



**DETERMINANTS OF CUSTOMERS' INTENTION TO USE  
INTEREST FREE BANKING PRODUCTS AND FACTORS  
AFFECTING EMPLOYEES' PRODUCT KNOWLEDGE: THE  
CASE OF COMMERCIAL BANK OF ETHIOPIA**

**A THESIS SUBMITTED TO ADDIS ABABA UNIVERSITY COLLEGE  
OF BUSINESS AND ECONOMICS IN PARTIAL FULFILLMENT OF  
THE REQUIREMENT FOR THE DEGREE OF MASTER OF  
BUSINESS ADMINISTRATION (MBA)**

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**ADDIS ABABA UNIVERSITY  
COLLEGE OF BUSINESS AND ECONOMICS  
MASTER OF BUSINESS ADMINISTRATION**

**JUNE, 2017  
ADDIS ABABA**

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**JUNE, 2017  
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## **STATEMENT OF DECLARATION**

I, **Abraham Redi Awol**, declare that this research entitled “*Determinants of Customers’ Intention to Use Interest Free Banking Products and Factors Affecting Employees’ Product Knowledge: The case of Commercial Bank of Ethiopia*” is the result of my own effort and study. I also declare that all sources of materials used for the study have been duly acknowledged. I have produced it independently except for the guidance and suggestion of the Research Advisor.

This study has not been submitted for award of any Degree or Diploma Program in this or any other Institution.

**Declared by: Abraham Redi Awol**

**Signature**\_\_\_\_\_

**Date**\_\_\_\_\_

## **STATEMENT OF CERTIFICATION**

This is to certify that **Abraham Redi Awol** has carried out his research work on the topic entitled “*Determinants of Customers’ Intention to Use Interest Free Banking Products and Factors Affecting Employees’ Product Knowledge: The case of Commercial Bank of Ethiopia*” is his original work and is suitable for submission for the award of Master Degree in Business Administration.

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**Yitbarek Takele (Ph.D)**

**(Advisor)**

**June, 2017**

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## *Abstract*

*The capacity of Interest Free Banks to gain substantial market share in a challenging financial environment, particularly in a dual-banking system like Ethiopia, will primarily hinge on the ability of IFB's to formulate and implement successful marketing strategies. This will require a clear understanding of the attitudes of the potential consumers. On the other hand, in coping with customers need, it is always questionable whether the employees of the bank are having adequate training and knowledge on Islamic banking practices. In addressing the stated problems, this thesis, therefore, examines the determinants of customers' intention to use interest free banking products and factors affecting employees' product knowledge, in the context of Commercial Bank of Ethiopia. A survey approach was used to investigate intention to use and products knowledge of IFB customers and employees respectively. 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 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 findings of the study on customers' intention showed that, except for Knowledge, all the other variables: Attitude, Social Influence, Perceived Financial Cost and Religious Belief have significant effect on IFB use intention. Moreover, except for Underlying Arabic Terminology, the other two variables: Underlying Sharia' Principles and Training have significant effect 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 effect on IFB adoption intention. To sum up, 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 influence customers' decision in adopting IFB in order to devise effective marketing strategies to attract customers. Not to mention, the findings of this study should be of value to IFBs in terms of expanding customer base. 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.*

**Keywords:** *Intention to Use, Product Knowledge, Commercial Bank of Ethiopia, Interest Free Banking*

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---

## LIST OF ABBREVIATIONS AND ACRONYMS

**AMOS:** Analysis of Moment Structure

**BBA:** Bai-Bithamanan Ajil

**CBE:** Commercial Bank of Ethiopia

**CFA:** Confirmatory Factor Analysis

**DTPB:** Decomposed Theory of Planned Behavior

**GOF:** Goodness of FIT

**IDT:** Innovation Diffusion Theory

**IFB:** Interest Free Banking

**IFBWS:** Interest Free Banking Window Service

**MIS:** Management Information System

**SEM:** Structural Equation Modeling

**SPSS:** Statistical Package for the Social Sciences

**TAM:** Technological Acceptance Model

**TRA:** Theory of Reasoned Action

**TPB:** Theory of Planned Behavior

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## CHAPTER ONE: INTRODUCTION

*This thesis investigates the Determinants of Customer's Intention to use Interest Free Banking Products by considering the effects of attitude; social influence; religious belief; pricing and knowledge of IFB products in the context of Commercial Bank of Ethiopia. Moreover, the study examines factors Affecting Bank employees' product knowledge in relation with training, the understanding of the underlying Sharia' principles, and the understanding of the underlying basic Arabic terminologies in the same context. This chapter is organized in nine sections. Background of the study and statement of the problem and research questions were dealt within the first, the second and the third sections respectively. Objective and hypothesis of the study are presented in the fourth and fifth sections respectively. Scope and limitation of the study was addressed in the sixth section. Moreover, significance of the study, definition of Arabic terms used in this study and organization of the paper is discussed in seventh, eighth and the final section of the thesis respectively.*

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### 1.1 Background of the study

The earliest references to the re-organization of Interest Free Banking on the basis of profit sharing rather than interest are found in Anwar Qureshi (1946) and Naiem Siddiqi (1948) in the late forties, followed by a more elaborate exposition by Mawdudi (1950; 1961). They have all recognized the need for interest free commercial banks and have proposed a banking system based on the concept of Mudarabha - profit and loss sharing- since basic principle is that, interest- usury or *Riba* used interchangeably is prohibited on the principle of “no pain no gain”. The investor takes a share in the profits, if any, of the venture and is liable to lose his/her capital (Nassem Bukhari, (?).

Early seventies saw the institutional involvement. Conference of the Finance Ministers of the Islamic Countries held in Karachi in 1970, First International Conference on Islamic Economics in Mekka in 1976, International Economic Conference in London in 1977 were the result of such involvement. The involvement of institutions and governments led to the application of theory to practice and resulted in the establishment of the first Interest Free banks. The Islamic Development Bank, an inter-governmental bank, was born out of this process in 1975.

Prior the stated period small scale and limited scope Interest Free banks have been tried. The establishment of the Mit Ghamr Islamic Bank in Egypt in 1963 is often viewed as the starting point

of the modern Islamic banking movement. Evidence exists, however, that interest free commercial financial transactions existed in various parts of the Muslim world several decades earlier. For instance, the institution Anjuman Mowodul Ikhwan of Hyderabad, India, made interest free loans to Muslims as early as the 1890s. Another institution in Hyderabad, the Anjuman Imdad-e-Bahmi Qardh Bila Sud, was established in 1923. These organizations made small loans to small businesses on a profit-sharing basis (Shanmugam and Zahari, 2009).

By the mid-1980s, Interest free banking, based on Islamic principles became an established part of mainstream banking in the Middle East and South Asia. They continued to sprout across South and East Asia in addition to Turkey and the Arab countries. Now the practice of Islamic banking is not limited to Arab and Muslim countries but has spread "from East to West", all the way from Indonesia and Malaysia towards countries where Muslims are minorities, such as UK, Luxemburg, Denmark, Australia, India and the Americas. Not only that many conventional banks including some major multinational western banks have also started using Islamic banking techniques (Iqbal and Molyneux, 2005). The sound economic resilience of the industry's twin engines- Malaysia and the Gulf cooperation council (GCC: comprising Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE) will help the industry sustain strong growth rate.

Due to its significant achievements, Islamic banking has won the admiration of both developed and developing nations. On the other hand, though several features make its instruments relevant to most Sub-Saharan African countries, Islamic finance is not yet significant in the region. (IMF, 2014)

In Ethiopia, 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 lived as the finally issued directive does not allow the establishment of full-fledged Islamic financial institution (Mohammed, 2012). Rather, the final directive, SBB/51/2011, only authorizes conventional banks to market and launch their products with the introduction of 'windows' alongside of conventional operation "in a manner consistent with Islamic finance principles and mode of

operation". Therefore, Zemzem<sup>1</sup>, a prospective new bank, expected to join the banking industry as a full-fledged interest-free bank, was unable to start operations as the supervisory directive requires that interest-free banking be given alongside conventional banking services.

Subsequent to the issuance of the working directive, SBB/51/2011, the NBE has granted the IFB service license to Oromia International Bank S.C (OIB) on September 16, 2013. Same license is granted to the Commercial Bank of Ethiopia (CBE) 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 their customers.

On the other hand, in present era, every organization places a great emphasis on their respective customers due to severe competition arising from liberalization and globalization of business sectors. Among these, banking sector whether it is conventional or Islamic banking, puts more emphasis to provide value added and featured services to their customers in order to remain competitive and survive in the financial market. Zeithaml and Bitner (2000) found that businesses now-a-days have to manage their competitive edge by focusing more on service quality which ultimately, leads to customer satisfaction. Peters (1999) further supports this idea and stated that quality is a "magic bullet" that gives higher customer services and high (profit) margins and without managing quality, it is impossible to give value added services.

Zeithaml (2000) argues that service quality is an important aspect and therefore, banks must accredit their customer's perception and then meet the customer needs by providing desired services. However, it is commonly observed and tested that, employees of the organization can deliver satisfactory services to customers when their respective organizations equip them with basic resources including logistics, equipment, administrative and management support(Schneider and Bowen, 1985). Zeithaml (2000) further supports this by arguing that

*"Satisfied employees make for satisfied customers (and a satisfied customer can, in turn, reinforce employees' sense of satisfaction in their jobs)."*Zeithaml (2000) pp. 67

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<sup>1</sup>According to Senait (2015), Zemzem Bank was floated shares with the sole intention of operating interest-free banking, since December 2010. It was able to raise Birr 137 million in paid-up capital and Birr 337 million in subscribed capital from its 6,800 shareholders.

Haron (1996) further argued that; in accordance with the objectives of the formation of Islamic banks, these institutions must provide services in compliance with Islamic legal practices because Islamic banks are prohibited to engage in any activity which is based on *Riba* (interest). Hamid and Nordin (2001) piloted the research for the determination of the importance of education in Islamic banking and the development of viable strategy for Islamic banks to face new millennium. Authors found that 60% of the customers are unable to differentiate between conventional and Islamic banking products. Hassan and Ahmed (2002) conducted the study on the employees and customers of Islamic banks and found that customers are not interested in doing banking transaction with Islamic banks because they thought that only the name of banks have been changed and the *Riba* which is prohibited in Islam is still in practice. Moreover, Haron and Ahmad (2002) have emphasized that nearly 65% of banking customers stated that they had very limited knowledge of Islamic banking.

The stated discussions revealed that the employees and customers understanding of the concepts and practices of Interest-free banking is still ambiguous. Therefore, this paper attempts to investigate the Determinants of Customers' Intention to Use Interest Free Banking Products and Factors Affecting Employees' Product Knowledge particularly with reference to the Ethiopian context to raise the awareness of the stakeholders and realize the full potential of the newly embarked convention

## 1.2 Statement of the Problem

A great deal of literatures has pointed out that since its emergence onto the financial scene in the 1970s, Islamic banking has gained prominence, becoming one of the most important players in the banking service industry today. The amount of its assets was estimated to be 1.7 trillion dollars in 2013 and is expected to reach 3.4 trillion dollars by 2018 (World Islamic Banking Competitiveness Report, 2013-2014). Moreover, its ability to overcome the financial crisis gave it the opportunity to realize a triumph, to take advantage over conventional banking and to get more attention from politicians, investors, bankers, theoreticians and researchers (Echchabi and Azouzi, 2014). On the other hand, Islamic finance is not yet significant in most Sub-Saharan African countries, though several features make its instruments relevant to the region (IMF, 2014).

In Ethiopia, the introduction of Interest Free Banking Window alongside with conventional operations generated a new dimension in banking sector of the country. From the outset, many commercial banks

anticipated much demand from the side of the target customers. After its three years of implementation, however, IFB products attract the attention of few customers. To support this argument, as per the CBE's -MIS report, IFB maintains only less than 3% of the total accounts of the bank. Moreover, IFB's financing products able to attract only a handful of credit customers. The total IFB financing amount was stood at Birr 171.58 million, i.e., only around 0.12% of the total credit portfolio of the bank as at December 31/2016. Further, IFB's Depository and Investment products jointly able to mobilize Birr 4.14 billion only, or 1.3% of CBE's total deposits.

For ease of comparison, if we look at a single conventional depository product of the CBE, Women's Saving Account, which has the same age with IFB, however, able to mobilize Birr 12.67 billion of deposits as at December 31/2016, which is more than thrice-fold as compared with IFB's seventeen-product-category deposit account performances in aggregate!

Moreover, it is worrying, considering that nearly 34% of Ethiopia's population consists of 102 million people are Moslems now. Why is the majority of the target population being less interested in using those products is a critical question?

At international level, academic researchers such as Erol and El-Bdour (1989) have initiated and published their pioneering study in order to understand the nature of customers' attitude toward its use. Thus, it became apparently clear right from its infancy; Islamic banking adoption among some customers was motivated by religious zeal (Bley & Kuehn, 2004; Metawa and Almassawi, 1998), while other customers considered adoption as a means to harvest additional economic benefits (Dusuki & Abdullah, 2007; Erol and El-Bdour, 1989). Similarly, studies have documented that pricing can affect one's decision regarding which bank to utilize and which banking services to give their patronage (Amin, 2008). However, going beyond a description of customers' religious zeal, economic benefits and costs, researchers have also attempt to identify the causal inferences between the psychological factors and the adoption of Islamic banking using the theory of reasoned action (Taib et al., 2008; Amin et al, 2010; Amin et al, 2011; Wahyuni, Sakur and Arifin, 2013), theory of planned behavior (Alam et al., 2011; Amin et al., 2013; Amin et al., 2014) and technology acceptance model (Amin et al, 2008).

Although, those earlier studies on this area add their own contribution to the theory and stated their own policy implications, they were inclined towards the Moslem dominated and or Arab countries, and hence, Ethiopia received little attention in various literatures on this issue.

In Ethiopia, on the other hand, few studies were conducted on Interest Free banking. Among these studies, Mohammed (2012) had studied the Prospects, Opportunities and Challenges of Islamic Banking in Ethiopia. Debebe (2015) has conducted a study on Factors Affecting Customers to Use Interest Free Banking by using the theory of Decomposed Theory Planned Behavior (DTPB). Further, Teferi (2015) was studied about the Contribution of IFB to economic development and its prospect in Ethiopia. Finally, Kerima (2016) contributed a research paper on Challenges of Interest Free Banking Services.

As stated above, there is no earlier work on IFB Employees' Product Knowledge in the Ethiopian context. Furthermore, even though there is a work on Customer's Intention, it was made based on DTPB model (Debebe, 2015). However, due to its parsimonious and prediction capacity, Theory of Reason Action receives rich empirical support as evidenced by the work of (Gumel, Othman and Yusof, 2015). Therefore, this study investigates customer's intention based on TRA model.

While reviewing studies done using TRA model, one can witness that many researchers have tried to modify the TRA model by incorporating one or more additional variables as moderator; For instance, (Ali, Raza and Pua, 2015; Aminet al., 2011) modified TRA by adding three new moderating variables, namely, "Religious Obligation", "Pricing" and "Government support". However, this study was used Attitude as a mediator variable in order to predict the indirect effect of Religious belief and Knowledge on Intention in addition to their respective direct effects. Moreover, this research has developed two new constructs knowledge and the underling Arabic Terminology on Customer's Intention and Employee Product Knowledge respectively.

Besides, as per the literature review, only a couple of literatures were used Structural Equation Modeling (SEM) on the original constructs of TRA: Attitude and Social influence (Echchabi and abd. Aziz, 2012; Abduh & Abdu-Razak, 2012). On the other hand, Amin et al. (2012) has included Perceived Financial Cost on original constructs of TRA to investigate customers' intention by using SEM. However, apart from the two original constructs of TRA, this study was used SEM on three

newly added variables too: Perceived Financial Cost, Religious Belief and Knowledge constructs to investigate customers' intention.

To sum up, the capacity of IFBs to gain substantial market share in a challenging financial environment, particularly in a dual-banking system like Ethiopia, will primarily hinge on the ability of IFB's to formulate and implement successful marketing strategies. This will require a clear understanding of the behavior, attitudes, and perceptions of their potential consumers (Bobat, 2007). On the other hand, in coping with customers need; it is always questionable whether the employees are having adequate training and knowledge. Zainol et al. (2008) argued that the bankers have limited knowledge in Islamic banking practices.

Accordingly, in examining the above points, therefore, this study is aiming to fill the knowledge gap by providing information on Determinants of Customers' Intention to use Interest Free Banking Products and factors affecting employees' Product Knowledge in order to raise the awareness of the stakeholders for the greater success of the business.

### **1.3 Research Questions**

This study was an attempt to answer mainly the following two research questions to achieve the intended objectives of the study and to address the research problem properly.

1. Can the Theory of Reasoned Action (TRA) be used to predict customers' intention to use Interest Free Banking Services?
2. What factors influence the customers' intention towards use of Interest Free Banking?
3. What factors influence the knowledge of employees towards the IFB products?
4. To what extent demographic factors are associated with customers' adoption decision?

### **1.4 Objectives of the Study**

#### **1.4.1 General Objective of the Study**

The main objective of study, as stated on the introduction part, is to explore both customers' intention to use IFB and employees' product knowledge towards the IFB products and how this intention and knowledge can be raised for the greater success of the business.

## 1.4.2 Specific Objective of the Study

The specific objectives of the study will be

1. To study the applicability of TRA model to predict customers' IFB product usage intention.
2. To examine the intention of the Ethiopian customers to use IFB products.
3. To investigate factors that influence product knowledge of IFB employees,
4. To assess the association between demographic factors and Customers' adoption decision

## 1.5 Hypothesis Development

The following hypothesis was proposed based on the review of the respective literatures on “Determinants of Customers' Intention to use IFB products”.

H<sub>1</sub>: Attitude has a positive influence on Intention to use of IFB products.

H<sub>2</sub>: Social Influences has a positive influence on the Intention to use the products of IFB.

H<sub>3</sub>: Attitude mediates the relationship between Religious Belief and Intention to use IFB products.

H<sub>4</sub>: Religious belief has a positive influence in the usage of IFB products.

H<sub>5</sub>: Perceived Financial Cost (pricing) has negative influences on the Intention of the use of IFB products.

H<sub>6</sub>: Knowledge has a positive relationship with Attitude towards IFB product.

H<sub>7</sub>: Knowledge has a positive relation with Intention to use of IFB products.

H<sub>8</sub>: Attitude mediates the relationship between Knowledge and Intention to use of IFB products.

Moreover, the following hypothesis was proposed based on the review of the respective literatures on “Factors Affecting Product Knowledge of Employees”

H<sub>1</sub>: Training of IFB Staffs explains the variance of knowledge among IFB performers towards the IFB products.

H<sub>2</sub>: Understanding of the Underlying Sharia' principles explain the variance of knowledge among IFB performers towards the IFB products.

H<sub>3</sub>: Understanding of the basic Arabic terminologies explains the variance of knowledge among IFB staffs towards the IFB products.

## **1.6 Scope and Limitation of the Study**

### **1.6.1 Scope of the Study**

This study will be confined to the “Determinants of Customers’ Intention to use Interest Free Banking Products and Factors Affecting Employees’ product knowledge” in the Ethiopian context. Moreover, the study area is limited to four Addis Ababa city districts of the Commercial Bank of Ethiopia. Further, the study was included customers and staffs of interest free banking business only.

### **1.6.2 Limitation of the Study**

The findings of this study are based entirely upon the research conducted in the Addis Ababa city and hence may not be applicable to other areas and regions on accounts of contextual factors. Moreover, this study employed cross-sectional data and it is difficult to determine the time series link among variables. As a result, the research may result different findings if it is conducted in another time. Despite these limitations, the findings of this study will provide invaluable insights into factors determining the bank customers’ intention to use IFB products and employees’ product knowledge, especially in the case of Ethiopian interest free banking business.

## **1.7 Significance of the Study**

The study on “Determinants of Customers’ Intention to use IFB products” would contribute towards a better understanding of the customers’ expectation. The management of the bank could now comprehend better the factors that influence customers’ decision in adopting IFB in order to devise effective marketing strategies to attract customers. Besides, the findings of this study should be of value to IFBs in terms of expanding customer base. Moreover, the study on “Factors Affecting Employees’ Product Knowledge”, among others, directs the management of IFB to inculcate their staff with IFB knowledge to be more competitive in the banking industry. Further these studies will give direction for future studies.

## 1.8 Definition of Arabic Terms

- **Bai-Bithamanan Ajil:** refers to sale of goods or property against deferred payment (either in lump sum or installments)
- **Gharar:** Contractual uncertainty that may lead to major dispute between contracting parties which is otherwise preventable or avoidable.
- **Halal:** Things permissible by the Sharia'
- **Haraam:** Things prohibited by Sharia'.
- **Musharakah:** A business partnership set up to make profit, where all partners contribute capital and effort to help the business run.
- **Musharakah-mutenaqisah:** temporary partnership where an asset or property is jointly purchased by two partners and one partner eventually acquires ownership of it through a series of property share purchases.
- **Qardul Hassen:** A benevolent/goodly loan against which interest is not charged; where only the principal amount is to be returned in the future.
- **Riba:** literally means increase, addition, rise or growth. Any amount that is charged in excess which is not in exchange for a due consideration. Conventionally it is referred to as interest and is prohibited in Islam.
- **Sharia':** means Islamic principles or law.
- **Ummah:** The Muslim community

## 1.9 Organization of the Paper

The rest of this thesis is organized as follows: Chapter two presents review of the theoretical and empirical literatures, hypotheses and conceptual framework. The research methodology and procedures used to collect data for the study was presented under Chapter three. Discussions of results were presented in Chapter four. Chapter five finalizes the thesis with major findings, conclusion, recommendation, limitations and suggestion for future study.

## CHAPTER TWO: REVIEW OF THEORETICAL AND EMPIRICAL LITERATURES

*This section, in light of interest free banking, provides the theoretical framework of the study, empirical review, overview of IFB, conceptual framework and hypothesis development.*

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### 2.1 Theoretical literature Review

#### 2.1.1 Definition of Basic Concepts used in the study

- “Interest Free Bank” commonly known as Islamic Bank, is a financial and social institution whose objectives and operations as well as principles and practices must conform to the principles of Islamic Sharia’. (Hassan and Ahmed, 2002).
- “Interest Free Banking Business” in accordance with NBE’s Directive SBB/51/2011, it refers to “banking business in which mobilizing or advancing funds is undertaken in a manner consistent with Islamic finance principles and mode of operation that avoids receiving or paying interest;”
- “Interest Free Banking Window” in line with the same Directive it refers to “a unit within a conventional bank exclusively offering interest-free banking services”.
- “Intention” is simply defined as how hard an individual is willing to try and how much effort they are planning to charge towards the implementation of the behavior (Ajzen, 1991). The higher the level of behavioral intention, the greater will be the likelihood of actual behavior.
- “Knowledge” is defined as information combined with experience, context, interpretation and reflection Davenport, Long, and Beers (1998) as well as an organized combination of ideas, rules and procedures (Bhatt, 2000). In this study, knowledge will refer to ideas, rules, procedures, information (ibid.), experience, context and interpretation (Davenport et al., 1998).

#### 2.1.2 Innovation, Technology Adoption and Diffusion

Hoyer and MacInnis (2008, p. 415), defined innovation as an offering that is perceived as new by consumers within a market segment and that has an effect on existing consumption patterns. Rogers (1995, p. 11), also defined innovation as an idea, practice, or object that is perceived as new by an individual or another unit of adoption. Technology adoption is the choice to acquire and use a new invention or innovation (Hall & Khan, 2002).

On the other hand, Diffusion is the process by which an innovation is communicated through certain

channels over time among the members of a social system. And it is a kind of social change, defined as the process by which alteration occurs in the structure and function of a social system (Rogers, 1995, pp. 5–6). According to Rogers’s definition, innovation diffusion has four important elements – an innovation, communication channels, time and social system.

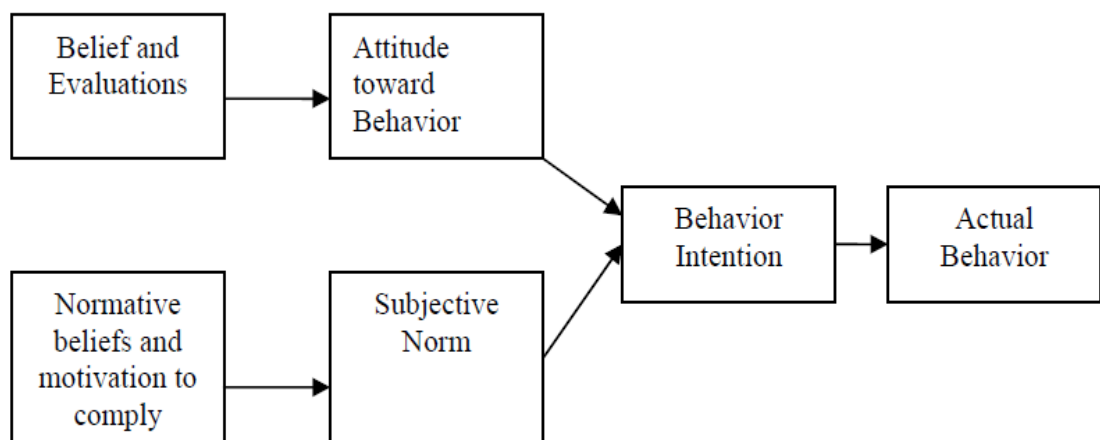
Technology adoption and diffusion are two interrelated concepts. Adoption is the process by which an individual becomes committed to continued use of an innovation. It occurs at the micro level, being the individual’s Decision process leading to adoption or rejection. Diffusion occurs at a macro level, being the process by which adoption spreads through a specific culture (Angeli, Coventry, & Johnson, 2005). Adoption, resistance, and diffusion can be influenced by the type of innovation, its breadth, its characteristics, and the social system into which it is introduced (Hoyer & MacInnis, 2008).

There are many well-known models that are tested in various contexts and Technological products. In this study the widely known models are discussed as follows:

### 2.1.2.1 Theory of Reasoned Action (TRA)

This theory, developed by Ajzen and Fishbein (1975), empirically indicated that an individual’s behavior intentions determine his or her actual behavior. Behavior intention in turn is determined by the individual’s attitude toward the behavior and subjective norms which deals with the influence of the social environment on behavior.

Figure 2.1.2.1-1: Theory of Reasoned Action



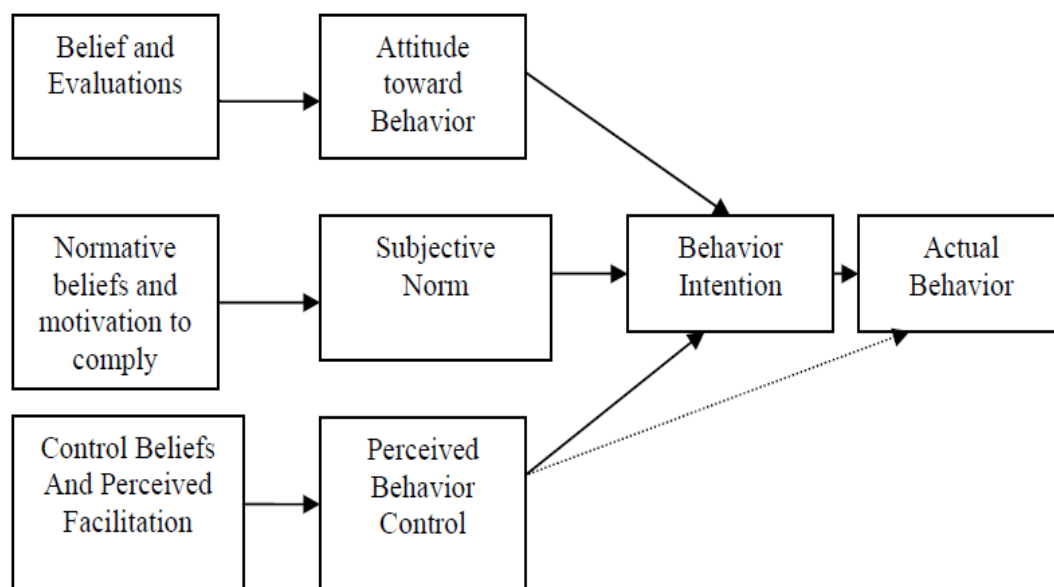
Source: Ajzen and Fishbein (1975)

### 2.1.2.2 Theory of Planned Behavior (TPB)

This theory, developed by Ajzen I.(1991), is an extension of the Theory of Reasoned Action (Ajzen &Fishbein, 1975). Ajzen indicated that TRA has limitation in dealing with behaviors over which people have incomplete volitional control. Ajzen introduced a new variable, called Perceived behavioral control, to the TRA model and developed the Theory of Planned Behavior.

Ajzen's empirical evidence indicated that Intentions to perform behaviors of different kinds can be predicted with high accuracy from attitudes toward the behavior, subjective norms, and perceived behavioral control; and these intentions, together with perceptions of behavioral control, account for considerable variance in actual behavior.

Figure 2.1.2.2-1: Theory of Planned Behavior



Source: Ajzen (1991)

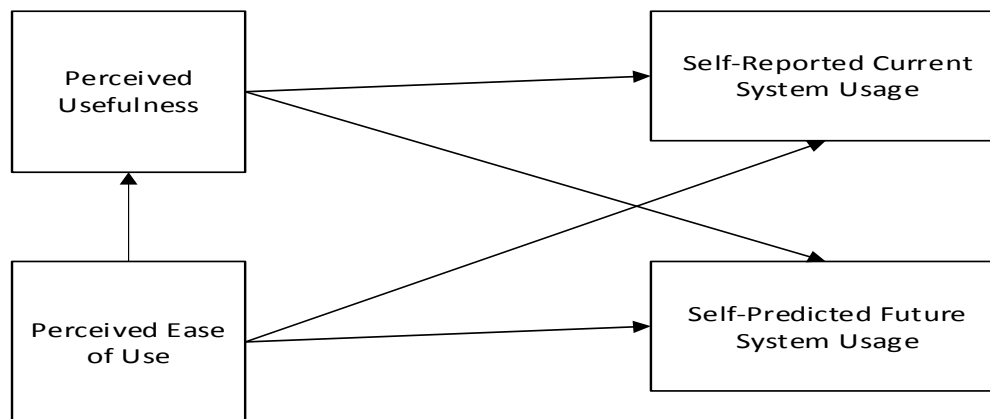
### 2.1.2.3 Technology Acceptance Model (TAM)

The model was originally developed by Davis (1989) in order to predict and measure users 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 effect 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, p. 324).

Figure 2.1.2.3-1: Technology Acceptance Model



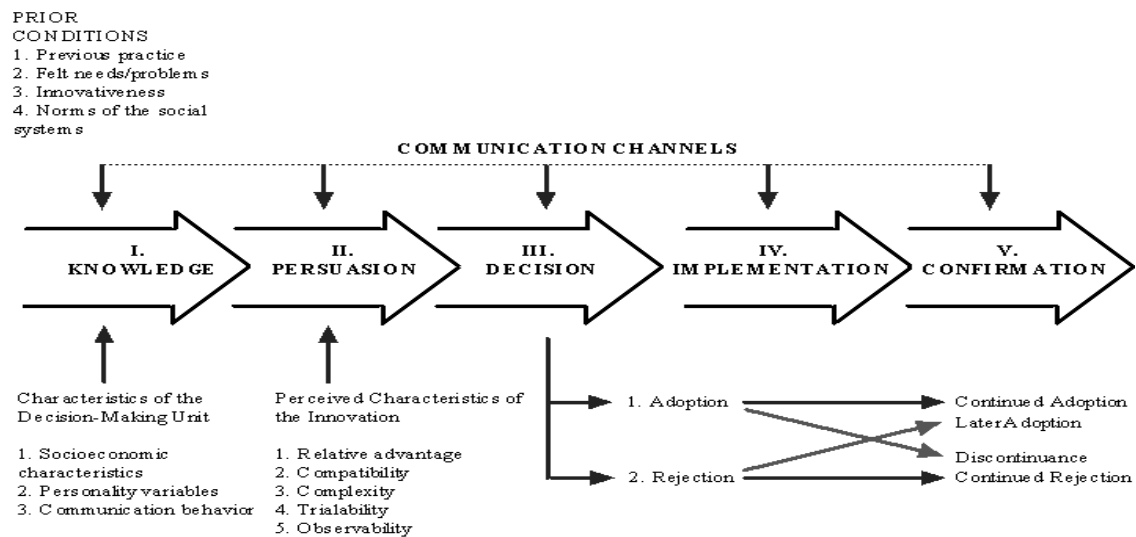
**Source:** Davis(1989)

#### 2.1.2.4 Innovation Diffusion Theory (IDT)

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, p. 165).

Rogers indicated that the Decision to adopt an innovation or a “new idea” depends on five factors – Relative Advantage, Compatibility, Complexity, Trialability and Observability.

Figure 2.1.2.4-1: Innovation Diffusion Theory



Source: Rogers (1995)

### 2.1.3 Comparison of the Models

TRA, TAM and TPB all focus on explaining the actual behavior for technology adoption. TRA provides the theoretical foundation to both TAM and TPB. TAM uses TRA to specify the causal linkages between two key beliefs: Perceived Usefulness and perceived ease of use (Qayyum & Ali, 2012). TPB also uses TRA as a theoretical basis for explaining the actual behavior, but it only differs from TRA because of the addition of perceived behavioral control (Qayyum & Ali, 2012). TAM and IDT have similar constructs like perceived usefulness and Relative advantage, perceived ease of use and complexity.

### 2.1.4 Why Theory of Reasoned Action?

There exist an increased number of literatures pertaining to the applicability of the TRA to an Islamic marketing context, Islamic accounting and Islamic housing, to mention some, Taib et al. (2008) extend the TRA to diminishing partnership of Islamic home financing, Amin (2009) extend the TRA to an Islamic accounting. On the other hand, Amin, Rahman, Sondoh and Hwa (2011) extend the TRA in to Islamic personal financing.

The researcher proposes to choose the TRA is due to its parsimonious and it receives rich empirical supports. This explains that the selection of the TRA is based on its parsimony and predictive power which make it easy to apply in different context of study. Hence, the TRA is advantageous in this

current study. The TRA asserts that attitude towards IFB products and subjective norm are the antecedents of performed behavior. The two antecedents namely attitude and subjective norm influence the purchase behavior additively (Taib et al., 2008). Empirical works have reported that these measures have shown to have separate effects on the purchase behavior (Ha, 1998).

The TRA also leads to marketing strategies as IFB products subject to individual's attitude and social influence. This implies one's attitude is appeared as an intrinsic force which generate favorable outcome for adoption. Whilst, good subjective norm for IFB products will build better "environment" for individuals to choose IFB products. These behavioral psychology components have tendency to explain one's consumption for a particular product is largely sourced from his attitude and other people influence around him. Ha (1998) argued that the TRA is different from the traditional attitude theories in that it introduces normative influences into the overall model and a causal relationship between the two factors and intention. This means to marketers that prior to push consumer to choose IFB products, they in the first place should change consumer attitude in advance. Changing one's attitude is able to improve consumers' positive attitude which in turn influencing adoption. Concerned with social influence, marketers are encouraged to promote IFB products as a symbol of social values which in turn creates a good environment for those customers who have the same taste of choosing IFB products. Building a network amongst the users could offer better prospect of social influence.

Prior works have confirmed the importance of attitude and subjective norm in predicting use/adoption/consumption. This study borrows Amin et al. (2011) research to support such assertion. Their work has reported the importance of attitude and subjective norm in determining acceptance of *Qardhul Hassan* financing. Hence, in an IFB framework, attitude and subjective norm are relevant. The former relates to consumption in that one's belief pertaining to the positive or negative of a particular product can lead to or inhibit adoption. The latter relates to the influence of society with regard to the consumption. Islam only allows consuming *Halal* (permissible) products which explain one should follow it otherwise he is psychologically isolated from the group. This claim has an implication to marketing context. For instance, a food service provider is of the opinion to comply with *Halal* specifications in order to be accepted by Moslem society (Wilson and Liu, 2010). Concerning with attitude, it is expected to be positive for certain product that is permissible in the religion.

## 2.2 Empirical Literature Review

### 2.2.1 Brief Review of Sources of Islamic law, Prohibitions and Products

As per Gait, Alsadek and Andrew (2009), Islamic finance is a financial service principally implemented to comply with the main tenets of *Sharia* (or Islamic law). In turn, the main sources of *Shariah* are the *Glorious Quran*, *Hadith*, *Sunna*, *Ijma*, *Qiyas* and *Ijtihad*. The *Glorious Quran* is the book of revelation given to the Prophet Muhammad; *Hadith* is the narrative relating the deeds and utterances of Muhammad; *Sunna* refers to the habitual practice and behavior of Muhammad during his lifetime; *Ijma* is the consensus among religious scholars about specific issues not envisaged in either the *Glorious Quran* or the *Sunna*; *Qiyas* is the use of deduction by analogy to provide an opinion on a case not referred to in the *Quran* or the *Sunna* in comparison with another case referred to in the *Quran* and the *Sunna*; and *Ijtihad* represents a jurists' independent reasoning relating to the applicability of certain *Sharia* rules on cases not included in either the *Quran* or the *Sunna*.

In brief, the principles of Islamic finance are as follows: (i) the prohibition of *Riba* (usually interpreted as usury or interest); (ii) the prohibition of *Gharar*, encompassing the full disclosure of information, removal of asymmetric information in contracts; (iii) the exclusion of financing and dealing in activities and commodities regarded as sinful or socially irresponsible (such as gambling, alcohol and pork); (iv) an emphasis on risk-sharing, the provider of financial funds and the entrepreneur share business risk in return for a pre-determined share of profits and losses; (v) the desirability of materiality, a financial transaction needs to have 'material finality', that is a direct or indirect link to a real economic transaction; and (vi) consideration of justice, a financial transaction should not lead to the exploitation of any party to the transaction (Shanmugam and Zahari, 2009).

In practical terms, these prohibitions and recommendations manifest themselves as the following commercial products and services offered by IFBs: (i) *Mudarabah*, the provision of capital to a partial-equity partnership in return for a share of profits, but where the losses on funds lent are borne by the lender; (ii) *Musharakah*, full-equity partnerships where the provider of funds and the entrepreneur directly and wholly share in the business, (iii) *Murabaha*, an instrument used for financing the purchase of goods and services where the financial institution purchases goods and services on behalf of the customer; (iv) *Bai muajjal*, deferred payments on products encompassed under *Murabaha*; (v) *Bai Salam*, advance or pre-paid sale contracts of goods and services; (vi) *Istisna*,

or manufacturing contracts to cover work in progress and paid by the financial institution on behalf of the customer; (vii) *Ijarah*, lease financing; (viii) *Takaful* or Islamic insurance in the form of cooperative self-help schemes, and (ix) *Qardul- Hassan*, benevolent loans offered interest free.

In turn, these commercial products and services underlie the various depository and investment accounts offered to retail customers. In terms of Islamic banks, these are again very similar to the products and services offered by conventional banks with the exception that Islamic financing principles apply to the underlying bank assets and liabilities. For example, unlike a conventional savings account, interest is forbidden on balances in Islamic accounts. Investment depositors can, however, obtain benefits in the form of 'profit', whose value depends, in part, on the depositor's balance and the bank's profitability.

IFB products and services also increasingly manifest themselves as mutual funds underpinned by investments in *Sharia*'-compliant equity or property, *Sukuk* (Islamic bonds), *Takaful* (Islamic insurance) or *Ijarah* (Islamic leasing) constructed with Islamic principles in mind. For example, a *Sharia*'-compliant equity mutual fund would, through a process of sector screening and dividend 'purification', normally exclude: banking, insurance or any other interest-related activity; alcohol, tobacco, gambling, armaments; any activity related to pork; and any sectors or companies significantly affected by any of the above.

On the other hand, as per the Customer's Account Transaction procedure (CATS) of Commercial Bank of Ethiopia, the interest-free financial products and services offered under separate windows are *Wedia*' (saving depository) account, *Qard* (current) account, *Mudarabah* (partial-equity Profit sharing) investment account. On the other hand, as per the interest free financing procedures of the CBE, currently the bank has the following financing products: *Murabaha*, *Ba'i Salam* and *Istisna*' mode of financing. As shown in the reports of MIS, customers' currently use all of the depository and investment products stated in the CATS procedure, while the bank has the experience of offering *Murabaha* mode of financing only.

### 2.2.2 Difference between Islamic and Conventional Banking

As per Shanmugam and Zahari (2009), Islamic finance is based on the themes of community banking, ethical banking, and socially responsible investing. Among others, the difference between the Islamic and conventional bank is tabulated in table 2.2.2\_1

**Table 2.2.2–1: The difference between Islamic and conventional Banking**

S. No	Characteristics	Islamic Banking System	Conventional Banking System
1	Business framework	Functions and operating modes are based on <i>Sharia</i> '. Islamic banks must ensure that, and all business activities are in compliance with <i>Sharia</i> ' requirements	Functions and operating modes are based on secular principles, not religious laws or religious guidelines
2	Interest charging	Financing is not interest ( <i>Riba</i> ) 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 ( <i>Riba</i> ) but may share risk and rewards of investments made by the Islamic bank, not guarantee principal amount i.e, in <i>Mudarabah</i> 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 <i>Musharakah</i> 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 <i>Sharia</i> ' 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 <i>Gharar</i>	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	<i>Sharia</i> ' supervisory	Each Islamic bank must have a supervisory board to ensure that all its business activities are in line with <i>Sharia</i> ' requirements.	Conventional banks have no such requirement.
11	Statutory requirements	An Islamic bank must be in compliance with the statutory requirements of the National/central bank of the country in which it operates and also with <i>Sharia</i> ' guidelines.	A conventional bank must be in compliance with the statutory requirements of the National/central bank of the country in which it operates.

Source: Shanmugamand Zahari (2009)

## 2.2.3 Empirical Literature Review on customers' intention

### 2.2.3.1 Empirical Literatures: at International Level

Empirical studies on intention to adopt or use Islamic banking can be categorized and discussed into Musharaka Diminishing (*Musharakah-mutanaqisah*) otherwise known as Islamic home financing or Islamic diminishing home financing, Islamic personal financing (*Qardhul-Hassan* debt financing) , and Islamic credit card.

#### **Musharaka Diminishing (Musharakah-mutanaqisah) Home Financing**

According to (Abdul Razak and Taib, 2011), *Musharakah-mutanaqisah* home financing facility came into being when *Bai-Bithamanan Ajil* (BBA) was found inconsistent with belief and aspiration of the Muslim community (*Ummah*). Prior to the above, Taib et al. (2008) has already employed TRA model to examine *Musharakah-mutanaqisah* acceptance among 300 post-graduate students enrolling at three different Malaysian public universities. Cross sectional data were collected through self-administered questionnaires, and was computed using correlation, regression and factor analysis. Finding shows that customers' attitude and social influence predicted behavioral intention to adopt the new facility. Although, TRA model predicted intention of the participants, however, subjective norm component contributed greatly in the model. This is consistent with Abduh and Abdul Razak (2012) study of *Musharakah-mutanaqisah* home financing acceptance among 504 respondents in Kuala Lumpur. The structural equation modeling result indicate that customers' intention is greatly supported by subjective norm component compared to attitudinal disposition towards the new facility. This means that customers' intention to use *Musharakah-mutanaqisah* financing was more of motivation to comply with expectations of others than the evaluation of outcome from engaging in the use of the facility.

#### **Islamic Personal Benevolent Loan (Qardul-Hassan)**

In its inception, Islamic banking introduced a new financing facility, otherwise known as *Qardul-Hassan* or benevolent loan. Although, *Qardul-Hassan* was introduced to cater for customers' urgent financial needs, however, its life span ended-up abruptly (Amin, et al., 2011). Amin et al. (2010) test the applicability of TRA model in addition to the role of pricing towards *Qardhul-Hassan* debt financing among 214 customers in Labuan, Malaysia. The linear regression result indicated that attitude, subjective norm and pricing predicted intention to adopt *Qardhul-Hassan* financing.

In another closely related study one year after, Amin et al. (2011) conducted a study, examining the determinants of *Qardhul-Hassan* financing facility among Islamic banking customers in Malaysia. In addition to the original variables of TRA, three additional variables were added. Thus, attitude, subjective norm, pricing, religious obligation, and government support were all put to correlation and multiple regression analysis. Findings from the 136 sampled customers of Bank Islam and Bank *Mu'amalat* Malaysia indicated that attitude, subjective norm and pricing were found positively related to intention, while government support and religious obligation proved insignificant in the study. Although, the study confirmed the insignificant contribution of religious obligation and government support, nevertheless, religiosity has been found significant in many studies of Islamic banking (Bley and Kuehn, 2004; Metawa and Almosawi, 1998).

### **Islamic Credit Card**

Islamic credit card is another innovation introduced in Islamic banking industry, and hence, its acceptability among customers called for the attention of academic researchers. Therefore, Amin(2012) examines Islamic credit card adoption among 354 banks' customers in Malaysia. Knowledge, financial cost, attitude, financial recommendation and demographic variables were analyzed using Ordered Probit Model. Findings revealed that knowledge of Islamic credit card, financial recommendation, age, marital status, education and religion significantly influenced Islamic credit card usage intention. However, attitude appears to have no any significant effect in the study. Conversely, this is contrary to empirical discoveries in which attitude is the strongest predictor of behavioral intention (Abduh & Abdul Razak, 2012; Amin, et al., 2011). In another similar study, Amin (2013) employed TRA model to better understand the determining factors of Islamic credit cards among 257 respondents in Southeast Malaysia. Partial Least Square-Structural Equation Modeling (PLS-SEM) analysis indicate that attitude, perceived financial cost and subjective norm significantly influence customers' intention to adopt Islamic credit cards.

#### **2.2.3.2 Empirical Literature Review: at National Level**

In Ethiopia, IFB is a recent phenomenon. As a result, there is little empirical literature on the area. The studies conducted so far include the following: Mohammed (2012) has conducted research on "Islamic Banking: Prospects, Opportunities and Challenges in Ethiopia", research work conducted by Teferi (2015) was on "Contribution of IFB to economic Development and its Prospect in Ethiopia";

on the other hand, study conducted by Debebe (2015) is on “Factors Affecting Customers to Use Interest Free Banking in Ethiopia”. And finally a research conducted by Kerima (2016) on “Challenges on Interest Free Banking Services”. Accordingly, their findings in brief and the gap thereto is presented as follows. 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 (2015) studied 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. Debebe (2015), has conducted a study on “Factors Affecting Customers to Use Interest Free Banking in Ethiopia”. His study has centered on willingness on patronage of interest free banking services. The results showed that perceived relative advantage, perceived compatibility, and customers’ level of awareness have a significant positive impact towards the acceptance of interest free banking in Ethiopia. Finally, a research conducted by Kerima (2016) finds out the following challenges: lack of capacity to deliver IFB product at full range, 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*’ 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.

#### **2.2.4 Empirical Literature Review: Employees’ Product Knowledge.**

Buchari, Rafiki, and Al Qassab (2015) conducted a study aims to analyze the employees’ awareness and attitudes towards the Islamic banking products in Bahrain. Based on the descriptive analysis of 102 responded questionnaires from employees who are currently working in five Islamic retail banks in Bahrain, the study concluded that 56% of respondents are aware as well as have a positive attitude

towards Islamic banking products and services. It also found that there are statistically significant differences in the awareness and attitudes towards Islamic banks' products and services when they are grouped according to gender and education level while age and income both have insignificant differences.

Arshad et al.(2011) was conducted a research to gauge the perceptions of employees, in both Islamic banks and conventional banks, of Islamic products and services, the training and experience gained in Islamic banking, and the potential of Islamic banking in Pakistan. The results revealed that bankers in Islamic banks have more positive perceptions on the above issues. The same claim was also supported by (Rehman and Shoaib, 2014; Buchari et al., 2015). Arshad et al. (2011) argued few of the bankers possessed a relevant academic background or relevant experience in Islamic banking before embarking on this career. The bankers also claimed that they had very limited knowledge in this area prior to working with the banks.

Moreover, Harun et al. (2015), by using a survey approach investigates products' knowledge of Islamic Banking employees. The data for this study are collected via structured questionnaires which are completed by 150 staff of Islamic banking operated in northern part of Malaysia. The findings show a high significantly positive correlation between product knowledge and underlying principles followed by training, religiosity and perception. However, further analysis revealed only underlying principles and training give a significant and positive impact on product knowledge of Islamic banking employees.

On the other hand, Baba and Amin (2009), by using mail survey method investigate offshore bankers' perception on Islamic banking in Lubanan, Malaysia. The results of the survey indicate that Labuan offshore bankers do not have a clear notion of Islamic banking principles and practices. The results also show that most of the offshore banks do not have officers and staff who are conversant with Islamic banking.

## 2.3 Knowledge Gap

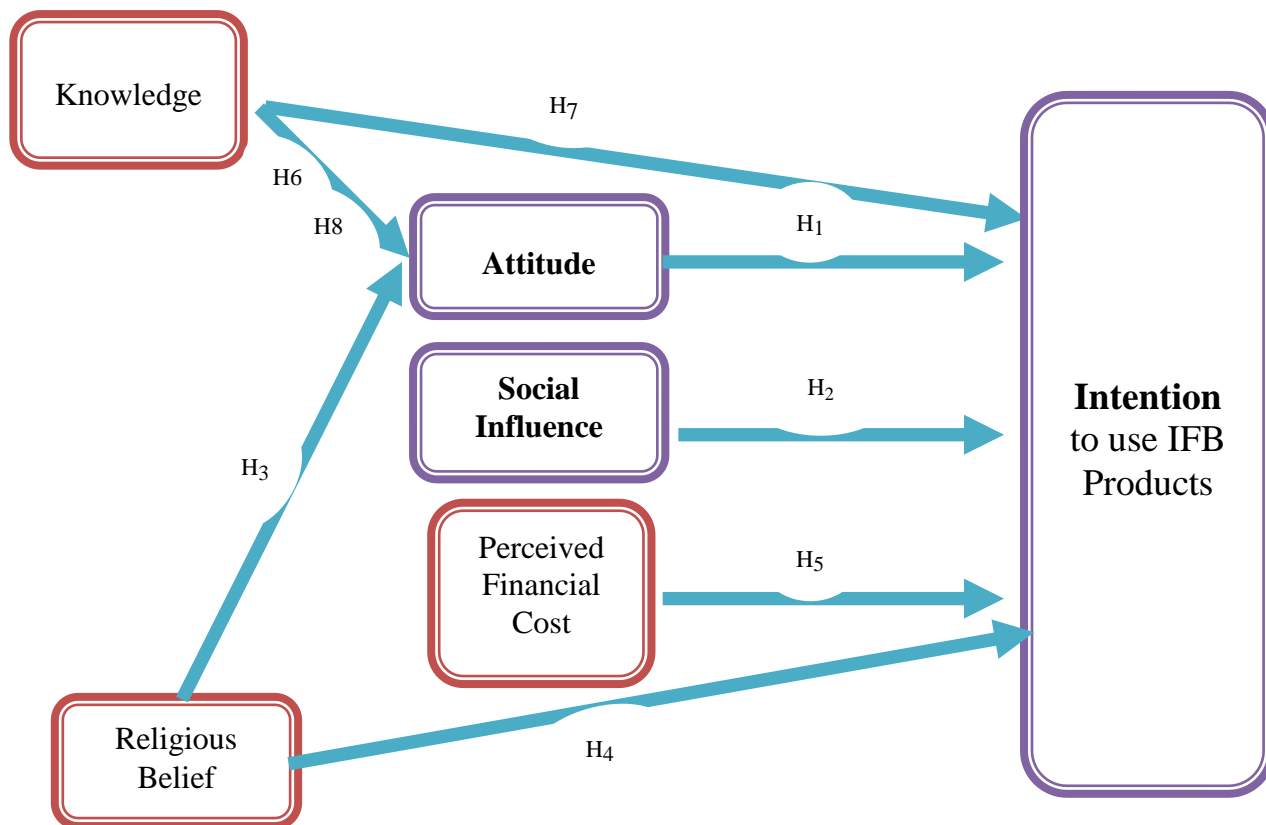
- There is no earlier work in the country in context of IFB which tries to model customer's attitude based on the Theory of Reasoned Action. However, Gumel et al. (2015) stated that "...*(of) All the theories reviewed (TRA, TPB, DTPB and TAM models) predicted behavioral intention to adopt/use Islamic banking, with TRA/TAM having the upper hand*". However, Technological Acceptance Model (TAM) mainly used for the adoption of new technologies like in case of mobile banking, internet banking, card banking etc. Therefore, this study was used TRA to investigate customer's intention.
- Besides, unlike most international studies, which employ SEM on two original constructs of TRA, this study was used SEM on three newly added variables too: Perceived Financial Cost, Religious Belief and Knowledge constructs to investigate customers' intention.
- There is no earlier work on Employees Product Knowledge in the Ethiopian context.
- This thesis has developed two new constructs knowledge and the underling Arabic Terminology on Customer's Intention and Employee Product Knowledge respectively.
- Most of the previous international Empirical studies on intention to adopt or use Islamic banking focused on a single IFB financing or credit card products, *Musharakah-mutanaqisah* otherwise known as Islamic home financing or Islamic diminishing home financing (Abduh & Abdul Razak, 2012; Taib, Ramayah, & Razak, 2008), Islamic personal financing (*Qardhul-Hassan* debt financing) (Amin et al, 2011), Islamic credit card (Amin, 2012; 2013). However, this study investigates customer's intention to use IFB products by focusing only on deposit/retail customers of the bank.
- 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.

## 2.4 Conceptual Framework and Hypothesis Development

Based on the reviewed literatures and the findings of previous researchers, the following conceptual framework (Research model) was developed for customers' intention to use IFB products.

### 2.4.1 Conceptual Framework of Customers' Intention

Figure 2.4.1-1: Modified TRA Conceptual Framework of Customers' Intention



Source: Self extracted

N.B Items encircled with purple color and written on bold are the original constructs of TRA.

## 2.4.2 Hypothesis Development

### 2.4.2.1 The Proposed Research Model for Customers' Intention

As stated earlier, the model of the current study is derived from the model developed by Ajzen and Fishbein (1975) known as the TRA. The model is adapted to better explain the intention to use IFB products. Previously, the model has also been adapted to better explain behavioral studies in the areas of management, psychology and marketing. Since the TRA is a generic model, the adapted model can be used as a point of reference for future research relevant to IFB.

Prior studies have documented the need to adapt the theory to better reflect the study setting (Taib et al., 2008; Ali et al., 2015). The model will help measure the intention to use IFB products by adding three new variables relevant to the Ethiopian context, namely, "religious belief", "perceived financial cost (pricing) of IFB products" and "knowledge". This study excludes "actual behavior" and the other two original external constructs of TRA (Belief and evaluation and Normative Belief to comply), as this study is more interested in examining behavioral intention, attitudes and subjective norms. This approach is similar to the model adapted by (Taib et al., 2008; Amin et al., 2011; Ali et al., 2015). Attitude is used as it is while subjective norm is renamed as social influence in order to reflect the study context. This is similar with the study of (Amin et al., 2011). The dependent variable consists of one variable, that is, the intention to use IFB products, while the independent variables consist of five variables, namely, "attitude", "social influence", "religious belief", "perceived financial cost" and "knowledge"

#### 2.4.2.1.1 Attitude

In the TRA, attitude refers to the positive effects (like / well) or negative (not like / bad) of the evaluation of individual feelings in assessing an individual's behavior. Attitude is considered as the first antecedent of behavioral intentions. Individuals will have an intention to show a certain behavior when judged it positively. Many studies show a significant effect of attitude on intention (Taib et al. 2008; Amin et al., 2011, Abduh and Abdul Razak, 2012). Study conducted by Bisrat (2015) by supporting these results identified attitude as a key predictor of the adoption of internet banking in Ethiopia. However, Amin (2012) argued that attitude appears to have no significant effect on intention. Therefore, this study also hypothesized as follows:

*H<sub>1</sub>: Attitude has a positive influence on intention to use of IFB products.*

### 2.4.2.1.2 Social Influence

The term social influence refers to subjective norm or normative pressure. It can be defined as one's perception that those who are important to her or him should or should not perform the behavior in question (Fishbein and Ajzen, 1975). Taib et al. (2008) found subjective norm to be associated with the level of acceptance of diminishing partnership and in fact, the subjective norm was found to be a more influential predictor of intention to use Islamic financing than attitude. The same result is consistent with (Abduh and Abdul Razak, 2012). However, results of previous studies have been mixed. (Chau and Hu, 2001; Lewis, Agarwal, and Sambamurthy, 2003) have found subjective norm to have no direct impact on intention to use information technology. In view of the above studies, the following hypothesis is proposed:

*H<sub>2</sub>: Social influence has a positive influence on the intention to use the products of IFB.*

### 2.4.2.1.3 Religious Belief

Religious belief is defined as “an organized system of beliefs, practices, rituals and symbols designed (a) to facilitate closeness to the sacred or transcendent (God, higher power, or ultimate truth/reality), and (b) to foster an understanding of one's relation and responsibility to others in living together in a community” (Koenig, McCullough and Larson, 2000). Religiosity is defined as “the extent to which an individual is committed to the religion he or she professes and its teachings, such as the individual's attitudes and behaviors reflect this commitment” (Johnson, Jang, and Larson, 2001). Religiosity has a personal dimension, as per Slater, Hall and Edwards (2001) it represent an individual's real relation to the sacred. In this study, it indicates to the role of religion in affecting one's choices and activities.

Alam et al. (2012) clarified religion as one of the most universal and famous social institution which may influence attitudes, values and behavior of individuals and communities in the rankings. Meanwhile, religious belief can influence people's ethical beliefs and can reflect human daily conduct and commitment (Conroy and Emerson, 2004). Furthermore, religious belief indirectly provides significant determinant of consumer ethical beliefs and practices (Vitell and Paolillo, 2003). Hence the hypothesis suggested is:

*H<sub>3</sub>: Attitude mediates the relationship between religious belief and intention to use IFB products.*

Further previous empirical studies found a positive influence of religious belief on banking selection (usage) criteria. Metawa and Almosawi (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, they found religiosity is ranked highest factor affecting selection criteria followed by profitability. 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 R. El-Bdour, 1989). Moreover, the study of Amin et al., (2011) confirmed the insignificant contribution of religious obligation. Consistent with previous studies on the use of Islamic banks, the following two hypotheses are proposed:

*H<sub>4</sub>: Religious belief has a positive influence in the usage of IFB products.*

#### **2.4.2.1.4 Perceived Financial Cost (Pricing)**

Pricing plays on consumers' perception and it is the customers' perception of price that makes them buy a product and not the actual money price. According to Olson and Zoubi (2008), Islamic banks use profit and loss sharing in charging for the financial transactions services. Abdullah and Dusuki (2006) argued that Islamic hire purchase (*Ijarah*) was expensive whereas other systems just seemed confusing. Similarly, Amin and Isa (2008) found "lower monthly payments" was ranked second behind "transparency practice", implying that lower pricing was one of the motivators for customers to deal with Islamic banks. This is consistent with the view of (Erol, C. and R. El-Bdour, 1989).

Yu (2012) finds perceived financial cost is significant and has negative relationship with mobile banking acceptance. Luarn and Lin (2005) use Technological Acceptance Model (TAM) to explain one's acceptance on mobile banking. They note that perceived financial cost is significantly related to mobile banking acceptance and it is of inverse relationship. Amin et al. (2011) found that financial cost (termed as pricing in their work) is influential in determining the behavioral intention to use IFB products.

*H<sub>5</sub>: Perceived financial cost (pricing of IFB products) has negative influences on the intention of the use of IFB products.*

### 2.4.2.1.5 Knowledge

Knowledge of the product is one of the determinants in influencing individual behavior. Research made by Tang, Jianghong and Juan (2011) for personal computer users in China support this statement. Kaplan, Schoder and Haenlein (2007) who conducted a study on print media customers, asserts that the knowledge of the print media category has significantly direct impact on intention to subscribe. This result was similar with Amin (2012)'s study of Islamic Credit Cards. In relation to attitudes, the research of Fazio and Zanna (1981) revealed that there is a positive relationship between knowledge and attitude towards the product. This result is in line with the study of (Tang et al., 2011). In this study the researcher will examine the knowledge/awareness regarding Product and services, awareness in term of financial teaching of Islam. Hence the hypothesis suggested is:

*H<sub>6</sub>: Knowledge has a positive relationship with attitude towards IFB product.*

The study of Wahyuni (2012) shows that the Moslem community in Surakarta on average has relatively low knowledge but the standard deviation is actually quite high on Islamic banking. With a high standard deviation, indicating that there is the variation of knowledge about Islamic banking product among individuals in Surakarta community. Those who have relatively little knowledge stated that the operation of Islamic banks is similar with conventional banks: only the name changed. For example, if you have the deposit, you will get profit sharing as an interest for a conventional bank. With little knowledge, the intention to use Islamic banking products is also small. This result is in line with research of Kaplan et al. (2007), the knowledge about the product category is positively related with the intense adoption/use of the product concerned. Engel et al. (1990), as stated in the research of Tang et al. (2011) acknowledged that attitudes mediate the relationship between knowledge and purchase (intention to use). So the following hypotheses are proposed:

*H<sub>7</sub>: Knowledge has a positive relationship with intention to use of IFB products.*

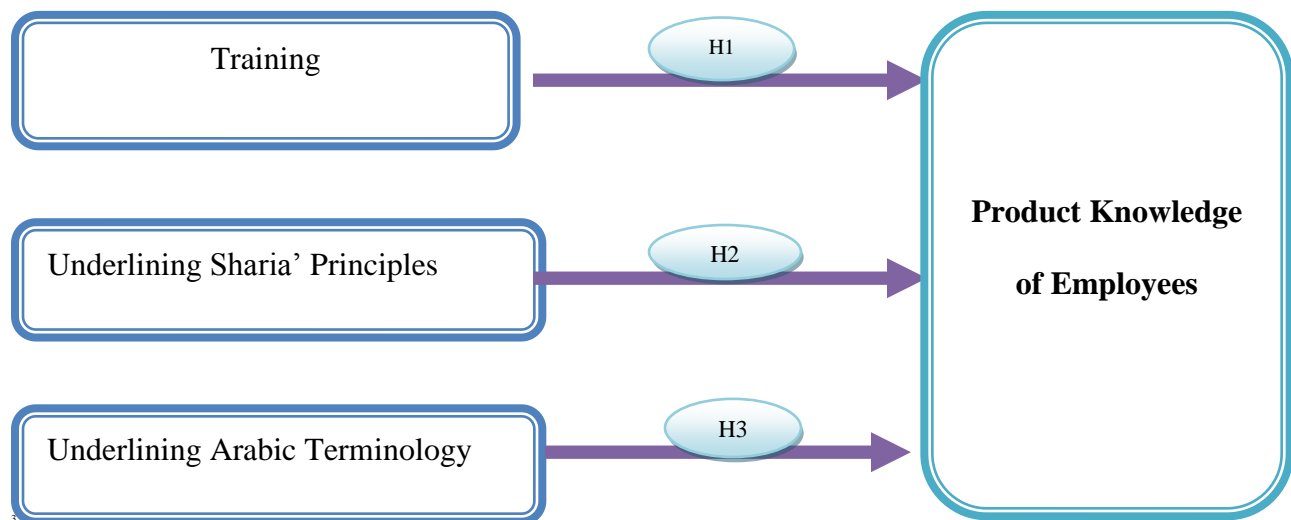
*H<sub>8</sub>: Attitudes mediate the relationship between knowledge and intention to use of IFB products.*

## 2.5 Conceptual framework and hypothesis Development

### 2.5.1 Conceptual framework of Employees' Product Knowledge

Based on the reviewed literatures and the findings of previous researchers, the following conceptual framework was developed for employees' product knowledge.

**Figure 2.5.1-1:** Conceptual framework for Employees' Product Knowledge



**Source:** Adapted from Harun et al. (2015)

### 2.5.2 Hypothesis development

Knowledge is defined as information combined with experience, context, interpretation and reflection Davenport et al. (1998) as well as an organized combination of ideas, rules and procedures (Bhatt, 2000). In this study context, knowledge will refer to ideas, rules, procedures, information (ibid.), experience, context and interpretation Davenport et al.(1998) of IFB products which is then known as product knowledge. Previous studies in the banking sector revealed that Malaysian bankers are reported to have limited knowledge of Islamic banking products and services (Zainol et al., 2008). where they do not have sufficient knowledge regarding to Islamic banking products and services (Arshad, Aslam, Razi, and Ali, 2011). Meanwhile, Baba and Amin (2009) revealed that most offshore bankers were not knowledgeable about Islamic banking where they had confused notions regarding the practices of Islamic banking system. On the other hand, Rahman and Shoaib (2014) found that

Islamic Bankers have high degree of knowledge regarding Islamic products and services than their counterparts.

### 2.5.2.1 Training

Training is a learning experience where it pursues a relatively perpetual transformation in an individuals' that later will improve the ability of an individual to perform the task (Treven, 2003). It can be considered as a course of action which creates the qualities in human resources to make them more productive in order to achieve the organizational goals (Hashim, 2009). Harun et al. (2015) stated that training will give a significant positive impact on product knowledge of employees. Meanwhile as per Zainol et al. (2008) reported bank employees are lack of training and many of them do not have skill in Islamic product principles. This argument is supported in the Ethiopian context by the studies of (Mohammed, 2012; Kerima, 2016). Many bankers claimed that they have limited knowledge and do not have extensive experience or relevant academic background prior to working with present banks (Arshad et al., 2011). While, new advancements in human resource development must be included in evaluating the effectiveness of training (Mulder, 2001). Therefore, it was suggested that employees can deliver and provide first-class customer services by fully utilizing the equipment, management structure as well as the hierarchical infrastructure (Schneider and Bowen, 1985). Bankers create an awareness of product's existence among the public through word of mouth which is valued by the customers. In view of the stated arguments the following hypothesis is developed.

*H<sub>1</sub>: Training of IFB Employees explains the variance of knowledge among IFB performers towards the IFB products*

### 2.5.2.2 Understanding of the Underlying Sharia' Principles

Principle is a set of theories and ideas related to its understanding Al-Jarbi (2004) and it could be values, morals and ethics (Chippendale, 2001). Kania, Romly and Zarman (2011) refers value as principles people choose in how they behave in their lives based on basic concepts of good and evil. The study of Harun et al. (2015) revealed that the underlying principles will give a significant and positive impact on product knowledge of Islamic Bank employees. On the other hand, a study from Labuan: the financial district of "Malaysia", the offshore banks do not have officers and staff who are conversant with Islamic banking (Baba and Amin, 2009). They also argued some bankers believed

that Islamic banking products are similar to those of conventional banks, except the Islamic banks use different product names. In light of the above literatures the following hypothesis is proposed.

*H<sub>2</sub>: Understanding of the Underlying Sharia' principles explain the variance of knowledge among IFB performers towards the IFB products*

### **2.5.2.3 Understanding of the Basic Arabic Terminology**

Staff members do not know about the technical concepts of Islamic modes of financing. By supporting this argument, the study of Thambiah, Ismail and Eze (2011) identifies most respondents do not understand the concept of Islamic banking products because of the application of Arabic terms. In the view of those statements the following hypothesis is developed.

*H<sub>3</sub>: understanding of the basic Arabic terminologies explains the variance of knowledge among IFB staff.*

## CHAPTER THREE: RESEARCH METHODOLOGY

*This chapter outlines the research framework and methodology used to collect the data to test the hypotheses of this study. It includes about research approach, research design, data source, population of the study, sampling procedure and technique, sample size determination, measurement of constructs, validity and reliability of the instrument, methods of data analysis and ethical considerations.*

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### 3.1 Research Approach

In general research approach can be divided into two – deductive and inductive. Deductive approach tests the validity of assumptions (or theories/hypotheses) in hand, whereas inductive approach contributes to the emergence of new theories and generalizations (Dudovskiy, 2016; Walliman and Baiche, 2001). On the other hand, research type refers to pure and applied research. Pure research has no obvious practical implications beyond contributing to a particular area of intellectual enquiry. Applied research, on the other hand, is problem focused and is directed towards solving some particular intellectual question that has practical implications for a client outside the academic world (Sekaran, 2006). This study, through deductive reasoning approach, attempt to develop a model to solve a problem in the CBE and its focus is thus application of findings to solve problems outside the academic world.

### 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 through interviews. This study aims to find out and analyze the Determinants of Customers' Intention to Use Interest Free Banking Products and employees' product knowledge on sample basis so that the results can be generalized to the population i.e. to CBE's

customers and employees in Addis Ababa. Therefore, this study used both quantitative and qualitative (i.e., mixed) research design.

In order to ensure that the research design was consistent with the research objectives, the first step was taken by selecting CBE as a sample to examine the stated factors. Secondly, exploratory research was used to understand the problem and the subject matter. Thirdly, a self-administered questionnaire and interviews were considered an appropriate approach to collect data for this research. Finally, pre-testing of the questionnaire was conducted before the questionnaire was distributed to the sample Respondents. Due to the nature of the research which was to be studied at one time, the researcher preferred to use a cross sectional approach.

### 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, and internal documents of the CBE like IFB - Financing Process Procedure, IFB - Customer Accounts and Transaction (CATs) Procedure and Training documents of the bank in the area of Interest Free Banking. So as to analyze the effect of the identified factors, primary data is collected from selected customers and employees of the CBE in Addis Ababa.

### 3.4 Study Area/Organization

The research will be conducted at Commercial Bank of Ethiopia (CBE) by focusing on IFB windows specifically to investigate the Determinates of Customers' Intention to use Interest Free Banking products and Employees' Product Knowledge in the city of Addis Ababa. CBE, a state-owned institution established in 1942 and it is the biggest bank in the country. It currently has over 1,167 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 24, 2013. The

bank provides these products through its selected 796 branches and has 423,919 customer accounts with total deposit amounts to Birr 4.14 billion and the outstanding balance of *Murabaha* finance reached to Birr 171.58 million, while the number of Financing customers are only thirteen; as of December 31/2017.

### 3.5 Target Population

Population refers to the entire group of people, events, or things of interest that the researcher wishes to investigate (Sekaran, 2006).

The CBE has divided the country into fifteen district offices; these district offices are responsible for managing the branches of the bank. The division of districts in the CBE is just for the purpose of efficient management; there is no difference among district offices and the branches under their supervision on the type of customer they target or the types of services they provide.

The bank's districts are divided into two: Addis Ababa districts and outlying districts. The Addis Ababa city districts are four in number while the outlying districts are eleven. To make the research manageable, the Addis Ababa city districts of the bank are considered in this research, which has 369 branches in its domain. On the other hand, the number of branches offering IFB services in these four districts stood at 289 branches as at March 31/2017. Since this study aims to analyze the determinants that affect customers' intention and employees' product knowledge the target population are the entire IFB customers and IFB-employees of the CBE in Addis Ababa.

Therefore, appropriate sample is taken out of the four districts. Including respondents from every corner of Addis Ababa i.e. from the four districts, this enabled the researcher to reach respondents with different demographic characteristics perceptions about the matter of this study which in return enables to generalize the findings to the population of this study.

### 3.6 Sampling Methods and Sample Size Determination

#### 3.6.1 Sampling Methods

In general, there are two basic sampling techniques: probability and non-probability sampling. A probability sample is defined as a sample in which every element of the population has an equal chance of being selected (random selection). Alternatively, if sample units are selected on the basis of

personal judgment (non-random selection), and elements of the population does not have equal chance of being selected, the sample method is a non-probability sample (Adams et al., 2007; Kothari, 2004). Probability sampling includes Simple Random, Systematic, Stratified, Cluster and Multistage sampling methods (Adams et al., 2007).

This study was employed multistage sampling techniques and convenience sampling in order to reach at the specific respondents. As stated above, the districts are selected on a purposive base which we can consider them as strata. 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 conclusions.

Sample size of branch from the districts and of respondents (customer and employee) was determined using the following techniques.

#### A. Branch Sample Size

A method developed by Carvalho (1984) was used to determine the branch sample size. This sampling technique has been used by (Debebe, 2015; Kerima, 2016) while determining sample size of bank's branch. The researcher was used CBE's report of March 31, 2017, so the total branches in these districts that have IFB windows reached to 289 branches.

**Table 3.6.2-1** 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 medium sample size which is 50 branches of CBE with IFB windows in Addis Ababa districts from the population of 289 branches wherein the medium number is considered than the smaller to increase the accuracy of the data. Moreover, medium number is economical than the larger number samples, because it saves both time and cost of the researcher.

On the other hand, since the number of branches in each cluster is not the same, the researcher has used proportional computation to the size of each cluster, 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 3.6.2–2:** Number of Sample IFB offering Branches from Each Addis Ababa districts

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	68	24%	12
2	North Addis	64	22%	11
3	South Addis	73	25%	13
4	West Addis	84	29%	15
<b>Total</b>		<b>289</b>	<b>100%</b>	<b>50</b>

**Source:** Own Computation from CBE - MIS data March 31/2017.

After determining the appropriate number of sample branches from each district, simple random sampling method was used and 50 branches were selected to collect data from respondents. For example, to select 12 branches from 68 branches of East Addis district, branches were arranged alphabetically and every 5<sup>th</sup> branch was selected until the full sample size of 12 branches are selected from the cluster.

## B. 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 from the book of Kothari (2004) will be used for finite population. This sampling method is also used by Debebe (2015). Accordingly, the minimum sample size is  $n = Z^2 \cdot p(1-p) \cdot N / e^2 (N-1) + Z^2 \cdot p(1-p)$  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: probability ( $p$ ) 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 118,666 from 289 branches. Given the above assumption, the sample size is estimated by:  $n = Z^2 \cdot p(1-p) \cdot N / e^2 (N-1) + Z^2 \cdot p(1-p) = 1.96^2(0.5) (1-0.5) (118,666) / (0.05)^2(118,666-1) + 1.96^2(0.5) (1-0.5) = 384$

**Table 3.6.2-3:** Number of Sample 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 (n) per branch
1	East Addis	11,236	9%	36	12	3
2	North Addis	15,301	13%	50	11	4
3	South Addis	10,732	9%	35	13	3
4	West Addis	81,397	69%	263	15	22
<b>Total</b>		<b>118,666</b>	<b>100%</b>	<b>384</b>	<b>50</b>	

**Source:** Own Computation from CBE - MIS data March 31/2017.

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 was distributed to willing customers who just arrived to get the service until the expected number of sample from the selected branch has been satisfied.

### C. Employee Sample Size

In order to determine number of sample from the population of bank staffs, once again the method used by Carvalho was used.

The population of IFB staff is on the selected districts and head office is 303(i.e., 289 on IFB windows and 14 at IFB - Head Office) and the sample from this population equals to 80, considering large sample size. (66 employees of the IFB window of the selected branches and 14 credit employees at head office respectively).

Questionnaire prepared for the staff have been distributed to the sample branches with equal number of one questionnaire for each sampled branches except West Addis district branches where two questionnaires for each sampled branches were distributed. Moreover, the rest 14 questioners have been distributed for employees at head office.

**Table 3.6.2–4:** Summary of Sampling Techniques

Sampling Unit	Sample Size Determination	Sampling Techniques
Commercial Bank of Ethiopia	-	Purposive
Addis Ababa Districts	-	Purposive
Number of sample branches	Carvalho (1984)	-
Number of sample branches in each District	-	Quota Sampling
Selection of branches from each district	-	Simple Random sampling- lottery method
Number of sample customers	Kothari (2004)	-
Number of sample customers in each District	-	Quota Sampling
Selection of customers from sample branches	-	Convenience sampling
Number of sample IFB Staff	Carvalho (1984)	-
Selection of IFB staff	-	Quota Sampling

### 3.7 Data Collection Instruments

There are two types of data collection methods – primary and secondary. Primary data collection methods include observation, experimentation, Surveys and interviews; on the other hand, Secondary data is data collected by someone else and are available in the form of books and the web (Adams et al., 2007).

The study was used both primary and secondary sources to collect data. The primary data have been collected through questionnaire and interview. In addition, data was also collected from secondary sources of the bank's report. The researcher was collected primary data through administered questionnaire and interview. The questionnaire has involved both structured and unstructured questions to collect data from IFB customer. Questionnaire for customers was prepared in both Amharic and English languages while for the bank staff it was developed in English language only.

Structured and unstructured questions will be used to collect quantitative and qualitative data respectively.

As shown in Appendix A.1, and A.2, the questionnaire on customers' intention has two sections: the first section addresses the demographic profile of the respondent and the second part asks about the perception of customers about the hypothesized independent variables- Attitude, Social Influence, Religious belief, Perceived Financial Cost (pricing) and Knowledge. Moreover, as shown in Appendix B, another questionnaire was developed based on three factors to examine product knowledge of employees' in relation with training, the understanding of the underlying Sharia' principle and understanding of the underlying Arabic terminologies. Five-point Likert scale was used for the statement of the second section of the questionnaires ranging from "strongly disagree" to "strongly agree"

The primary data is collected, by making use of sampling method (Table No. 3.6.2\_4), from customers' and employees' of the selected branches.

**Table 3.7–1:** Source of Questionnaire Items for Customers' Intention to Use

<b>Constructs</b>	<b>Number of Items</b>	<b>Source of Questionnaire Items</b>
Attitude (ATT)	6	(Ali et al., 2015;Amin et al., 2011; Taib et al., 2008)
Social Influence (SI)	5	(Ali et al., 2015;Amin et al., 2011; Taib et al., 2008)
Religious Belief (RB)	5	(Hanzaee , Attar and Alikahn, 2011)
Perceived Financial Cost /pricing (PFC)	6	(Hanzaee et al., 2011)
Knowledge (KN)	6	Self-developed by the researcher
Intention to Use (ITU)	5	(Ali et al., 2015;Amin et al., 2011)

**Table 3.7–2:** Source of Questionnaire Items for Employees' Product Knowledge

<b>Constructs</b>	<b>Number of Items</b>	<b>Source of Questionnaire Items</b>
Training (TRA)	9	(Harun et al., 2015; Zainol et al., 2008)
Underlying Sharia' principles (USP)	6	Harun et al., 2015
Underlining Arabic Terminologies (UAT)	6	Self-developed by the researcher
Product Knowledge (PKN)	5	(Harun et al., 2015; Khan and Asghar, 2012; Osman and Ali, 2008)

### 3.8 Validity and Reliability of the Instrument

#### 3.8.1 Pilot testing Procedures

A pilot/pre-test is necessary to assess the reliability and validity of a questionnaire (Du, 2011). In this study, a sample of 40 CBE customers and employees are used to check the clarity of the question and run reliability analysis. The Respondents were asked to make comments and corrections are made on grammatical and clarity problems of the questionnaire.

#### 3.8.2 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-effect 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. By applying Confirmatory Factor Analysis (CFA) the construct validity was assessed with due attention.
2. A pilot survey was conducted on randomly selected 40 customers and employees by making use of the questionnaire developed for this study in order to ensure that the questionnaire is appropriate and statements are generally understandable.
3. The questionnaire of Customers' intention was translated to Amharic by professional translators

### 3.8.3 Scale Reliability

The reliability of a measure indicates the extent to which it is without bias and hence ensures consistent measurement across time and across the various items in the instrument (Sekaran, 2006).

As Trochim (2000) discussed it, there are four general classes of reliability estimates, each of which estimates reliability in a different way. These are: - Inter-Rater or Inter-Observer Reliability, Test-Retest Reliability, Parallel-Forms Reliability and Internal Consistency Reliability.

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 effect 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, the closer the coefficient gets to 1.0, the better. Coefficients less than 0.60 are considered poor and those in the 0.70 range, acceptable, and those over 0.80 good (Sekaran, 2006).

In this study reliability analysis is carried out on each item of the dependent and independent variables by making use of the 40 pilot survey samples. Accordingly, as presented on table 8 and 9, the overall scale reliability of this study is greater than .700, after excluding the reverse question items of customers' intention due to inconsistent responses of customers, as shown below;

**Table 3.8.3–1:** Reliability Analysis of Variables of Customers' Intention

Variables	Number of Items	Cronbach's Alpha
Intention to use	4	.883
Attitude	5	.778
Social Influence	4	.740
Religious Belief	5	.871
Perceived Financial Cost (pricing)	5	.822
Knowledge	6	.868
<b>Overall Scale Reliability</b>	<b>29</b>	<b>.870</b>

**Table 3.8.3–2:** Reliability Analysis of Variables of Employees' Product Knowledge

Variables	Number of Items	Cronbach's Alpha
Product Knowledge	5	.763
Training	9	.832
Underlining Sharia' Principles	6	.793
Underlining Arabic Terminology	6	.894
<b>Overall Scale Reliability</b>	<b>26</b>	<b>.895</b>

### 3.9 Methods of 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.

#### 3.9.1 Structural Equation Modeling (SEM)

The conceptual framework for customers' intention was analyzed using 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.

In Structural Equation Modeling, 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). 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.

### 3.9.2 Multiple Regression

The survey response of employees' product knowledge was analyzed using the multiple regression model as shown below;

$$PKN = f(TR, USP, UAT)$$

$$PKN = \beta_0 + \beta_1 TR + \beta_2 USP + \beta_3 UAT + \varepsilon$$

(Where PKN is the dependent variable of "Product Knowledge"; TR, USP, and UAT represent the independent variables (TR – Training, USP– Underlining Sharia' Principle, UAT – Underlying Arabic Terminologies and  $\varepsilon$  denotes the error terms. Moreover,  $\beta_0$  = intercept/constant,  $\beta_{1-3}$ = slope coefficients)

### 3.10 Operationalization of the study variables

**Table 3.10–1:** Conceptual Definition and operationalization of Intention Constructs

Constructs	Conceptual Definition	Number of Items	Source of Questionnaire Items
Attitude (ATT)	Refers to an index of the degree to which a person likes or dislikes an object. (Ajzen <i>et al.</i> , 1980)	6	(Taib <i>et al.</i> , 2008; Amin <i>et al.</i> , 2011; Ali <i>et al.</i> , 2015)
Social Influence (SI)	Refers to a person's perception of the most important people to him or her that the person should or should not perform to the behavior and his or her motivation to comply with the specific referents (Ajzen <i>et al.</i> , 1980)	5	(Taib <i>et al.</i> , 2008; Amin <i>et al.</i> , 2011; Ali <i>et al.</i> , 2015)
Religious Belief (RB)	Refers to the role of religion in affecting one's choices and activities. (Amin <i>et al.</i> , 2011)	5	(Hanzaee <i>et al.</i> , 2011; Salleh <i>et al.</i> , 2014)
Perceived Financial Cost /pricing (PFC)	Refers to a financial cost that customers perceive to incur in using a particular new service.	6	Hanzaee <i>et al.</i> , 2011
Knowledge (KN)	Refers to customer's awareness regarding product and services of IFB and the financial teaching of the religion.	6	Self-developed by the researcher
Intention (ITU)	Defined as how hard an individual is willing to try and how much effort he or she is planning to charge towards the implementation of the behavior (Ajzen, 1991).	6	(Taib <i>et al.</i> , 2008; Amin <i>et al.</i> , 2011; Ali <i>et al.</i> , 2015)

**Source:** Various authors and researcher's own definition

**Table 3.10–2:** Conceptual Definition and operationalization of Product Knowledge Constructs

Constructs	Conceptual Definition	Number of Items	Source of Questionnaire Items
Training (TRA)	Refers to learning experience where it pursues a relatively perpetual transformation in an individuals' that later will improve the ability of an individual to perform the task (Treven, 2003).	9	(Harun et al, 2015)
Underlying Sharia' Principles (USP)	Refers to employees' understanding of the basic Sharia' principles related with Interest Free Banking.	6	(Harun et al, 2015)
Underlying Arabic Terminology (UAT)	Refers to employees' understanding of the underlying basic Arabic terminologies related with Interest Free Banking	6	(Researcher's own Definition)
Product Knowledge (PKN)	Refers to ideas, rules, procedures, information, experience, context and interpretation (Davenport et al., 1998) of IFB products.	5	(Harun et al, 2015)

**Source:** Various authors and researcher's own definition

### 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: RESULTS AND DISCUSSION

*This chapter presents the results of the data analysis according to the research methodology discussed in chapter three. In this chapter, the collected data from the customers and employees of the Commercial Bank of Ethiopia was analyzed in order to realize the objective of this study. Accordingly, descriptive analysis of respondents' profile, descriptive analysis of employees' product knowledge, descriptive analysis of customers' intention, correlation analysis and inferential analysis of customers' and employees' data by making use of Structural Equation Modeling and multiple regression model respectively is presented and discussed. At last, a detailed discussion on research hypotheses, in light of similar studies, was also presented.*

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### 4.1 Sample and Response Rate

The sample size of this study was 384, however, for contingency purpose, 420 questionnaires were distributed to the customers of the Commercial bank of Ethiopia and 403 were returned. After checking the returned questionnaires, 380 questionnaires, which are 99% of the sample size, found to be appropriate. Moreover, eleven questionnaire responses with critical values above 71.5 Mahalnobis Distance (MD) were considered as outliers and excluded from further analysis. Therefore, 369 questionnaires, which are 96% of the sample size, found to be valid for further statistical analysis.

### 4.2 Missing Data Management

While collecting data from respondents, it is common to have missing data for various reasons (Field, 2009). In this study, if a questionnaire, within an item, has more than one missing value in the second part of the questionnaire, such questionnaire considered as incomplete and rejected from further analysis. In this study, questionnaires that have more than one missing value, in the second part of the questionnaire, are 23.

On the other hand, for questionnaires which miss only one item on the second part, the procedure used in this study was to replace missing values with mean of other valid responses within the item. According to Pallant (2005), mean substitution is one way of replacing missing values if there are few missing values.

### 4.3 Descriptive Analysis

In the questionnaire (see Appendix A.1 and A.2), 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 Attitude, Social Influence, Religious Belief, Perceived Financial Cost and Knowledge.

#### 4.4 Analysis of Customers' Profile

From the total of valid responses, male customers constitute 236 (64%) of the respondents while female respondents constitute 133 (36%). Respondents below the age of 30-year accounts for 66.1% of the total respondents followed by the age group 30-45 which comprise 26% of valid responses. The survey result shows that 44.2% of the respondents have first degree and 18.2% are college diploma holders. The study also shows that 38.8% of the respondents are employed at private sector and 35.8% are employed in the governmental sector. With regards to monthly income, 37.1% of the respondents are within the income range of Birr 2,000 – Birr 4,999 and individuals with monthly income below birr 2,000 constitute of 16.5% of the total valid responses. Table 4.4\_1 summarizes the profile of the respondents.

**Table 4.4-1: Customer's Profile**

Questions	Response Alternatives	Count	Percent
<b>Sex of the Respondents</b>	Male	236	64
	Female	133	36
<b>Age of the Respondents</b>	Below 30 Years	244	66.5
	Between 30 – 45 Years	96	26
	Above 46 Years	19	5.1
	Missing	10	2.7
<b>Education level of the Respondents</b>	Primary school	30	8.1
	Secondary School	79	21.4
	College Diploma	67	18.2
	First degree	163	44.2
	Masters degree and above	14	3.8
	Others	9	2.4
	Missing	7	1.9
<b>Occupation of the Respondents</b>	Government employed	132	35.8
	Private sector employed	143	38.8
	Self-employed	65	17.6
	Other	23	6.2
	Missing	6	1.6
<b>Monthly Income of the Respondents</b>	Below 2,000	61	16.5
	2,000- 4,999	137	37.1
	5,000-6,999	79	21.4
	7,000-10,000	40	10.8
	More than 10, 000	40	10.8
	Missing	12	3.3

Source: Survey Result (2017)

### 4.4.1 Descriptive Analysis of Independent Variables

The mean scores have been computed for all items under the five independent variables of this study. Respondents were asked to rate their perception on a five-point Likert type scale ranging from strongly disagree to strongly agree and “1” being strongly disagree and “5” strongly agree. The descriptive analysis result is tabulated on table 4.4.1\_1 as follows.

Table 4.4.1–1: Mean score of the items of customers’ intention

<b>Religious Belief</b>	<b>RB1</b>	<b>RB2</b>	<b>RB3</b>	<b>RB4</b>	<b>RB5</b>
	4.52	4.56	4.48	4.47	4.53
<b>Attitude</b>	<b>ATT1</b>	<b>ATT2</b>	<b>ATT3</b>	<b>ATT4</b>	-
	4.38	4.52	4.30	4.21	-
<b>Social Influence</b>	<b>SI1</b>	<b>SI1</b>	<b>SI1</b>	<b>SI1</b>	-
	3.41	3.96	3.83	3.92	-
<b>Knowledge</b>	<b>KN1</b>	<b>KN2</b>	<b>KN3</b>	<b>KN4</b>	<b>KN5</b>
	3.36	3.90	3.66	3.69	3.81
<b>Perceived Financial cost</b>	<b>PFC1</b>	<b>PFC2</b>	<b>PFC3</b>	<b>PFC4</b>	<b>PFC5</b>
	1.86	1.79	1.78	1.81	1.83

- The mean scores of items under Religious Belief range from 4.47 to 4.56 which indicate that, on average, customers agreed that their IFB adoption Decision is highly influenced by their religious belief.
- The mean scores of items under Attitude range from 4.21 to 4.52 which indicate that customers have positive attitude towards IFB products.
- The mean scores of items under Social Influence range from 3.41 to 3.96 which indicates that, on average, customers have perceived or agreed that their IFB adoption Decision is influenced by social influence.
- The mean scores of items under Knowledge range from 3.36 to 3.90 which indicate that, on average, customers agreed or perceive that they have basic knowledge about IFB products.
- The mean scores of items under Perceived Financial Cost ranges from 1.78 to 1.86 which indicate that, on average, customers do not perceive that their IFB adoption decision will expose them to any financial damage.

### 4.4.2 Association between Intention to Use and Demographic Factors

As used in the works of Amin (2012), Chi-Square test is conducted to check the association between Age, Education level, Income, Sex and Intention to Use (ITU). The summary is presented under Table 4.4.2\_1.

4.4.2–1: Chi-Square Test between Age, Education level, Income, Sex and Adoption

Comparison		Value	df	Asymp. Sig. (2-sided)
Age and ITU Decision	Pearson Chi-Square	27.942 <sup>a</sup>	28	.468
	Likelihood Ratio	31.155	28	.310
	Linear-by-Linear Association	1.571	1	.210
	N of Valid Cases	359		
Education level and ITU Decision	Pearson Chi-Square	110.713 <sup>a</sup>	70	.001
	Likelihood Ratio	75.728	70	.299
	Linear-by-Linear Association	2.029	1	.154
	N of Valid Cases	362		
Monthly Income and ITU Decision	Pearson Chi-Square	65.606 <sup>a</sup>	56	.178
	Likelihood Ratio	72.576	56	.067
	Linear-by-Linear Association	4.972	1	.026
	N of Valid Cases	357		
Gender and ITU Decision	Pearson Chi-Square	14.479 <sup>a</sup>	14	.415
	Likelihood Ratio	15.053	14	.375
	Linear-by-Linear Association	1.434	1	.231
	N of Valid Cases	369		

Source: Survey Result (2017)

#### 4.4.2.1 Age and Use Decision

At 95% confidence interval, the significance value (.468) is greater than 0.05. Hence it can be concluded that there is no significant relationship between age and ITU adoption Decision.

#### 4.4.2.2 Education level and Use Decision

At 95% confidence interval, the significance value (.001) is less than 0.05. Hence it can be concluded that there is a significant relationship between education level and ITU adoption Decision.

#### 4.4.2.3 Monthly Income and Use Decision

At 95% confidence interval, the significance value (.178) is greater than 0.05. Hence it can be concluded that there is no significant relationship between income and ITU adoption Decision.

#### 4.4.2.4 Gender and Use Decision

At 95% confidence interval, the significance value (.415) is greater than 0.05. Hence it can be concluded that there is no significant relationship between gender and ITU adoption Decision.

### 4.5 Inferential Analysis

When a regression analysis is done, an equation can be produced that is correct for the sample of observed values. However, researches in social science are usually interested in generalizing their findings outside of the sample. For a regression model to be generalized we must make sure that the underlying assumptions have been met, and to test whether the model could be generalized we can look at the following assumptions.

#### 4.5.1 Multivariate Normality

Multivariate normality is the assumption that each variable and all linear combinations of the variables are normally distributed. It is critically an important assumption when conducting structural Equation modeling in general and using AMOS software for data analysis in particular is that data are multivariate normal (Byren, 2010). Thus normality analysis was conducted, as shown below

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Intention to use	369	-1.569	.127	3.094	.253
Attitude	369	-1.131	.127	2.536	.253
Knowledge	369	-.505	.127	-.139	.253
Social Influence	369	-.774	.127	.419	.253
Religious Belief	369	-1.404	.127	2.641	.253
Perceived Financial cost	369	1.271	.127	1.959	.253

As per Field, (2009), an absolute value greater than 1.96 is significant at  $p < .05$ , above 2.58 is significant at  $p < .01$  and absolute values above about 3.29 are significant at  $p < .001$ . Large samples will give rise to small standard errors and so when sample sizes are big, significant values arise from even small deviations from normality. In small samples it's OK to look for values above 1.96 (within +2 to -2 range); however, in large samples this criterion should be increased to the 2.58 one and in

very large samples, because of the problem of small standard errors, no criterion should be applied! A large sample (200 or more) it is more important to look at the shape of the distribution visually and to look at the value of the skewness and kurtosis statistics rather than calculate their significance. However, because of the large sample (369), in our case, the value of 3.09 isn't surprising and in fact that all values of kurtosis are below upper threshold of 3.29.

#### 4.5.2 Linearity

The assumption of linearity in multiple regression, assumes that there is a linear relationship between any predictors and the outcome variable (Field, 2009). The scatter plot of standardized residuals versus the fitted values (see Appendix D\_01) for the regression models were visually inspected. The plots did not show any systematic pattern, thus providing support for the specified linear relationship.

#### 4.5.3 Independence of Errors

This assumption refers to that errors in regression are independent; this assumption is likely to be met if the Durbin–Watson statistic is close to 2 and between 1 and 3 (Field, 2009). The Durbin–Watson statistic test for this study found to be 1.815 which indicates the assumption of independence of errors is met (see Appendix D\_03).

#### 4.5.4 Multicollinearity

This assumption refers to that predictors should not be too highly correlated. 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 (Table 4.5.4\_1, see appendix D\_02 for the detail).

**Table 4.5.4–1** Multicollinearity Test

Variables	Collinearity Statistics	
	Tolerance	VIF
Attitude	.578	1.730
Social Influence	.866	1.155
Religious Belief	.694	1.441
Perceived Financial Cost	.751	1.332
Knowledge	.806	1.241

**Source:** *Survey Result (2017)*

### 4.5.5 Outliers

This assumption asserts that there should be no outliers, high leverage values or highly influential points. As stated earlier, in this study, test for outliers was made by using critical values of Mahalanobis Distance (MD) and eleven customer responses with critical values above 71.5 MD were considered as outliers and excluded from further analysis.

### 4.5.6 Homoscedasticity

If the error term has constant variance, it is called Homoscedastic (equal variance). Otherwise, it is called Heteroscedastic. To see the Homoscedasticity of the study error terms, the researcher plotted ZRESID (residual value) on Y-axis and ZPRED (standardized predicted values) on X-axis. By fitting Loess line on the graph of residuals of the SPSS output and by visual inspection, the researcher assumes that the study does not violate the assumption of homoscedasticity, for the reason that the Loess line exhibits no sharp angles when fitted on the graph of residuals. (See Appendix D\_04)

Alternatively, in order to check Homoscedasticity, one could check the output of the variance of the variables. According to Field (2009), the variance of any of the measured variables should not exceed more than 10 times of the variance of any other variable. The variance of the variables of this study is Homoscedastic and acceptable as seen in Appendix D\_05.

### 4.5.7 Positive Definiteness

As per Kline (2011), the data matrix entered for SEM analysis should have the property of positive definite (PD), i.e., the determinant of the correlation matrix should be different from zero. Accordingly, the determinant of the correlation matrix of this study is 4.304 E-09 (=0.00000004304) close to zero but positive and different from zero. Therefore, it satisfies the condition of positive definiteness. (See Appendix D\_06)

#### 4.5.8 Model Specification Complexity

The number of observations ( $n$ ) must be greater than the number of parameters to be estimated. Alternatively, the number of observations must be greater than the number of explanatory variables. Since the study's number of observation by far greater than both the number of parameters and number of explanatory variables, thus the research model is considered as over-identified.

#### 4.6 Kaiser–Meyer–Olkin (KMO) and Bartlett's tests of sampling adequacy

The KMO value indicates the sampling adequacy of the data while it is also referred to as a measure of sampling adequacy (MSA). In the data set, KMO statistic shows the variables, correlation which has the ability to explain the other variables. The threshold values for sampling adequacy is; below 0.50 as "Unacceptable", 0.50 – 0.59 as "Miserable", 0.60 – 0.69 as "Acceptable", 0.70 – 0.79 as Good, 0.80 – 0.89 as "very good" and 0.90 or higher as "Marvelous" (Kaiser, 1974). In addition, Bartlett's test of Sphericity statistic is used to confirm the null hypothesis, whether the correlation matrix is a diagonal matrix or not. In this sense, principal components analysis required higher correlations whereas a lower probability value (i.e. less than 5%) with higher test statistic value results the rejection of the null hypothesis. In this case, the value of KMO is 0.908, which is Marvelous it further signifies that each factor contains sufficient items for making groups in factor analysis. Furthermore, the probability value of Bartlett's test of Sphericity is 0.000, which indicate that the correlation between the variables is adequate at 5 percent level of significance and is sufficient for factor analysis. (See Appendix D\_07)

#### 4.7 Exploratory Factor Analysis (Factor Analysis)

Factor analysis is a statistical technique which is used for data reduction. The reason to apply this test is to reduce a large number of items into smaller numbers. Factor analysis helps researchers to check the variables belongings in the sample data (Emory and Cooper, 1991). In addition, principal component analysis is used to confirm the construct validity of the items which is also an important feature of factor analysis. Furthermore, this study uses Hair et al. (1998) guidelines to assist theoretical significance of factor loadings. They suggest that factor loading value of each factor should be 0.30 or more for a sample of 350 or greater. In this research, factor loading ranges from 0.525 to 0.876, which satisfy the minimum criteria and is appropriate for factor analysis.

Customers' intention originally has 33 questionnaire items, which was reduced to 27 items. These 27 items, were retained since they met essentially significant level of convergent validity. The measures

used for assessing convergent validity were the Average Variance Extracted (AVE) test statistics and Composite Reliability (CR) estimates. The AVE scores need to be greater than 0.5 and the CR should be greater than 0.7 (Hair et al., 2010). On the basis of the analysis, the researcher then grouped the 27 items into six factors, namely “Intention”, “Attitude”, “Social Influence”, “Religious Belief”, “Perceived Financial Cost” and “Knowledge”. For each factor, there exists some connotations, for instance, Knowledge had six items, leading to the use of factor analysis. This technique is argued to be consistent with that used by de Vaus (2002) who claimed that factors are not single measurable entities but are constructs of a number of other directly observable variables.

Thus, the results of factor analysis are reported in the following two tables (Table No. 4.7\_1 and 4.7\_2)

**Table 4.7–1: Factor Analysis for Customers’ Intention to Use**

	<b>Factor Loading</b>
<b>Intention to Use (Cronbach Alpha 0.895)</b>	
I am interested to use IFB products.	.825
I intend to use IFB products in the future.	.872
I predict that I will frequently use IFB products in the future.	.837
I will definitely recommend IFB products to others.	.525
<b>Eigenvalue</b>	<b>3.059</b>
<b>Percentage variance</b>	<b>76.467</b>

The eigenvalue for the dependent variable is 3.059 and explains a total of 76.467 percent of the variance with factor loading between .525 and .872. In general, total variance explains the distributions of variance among the potential variables while the eigenvalues measure the variance explain. For all factors, the eigenvalues must be greater than 1.0 whereas less than 1.0 eigenvalues are insufficient for the variance explain (Table 4.7–1)

Moreover, as seen in the following table (Table 4.7–2), the eigenvalue for all independent variable factors is greater than one and in aggregate explained a total of 70.279 percent of the variance with factor loading between .568 and .876. Further the reliability is assured since the Cronbach Alpha is greater than) the minimum threshold 0.6<sup>2</sup>. The Cronbach Alpha of the study lies between 0.730 and 0.939.

<sup>2</sup> Sekaran (2006)

Table 4.7–2: Rotated component Matrix of Independent variables

	ATT	SI	RB	PFC	KN
<b>Attitude (Cronbach Alpha 0.817)</b>					
The introduction of IFB window is a good idea as it provides solutions for my banking needs	.674				
The provision of IFB by the CBE is useful.	.697				
Using IFB products will make me better off financially.	.733				
IFB products are one of the best products of the CBE.	.593				
<b>Social Influence (Cronbach Alpha 0.780)</b>					
People who I listen to could influence me to use IFB		.626			
It is expected by others that I should use IFB products.		.653			
Most people who are important to me help me to use IFB.		.678			
Most of my friends/colleagues using IFB services agreed that IFB is better than conventional products.		.620			
<b>Religious Belief (Cronbach Alpha 0.872)</b>					
I try to follow Islamic injunctions/rules in all matters of my life.			.719		
I always try to avoid minor and major sins as told by my religion.			.722		
I have firm belief in all basic ideological dimensions of Islam.			.661		
I know the basic and necessary knowledge of my religion.			.659		
I feel sorrow and dissatisfaction when I do something against my faith			.607		
<b>Perceived Financial Cost (Cronbach Alpha 0.939)</b>					
Service charges of IFB products are higher than the conventional.				.777	
Penalty of IFB is higher than the conventional.				.876	
Monthly payments of IFB products are higher than the conventional.				.875	
Profits charged by IFBs are higher than the conventional.				.848	
IFB products produce unjust pricing than the conventional.				.687	
<b>Knowledge (Cronbach Alpha 0.875)</b>					
I have information about the depository, investment and financing products of IFB.					.568
I know that all IFB products are interest free.					.621
I have enough knowledge about IFB products.					.810
I have enough knowledge about using IFB products.					.822
I have enough knowledge about the benefit of IFB products.					.637
<b>Eigenvalue</b>	<b>7.077</b>	<b>3.568</b>	<b>2.289</b>	<b>1.895</b>	<b>1.334</b>
<b>Percentage variance</b>	<b>30.771</b>	<b>15.513</b>	<b>9.954</b>	<b>8.239</b>	<b>5.802</b>
<b>Cumulative variance</b>	<b>30.771</b>	<b>46.284</b>	<b>56.238</b>	<b>64.48</b>	<b>70.279</b>

### 4.8 Goodness of Fit (GOF) Indices

Goodness of Fit statistics compares the goodness of fit between theory and reality (Hair, Anderson, Tatham, & Black, 2010). According to the same author there are four categories of model fit indices which are summarized in the following table 4.8–1

**Table 4.8–1: Categories of Model Fit indices**

Category	Statistics	Definition
Chi-Square ( $\chi^2$ )	Chi square	Difference between observed and estimated covariance matrices
	Degrees of freedom	Covariance in the observed matrix less the number of estimated coefficients
	Probability statistic (p-value)	Probability that the observed and estimated covariance matrices are actually equal
	Normed chi-square	Ration of chi-square to degrees of freedom for a Model
Absolute fit measures	GFI index	Measure indicating how well a model reproduces the variance/covariance matrices of the observed sample
	Root mean square error of approximation (RMSEA)	Badness-of-fit index measuring how well a model fits a population taking into account both model complexity and sample size
	Root mean square residual (RMR)	represents the average residual value derived from the fitting of the variance–covariance matrix for the hypothesized model
Incremental fit indices	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)
	Comparative fit index (CFI)	
	Tucker-Lewis index (TLI)	
	Incremental fit indices (IFI)	

Based on the recommendations of (Hair et al., 2010; Ali et al., 2015; Abdul Razak and Abduh, 2012), acceptable fit measures were summarized below,

**Table 4.8–2:** GOF Acceptable values for model fitness

Type	Name of GOF statistics	Abbrev.	Acceptable Level
Chi-square*	Chi-square (with df, p) (CMIN)	x2 (df, p)	p-value of greater than .05
	Normed chi-square	x2 /df	Value between 1 and 5
Absolute fit measures	GoF index	GFI	value >0.92
	Root mean square error of approximation	RMSEA	Values < .08/.10
	Root mean square residual	RMR	Values < .09
Incremental fit indices	Normed Fit Index	NFI	Values >= .92
	Comparative Fit Index	CFI	
	Tucker-Lewis Index	TLI	
	Incremental Fit Index	IFI	

Moreover, Ali et al.(2015), used the following cut-off values while undertaking their research;

Goodness-of-fit Measures	GFI	AGFI	NFI	CFI	TLI	RMSEA
Threshold Values	≥0.85	>0.80	Close to 1	≥0.90	Close to 1	≤ 0.05

Further, Abdul Razak and Abduh (2012), used the following cut-off values while undertaking their research.

Measurement	Acceptable Values of Goodness-of-fit
CMIN	p-value>0.05
NFI, TLI, RFI	>0.80
IFI, CFI	>0.90
RMSEA	<0.08

In addition to GOF indices, Standard Regression Weight (SRW) estimates of .5 (preferably .7 and above) and Squared Multiple Correlations (SMC) of .3 (preferably .5 and above) suggest construct validity and item reliability (Hair et al., 2010).

After the model is found fit as per the above criteria, it is further assessed by examining the Average Variance Extracted (AVE) test statistics and Composite Reliability (CR) indexes as they are also important measures of convergent validity (Hair et al., 2010). The acceptable threshold for AVE and CR is a value at least 0.5 and 0.7 respectively.

\*The statistical package of AMOS 20 produces a number of different goodness-of-fit measures and the choice to be used has been a matter of dispute among methodologists.

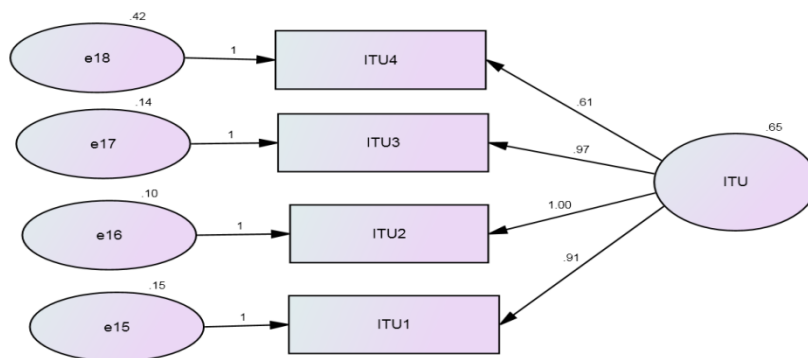
Most researchers recommend reporting chi-square as the goodness-of-fit index of the model under the Maximum Likelihood Estimation (MLE). However, chi-square is sensitive to sample size. Hair et al. (2010) argue that with large sample size, the chi-square values will be inflated and reports statistically significant, which might erroneously imply a poor data-to-model, fit. Wheaton (1987) advocated not using chi-square. To overcome the limitations of the chi-square test, other goodness-of-fit indexes be used as substitutes to the chi-square statistic to assess the model fit such as RMSEA; the baseline fit measures (e.g. NFI, RFI, IFI, TLI and CFI).

As shown in Tables 4.8.2\_1, 4.8.2\_2, 4.8.4\_1 and many other tables, p-value for Chi-square (CMIN) is below 0.05, i.e., significant, which means reject null hypothesis. In other words, CMIN criteria reject the fit of the model. Baseline comparison tables, however, gives information about NFI, TLI, RFI, IFI and CFI measures confirmed that good data-to-model fit. Therefore, in this study, though reported in the table, chi-square values will not be used to assess the goodness of fit as advocated by (Wheaton, 1987). On the other hand, to check goodness-of-fit measurements like NFI, RFI, IFI, TLI, CFI, RAR and RMSEA values from the above three tables, as appropriate, were used to check fitness. On the next section each variable under the study was assessed separately for measurement model Goodness-of-fit (GOF).

### 4.8.1 Intention to Use (ITU)

A latent variable Intention to Use is proposed to be measured by four items per the instrument used. The following figure depicts the proposed measurement model for Intention to use (ITU)

Figure 4.8.1-1: The proposed unidimensional measurement model of ITU



From the following table 4.8.1–1, it can be seen that the model manages to fulfill all of the criteria set for GOF. Moreover, absolute and incremental fit indices were best and above the acceptable level. Further, all the items have a Standard Regression Weight Estimate (SRW) well above 0.5 (between 0.601 to 0.930) and Squared Multiple Correlations (SMC) exceeds the threshold mark of 0.3 (between 0.362 and 0.866). Thus the construct is taken as it for further analysis.

Table 4.8.1–1: GOF indices for the proposed unidimensional measurement model of ITU

Chi square		Absolute fit indices		Incremental Fit Indices		Goodness of fit (GFI)	Other indices		
X <sup>2</sup> (P Value)	2.073 (.355)	RMSEA	.005	CFI	1	.997	All SMC	>.3	
Df	2			NFI	.998		All SRW	>.5	
X <sup>2</sup> /df	1.0365	RMR	.010	IFI	1				
				TLI	1				

Source: Survey result (2017)

### 4.8.2 Attitude (ATT)

This construct is proposed to be indicted by 5 items as per the questionnaire. The proposed measurement model is as depicted below;

Figure 4.8.2-1: The proposed unidimensional measurement model of ATT

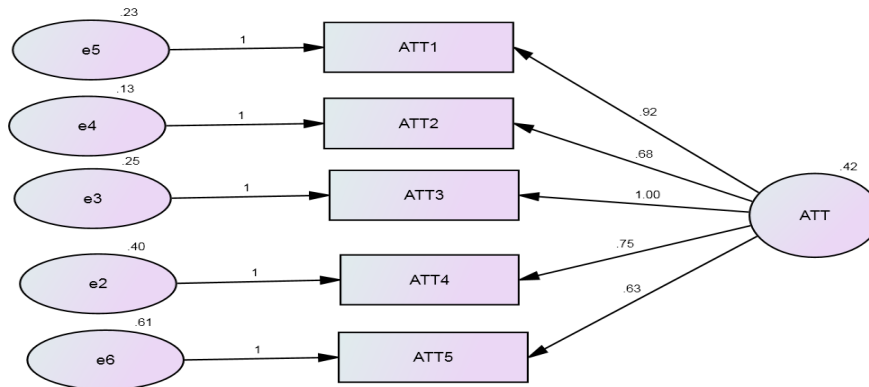


Table 4.8.2–1: GOF indices for the proposed unidimensional measurement model of ATT

Chi square		Absolute fit indices		Incremental Fit Indices		Goodness of fit (GFI)	Others indices	
X <sup>2</sup> (P Value)	20.029 (.001)	RMSEA	.090	CFI	.976		.979	ATT5
Df	5			NFI	.968	SMC		
X <sup>2</sup> /df	4.006	RMR	.018	IFI	.976	ATT5		
				TLI	.952	SRW		<.5*

\*the indices are less than the expected minimum values

Source: Survey result (2017)

The model fit indices summarized on the table above shows that the model fails to meet the SMC and SRW, thus the model is re-run by eliminating an item, ATT5, which has SRW and SMC below 0.5 and 0.3 respectively.

The corrected model of Attitude is depicted in figure 4.8.2–2, as seen below

Figure 4.8.2-2: The corrected unidimensional measurement model of ATT

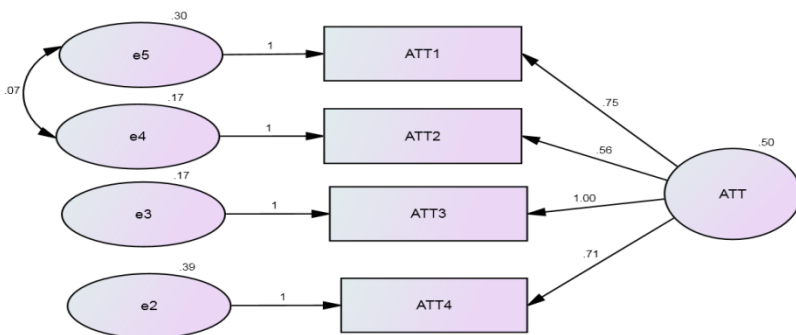


Table 4.8.2–2: GOF indices for the corrected unidimensional measurement model of ATT.

Chi square		Absolute fit indices		Incremental Fit Indices		Goodness of fit (GFI)	Other Indices	
X <sup>2</sup> (P Value)	3.890 (.049)	RMSEA	.089	CFI	.995		.995	SMC
Df	1			IFI	.995			
X <sup>2</sup> /df	3.890	RMR	.008	TLI	.969	SRW		>.5

Source: Survey result (2017)

As we can see from the above figure and table, the corrected measurement model of Attitude satisfies almost all of the requirements for model fit after we draw correlation line between measurement error e4 and e5, as per Amos modification indices suggestions.

Moreover, as shown in Table 4.8.2–2, the values of NFI, TLI, IFI, CFI are greater than 0.95. Similarly, RMSEA and GFI values are less than 0.09 (0.089) and greater than 0.92 (0.995) respectively confirmed the goodness-of-fit of the unidimensional model.

### 4.8.3 Social Influence (SI)

Based on literature review, the instrument used for this study has four items that are taken as indicator for latent variable Social Influence (SI). From the following table it can be observed that the absolute and incremental fit indices were above the acceptable level. Further, all the items have SRW above 0.5 (between 0.563 and 0.797) and SMC fairly exceeds the threshold 0.3 (between 0.317 and 0.517). Therefore, the original construct of SI was used in this analysis.

Figure 4.8.3-1: The proposed unidimensional measurement model of SI

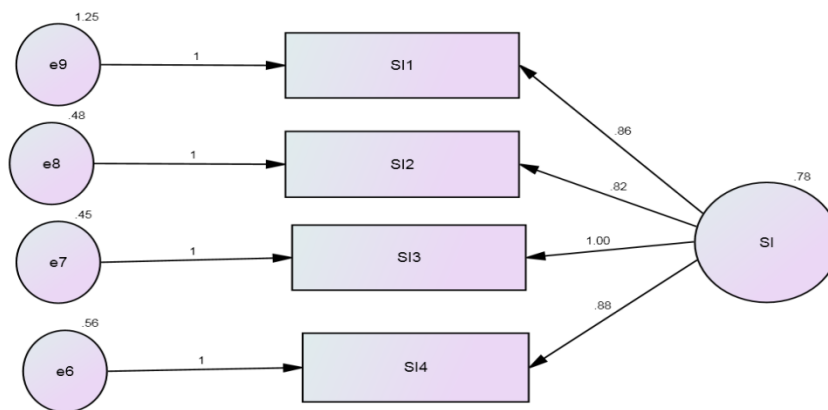


Table 4.8.3-1: GOF indices for the proposed unidimensional measurement model of SI

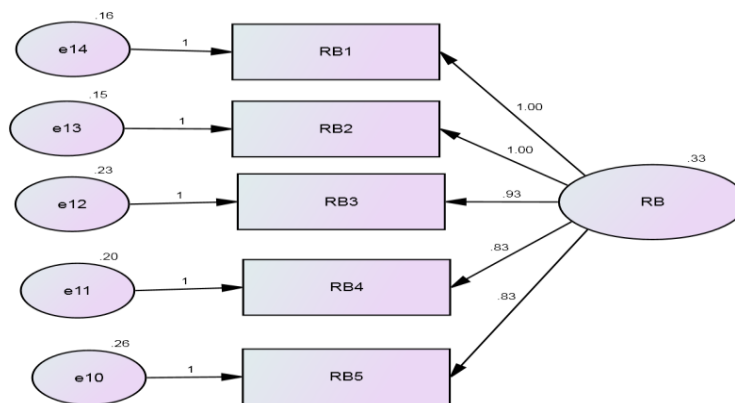
Chi square		Absolute fit indices		Incremental Fit Indices		Goodness of fit (GFI)	Other Indices	
X <sup>2</sup> (P Value)	3.410 (.182)	RMSEA	.044	CFI	.997		.995	SMC
Df	2			NFI	.992			
X <sup>2</sup> /df	1.705	RMR	.022	IFI	.997	SRW		>.5
				TLI	.990			

Source: Survey result (2017)

### 4.8.4 Religious Beliefs (RB)

A latent variable for Religious Belief is proposed to be measured by five items per the instrument used. The following figure depicts the proposed measurement model for RB

Figure 4.8.4-1: The proposed unidimensional measurement model of RB



The model fit indices summarized on the following table shows that both normed chi square and RMSEA are exceeding the threshold values. Therefore, this measurement model is not a fit model, as shown below;

Table 4.8.4-1: GOF indices for the proposed unidimensional measurement model of RB

Chi square		Absolute fit indices		Incremental Fit Indices		Goodness of fit (GFI)	Others indices	
X <sup>2</sup> (P Value)	32.068 (.000)	RMSEA	.121*	CFI	.969		.965	All
Df	5			NFI	.964	All		
X <sup>2</sup> /df	6.414	RMR	.015	IFI	.969	All		>.5
				TLI	.938	SRW		

\*value exceeds the threshold

Source: Survey result (2017)

However, after incorporating the suggestions of the modification indices of Amos, the model was analyzed by drawing two correlation lines between two measurement error as shown below;

Figure 4.8.4-2: The corrected unidimensional measurement model of RB

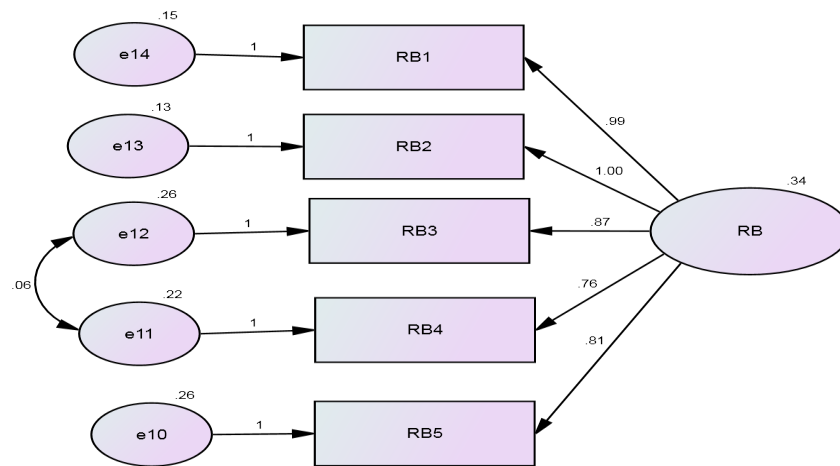


Table 4.8.4-2: GOF indices for the corrected unidimensional measurement model of RB

Chi square		Absolute fit indices		Incremental Fit Indices		Goodness of fit (GFI)	Other Indices	
X <sup>2</sup> (P Value)	15.093 (.005)	RMSEA	.087	CFI	.987		.984	SMC
Df	4			NFI	.983			
X <sup>2</sup> /df	3.773	RMR	.011	IFI	.987	SRW		>.5
				TLI	.968			

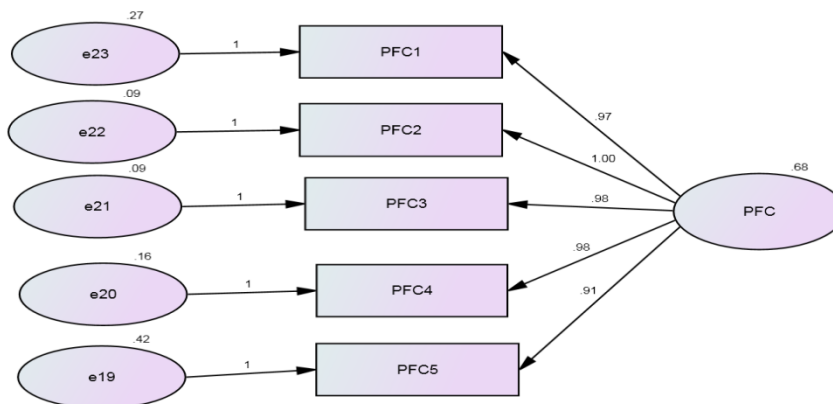
Source: Survey result (2017)

As shown above, the corrected measurement model for Religious Belief suits all of the requirements for model fit after we draw correlation lines between measurement errors e11 and e12, as per the guidance of Amos modification indices.

### 4.8.5 Perceived Financial Cost (PFC)

A latent variable for PFC is proposed to be measured by five items of the research instrument. The following figure depicts the proposed measurement model for Perceived Financial Cost.

Figure 4.8.5-1: The proposed unidimensional measurement model of PFC



The model fit indices summarized on the following table shows that RMSEA figure is not per the requirement. Therefore, this measurement model is not a fit model, as shown below.

Table 4.8.5–1: GOF indices for the proposed unidimensional measurement model of PFC

Chi square		Absolute fit indices		Incremental Fit Indices		Goodness of fit (GFI)	Others indices	
X <sup>2</sup> (P Value)	28.035 (.000)	RMSEA	.112*	CFI	.987	.971	All	>.3
Df	5			NFI	.984		SMC	
X <sup>2</sup> /df	5.607	RMR	.016	IFI	.987		All	
				TLI	.974		SRW	

\*above the expected minimum value

Source: Survey result (2017)

After incorporating the suggestions of the modification indices of Amos, the model was analyzed by drawing a correlation line between two measurement error terms as shown below;

Figure 4.8.5-2: The corrected unidimensional measurement model of PFC

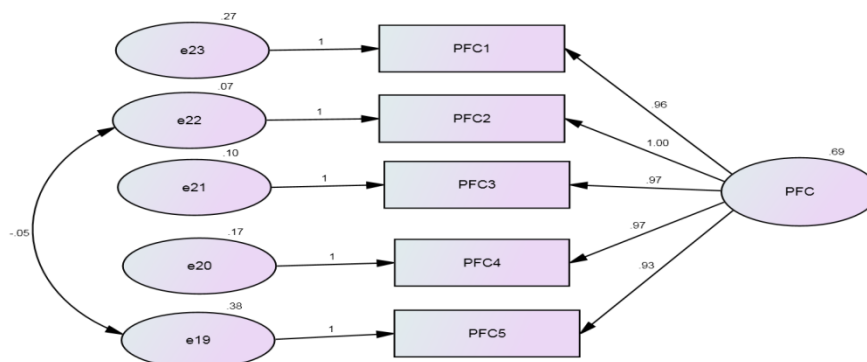


Table 4.8.5–2: GOF indices for the corrected unidimensional measurement model of PFC

Chi square		Absolute fit indices		Incremental Fit Indices		Goodness of fit (GFI)	Other Indices	
$X^2$ (P Value)	11.076 (.026)	RMSEA	.060	CFI	.996		.988	SMC
Df	4			NFI	.994			
$X^2$ /df	2.769	RMR	.010	IFI	.996	SRW		>.5
				TLI	.990			

Source: Survey result (2017)

As shown above, the corrected measurement model for PFC suits all of the requirements for model fit after we draw correlation lines between measurement errors e19 and e22, as per the suggestion of Amos modification indices.

### 4.8.6 Knowledge (KN)

Five indicator variables (items) are proposed to measure Knowledge as per the research instrument. Table 4.8.6-1 stated that the p value of this construct is significant. On the other hand, all other fit indices were fulfilled as shown below; therefore, we left it as it is for further analysis.

Figure 4.8.6-1: The proposed unidimensional measurement model of KN

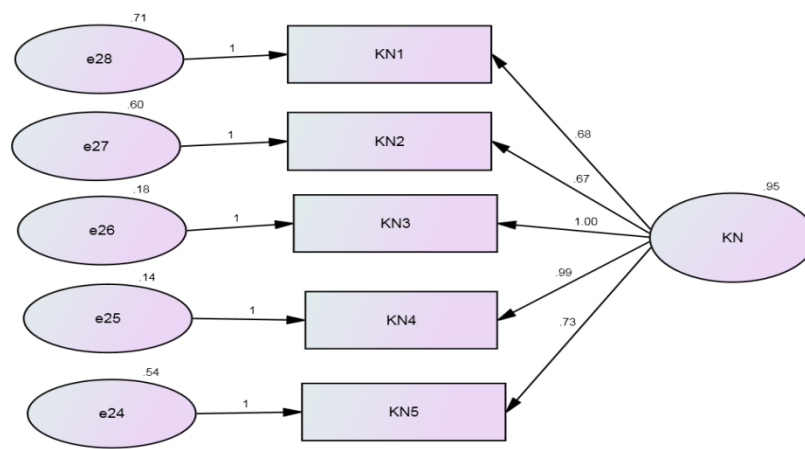


Table 4.8.6-1: GOF indices for the proposed unidimensional measurement model of KN

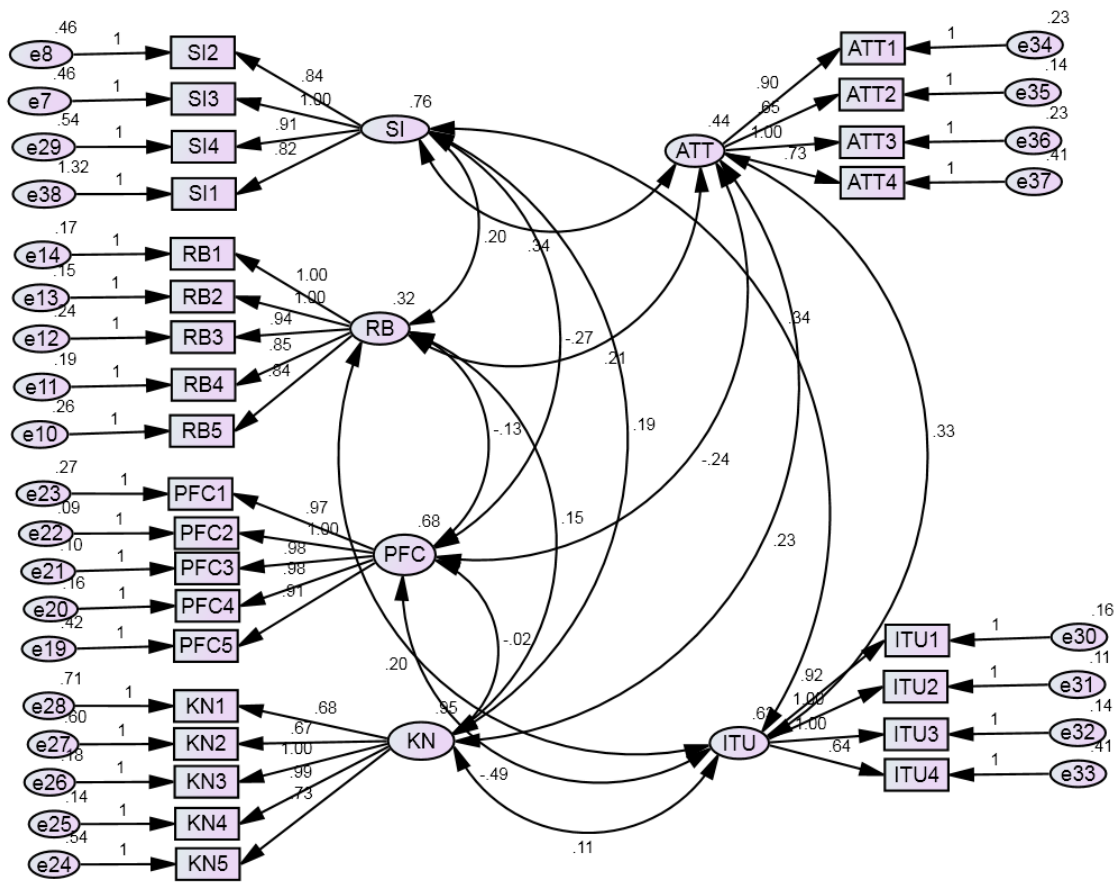
Chi square		Absolute fit indices		Incremental Fit Indices		Goodness of fit (GFI)	Other Indices	
X <sup>2</sup> (P Value)	22.419 (.000)	RMSEA	.097	CFI	.983		.977	SMC
Df	5			NFI	.979			
X <sup>2</sup> /df	4.484	RMR	.035	IFI	.983	SRW		>.5
				TLI	.967			

Source: Survey result (2017)

### 4.9 Unit Loading Identification (ULI)

As proposed by Hair et al. (2010), assessment of model fit has two steps, the first is assessing the individual constructs measurement model fit (i.e., unidimensionality), the second one is testing the full measurement model (i.e., Unit Loading Identification). The full measurement model consisting of all variables is depicted on figure 4.9–1

Figure 4.9-1: The full measurement model



The fit of the full measurement is also adequate, as shown in the following Table 4.9–1.

Table 4.9–1: GOF indices for the full measurement model

Chi square		Absolute fit indices		Incremental Fit Indices		Goodness of fit (GFI)
X <sup>2</sup> (P Value)	654.364 (.000)	RMSEA	.055	CFI	.948	
Df	309			NFI	.906	
X <sup>2</sup> /df	2.118	RMR	.050	IFI	.948	
				TLI	.941	

Source: Survey result (2017)

#### 4.10 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis is a way of testing how well measured variables represent a smaller number of construct that they are intended to measure (Hair et al., 2010). The CFA gives different statistics that show how well the theoretical specification of the factors matches the actual data used. The confirmatory factor analysis used in this study is first analyzing the fit of the measurement model that assesses how fit are the indicator variables to measure the latent variable. This is generally termed as construct validity as it 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). Construct validity consists of Convergent validity, Discriminant validity and Nomological validity.

##### 4.10.1 Convergent Validity

Convergent validity<sup>3</sup> assesses the extent to which items constituting a given construct converge or share a high proportion of variance in common (Hair et al., 2010). Measures that are used for assessing convergent validity are the Average Variance Extracted (AVE) test statistics and Composite Reliability (CR) estimates. The AVE scores need to be greater than 0.5 and the CR should be greater than 0.7 (Hair et al., 2010). Accordingly, the constructs of this research model exhibits convergent validity as depicted below.

Convergent Validity	Intention to use	Attitude	Social Influence	Religious Belief	Perceived Financial Cost	Knowledge
$AVE = \sum xi^2 \div N$ <b>Value &gt; .5</b>	0.702	0.552	0.558	0.581	0.767	0.596
$CR = \frac{\sum (xi^2) \div \sum (xi^2) + \sum \delta}{\sum (xi^2) + \sum \delta}$ <b>Value &gt; .7</b>	0.902	0.830	0.791	0.873	0.942	0.877
Convergent Validity	Established	Established	Established	Established	Established	Established

Source: Survey result (2017)

<sup>3</sup> AVE and CR scores could be done by hand using the formulas afore-depicted. However, the following online excel calculators could help to do the same more easily once we input the standardized regression weight (SRW) of the constructs.

CR and AVE calculator1: <http://www.watoowatoo.net/sem/sem.html>

CR and AVE calculator2: <http://akssoares.com/psicometria/calculadora-vme-e-cc>

### 4.10.2 Discriminant Validity

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 Discriminant 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 discriminant validity, as shown below in detail.

			Factor Correlation (r)	Correlation Squared ( $r^2$ )	AVE <sub>1</sub> , AVE <sub>2</sub> AVEs should be > $r^2$	Discriminant Validity
ATT	<-->	SI	0.252	0.0635	0.552 0.558	Established
ATT	<-->	RB	0.13	0.0169	0.552 0.581	Established
ATT	<-->	PFC	-0.176	0.0310	0.552 0.767	Established
ATT	<-->	KN	0.163	0.0266	0.552 0.596	Established
ATT	<-->	ITU	0.22	0.0484	0.552 0.702	Established
SI	<-->	RB	0.17	0.0289	0.558 0.581	Established
SI	<-->	PFC	-0.276	0.0762	0.558 0.767	Established
SI	<-->	KN	0.177	0.0313	0.558 0.596	Established
SI	<-->	ITU	0.316	0.0999	0.558 0.702	Established
RB	<-->	PFC	-0.11	0.0121	0.581 0.767	Established
RB	<-->	KN	0.122	0.0149	0.581 0.596	Established
RB	<-->	ITU	0.156	0.0243	0.581 0.702	Established
PFC	<-->	KN	-0.023	0.0005	0.767 0.596	Established
PFC	<-->	ITU	-0.445	0.1980	0.767 0.702	Established
KN	<-->	ITU	0.096	0.0092	0.596 0.702	Established

### 4.10.3 Nomological Validity<sup>4</sup>

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.

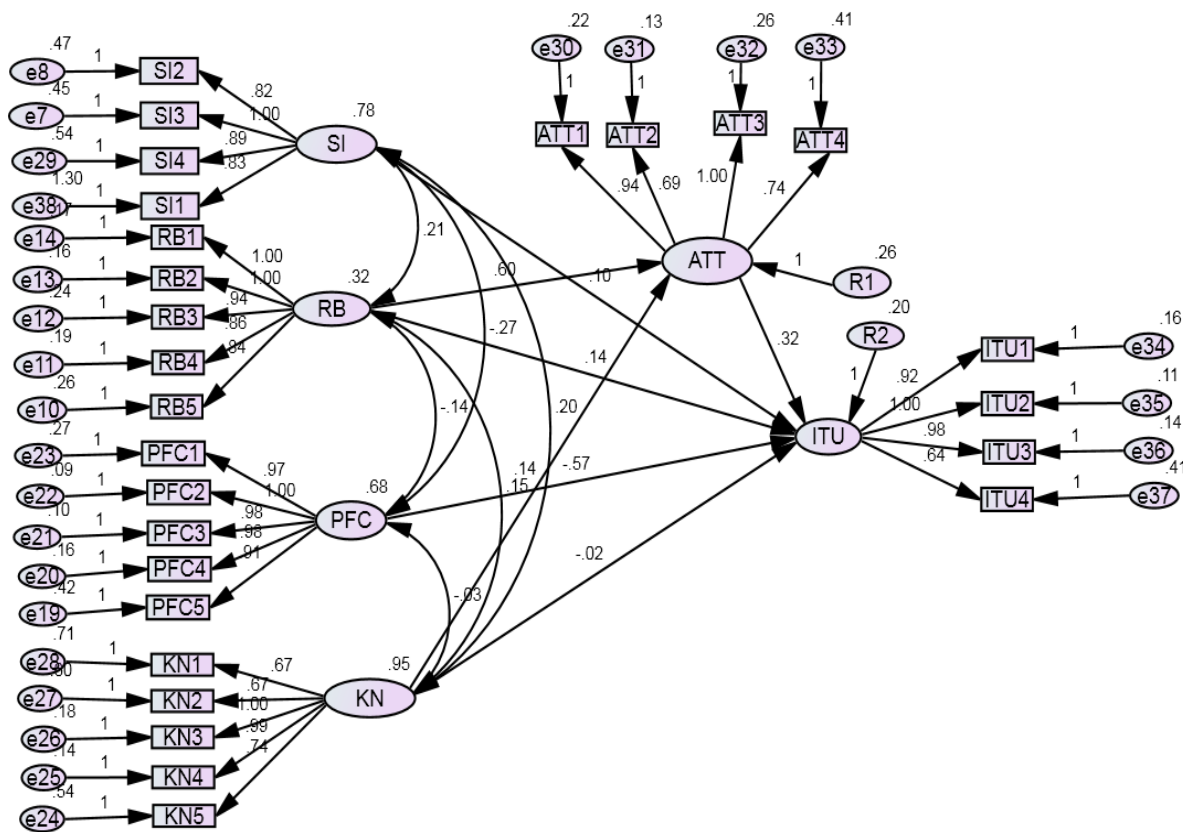
<sup>4</sup> <https://www.alleydog.com>

### 4.11 The Structural Model and Hypotheses Testing

#### 4.11.1 The Structural Model

After measurement models are fitted, the structural model for the hypothesized research model is developed by incorporating each individual latent variable as structural model specifies the manner by which particular latent variables directly or indirectly influence (cause) changes in the values of certain other latent variables in the model (Byrene,2010).The structural model of this study is depicted below.

Figure 4.11.1-1: The proposed Structural Model



Source: Survey result (2017)

As shown in the following table, the GOF indices were good except for the GFI figures of the structural model.

Table 4.11.1-1: GOF indices for the proposed structural model

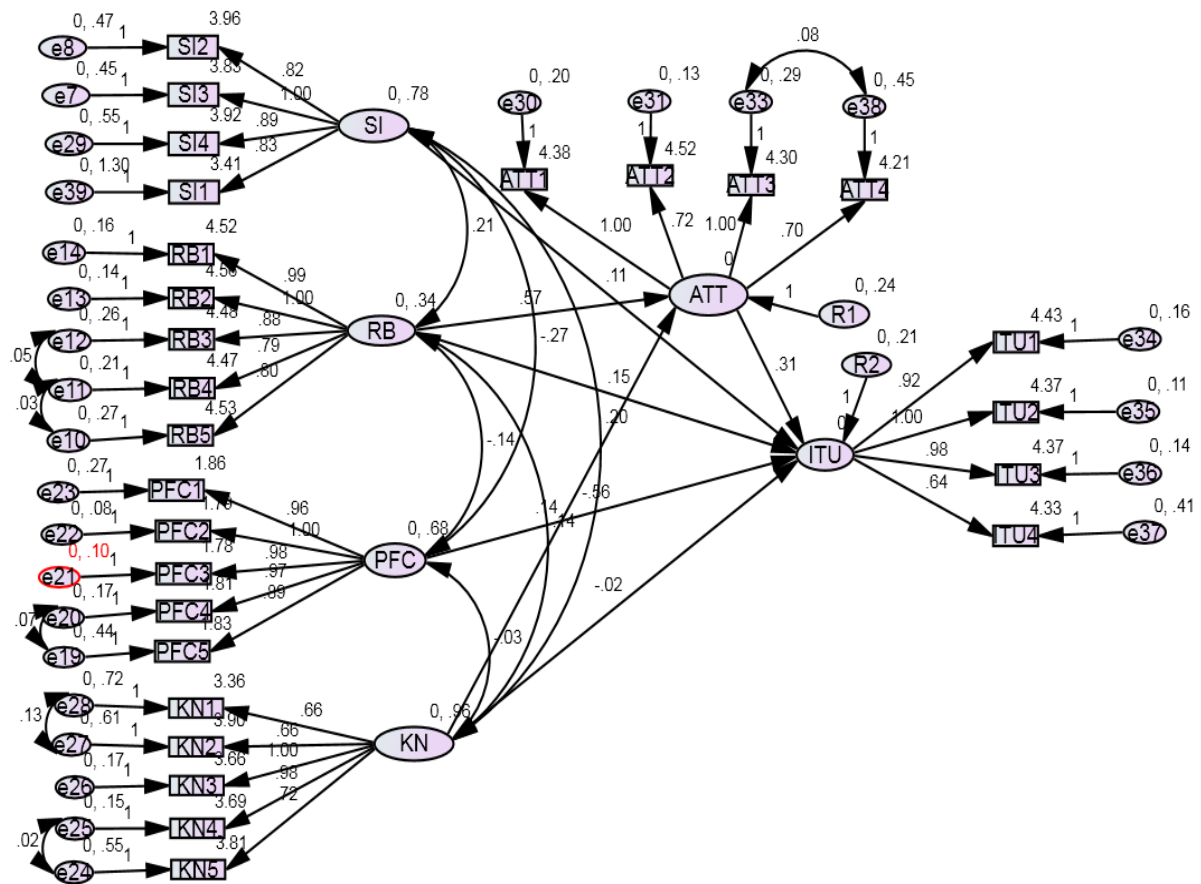
Chi square		Absolute fit indices		Incremental Fit Indices		Goodness of fit (GFI)
X <sup>2</sup> (P Value)	726.077 (.000)	RMSEA	.060	CFI	.937	
Df	311			IFI	.938	
X <sup>2</sup> /df	2.335	RMR	.067	TLI	.929	.847*

\*Less than the threshold

Source: Survey result (2017)

We try to fit the model by incorporating correlation lines between the measurement errors of the construct, as per Amos suggestions. The values were a bit improved as shown in the following Table 4.11.1-2.

Figure 4.11.1-2: The corrected Structural Model



**Table 4.11.1–2: GOF indices for the corrected structural Model**

Chi square		Absolute fit indices		Incremental Fit Indices		Goodness of fit (GFI)
X <sup>2</sup> (P Value)	666.044 (.000)	RMSEA	.057	CFI	.946	
Df	305			NFI	.905	
X <sup>2</sup> /df	2.184	RMR	.068	IFI	.946	
				TLI	.937	

**Source:** Survey result (2017)

As per the values on the above table, the final structural model exhibits fit on all indices. Upon the acceptance of the modified TRA’s goodness-of- fit, the study proceeds to interpret the parameters estimated by SEM after checking the construct validity of the structural model itself.

#### 4.11.2 Construct Validity of the Structural model

In order to test the structural model, first it should have adequate construct validity (Hair et al., 2010). Testing the construct validity of the structural model can be done by examining GOF indices and comparing factor loadings of the structural model with that of the underlying measurement model and the difference should not be more than 0.05 (Hair et al., 2010).

When we compare the standard estimate loading of the structural model with the full measurement model, the differences are below the threshold as tabulated hereunder;

Variables	Factor Loading of the full measurement model(A)	Factor Loading of the structural model (B)	The Difference should be below 0.05 (C)= A-B	Construct Validity of the Structural model
SI3	0.788	0.795	0.007	Established
SI2	0.737	0.726	0.011	Established
RB5	0.684	0.681	0.003	Established
RB4	0.742	0.749	0.007	Established
RB3	0.741	0.740	0.001	Established
RB2	0.823	0.817	0.006	Established
RB1	0.812	0.807	0.005	Established
PFC5	0.757	0.757	0.000	Established
PFC4	0.897	0.897	0.000	Established
PFC3	0.932	0.933	0.001	Established
PFC2	0.941	0.941	0.000	Established
PFC1	0.839	0.839	0.000	Established
KN5	0.698	0.699	0.001	Established

Variables	Factor Loading of the full measurement model(A)	Factor Loading of the structural model (B)	The Difference should be below 0.05 (C)=/A-B/	Construct Validity of the Structural model
KN4	0.930	0.930	0.000	Established
KN3	0.917	0.917	0.000	Established
KN2	0.646	0.645	0.001	Established
KN1	0.615	0.614	0.001	Established
SI4	0.733	0.730	0.003	Established
ITU1	0.879	0.872	0.007	Established
ITU2	0.922	0.917	0.005	Established
ITU3	0.903	0.896	0.007	Established
ITU4	0.623	0.609	0.014	Established
ATT1	0.782	0.792	0.010	Established
ATT2	0.760	0.778	0.018	Established
ATT3	0.808	0.787	0.021	Established
ATT4	0.605	0.596	0.009	Established
SI1	0.528	0.541	0.013	Established

### 4.11.3 Hypotheses Testing

The study of customers' intention examined four exogenous (SI, RB, PFC and KN) and two endogenous (ATT and ITU) variables as proposed by the conceptual framework of the study. In total eight hypotheses were formulated. On the final structural model one headed arrows between latent variables show the hypothesis of this study.

Accordingly, the results of the parameter estimates revealed the following major findings:

- As Perceived Financial Cost increase by one unit, it will decrease the intention to use IFB services by 0.561 units.
- As Attitude increases by one unit, it will increase 0.311 unit of intention to use.
- As Religious Belief increases by one unit, intention to use increase by 0.146 units, and
- 0.106 unit of Intention to use expected, if a unit of social influence increase, and
- Knowledge does not have significant impact on Intention to use IFB products. The detail is presented in the following Amos output Table 4.11.3–1.

Table 4.11.3–1: Regression Weights

			Estimate	S.E.	C.R.	P
ATT	<---	KN	.139	.034	4.097	***
ATT	<---	RB	.567	.067	8.445	***
ITU	<---	ATT	.311	.072	4.311	***
ITU	<---	PFC	-.561	.041	-13.705	***
ITU	<---	SI	.106	.043	2.478	.013
ITU	<---	RB	.146	.068	2.144	.032
ITU	<---	KN	0.007	0.03	0.236	.814
SI3	<---	SI	1.000			
SI2	<---	SI	.822	.066	12.477	***
RB5	<---	RB	.804	.060	13.426	***
RB4	<---	RB	.787	.057	13.700	***
RB3	<---	RB	.883	.062	14.283	***
RB2	<---	RB	1.000			
RB1	<---	RB	.992	.055	17.974	***
PFC5	<---	PFC	.887	.047	18.995	***
PFC4	<---	PFC	.971	.033	29.493	***
PFC3	<---	PFC	.977	.028	35.249	***
PFC2	<---	PFC	1.000			
PFC1	<---	PFC	.964	.038	25.325	***
KN5	<---	KN	.719	.051	14.232	***
KN4	<---	KN	.977	.040	24.648	***
KN3	<---	KN	1.000			
KN2	<---	KN	.659	.047	14.058	***
KN1	<---	KN	.662	.050	13.274	***
SI4	<---	SI	.890	.071	12.623	***
ITU1	<---	ITU	.917	.035	26.322	***
ITU2	<---	ITU	1.000			
ITU3	<---	ITU	.983	.035	28.020	***
ITU4	<---	ITU	.637	.046	13.888	***
ATT1	<---	ATT	1.000	.071	14.174	***
ATT3	<---	ATT	1.000			
ATT2	<---	ATT	.719	.052	13.895	***
ATT4	<---	ATT	.705	.065	10.925	***
SI1	<---	SI	.831	.085	9.817	***

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

Table 4.11.3–1 describes the names of the explanatory variables, their (Beta) estimate ( $\beta$ ), the standard errors of the estimates (S.E.), and the (C.R.)  $t$  statistic of each coefficient, which is simply the ratio of estimate divided by its standard error, and the  $p$  value, or the exact level of significance of the  $t$  statistic. For each estimate, the null hypothesis is that the population value of that estimate is zero, that is, the particular regressor has no influence on the regressand, after holding the other regressor values constant. Moreover, the smaller the  $p$  value, the greater the evidence against the null hypothesis. Let's test each of the hypotheses one by one. The test for mediation will be done afterwards.

#### 4.11.3.1 Testing the Direct Effect of ATT, SI, RB and KN on ITU

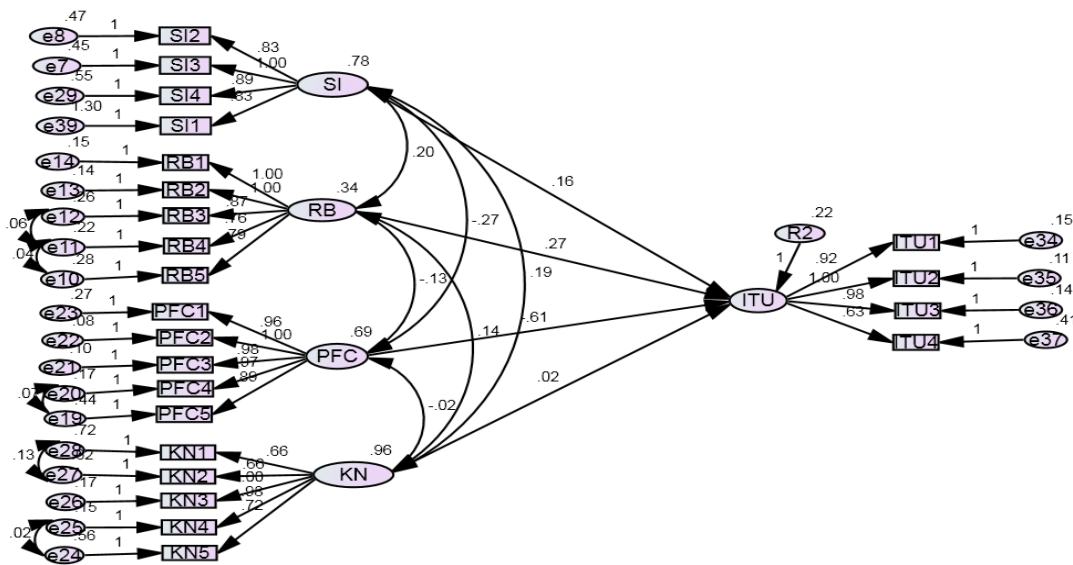
- ⇒ Hypothesis  $H_1$  proposed that Attitude has a positive impact on Intention to use IFB products. As can be observed from the table above ATT (Attitude) and ITU (intention to use) have  $\beta$  estimate value of .311 and  $t$ -statistics 4.311 with a  $p$  value of less than 0.001. Thus the alternative hypothesis ( $H_1$ ) is not rejected. To put it differently, we can say that ATT is an important determinant of ITU, after allowing for the influence of other variables in the model. On the other hand, the respective null hypothesis i.e., Attitude does not have a positive impact on Intention to use IFB products is rejected.
- ⇒ Hypothesis  $H_2$  hypothesized that Social Influences has a positive influence on the Intention to use the products of IFB. By confirming this statement, the above table shows that these two variables (SI and ITU) have  $\beta$  estimate value of .106 and  $t$ -statistics 2.478 with a  $p$  value of 0.013 i.e., less than 0.05. Therefore, the alternative hypothesis ( $H_2$ ) is not rejected while the underlying null hypothesis i.e., Social Influences does not have a positive impact on Intention to use IFB products is rejected.
- ⇒ Hypothesis  $H_4$  proposed that Religious Belief has a positive influence on the usage of IFB products. Supporting this statement these two variables (RB and ITU) have  $\beta$  estimate value of .146 and  $t$ -statistics 2.144 with a  $p$  value of 0.032 i.e., less than 0.05. Thus the alternative hypothesis ( $H_4$ ) is not rejected. In contrary, the underlying null hypothesis i.e., Religious Belief does not have a positive influence on the usage of IFB products is rejected.
- ⇒ Hypothesis  $H_5$  hypothesized that Perceived Financial Cost has negative influences on the Intention of the use of IFB products. By validating this hypothesis, (PFC and ITU) have  $\beta$  estimate value of -.561 and  $t$ -statistics -13.705 with a  $p$  value of less than 0.001. As a result, the alternate hypothesis ( $H_5$ ) is not rejected, while the respective null hypothesis rejected.

- ⇒ Hypothesis H<sub>6</sub> proposed that Knowledge has a positive relationship with Attitude towards IFB product. By concurring with this statement these two variables (KN and ATT) have  $\beta$  estimate value of .139 and *t*-statistics 4.097 with a *p* value of less than 0.001. Thus the alternative hypothesis (H<sub>6</sub>) is not rejected. In contrary, the underlying null hypothesis is rejected.
- ⇒ On the other hand, Hypothesis H<sub>7</sub> hypothesized that Knowledge has a positive relation with the Intention to use of IFB products. By concurring with this hypothesis  $\beta$  estimate showed a positive value of .007 and *t*-statistics.236. On the other hand, a *p* value of .814, shows that this variable has an insignificant effect on intention. Thus the alternative hypothesis (H<sub>7</sub>) is rejected whereas the respective null hypothesis is not rejected.

### 4.11.3.2 Testing the Mediation Effect of Attitude

As proposed on conceptual framework, Attitude positively mediates the relationship between Religious Belief and Intention the use of IFB products. To test this hypothesis, the researcher used the method used by (Wahyuni, Sakur, and Arifin, 2013). First the attitude (ATT) variable will be taken out from the structural model as shown in figure 4.11.3.2–1 and the resulting non mediated model will be tested for validity based on GOF indices.

Figure 4.11.3.2-1: the Non-mediated structural model



When Attitude (ATT) is taken out and model tested for validity in AMOS by doing CFA it resulted in valid model as it satisfies all the GOF criteria, as tabulated below;

**Table 4.11.3.2–1: GOF indices for non-mediated structural model**

Chi square		Absolute fit indices		Incremental Fit Indices		Goodness of fit (GFI)
X <sup>2</sup> (P Value)	387.902 (.000)	RMSEA	.047	CFI	.970	.918
Df	215			NFI	.935	
X <sup>2</sup> /df	1.804	RMR	.052	IFI	.970	
				TLI	.965	

Source: Survey result (2017)

#### 4.11.3.2.1 Testing the effect of RB and ITU through ATT as a mediating (H<sub>3</sub>)

To see mediating effect of RB and ITU through ATT as a mediating variable the following three assumptions needs to be tested and all must be met (Wahyuni et al., 2013).

1. There is a statistically significant relationship between RB and ITU.
2. There is a statistically significant relationship between RB and ATT.
3. There is a statistically significant relationship between ATT and ITU.

Before the mediator Variable (ATT) enter the model

	Beta Estimate	S.E	C.R.	P Value	Remark
ITU<---RB	.269	.059	4.544	***	Significant

After the mediator Variable (ATT) entered in to the model

	Beta Estimate	S.E	C.R.	P Value	Remark
ITU<---RB	.146	.068	2.144	0.32	Significant
ATT<---RB	.567	.067	8.445	***	Significant
ITU<---ATT	.311	.072	4.311	***	Significant

After ATT entered in to the model  $\beta$  is reduced from .269 to .146 and the result is statistically significant since the p value is less than 0.001. Moreover, RB has a statistically significant effect on ATT and ATT has also statistically significant effect on ITU. The type of mediation here is *partial mediation* since the direct effect of RB on ITU is still statistically significant after ATT has entered the model even though  $\beta$  is reduced.

⇒ We can conclude that by fulfilling all of the three assumptions set above, religious belief has statistically significant direct effect on intention to use and also has statistically significant

indirect effect on intention to use through mediating variable attitude. Thus the alternative hypothesis  $H_3$  is not rejected, whereas the null hypothesis is rejected.

#### 4.11.3.2.2 Testing the effect of KN and ITU through ATT as a mediating variable ( $H_8$ )

On the other hand, before the mediator variable ATT enters the model, KN was statistically insignificant as stated below, which violates the first assumption.

	Beta Estimate	S.E	C.R.	P Value	Remark
ITU<--- KN	.024	.031	.758	.449	Insignificant

⇒ Thus we can conclude that the alternative hypothesis ( $H_8$ ), which hypothesized that Attitudes mediate the relationship between knowledge and intention to use IFB products is rejected, but the null hypothesis which proposes that Attitudes does not mediate the relationship between knowledge and intention to use IFB products is not rejected.

#### 4.12 Discussion of Results of Customers' Intention to use IFB products

The results of H1 and H2 indicate that two constructs, attitude and social influence, are found to be positively related with the intention to use IFB products. Attitude is positively related with intention to use IFB products at less than one percent significance level (p-value = 0.000,  $t = 4.311$ ). Similarly, social influence is also positively related to the intention to use IFB products but at five percent significance level (p-value= 0.013,  $t = 2.478$ ). These findings are consistent with previous studies (Amin, 2013; Amin et al., 2011; Abdurazak and Taib, 2011; Amin et al., 2010; Taib et al., 2008). Thus, the more positive is the attitude, the more likely that IFB products are utilized by bank customers. In addition, the more positive the social influence, the more likely that IFB is utilized by bank customers. These findings provide evidence for the appropriateness of the original constructs of TRA in the context of Interest Free Banking products. Hence, the results confirmed that the model of customers' intention to adopt IFB financing products can be approached by the TRA framework. This result is answering Research Question 1 and thus confirming that the TRA model is applicable to predict Ethiopian customers' intention behavior towards IFB products. Attitude ( $\beta = 0.311$ ) is found to be a stronger predictor than social influence ( $\beta = 0.106$ ), indicating that bank customer has made a firm decision after the evaluation of the outcome of engaging in use of IFB products rather than motivation to comply with expectations of others.

Moreover, the results on table 4.11.3–1 shows that Religious Belief is positively related with intention to use IFB products. This means the greater the religious belief, the more likely that IFB products will be utilized by bank customers. This finding is in line with the findings of (Amin, 2012; Bley and Kuehn, 2004; Metawa and Almosawi 1998).

As for Perceived financial cost (pricing), on table 4.11.3–1, it is reported to be negatively related to the intention to use IFB products. The result indicates that Perceived Financial Cost has a negative effect on the intention to use IFB products. This means, the lower the Perceived Financial Cost of IFB products, the greater the likelihood that the service is going to be used by bank customers. This finding support past studies conducted by Amin (2013); Yu (2012); Amin et al.(2011); Amin et al. (2010); Luran and Lin (2005), who all found Perceived financial cost to be a key predictor of the IFB's patronage.

The results of Knowledge, the other predictor, found to be positively related to the intention to use IFB products but it is insignificant ( $p$ -value = 0.814,  $t$  = 0.236). This result is not in line with the findings of (Tang et al., 2011; Engel et al., 1990). On the other hand, having mentioned this result, one should not conclude that IFB customers do not need knowledge to increase their usage intention; instead, the result of analysis specifies that customers attach more importance to attitude, social influence, religious belief and perceived financial cost. Thus, the management of CBE should take lesson on the issue.

Moreover, our finding shows that Knowledge has a positive relationship with Attitude towards IFB products. This result is in line with the findings of (Amin, 2012; Tang et al., 2011; Kaplan et al., 2007; Fazio and Zanna, 1981)

As stated above, Religious belief has significant direct positive effect on intention to use and also significant indirect positive effect on intention to use through mediating variable attitude. This finding is in line with the findings of (Corroy and Emerson, 2004; Vitell and Paolillo, 2003).

H<sub>8</sub>, which hypothesized that Attitudes mediate the relationship between knowledge and intention to use IFB products, is rejected. This result is not in line with the findings of (Tang et al., 2011; Engel et al., 1990).

### 4.13 Presentation of Results of Factors Influencing Employees' Product Knowledge

#### 4.13.1 Descriptive statistics of Employees' Product Knowledge

A total of 77 sets of questionnaire were collected and considered usable for this study. The respondents were 74% male employees and the rest were females. 77.9% of them were the followers of the religion of Christianity. Majority of the respondents were Bachelor's degree holders (76.6%) followed by Master Degree (15.6%). 87% of the respondents were currently working in branches, while the rest was working at head office. All of the respondents of the head office were working for the conventional bank before they are assigned to the Interest Free Banking wing of the CBE. About 75 percent of the respondents were officers and have banking experience not exceeding five years. Of which 58% of them were limited exposure with the working of IFB in their respective branches for a maximum of one year. None of the sampled respondents has formal education/certification on Islamic banking and finance; rather almost all of the respondents were qualified in business fields: Accounting, Management and Economics.

#### 4.13.2 Assumptions of the Regression Model

For a regression model to generalize we must be sure that underlying assumptions have been met, and to test whether the model does generalize we can look at the following assumptions

##### 4.13.2.1 Multivariate Normality

As per Field (2009), in small samples it's OK to look for values above 1.96 (within +2 to -2 range) to fulfill the assumption of normality, as shown in the following table all variables are normally distributed.

**Table 4.13.2.1-1:** Multivariate normality test

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Training	77	-.857	.274	.906	.541
Underlying Sharia' Principles	77	.145	.274	.300	.541
Underlying Arabic Terminology	77	-.161	.274	-.034	.541
Product Knowledge	77	-.681	.274	.577	.541

### 4.13.2.2 Independence of Errors

This assumption refers to that errors in regression are independent; this assumption is likely to be met if the Durbin–Watson statistic is close to 2 and between 1 and 3 (Field, 2009). The Durbin–Watson statistic test for this study found to be 1.652 which indicates the assumption of independence of errors is met.

### 4.13.2.3 Multicollinearity

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.

**Table 4.13.2.3–1:** Multicollinearity test statistics

Model		Collinearity Statistics	
		Tolerance	VIF
1	Training	.865	1.156
	Underlying Sharia' principles	.714	1.401
	Underlying Arabic Terminology	.647	1.545

a. Dependent Variable: Product Knowledge

### 4.13.3 Validity and Reliability Analysis of Employees' product knowledge

Initially, product knowledge of IFB employees as dependent variable was developed using six items. After performing factor analysis, it reduced to five items. The eigenvalue for this factor is 2.59 and explained a total of 51.86 percent of the variance with factor loading between .62 and .81 (Table 4.13.3–1)

**Table 4.13.3–1: Factor Analysis for Product Knowledge**

Items Loading	Factor Loadings
I understand the differences between Interest Free banking (IFB) and conventional banking products.	.814
I know the concept applied to Islamic/interest free banking.	.601
IFB products are offered to both Moslems and non-Moslems.	.616
IFB's must be based on Sharia'.	.794
The rules and regulation given by Sharia' Experts must be in accordance to Quran and Sunnah	.792
<b>Eigenvalue</b>	<b>2.593</b>
<b>Percentage of Variance</b>	<b>51.86</b>

**Table 4.13.3–2:** Rotated component Matrix of Independent variables

	Component		
	1	2	3
	TRA	USP	UAT
<b>Training (Cronbach's Alpha 0.832)</b>			
My colleagues help me understand the IFB products in more detail.	.724		
My boss helps me to understand the IFB products in more detail	.595		
Bank management had provided me with adequate materials regarding to IFB	.606		
I am always attending IFB program organized by the bank.	.681		
I am encouraged to attend short courses, seminars and conferences.	.831		
I have adequate training and exposure in IFB products and services.	.819		
I have the capacity to solve the problems related to IFB.	.779		
I have gained experience on IFB products during working session.	.747		
I have extensive knowledge of the products and services of IFB.	.855		
<b>Underlying Sharia' Principles (Cronbach's Alpha 0.793)</b>			
IFB's invests in businesses that are not prohibited by Islam.		.710	
IFB's must have Sharia' Supervisory Board to ensure that all business activities are in line with Sharia' requirements.		.699	
Islamic banking system has been introduced since Muslims are prohibited from receiving or giving interest.		.569	
There must be Aqad (contract) in the IFB transactions.		.824	
Profit/return on IFB is based on the sale, lease and investments.		.771	
IFB prohibits excessive uncertainty or gharar in all forms of transaction		.647	
I understand what Riba means and I could define its two components.		.762	
<b>Underlying Arabic Terminology (Cronbach's Alpha 0.894)</b>			
I understand the meaning of Gharar.			.800
I understand what Hallal mean.			.746
I understand what Musharaka and Mudaraba mean and the difference between the two.			.706
I understand what Qardul-Hassen mean.			.734
I understand what Murabaha, Salam , Istisna' mean			.809
<b>Eigenvalue</b>	<b>6.657</b>	<b>3.197</b>	<b>1.830</b>
<b>percentage variance</b>	<b>31.698</b>	<b>15.223</b>	<b>8.713</b>
<b>Cumulative variance</b>	<b>31.698</b>	<b>46.920</b>	<b>55.633</b>

The factors influencing employees' product knowledge was developed with 26 items. The result test of Sphericity is significant while the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is greater than 0.75. Percentage of cumulative variance for the factors is about 56 percent with factor

loading between 0.569 and 0.855 (Table 4.13.3–2). Then reliability of construct being tested and it is found that the reliability of all factors is high ranging from Cronbach's Alpha 0.793 to 0.894.

#### 4.13.4 Findings of the study on Employees' Product Knowledge

Descriptive analysis on product knowledge of IFB employees shows that a moderate understanding of Sharia; principles by IFB employees. While, the employees of IFB reported less level of training they received. Similarly, the understanding of basic Arabic terminology is also less among employees (Table 4.13.4–1).

**Table 4.13.4–1: Product Knowledge and its factors**

Variable	Mean	Std. Deviation
Underlying Sharia' Principles	3.54	0.66
Underlying Arabic Terminology	3.22	0.86
Training	3.18	0.66

The correlation between training, underlying Sharia' principles and underlying Arabic terminology on product knowledge of IFB employees was analyzed using bivariate Pearson's correlation. It is found that the product knowledge also reported to have a moderate correlation with Underlying Sharia' Principles, Underlying Arabic terminology and training (Table 4.13.4-2).

**Table 4.13.4–2: Correlation between Product Knowledge and its Determinant Factors**

Variable	Correlation
Underlying Sharia' Principles	3.61**
Underlying Arabic Terminology	4.61**
Training	4.23**

\*\*Correlation is significant at the 0.01 level (2-tailed)

Further analysis using multiple regressions indicated that the determinant factors are having significant relationship ( $p < .05$ ) and explained 55 percent variation in the product knowledge of IFB workers. It is found that underlying Sharia' principles and training are having a significant positive impact on employees' product knowledge. However, underlying Arabic Terminology is not significant to the model. The result explained that the increase of a unit in underlying Sharia' principles will affect the increase of 0.350 unit of product knowledge; while the other variables are held constant. Similarly, 0.253 unit of product knowledge is expected to increase if a unit of training increase. Thus, two of the hypothesis of this study is not rejected (Table 4.13.4–3). Thus, the regression equation can be written as follows:  $PKN = 1.442 + 0.253TR + 0.350USP + 0.138UAT$

The overall Product Knowledge of Employees' is calculated by taking the mean value of each respondent's product knowledge values. Therefore, the mean responses of respondents for the three attributes TR, USP and UAT were 3.18, 3.54 and 3.22 respectively. By substituting these values on the above equation we get PKN value of 3.93

$$PKN=1.442+0.253(3.18) +0.350(3.54) +0.138(3.22) = \underline{\underline{3.93}}$$

**Table 4.13.4-3:** The Influence of Determinant Factors on Product Knowledge

Model	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.442	.465		3.103	.003
Training	.253	.115	.232	2.206	.031
Underlying Arabic Terminology	.138	.101	.165	1.361	.178
Underlying Sharia' principles	.350	.125	.323	2.790	.007

Dependent Variable: Product Knowledge

#### 4.13.5 Discussion on the results of Employees' Product Knowledge

As stated under Descriptive statistics, 4.13.1, none of the sampled respondents has formal education/certification on Islamic banking and finance; rather almost all of the respondents were qualified in business fields: Accounting, Management and Economics. Consequently, IFBs ought to adequately train and develop their employees especially with respect to the distinctive characteristics of Islamic banking products and services (Dusuki and Abdullah, 2007). The skills and knowledge gaining by employees of the bank will ultimately can influence and attract more customers and be able to make the IFB system being competitive and more attractive to the customers.

Inferential analysis found that only underlying Sharia' principle and training are having statistically significant influence to the product knowledge of employees. Therefore, the alternative hypothesis, H<sub>1</sub> and H<sub>2</sub>were not rejected whereas the respective null hypotheses were rejected. The finding corresponds to the study of (Kerima, 2016; Harun et al., 2015; Mohammed, 2012;Aslam et al.,2011; Hashim, 2009; Zainol et al., 2008), who also found that training is one of the important factors that the management used to evaluate the knowledge of their staff. By having insufficient training and working experience, employees cannot provide accurate knowledge of the products and persuade the customers to use the IFB products.

The study revealed that the understanding of underlying Sharia' principle is another variable to seriously consider due to its statistically significant influence to the product knowledge. An Understanding of the basic Sharia' financing principle among the employees is imperative to avoid misperception among customers especially in relation to the unique features of IFB products and services (Dusuki and Abdullah, 2007). This finding is in agreement with (Harun et al., 2015; Baba and Amin, 2009). Baba and Amin (2009) reported that most of bankers were not knowledgeable about IFB since they still confused in regards of the practices of the system which still overshadowed by the conventional system.

On the other hand, understanding of the underlying Arabic terminology is perceived to be least important by the respondents which shown statistically insignificant result. Therefore, the alternative hypothesis,  $H_3$ , rejected in contrary the respective null hypothesis was not rejected. Having mentioned this result, one should not conclude that IFB employees do not need to focus on this issue; instead, the result of analysis specifies that employees attach more importance to training and understanding of underlying Sharia' principles. Thus, the management of CBE should be aware of the issue.

The overall findings of this study highlight that employees of IFB need to get adequate training and in depth understanding of underlying Sharia' principles so that they can easily differentiate between the IFB and conventional products. In addition, more efforts are required to identify how their practices actually work in practice and adopt effective training strategies for employees' knowledge enhancement and awareness on related issues.

## 4.14 Presentation and Assessment of the interview Questions

### 4.14.1 Interviewee demographic profile

In order to get in to the heart of the problem and to get the feeling of our customers, it is necessary to incorporate interview questions in addition to the questionnaires used in this study. The Demographic profile and the interview schedule of this part were attached in Appendix E and F Respectively. The appendix shows that majority (92.7%) of the participants are male. For more reliability of the data and information participants from different age groups were selected and these age groups are ranging from 25 – 60 years. 77% of the participants were using bank accounts for five years or more. The sample consists of both types of participants; one that are engaged in business and others that are job holders. 69% of the participants were Bachelor degree holders and only three of them were Masters qualified. The incomes of participants were ranging from Birr 7,000 to Birr 10,000 and more. The results have revealed that 76.9% of the participants were dissatisfied with CBE's IFB offering because they believe that it is nothing but the change of names of conventional banking products. The majority of sample of participants (92.7%) has bank accounts in both IFB and conventional banks. On the other hand, none of the participants have prior education of Islamic banking systems and products.

### 4.14.2 Difference between CBE's IFB and its Conventional Wing

The interview highlighted that majority of the participants were of the point of view that there is no actual difference between the CBE's IFB and conventional banking. The first interviewee said that

*“Well in my point of view we do not know where our money is invested by the CBE, how much profit that investment is yield to the bank so the main issue is that CBE should give information that whether it is investing in some Halal/permissible business ventures or just have lent customer's money with interest.”* (Interviewee No.1)

The participants also have pointed out that if a conventional bank and IFB window of conventional bank both have the same accumulated capital as recorded in the balance sheet and also their cash vaults are the same then there is no remarkable difference between both systems. In fact, if we talk about it in true spirit then there is certainly no difference between CBE's IFB and the conventional wing. Interviewee No. 11 stated that

*“After my experience of utilization of IFB for the last three years, I understand that I am doing business with IFB window of the CBE but the capital of CBE and IFB window is same so if capital is same for interest based and interest free banking then how will you (the bank) distinguish between IFB and Conventional bank.”*(Interviewee No.11)

Furthermore, Interviewee No. 13 stated that

*"I strongly believe that Special window is made to satisfy the bank's business interest and not the needs of the Moslem community. The very essence or logic behind Islamic banking is it differs from conventional banking in basic principles. By having special window in conventional banks you (bank) cannot reconcile the two systems. After all they are different and should be separate."*(Interviewee No.13)

Proper disclosures and briefings about the issues like where the deposited amounts are going to be invested, what will be the risk factors involve, are very important. Interviewee No. 8 said that

*"Islamic banking is conducted based on principles of Islamic law. That means having a special window in conventional bank will not make it Islamic. For instance, CBE pays interest, invests in alcohol, pork or other businesses prohibited in Islam."*(Interviewee No.8)

#### 4.14.3 Awareness of IFB Products

The participants were of the opinion that when it comes to explaining the IFB modes of financing, normally the bankers fail to satisfy the needs of customers. In fact, the information they give is considered accurate but the practices are somewhat ambiguous. Similarly, interviewee No. 4, 6 and 8 have given similar opinion as:

*"Actually when I opened the bank account in one of the branches of the CBE and there I discussed with counter clerk about the mode of IFB financing but he did not satisfy me so I haven't request for any financing but opened a Qard (current account) there".* (Interviewee No.8)

When the discussion was continued and the participants were feel ease, a very important general question was asked about the awareness of the banker's themselves. The bankers, who are supposed to be the custodians of IFB, were not known much about the IFB products. According to different participants like interviewee no. 2, 3 and 6 they were of the opinion that the staff members do not know about the technical concepts of the IFB modalities.

*"...No they are not well acquainted with the subject, if a layman will visit them they will say that we are Interest free and do not offer interest but offer profit. The technicalities are not shared and they do not give proper information".* (Interviewee No.3)

When the discussion was made with Interviewee No.5she said that

*"Islamic banking is a new concept. Bankers and customers still do not have adequate knowledge on the subject matter, but with the passage of time these limitations will be minimized and improvements will be seen."*(Interviewee No.5)

#### 4.14.4 Increasing awareness and improving perception:

According to interviewee No. 5 awareness can be created and perception can be improved by publishing books or brochures, different organizations can be associated with spreading of awareness, and—public at large can be invited for general awareness. This will be based upon that which community you are knocking at for increasing awareness. With the help of the Ethiopian/Addis Ababa Chamber of commerce interest free banks can knock the door of traders; and female related organizations can be used for enhancing the awareness in women. Interviewee No. 1 has given his point of view as:

*“First of all the IFB bankers should have to come out from the bank boundary. When a new product is launched by the bank it is not launched in the market but it is launched inside the bank.”* (Interviewee No.1)

Different participants have further added that there is no marketing campaign by IFB, and only very small message run on Radio that are also very unclear. This hinders the creation of awareness regarding IFB's in general masses. The awareness is very much important for the potential customer and this will be only possible when the bankers go to the sites of clients. Interviewee No. 3 said that

*“For creation of awareness bankers have to go to the door steps of customers and should address them properly. The bankers or management members have to move to customer's sites. So they have to start marketing IFB products then betterment will come”* (Interviewee No.3)

Therefore, major findings from the interviews with the selected participants revealed that customers are not well aware of the differences between IFB and conventional banking or not trust the bank on the grounds that it might invest their money against the principles of Sharia'. Customers generally maintain the Safekeeping (*Wadia*) and current (*Qard*) account but they don't use different profit sharing investment deposit items and modes of financing because they are not well aware of their existence or due to their suspicion. Interesting findings have reflected that Bankers', especially in the branches, themselves do not have full information about IFB financing modalities.

## CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

*In this chapter the summary of major findings, conclusion, recommendation, limitations, and finally suggestions for future research was presented and discussed.*

### 5.1 Summary of Major Findings

The present study analyzes the determinants for customers' intention to use interest free banking products and factors affecting employees' product knowledge by using Commercial Bank of Ethiopia as case Company. The study employed descriptive and inferential analysis. The major findings of the study are summarized as follows:

- It is statistically confirmed that there is a significant association between IFB's adoption intention and educational level of respondents. However, statistically insignificant association is found between IFB's adoption intention and sex, age, occupation and monthly gross income of the respondents.
- None of the sampled 77 employees of the CBE has formal education/certification in Islamic banking and finance; rather almost all of the respondents were qualified in business fields like Accounting, Management and Economics.
- Descriptive analysis on customers' intention to use IFB products showed that customers generally agreed or perceived that their IFB adoption decision is highly influenced by their religious belief (Mean score 4.52). Moreover, customers have positive attitude towards IFB products (Mean score 4.36). Further, customers have perceived or agreed that their IFB adoption Decision is influenced by social norm/influence or normative pressure (Mean score 3.69). On the other hand, the mean scores of items under Perceived Financial Cost is 1.82 which indicate that, on average, customers do not perceive that their IFB product adoption expose them to incur additional prices/charges/costs.
- Descriptive analysis on employees' product knowledge shows that a moderate understanding of Sharia' principles by IFB employees (mean score 3.54). While, the employees of IFB reported that they receive less level of training (mean score 3.18). Similarly, the understanding of basic Arabic terminology is also less among employees (mean score 3.22)
- Except for Knowledge, other variables like Attitude, Social Influence, Perceived Financial Cost and Religious Belief have statistically significant effect on IFB adoption intention of CBE's customers in Addis Ababa.

- The statistical significance of Attitude and Social influence provide evidence for the appropriateness of the original constructs of Theory of Reasoned Action (TRA) in the context of IFB products.
- Except for Underlying Arabic Terminology, other variables like Underlying Sharia' Principles and Training has statistically significant effect on Product Knowledge of employees of the CBE in Addis Ababa.
- The results of the parameter estimate of customers' intention to use IFB products revealed the following major findings:
  - As Perceived Financial Cost increase by one unit, it will decrease the intention to use IFB services by 0.561 units.
  - As Attitude increases by one unit, intention to use IFB services will increase by 0.311 units.
  - As Religious Belief increases by one unit, intention to use IFB services will increase by 0.146 units, and
  - 0.106 unit of Intention to use IFB products expected, to increase social influence by one unit.
- The results of the parameter estimate for Product Knowledge of employees revealed the following major findings:
  - As Underlying Sharia' Principles increase by one unit, it will affect the increase of 0.350 unit of employees' product knowledge.
  - As Training increase by one unit, it will increase 0.253 unit of product knowledge of employees.
- Major findings from the interviews with the selected participants revealed that customers are not well aware of the modalities of IFB or they are suspicious of the bank on the grounds that it could invest their money for businesses prohibited by the principles of Sharia'. Customers generally maintain the Safekeeping (*Wadia*) and current (*Qard*) account but they don't use different profit sharing investment deposit items and other modes of financing because they are not well aware of their existence or due to their suspicion.

## 5.2 Conclusion

The objective of this study was to analyze the determinants for customers' intention to use interest free banking products and factors affecting employees' product knowledge. Accordingly, the study analyzed the effect of Attitude, Social Influences, Perceived Financial Cost, Religious belief and knowledge to test customers' IFB use intention. Moreover, the study analyzed product knowledge of employees' by testing Training, Underlying Sharia' principles and underlying Arabic terminology.

The study in general showed that, except for Knowledge from Customers Intention model and Underlying Arabic Terminology from Employees Product Knowledge model, all other constructs have effect on intention and product knowledge of CBE's customers and employees respectively in the city of Addis Ababa.

Furthermore, from the parameter estimates it can be concluded as follows:

- From the study on customers' intention, Attitude, Religious belief, social influence and Perceived Financial Cost (Pricing) found to be statistically significant.
- From the study on employees' product knowledge, Underlying Sharia' principle and Training found to be statistically significant.

### 5.3 Recommendations

The purpose of this study was to identify and analyze the determinants for customers' intention to use interest free banking products and factors affecting employees' product knowledge. Understanding these factors would help banks in general and Commercial Bank of Ethiopia in particular to devise strategies in order to increase the usage rate of customers by enhancing the quality service provision of employees.

Based on the analysis and findings of this study, the following recommendations are forwarded:

- ✚ To increase customers' intention to use IFB products
  - The bank needs to work on improving bank customers' attitudes.
    - To create positive attitude CBE must conduct mass awareness creation programs. Moreover, the bank should implement effective promotional campaigns by targeting specific customer groups to stimulate IFB usage for instance, with the help of the Ethiopian/Addis Ababa Chamber of Commerce IFBs could knock the door of traders; with the help of local mosques, the bank can reach to its retail/financing customers and female related organizations can be used for enhancing the awareness in women. This approach is able to instill one's positive attitude on IFB products.
    - Considering low level of subscription of CBE's IFB financing products, the bank should strengthen its effort to finance many more customers who engage in domestic trade sector, by setting aside its priority sector financing scheme at least for the time being, which could give the bank a word of mouth in turn helps to crop positive attitude. Moreover, the bank should increase its accessibility by preparing windows in the remaining branches which not yet give IFB services.
    - The bank should secure certificate of Sharia' compatibility for its working procedures, guidelines, and contracts from local or foreign trusted organs.
    - 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.
  - In order to cater the religious belief of customers, the bank should establish/strengthen professional Sharia' advisory board, which will advise the bank on IFB related Sharia' issues.

The selected board members should be well known for their competency, religious knowledge, integrity, and should have public respect and acceptance in order to gain the public trust and to avoid suspicion.

- In terms of social influence, the bank should use the support of well-known and respected local religious leaders or even Sharia' board members to explain the benefits of using IFB. Moreover, by working in collaboration with voluntary ex-Zemzem bank board members, the bank could persuade the general public and could be able to exert influence among the public. Further, the bank may build-up customer database in order to identify the existing customers who are using the service, by training them about the principles applied in IFB; they could help the bank to persuade their friends, relatives and other people to use IFB in the future.
- In order to address the Financial cost perception of customers, the bank should render "a fair and transparent pricing policy practice" Considering a "lower flat rate for fixed IFB financing regime", or allowing a variable profit rate financing policy to promote equity pricing practice in products of IFB.

#### ✚ To enhance the product knowledge of Employees

- In short term, selected key bank personnel at head office should get certification or accredited trainings from known universities or educational institutions that provide detail training or education in the underlying Sharia' principles of Interest Free Banking and train other bank personnel or they could give training of trainers (TOT) to train more staffs. This training among others shall include, the Sharia' /legal aspect of IFB, the Accounting and Auditing practices of IFB by focusing on AAOIFI, Fund segregation and management in window models, and trainings on Profit Distribution system management.
- From short to medium term, the bank should arrange the platform to share knowledge through the development of a portal, which would be specifically designed in CBE's context. The portal could contain key information regarding the Sharia' principles used in IFB, procedures and directives as well as the product offering, IFB products, definitions, information on upcoming trainings, etc.
- In the long term, the bank should establish link with local higher education institutions; thus, provide collaborative Interest Free Banking training and education to its staffs. In doing so, it

can provide venues for meaningful transfer of knowledge and experience as well as exchanging of ideas in ensuring comprehensive knowledge on IFB.

#### **5.4 Limitations and Suggestion for Further Research**

The findings of this study are based entirely upon the research conducted in the Addis Ababa city and hence may not be applicable to other areas and regions on accounts of contextual factors. This study employed cross-sectional data and it is difficult to determine the time series link among variables. As a result, the research may result different findings if it is conducted in another time.

Therefore, the researcher recommends the following for future researches:

- 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.
- Comparative study by including more banks with regards to IFB products and services.
- The approach of this paper can be extended to analyze IFB by including variables such as culture, trust, awareness, risk 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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# A p p e n d i c e s

## Appendix A.1: Customers Questionnaire English



Dear Sir/Madam,

This questionnaire is part of a research project that I am carrying out in partial fulfillment for the Master Degree in Business Administration at Addis Ababa University under the supervision of Dr. Yitbarek Takele (Assoc. Prof.). This study seeks to investigate the Determinants of Customers' Intention to use Interest Free Banking Products and Factors affecting the product knowledge of Employees' in the 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 page.

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.

Should you have any queries concerning the questionnaire or the subject matter of the research, please do not hesitate to contact me at my address below.

Finally, please accept in advance my sincere thanks and admiration for your assistance and co-operation.

Yours faithfully,

Abraham Redi Awol

Email: [abrhamredi@gmail.com](mailto:abrhamredi@gmail.com)

Tel. No. +251-911-152755.

## PART A- 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. Master 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 – Birr 4,999 ( )
- iii. Birr 5,000 – Birr 6,999 ( )
- iv. Birr 7,000 – Birr 10,000 ( )
- v. Above Birr 10,000 ( )

**PART B: INTENTION TO USE IFB PRODUCTS AND ITS DETERMINANTS**

Please CIRCLE your degree of strength agreement/disagreement on the numbers following the respective statements.

<b>DEPENDENT VARIABLE:</b>						
<b>INTENTION TO USE (ITU)</b>						
S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
ITU1	I am interested to use IFB products.	1	2	3	4	5
ITU2	I intend to use IFB products in the future.	1	2	3	4	5
ITU3	I predict that I will frequently use IFB products in the future.	1	2	3	4	5
ITU4	I will definitely recommend IFB products to others.	1	2	3	4	5
ITU5	*I am not interested to use IFB products at all.	1	2	3	4	5
<b>INDEPENDENT VARIABLES:</b>						
<b>1. ATTITUDE (ATT)</b>						
S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
ATT1	The introduction of IFB window is a good idea as it provides solutions for my banking needs.	1	2	3	4	5
ATT2	The provision of IFB by the CBE is useful.	1	2	3	4	5
ATT3	Using IFB products will make me better off financially.	1	2	3	4	5
ATT4	IFB products are one of the best products of the CBE.	1	2	3	4	5
ATT5	I have positive attitude towards the products and services offered by IFB window.	1	2	3	4	5
ATT6	*I have NEGATIVE attitude towards the products and services given at IFB window.	1	2	3	4	5

<b>2. SOCIAL INFLUENCE (SI)</b>						
S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
SI1	People who I listen to could influence me to use IFB	1	2	3	4	5
SI2	It is expected by others that I should use IFB products.	1	2	3	4	5
SI3	Most people who are important to me help me to use IFB.	1	2	3	4	5
SI4	Most my friends/colleagues using IFB services agreed that IFB is better than conventional products.	1	2	3	4	5
SI5	*I will not consider/trust the recommendation of anyone on my banking choices.	1	2	3	4	5
<b>3. RELIGIOUS BELIEF (RB)</b>						
S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
RB1	I try to follow Islamic injunctions/rules in all matters of my life.	1	2	3	4	5
RB2	I always try to avoid minor and major sins as told by my religion.	1	2	3	4	5
RB3	I have firm belief in all basic ideological dimensions of Islam.	1	2	3	4	5
RB4	I know the basic and necessary knowledge of my religion.	1	2	3	4	5
RB5	I feel sorrow and dissatisfaction when I do something against my Faith.	1	2	3	4	5
<b>4. PERCEIVED FINANCIAL COST /PRICING (PFC)</b>						
S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
PFC1	Service charges of IFB products are higher than the conventional.	1	2	3	4	5
PFC2	Penalty of IFB is higher than the conventional.	1	2	3	4	5
PFC3	Monthly payments of IFB products are higher than the	1	2	3	4	5

	conventional.					
PFC4	Profits charged by IFBs are higher than the conventional.	1	2	3	4	5
PFC5	IFB products produce unjust pricing than the conventional.	1	2	3	4	5
PFC6	* IFBs can provide lower cost of products and services compared to conventional banks.	1	2	3	4	5

### 5. KNOWLEDGE (KN)

S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
KN1	I have information about the depository, investment and financing products of IFB.	1	2	3	4	5
KN2	I know that all IFB products are interest free.	1	2	3	4	5
KN3	I have enough knowledge about IFB products.	1	2	3	4	5
KN4	I have enough knowledge about using IFB products.	1	2	3	4	5
KN5	I have enough knowledge about the benefit of IFB products.	1	2	3	4	5
KN6	*I NEVER have any information about the products and services of IFB.	1	2	3	4	5

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



Appendix A.2 Customer Questionnaire-Amharic



**ክቡራትና ክቡራን ደንበኞች**

ይህ መጠይቅ በአዲስ አበባ ዩኒቨርሲቲ የቢዝነስ አመራር የማስተርስ ዲግሪ ተማሪ የተዘጋጀ ሲሆን ዓላማውም ለመመረቂያ ዕሉፍ ሟሟያነት በኢትዮጵያ ንግድ ባንክ ስለሚሰጠው ከወለድ ነፃ የባንክ አገልግሎት መረጃ ለማሰባሰብ ይሆናል። 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 እገልጻለሁ።

አብረሃም ረዲ አወል

ኢሜይል [abrham@gmail.com](mailto:abrham@gmail.com)

ሥልክ ቁጥር+251-911-152755

**ክፍል አንድ፤ የግል መረጃ**

እባክዎ ትክክለኛ ምርጫዎ ላይ ይህን ምልክት (√) በማስቀመጥ ይምረጡ።

**1. የታ**

- 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 - ብር 4,999 ( )
- ሐ. ከብር 5,000 - ብር 6,999 ( )
- መ. ከብር 7,000 - ብር 10,000 ( )
- ሠ. ከብር 10,000 በላይ ( )

**ክፍል ሁለት፤ከወለድ ነፃ የባንክ አገልግሎት ለመጠቀም ደንበኞች አስተሳሰብ ላይ ተፅዕኖ ሊፈጥሩ**

**የሚችሉ ጉዳዮች**

ይህ ክፍል በስድስት መደቦች የተከፋፈለ ሲሆን ስለደንበኞች ከወለድ ነፃ አገልግሎት የመጠቀም አስተሳሰብ ጋር የተያያዙ ዓረፍተ ነገሮችን አካቷል። ስለዚህ የሚሰማሙበትን ዓረፍተ ነገር ከታች በተቀመጠው አማራጮች መሠረት ያክብቡ።

<b>አገልግሎቱን የመጠቀም አስተሳሰብን በተመለከተ</b>						
ተራ ቁጥር	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልሰማማም (1)	አልሰማማም (2)	ገለልተኛ (3)	እሰማማለሁ (4)	በጣም እሰማማለሁ (5)
1	የወለድ ነፃ የባንክ አገልግሎትን ለመጠቀም እፈልጋለሁ።	1	2	3	4	5
2	የወለድ ነፃ የባንክ አገልግሎትን ወደፊት ለመጠቀም አስባለሁ።	1	2	3	4	5
3	የወለድ ነፃ የባንክ አገልግሎትን ወደፊት በተደጋጋሚ እጠቀማለሁ ብዬ እገምታለሁ።	1	2	3	4	5
4	ሌሎች ሰዎች አገልግሎቱን እንዲጠቀሙ በሚገባ እመክራለሁ ።	1	2	3	4	5
5	*ከወለድ ነፃ አገልግሎትን መጠቀም በፍፁም አላስብም።	1	2	3	4	5
<b>ባህሪን በተመለከተ</b>						
ተራ ቁጥር	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልሰማማም (1)	አልሰማማም (2)	ገለልተኛ (3)	እሰማማለሁ (4)	በጣም እሰማማለሁ (5)
1	የወለድ ነፃ የባንክ አገልግሎት መጀመር ለባንክ ፍላጎቴ አማራጭ በመሆኑ መልካም ሐሳብ ነው እላለሁ።	1	2	3	4	5
2	የኢትዮጵያ ንግድ ባንክ የወለድ ነፃ አገልግሎትን ማቅረቡ ጠቃሚ ነው።	1	2	3	4	5
3	የኢትዮጵያ ንግድ ባንክ የወለድ ነፃ አገልግሎትን ማቅረቡ ተጠቃሚ ያደርገኛል።	1	2	3	4	5

4	የወለድ ነፃ አገልግሎቶች የባንኩ ተመራጭና የተሻሉ አገልግሎቶቹ ናቸው።	1	2	3	4	5
5	በባንኩ የወለድ ነፃ መስሪያቶች በሚሰጡ አገልግሎቶች ላይ አወንታዊ አስተያየት አለኝ።	1	2	3	4	5
6	*በባንኩ የወለድ ነፃ መስሪያቶች በሚሰጡ አገልግሎቶች ላይ አሉታዊ አስተያየት አለኝ።	1	2	3	4	5

**የገብረተሰብ ተፅዕኖን በተመለከተ**

ተራ ቁጥር	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልስማማም (1)	አልስማማም (2)	ገለልተኛ (3)	እስማማለሁ (4)	በጣም እስማማለሁ (5)
1	ለእኔ ቅርብ የሆኑ ሰዎች የወለድ ነፃ የባንክ አገልግሎት እንድጠቀም ሊያሳድሩብኝ ይችላሉ።	1	2	3	4	5
2	ሌሎች ሰዎች ከወለድ ነፃ የባንክ አገልግሎትን ይጠቀማል ብለው ይገምታሉ።	1	2	3	4	5
3	ለእኔ ቅርብ የሆኑ ሰዎች ከወለድ ነፃ አገልግሎት እንድጠቀም ይረዱኛል።	1	2	3	4	5
4	ለእኔ ቅርብ የሆኑ ሰዎች የወለድ ነፃ አገልግሎት ከመደበኛው ባንክ አሠራር የተሻለ ነው ብለው ይስማማሉ።	1	2	3	4	5
5	*ስለ ባንክ አገልግሎት ምርጫዬ ከራሴ የበለጠ የማንኛውንም ሰው ተፅዕኖ ከግምት አላስገባም።	1	2	3	4	5

**ሐይማኖታዊ አሥተሳሰብን በተመለከተ**

ተራ ቁጥር	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልስማማም (1)	አልስማማም (2)	ገለልተኛ (3)	እስማማለሁ (4)	በጣም እስማማለሁ (5)

1	በየትኛውም የሕይወት አቅጣጫ ላይ ለመፈፀም እጥረላሁ።	1	2	3	4	5
2	በሌሎች ለማግኘት እንደታዘዘኩት ሁሉም አነስተኛም ሆነ ትልልቅ ሀጢያቶችን ለመረቅ እጥረላሁ።	1	2	3	4	5
3	በሁሉም የሌሎች ለማግኘት መሠረታዊ አስተሳሰቦች ላይ ጠንካራ እምነት አለኝ።	1	2	3	4	5
4	አስፈላጊና መሠረታዊ የሆኑ የሌሎች ለማግኘት ሕግጋት አውቃለሁ።	1	2	3	4	5
5	የሌሎች ለማግኘት ትዕዛዛት በመጣስ ክልል የሆኑ ነገሮችን ስፈፅም ፀፀት ይሰማኛል።	1	2	3	4	5

**የአገልግሎት ክፍያን በተመለከተ**

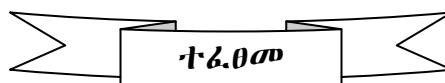
ተራ ቁጥር	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልሰማማም (1)	አልሰማማም (2)	ገለልተኛ (3)	እሰማማለሁ (4)	በጣም እሰማማለሁ (5)
1	የወለድ ነፃ የአገልግሎት ክፍያ ከመደበኛው ባንክ ክፍያ የበለጠ ነው።	1	2	3	4	5
2	የወለድ ነፃ የቅጣት ክፍያ ከመደበኛው ባንክ የበለጠ ነው።	1	2	3	4	5
3	የደንበኞች ወርሃዊ የብድር ክፍያ ከመደበኛው ባንክ የበለጠ ነው።	1	2	3	4	5
4	ደንበኞች የሚከፍሉት ትርፍ ከመደበኛው ባንክ የበለጠ ነው።	1	2	3	4	5
5	የወለድ ነፃ የአገልግሎት ክፍያ ኢፍትሃዊ ነው።	1	2	3	4	5
6	*በአጠቃላይ የወለድ ነፃ ባንክ የአገልግሎት ክፍያ ከመደበኛው ባንክ ክፍያ ያነሰ ነው።	1	2	3	4	5

**እውቀትን በተመለከተ**

ተራ ቁጥር	ዓረፍተ ነገሮች	አማራጮች				
		በፍፁም አልሰማማም (1)	አልሰማማም (2)	ገለልተኛ (3)	እሰማማለሁ (4)	በጣም እሰማማለሁ (5)

1	የወለድ ነፃ ባንክ ላይ የሚሠጡ የቁጠባ፤ የኢንቨስትመንትና የፋይናንስ አገልግሎቶችን አውቃለሁ።	1	2	3	4	5
2	የወለድ ነፃ ባንክ አገልግሎቶች ከወለድ ነፃ መሆናቸው አውቃለሁ።	1	2	3	4	5
3	ስለ ወለድ ነፃ ባንክ አገልግሎት በቂ እውቀት አለኝ።	1	2	3	4	5
4	ስለ ወለድ ነፃ ባንክ አገልግሎት አጠቃቀም በቂ ግንዛቤ አለኝ።	1	2	3	4	5
5	አገልግሎቶቹን መጠቀም የሚያስገኘውን ጥቅም በሚገባ አውቃለሁ።	1	2	3	4	5
6	*ስለ ወለድ ነፃ አገልግሎት ምንም መረጃ የለኝም።	1	2	3	4	5

ስለትብብርዎ አመሠግናለሁ!



Appendix B: Questionnaire of Bank Employees



Dear Sir/Madam,

This questionnaire is part of a research project that I am carrying out in partial fulfillment for the

award of Master Degree in Business Administration at Addis Ababa University under the supervision of Dr. Yitbarek Takele (Assoc. Prof.). This study seeks to investigate the Determinants of Customers' Intention to use Interest Free Banking Products and Factors Affecting Employees' Product Knowledge in the Ethiopian context. You are among those who have been chosen in the group of EMPLOYEES of the bank. 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 page.

This questionnaire might take you about 5-10 minutes to complete. The contents of this questionnaire will be kept PRIVATE and CONFIDENTIAL and only the summarized data will be used in any publication.

Should you have any queries concerning the questionnaire or the subject matter of the research, please do not hesitate to contact me at my address below.

Finally, please accept in advance my sincere thanks and admiration for your assistance and co-operation.

Yours faithfully,

Abraham Redi Awol

Email: abrahamredi@gmail.com

Tel. No. +251-911-152755.

## **PART A- BACKGROUND INFORMATION**

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

1. Gender:
  - i. Male ( )
  - ii. Female ( )
2. Religion
  - i. Moslem ( )
  - ii. Christian ( )
  - iii. Others ( )

3. Highest Educational Qualification
  - i. Diploma ( )
  - ii. BA/BSC ( )
  - iii. Masters Degree ( )
  - iv. Others ( )
4. Field of study:
  - i. Accounting ( )
  - ii. Management ( )
  - iii. Economics ( )
  - iv. Others ( )
5. Current Job Position in the bank:
  - i. Managerial ( )
  - ii. Analyst/CRM ( )
  - iii. Officer ( )
  - iv. Others ( )
6. Banking Experience in number of years:
  - i. Up to 5 years ( )
  - ii. 6-10 years ( )
  - iii. 11years and above ( )
7. Exposure to the job of Interest Free Banking
  - i. Up to 1 year ( )
  - ii. 1-2 years ( )
  - iii. 3 years and above ( )
8. Currently working at: i. Head office ( ) ii. Branches ( )
9. Did you work for conventional bank before assigned to the Interest Free Banking wing? (for head office staffs only) i. Yes ( ) ii. No ( )
10. Do you get any formal education/certification in Islamic banking and finance?
  - i. Yes ( )
  - ii. No ( )

**PART B: FACTORS AFFECTING EMPLOYEES' PRODUCT KNOWLEDGE**

Please CIRCLE your degree of strength agreement/disagreement on numbers of the following statements.

<b>DEPENDENT VARIABLE:</b>	
<b>PRODUCT KNOWLEDGE (PKN)</b>	
	<b>Alternatives</b>

S. No.	Statements	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
PKN1	I understand the differences between Interest Free banking (IFB) and conventional banking products.	1	2	3	4	5
PKN2	I know the concept applied to Islamic/interest free banking.	1	2	3	4	5
PKN3	IFB products are offered to both Moslems and non-Moslems.	1	2	3	4	5
PKN4	IFB's must be based on <i>Sharia</i> '.	1	2	3	4	5
PKN5	The rules and regulation given by <i>Sharia</i> ' Experts must be in accordance to <i>Quran</i> and <i>Sunnah</i>	1	2	3	4	5

**INDEPENDENT VARIABLES:**

**1. TRAINING**

S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
TR1	My colleagues help me understand the IFB products.	1	2	3	4	5
TR2	My boss helps me to understand the IFB products in more detail	1	2	3	4	5
TR3	Bank management had provided me with adequate materials regarding to IFB.	1	2	3	4	5
TR4	I am always attending IFB program organized by the bank.	1	2	3	4	5
TR5	I am encouraged to attend short courses, seminars and conferences.	1	2	3	4	5
TR6	I have adequate training and exposure in IFB products and services.	1	2	3	4	5
TR7	I have the capacity to solve the problems related to IFB.	1	2	3	4	5
TR8	I have gained experience on IFB products during working session.	1	2	3	4	5
TR9	I have extensive knowledge of the products and services of IFB.	1	2	3	4	5

**2. UNDERLINING SHARIA' PRINCIPLES (USP)**

		Alternatives				
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S. No.	Statements	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
USP1	IFB's invests in businesses that are not prohibited by Islam.	1	2	3	4	5
USP 2	IFB's must have <i>Sharia'</i> Supervisory Board to ensure that all business activities are in line with <i>Sharia'</i> requirements.	1	2	3	4	5
USP 3	Islamic banking system has been introduced since Muslims are prohibited from receiving or giving interest.	1	2	3	4	5
USP 4	There must be <i>Aqad</i> (contract) in the IFB transactions.	1	2	3	4	5
USP 5	Profit/return on IFB is based on the sale, lease and investments.	1	2	3	4	5
USP 6	IFB prohibits excessive uncertainty or <i>gharar</i> in all forms of transaction	1	2	3	4	5

### 3. UNDERLING ARABIC TERMINOLOGY (UAT)

S. No.	Statements	Alternatives				
		Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
UAT1	I understand what <i>Riba</i> means and I could define its two types.	1	2	3	4	5
UAT2	I understand the meaning of <i>Gharar</i> .	1	2	3	4	5
UAT 3	I understand what <i>Hallal</i> mean.	1	2	3	4	5
UAT 4	I understand what <i>Musharaka</i> and <i>Mudaraba</i> mean and the difference between the two.	1	2	3	4	5
UAT 5	I understand what <i>Qardul-Hassen</i> mean.	1	2	3	4	5
UAT 6	I understand what <i>Murabaha</i> , <i>Salam</i> , <i>Istisna'</i> mean and their respective differences.	1	2	3	4	5

Comments \_\_\_\_\_

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Sugesstions \_\_\_\_\_

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

Table C Pearson Correlation (Customer's Intention)

		Intention to use	Attitude	Social Influence	Religious Belief	Knowledge	Perceived Financial Cost
<b>Intention to Use</b>	Pearson Correlation	1	.575**	.165**	.469**	.406**	-.711**
	Sig. (2- tailed)		.000	.001	.000	.000	.000
	N	369	369	369	369	369	369
<b>Attitude</b>	Pearson Correlation	.575**	1	.331**	.514**	.464**	-.384**
	Sig. (2- tailed)	.000		.000	.000	.000	.000
	N	369	369	369	369	369	369
<b>Social Influence</b>	Pearson Correlation	.165**	.331**	1	.186**	.259**	-.045
	Sig. (2- tailed)	.001	.000		.000	.000	.393
	N	369	369	369	369	369	369
<b>Religious Belief</b>	Pearson Correlation	.469**	.514**	.186**	1	.351**	-.356**
	Sig. (2- tailed)	.000	.000	.000		.000	.000
	N	369	369	369	369	369	369
<b>Knowledge</b>	Pearson Correlation	.406**	.464**	.259**	.351**	1	-.251**
	Sig. (2- tailed)	.000	.000	.000	.000		.000
	N	369	369	369	369	369	369
<b>Perceived Financial Cost</b>	Pearson Correlation	-.711**	-.384**	-.045	-.356**	-.251**	1
	Sig. (2- tailed)	.000	.000	.393	.000	.000	
	N	369	369	369	369	369	369

\*\* . Correlation is significant at the 0.01 level (2-tailed).

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

Source: Survey Result (2017)

Appendix D: Outputs of Multiple Regression Assumption Tests

Figure D01\_Linearity Test

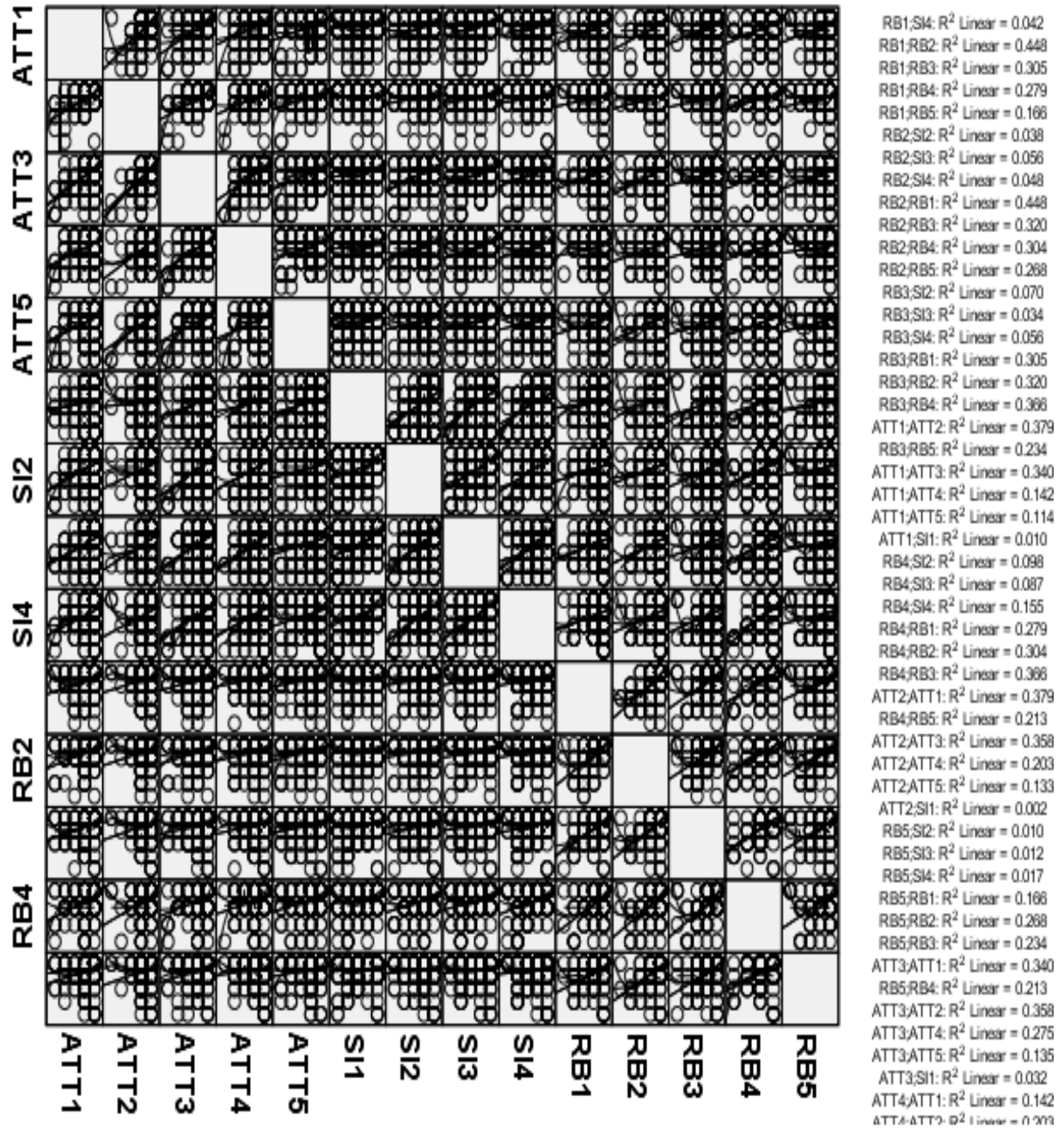


Table D02\_Test for Multicollinearity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-119.719	70.969		-1.687	.092		
ITU1	-4.289	11.379	-.034	-.377	.706	.307	3.259
ITU2	14.884	12.971	.121	1.147	.252	.220	4.552
ITU3	5.806	11.537	.048	.503	.615	.267	3.746
ITU4	7.363	8.524	.057	.864	.388	.557	1.796
ATT1	-5.123	10.196	-.037	-.502	.616	.456	2.193
ATT2	12.309	13.065	.069	.942	.347	.454	2.202
ATT3	-13.330	10.271	-.102	-1.298	.195	.392	2.551
ATT4	6.908	8.465	.051	.816	.415	.616	1.622
ATT5	9.042	6.841	.076	1.322	.187	.738	1.356
SI1	9.524	5.016	.117	1.899	.058	.646	1.547
SI2	2.713	7.682	.025	.353	.724	.492	2.031
SI3	-.532	7.122	-.005	-.075	.941	.474	2.110
SI4	-8.448	6.949	-.083	-1.216	.225	.517	1.934
RB1	14.443	10.875	.097	1.328	.185	.455	2.196
RB2	-10.191	12.209	-.064	-.835	.404	.414	2.418
RB3	7.670	10.408	.052	.737	.462	.481	2.080
RB4	-5.878	12.559	-.034	-.468	.640	.450	2.221
RB5	1.507	9.213	.010	.164	.870	.601	1.663
PFC1	9.733	9.966	.086	.977	.329	.314	3.183
PFC2	2.265	13.972	.018	.162	.871	.198	5.059
PFC3	8.605	14.020	.069	.614	.540	.195	5.138
PCF4	7.860	12.044	.066	.653	.514	.238	4.205
PCF5	7.267	8.269	.065	.879	.380	.443	2.256
KN1	3.336	6.771	.032	.493	.623	.579	1.726
KN2	-2.352	7.574	-.021	-.311	.756	.509	1.965
KN3	25.438	10.813	.241	2.353	.019	.233	4.296
KN4	-7.930	10.919	-.073	-.726	.468	.239	4.186
KN5	-1.155	7.835	-.011	-.147	.883	.474	2.109

Table D03\_Test for Independence of Errors

**Durbin–Watson Statistic for Independences of Errors**

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.795 <sup>a</sup>	.632	.627	.451	1.815
a. Predictors: (Constant), Attitude, Social Influence, Religious Belief, Perceived Financial Cost, Knowledge					
b. Dependent Variable: Intention to Use					

Source: Survey Result (2017)

Table D04\_Test for Homoscedasticity\_a

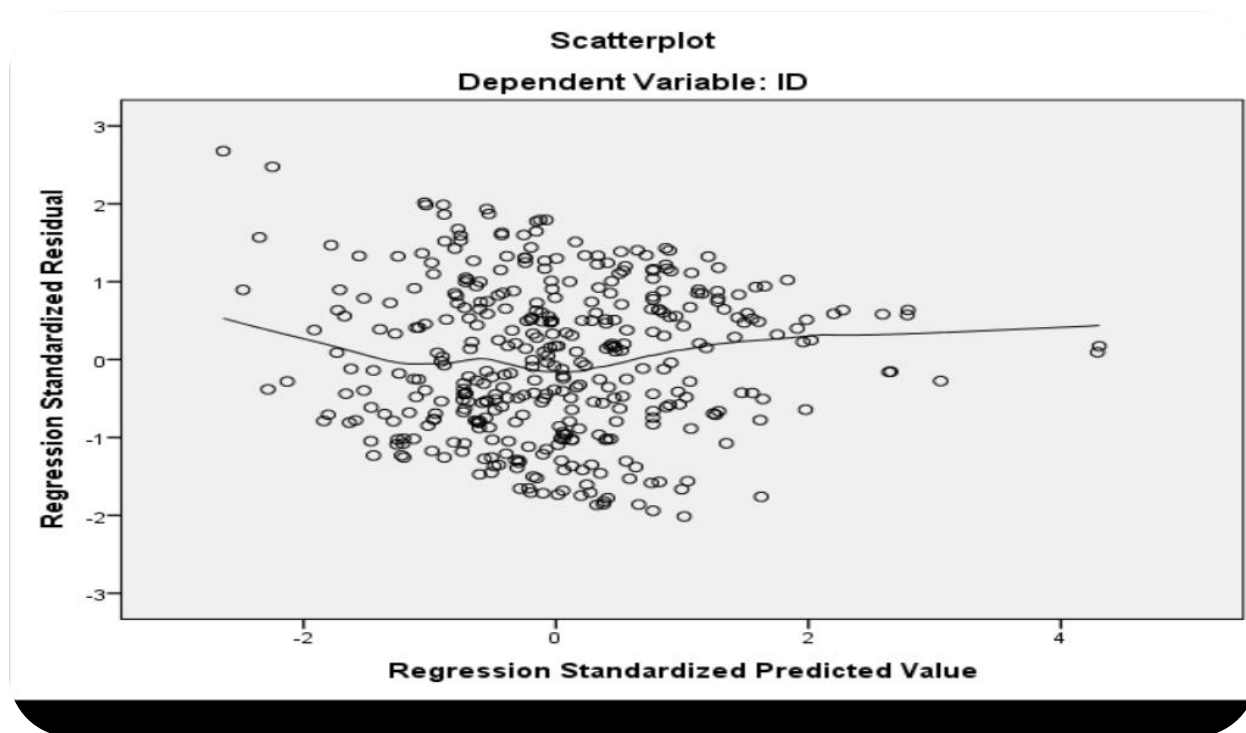


Table D05\_ Test for Homoscedasticity\_b

Variables	N	Variance
ITU1	369	.691
ITU2	369	.749
ITU3	369	.755
ITU4	369	.668
ATT1	369	.589
ATT2	369	.326
ATT3	369	.677
ATT4	369	.645
SI2	369	1.001
SI3	369	1.231
SI4	369	1.167
RB1	369	.489
RB2	369	.480
RB3	369	.522
RB4	369	.423
RB5	369	.489
PFC1	369	.906
PFC2	369	.767
PFC3	369	.751
PFC4	369	.819
PFC5	369	.984
KN1	369	1.145
KN2	369	1.033
KN3	369	1.129
KN4	369	1.067
KN5	369	1.051

Table D06\_Positive definiteness

Correlation

Matrix<sup>a</sup>

a. Determinant =

4.304E-009

Table D07\_KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.908
Approx. Chi-Square		6645.140
Bartlett's Test of Sphericity	df	325
	Sig.	.000

Appendix E: Interviewee Profile

	Sex	Age	Banking Experience	Job/Business	Experience in Job/Business	Profession	Qualification	Monthly Income	Field of Study	Satisfaction in IFB	Account in IFB and conventional	Qualification in Islamic Banking
1	M	25-35	> 5 Ys.	Job	≥ 5 Ys.	Teacher	Masters Degree	Birr 10,000<	mgt	No	Yes	No
2	M	46-55	11 ≤	Business	16 ≤	Self Employed	BA/BSC	Birr 7,000 to Birr 10,000	Eco	No	Yes	No
3	M	56-60	5-10 Ys.	Business	16 ≤	Self Employed	BA/BSC	Birr 7,000 to Birr 10,000	Mat	No	Yes	No
4	M	36-45	5-10 Ys.	Job	6-10 Ys.	Private Sector	Masters Degree	10,000<	Acc	No	Yes	No
5	M	56-60	11 ≤	Job	16 ≤	Teacher	Diploma	Birr 10,000<	Other	Yes	Yes	No
6	M	36-45	>5 Ys.	Job	6-10 Ys.	Government Sector	BA/BSC	Birr 7,000 to Birr 10,000	Acc	Yes	Yes	No
7	F	25-35	5-10 Ys.	Job	6-10 Ys.	Banker	Masters Degree	Birr 7,000 to Birr 10,000	Acc	No	Yes	No
8	M	46-55	11 ≤	Business	11-15 Ys.	Self Employed	BA/BSC	Birr 10,000<	Eco	No	Yes	No
9	M	36-45	5-10 Ys	Job	6-10 Ys.	Banker	BA/BSC	Birr 7,000 to Birr 10,000	Mgt	Yes	No	No
10	M	36-45	5-10 Ys	Business	11-15 Ys.	Self Employed	BA/BSC	Birr 10,000<	Other	No	Yes	No
11	M	25-35	> 5 Ys	Business	11-15 Ys.	Self Employed	BA/BSC	Birr 7,000 to Birr 10,000	Eco	No	Yes	No
12	M	46-55	11 ≤	Business	11-15 Ys.	Self Employed	BA/BSC	Birr 7,000 to Birr 10,000	Acc	No	Yes	No
13	M	46-55	11 ≤	Business	16 ≤	Self Employed	BA/BSC	Birr 10,000<	Other	No	Yes	No

Appendix F: Interview Questions

1. Is there a difference between Interest Free and conventional banking in CBE?
2. What are Interest Free Banking products and services you are aware of?
3. How do you perceive Sharia' compliant IFB banking services of the CBE?
4. Are the bankers being aware of the IFB products?
5. What are the strategies needed to enhance the customer awareness and perception about the IFB products and services?

## Appendix G: Compiled Reports of the Commercial Bank of Ethiopia, as at December 31/2016

<b>1. Total outstanding Loan/Financing Amount</b>		<b>% share of IFB</b>
<b>Total outstanding IFB Financing as of Dec 31/2016</b>	171,577,253	0.120%
<b>Total outstanding Conventional Loan as of Dec 31/2016</b>	142,440,591,619	
<b>2. Total Deposit Amount</b>		
<b>Total IFB Deposits of as at Dec 31/2016</b>	4,140,532,090	1.310%
<b>Total conventional deposit as at Dec 31/2016</b>	316,073,357,641	
<b>3. Total No. of Accounts</b>		
<b>Total No. of IFB Accounts as at Dec 31/2016</b>	423,919	2.979%
<b>Total No. of Conventional deposit as at Dec 31/2016</b>	14,232,587	
<b>4. Women Saving Account Total Deposit amount as at Dec 31/2016</b>	12,672,164,525	306%

Source: computed from data extracted from CBE-MIS