank of Abyssinia	1996	***Not lounching IFB service	***	***
10	Dashen Bank	2003		***	***
11	Lion International Bank	2006		***	***
12	Development Bank of Ethiopia	1909		***	***
13	Zemen Bank	2009		***	***
14	Bunna International Bank	2009		***	***
15	Berhan International Bank	2010		***	***
16	Addis International Bank	2011		***	***
17	Debub Global Bank	2012		***	***
18	Enat Bank	2013		***	***
Total Number Of Customers				**1,786,852**	**100%**

(Source: own computation from secondary data June 2018)