Measuring the Quality Dimension of Financial
Inclusion in Islamabad (Bari Imam Area)

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CERTIFICATE

This is to certify that this thesis entitled: **"Measuring the Quality Dimension of Financial Inclusion in Islamabad: Bari Imam Area"** submitted by Mahtab Alam is accepted in its present form by the PIDE School of Social Sciences, Pakistan Institute of Development Economics Islamabad (PIDE), as satisfying the requirements for partial fulfillment of the degree in Master of Sciences (MS) Management Sciences

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ABSTRACT

This study is focus over explaining the measurement of quality indicator/dimension of financial inclusion in Bari Imam (Islamabad). Where three categories of quality indicator are considered. Categories include Financial Literacy and Capability, Market Conduct and Consumer Protection, and Barrier to Use. Frist two categories are divided into further two sub-category as financial literacy and capability is divided into Financial Knowledge, and Financial Behavior and market conduct and consumer protection into Disclosure Requirement, and Internal Dispute Resolution. For barrier to use, distance is considered barrier for this study. Structural Equation Modeling is used to analyze the data. Data is collected through questionnaire survey from adults of Bari Imam. After using Partial Least Square- Structural Equation Modeling, the result outcomes as Financial Knowledge, Disclosure Requirement, Internal Dispute Resolution, and Distance show significant influence over Quality Indicator of Financial Inclusion and Financial Behavior has insignificant effect over Quality Indicator of Financial Inclusion. Further three items are explained on bases of gathered data as source of exploration and put aside from structural equation modeling. This effort provide an initial idea both to literature for measuring the demand side of financial inclusion in addition to supply side through using quality dimension because among five sub-categories four show positive impact over measuring the state of financial inclusion. For practitioners it recommend to use statistical data that institutes have kept aside from the research organizations and also avoid to provide information about dormant accounts and operating data of consumers related to use of financial products and services.

Keywords: Financial Literacy and Capability, Market Conduct and Consumer Protection, Barrier to Use, Financial Knowledge, Financial Behavior, Disclosure Requirement, Internal Dispute Resolution, and Distance.

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AFI	Alliance for Financial Inclusion
AJK	Azad Jammu Kashmir
ATM	Automatic Teller Machine
AVE	Average Variance Extract
BU	Barrier to Use
CA	Cronbach's Alpha
CB	Covariance Base
CB	Credit Barrier
CR	Composite Reliability
CU	Cost of Usage
D	Distance
DR	Dispute Resolution
DR	Disclosure Requirement
DR'	Dispute Resolution
DV	Discriminant Validity
FB	Financial Behavior
FFIs	Formal Financial Institutions
FI	Financial Inclusion
FIICR	Financial Inclusion Index Country Ranking
FK	Financial Knowledge
FLC	Financial Literacy and Capability
FSA	Financial Service Authority
GFD	Global Findex Database
GFDR	Global Financial Development Report
GPFI	Global Partnership for Financial Inclusion
HTMT	HeteroTrait-Monotrait

IDR	Internal Dispute Resolution
IR	Indicator Reliability
LAC	Latin American Caribbean
LV	Latent Variable
MCCP	Market Conduct and Consumer Protection
MENA	Middle East and North Africa
MFBs	Microfinance Banks
MFIs	Microfinance Institutions
NFCS	National Financial Capacity Study
NFLP	Nationwide Financial Literacy Program
NFLP-Y	National Financial Literacy Program for Youth
NIBF	National Institute of Banking and Finance
OV	Observable Variable
PLS	Partial Least Square
PLS-SEM	Partial Least Square – Structural Equation Modeling.
QIFI	Quality Indicator of Financial Inclusion
SBP	Sikka Baqida Program
SBP	State Bank of Pakistan
SEM	Structural Equation Modeling
SMEs	Small Medium Enterprises
SRMR	Standardized Root Mean Square Residual
SSA	Sub-Saharan Africa
TPS	Total Population Sampling
UCN	Union Council Number
UN	United Nation
VB	Variance Base.

CHAPTER 1
INTRODUCTION

1.1 Financial Inclusion

Traditionally financial inclusion is defined as to provide weak and unbanked with convenient, timely, affordable, and sufficient formal financial products and services that considered loans, savings, and remittances through existing financial institutes (Kim, 2022). Further the services provided by the informal financial providers are not consider as included in establish formal system of financial inclusion (Lee, Wang, & Ho, 2022). At Seoul (South Korea), G20 Leaders recognized that financial inclusion is among the most important pillars that contribute to the global development agenda and played their part to develop the GPFI (Global Partnership for Financial Inclusion) (Tariq, 2021). Currently the focus is shifted to provide the quality aspect both while providing access and using the sustainable financial inclusion services (Kim, 2022). Further expanding opportunity criteria towards underserved and excluded households and Small Medium Enterprises (SEMs) are considered (Global Partnership for Financial Inclusion, 2018). The aimed it to include the adults through using different available platforms.

The key organizations and institutes have bundle of data on calculating level of inclusion but building proper inclusive environment where coordination and interaction with the customer is feasible is currently very poor in developing countries (Burjorjee & Scola, 2015). On other side customers are not aware with the benefits of using provided services (Hassan et al., 2020). Further the used marketing platforms are very limited and traditional by the microfinance banks in Pakistan (Khan et al., 2018). The state of financial inclusion is determined by analyzing demand-side and supply-side data surveys. More studies are performed associate to supply-side analysis because it usually include formal and regulated suppliers and output data is more comparable over time and even across nations as comparable to demand-side analysis (GPFI, 2014; Ledgerwood, Earne, & Nelson, 2013). But demand-side data offers richer insights and provide even new methods to investigate how poor manage their financial transactions and highlighting the complexities associate to financial management (Ledgerwood, 2013).

Hence viewpoints of consumers are important to be considered for identifying the issues they actually face while using provided services and reasons behind, why they refused to use available provided financial products and services. Pakistan is considered among those nations possess low level of financial inclusion despite all the efforts are made for improving this level. Only 10% increase is occurred in the state of financial inclusion in Pakistan from 2011 to 2017 (Demirguc-Kunt et al, 2018). According to Global Findex Database (2017), 8% increased occur from 2014 to 2017 in Pakistan. According to Noreen et al. (2022), Sri Lanka reported the decrease in opening account concerns by the adult from 83% to 74%, India reported the increase from 53% to 80%, Bangladesh reported increase from 31% to 50%, Nepal reported increase from 34% to 45%, Pakistan reported increase from 13% to 21%, and Afghanistan reported increase from 10% to 15%.

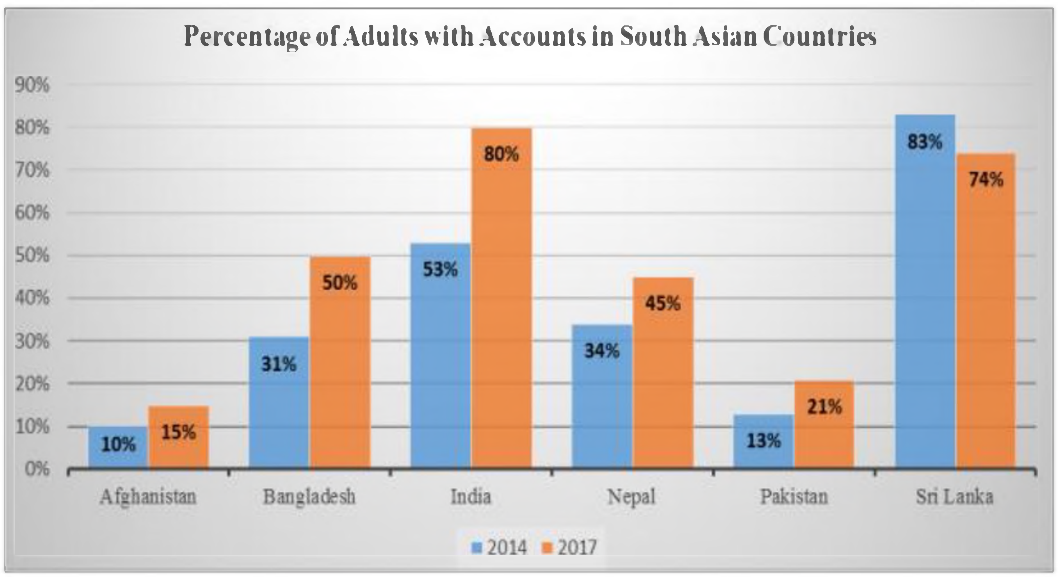

Figure 1.1: Proportion of adults with accounts in South Asian Countries for 2014-2017
Source: Noreen et al., 2022, p.39.

If we make comparison among South Asian countries, Pakistan is at the second lowest level for increasing the access to adults towards opening accounts. Which indicate the series of issues within existing platforms that aimed to provide services to the people across rest of Pakistan. Recently access factor shows increase in terms of numbering opened bank accounts but for measuring the operating concerns associate to opened accounts show different output. This depict the major increase in the dormant accounts or inoperative accounts. Which highlight that only investigating the access factor or point of service factor is not enough to identify the issues in prevailing state of financial inclusion in Pakistan.

The measurement aspect towards measuring the state of financial inclusion through prevailing state of only access factor is not sufficient. There exists four measurement indictors of financial inclusion as; "Access, Quality, Usage and Impact" (Hannig & Jensen, 2010; Ledgerwood, 2013; Tariq, 2022). These factors are further divided into supply side and demand indicators of measuring financial inclusion (Adil & Jalil, 2020). A lot of studies have been conducted to measure the access factor by Global Partnership for Financial Inclusion, Alliance for Financial Inclusion, World Bank, and Global Findex Database yearly. But the issue occurs while measuring the operating concerns of financial inclusion where the factor of quality provide the clear picture to measure the relationship between both supply and demand side (Haning & Jensen, 2010).

Issue of low financial inclusion is universal problem but this issue capture the developing world more badly. Furthermore the issue is concentrated towards ignoring the opinions and perceptions of the adults while measuring the quality aspect of inclusion (Tariq, 2021). In Pakistan, currently the issue is inclined towards the low level of access factor and this market is for behind in measuring the quality lens of inclusion. Quality dimension is measured through different categories such as; Financial Literacy and Capability (measure the understanding level of consumers along with behavioral implementations), Market Conduct and Consumer Protection (measure through analyzing the relationship building and dispute resolutions with clients), and through Barriers to Use (here different obstacles are noticed and measured the extent accordingly such as; Cost, Security issue, Trust issue, distance and so on) (GPFI, 2016). Quality indicator is not possible to calculate just from Supplier side (service providers) but it definitely require the involvement of the consumers that will help in easily abstract the existing obstacles and even help in providing different directions for policy building.

However, measuring quality dimension is not easy and straightforward method (AFI, 2016). As side from considering it as a difficult attribute, many factors can affect this aspect such as; "Cost of services, Consumer awareness, effectiveness of knowing and understanding mechanism, security of funds, market competition, transparency, intangible factor of client trust, and the consumer protection services" (AFI, 2016, p. 2). Hence measuring and providing a uniform index for finding financial inclusion is difficult because the factors that impact the quality varies across each country as is dependent on the states' social and policy context (AFI, 2016). In order to improve the level of quality dimension within provided range of services is a difficult task, and this require the scholars to conduct researches and make useful outcomes depend on solid evidences. For this reason this study is focus over initially study few indicators of quality dimension that socially and culturally effect the quality aspect while building relationship with the consumers.

This study aimed to conduct demand-side analysis where the focus is to abstract the viewpoint of the consumers related to their measure the state of quality dimension of financial inclusion. Their viewpoint will help to identify the level of relationship between service suppliers and buyers. For reflecting the literature gap in terms of measuring the financial inclusion through using the quality aspects in some combine form. This study focus over using the PLS-SEM, in order to identify the relationship between the categories of quality indicators and financial inclusion. According to Nguyen (2020), quality indicator of financial inclusion is mostly ignored due to less availability of coincide and synchronized data. Therefore this study gather the items from different sources that are working for identifying the uniform index for measuring the quality aspect of financial inclusion. SEM is used for analyzing the collected data set because it is a 2^{nd} generation multivariate analysis tool that is helpful for easy handling the diversified nature of market oriented problems (Kwong & Wong, 2013). Further it help to track and measure the unobservable latent variables (Bascon, 1999).

Quality dimension of financial inclusion is measured through opinions and attitudes of the consumers related to the provided financial products and services (Hannig & Jansen, 2010; Ledgerwood et al., 2013). Number of researches has been performed in order to highlight the reasons behind low level of inclusion such as issue of trust (over Microfinance Banking MFBs and Institutions MFIs), security, low level of financial literacy, lack of internet connectivity or lack of understanding internet banking, strict rules and regulations, and so on (Akhtar, 2007, Kim & Prabhakar, 2000; Malaquias & Hwang, 2016). For physical barriers, distance issue for availing the provided services is consider among essential issues to be address. Decision making organizations aimed to solve this issue by providing the branchless banking regulation but knowledge concern and security aspect associate to this issue still exists (Ahmed, Afzal, & Sumair, 2017). The concept understanding among the audience is very limited and they don't rely on the state systems while concerning for their monetary aspects. The numerous gaps exists from both the sides (supply and demand). Number of institutions serves as supplier of financial inclusion products but the end exchangers of the services and products themselves are not clearly aware with this concept and purpose of inclusion. This basic gap broader the issue itself in terms of engaging the target audience.

1.1.1 Literature Gap

This study is associate to explain two literature gaps within existing literature. First gap is linked to ignoring quality indicator while measuring the multidimensional index of financial inclusion. This is the reason due to which quality dimension is usually not study and it end up with having no unified index of measuring quality indicator of financial inclusion (Nguyen, 2020). Dominate working institutions such as Global Partnership for Financial Inclusion (GPFI), World Bank, Global Findex Database, and Alliance for Financial Inclusion (AFI) work a lot to build the basic set of categories and sub-categories and linked to quality aspect of financial inclusion but failed to conduct studies on one platform with one unified index of inclusion and associate them with state social and policy context. Literature indicate this gap, by just providing proxies for measuring the quality indicator but could not measure the composite indicator because available data is difficulty from authorized sources (Camara & Tuesta, 2014). But in this study we gathered all the categories of quality dimension and associate to measure its impact over state of financial inclusion through using this lens. Hence this effort initiate to measure the influence of study categories (FLC, MCCP, and BU) of quality dimension and measure it impact over Quality Indicator of Financial Inclusion (QIFI).

Second gap is the lack of access to the information that is considered important for checking the state of usage or operating stance of audience for availing financial services and even lack access to obtain data related to dormant account concern from banks and institutions. According to Central Bank of France the Federal Reserve's System (2014), financial institutions across developing world are failed to gather the granular data that help to monitor the activities and needs of individuals related to provided financial services. Just by increasing the access factor only will not result in increasing the usage rate by the audience (Ledgerwood, 2013). In addition to this, there are many people who have access to the services but they don't want to use provided services (Arora, 2018; Gadanecz & Tissot, 2015). This study highlight this gap and mentioned that quality indicator act as the bridge between access and usage indicators. Therefore just having data related to the access factor will not help out to figure the gaps within quality and usage dimensions. For this reason data related to capture the state of opinions related to identifying the content of quality indicator is measured through conducting questionnaire surveys. The aim is to highlight that the impact of quality indicator can be associate and measure by considering it as a part of multidimensional index of financial inclusion. By conducting various studies across different regions will help to formed unified index of quality indicator.

1.1.2 Research Problem

This study is focused over measuring the demand side analysis of financial inclusion through studying the quality indicator. After performing series of efforts by the Government, State Bank of Pakistan, Policy makers, and even Commercial banks the level of financial inclusion is still very low. According to Noreen et al. (2022) only 23% of the adults are financially included to the state formal financial system. There exists major problem that is the focus is all over measuring the supply side (which consists of all service providers) and lacking far behind in measuring the demand side assessment. When supply side consistently showing low level of presence then there must be the issue in their measurement lens. Which is indicated by Hannig and Jensen (2010), when there exists low level of inclusion, then their must the problem in designing the methodological aspects. Where there must be missing gaps of understanding and considering the point of views of the targets.

Further quality indicator act as bridge between access and usage, if the quality of provided services are not enough or are not accordingly to the need of targets, will lead to create issues in operating concerns for using the provided services. Currently SBP had introduced various program to increase the level of Access for Financial Inclusion. Where they aimed to provide access to 1.6 million people in 2023 (Noreen et al., 2022). But they don't display the list of dormant accounts publically, where the increased in the access factor is for behind the operating concerns. Number of people used to open accounts but there operating criteria is not available to analysis which is for behind the estimation. This indicate the gap of interaction and relationship between the suppliers and users. For this instance, AFI (2016), predict the dimensions of quality indicator, which can be used to study the particular country's state of relationship between both suppliers and users and measure the deficiencies in existing market infrastructure accordingly. The factors of measuring quality varies depending upon the country state of policy and social context.

1.1.3 Problem Statement

Currently issue of low financial inclusion is considered among important aspects around the developing world but problem associate to understand the opinions and perceptions of audience towards quality aspect of financial inclusion is very limited. Quality dimension is depended on financial understanding by the people, market conduct and protection provided by the suppliers, and through other prevailing physical barriers. In Pakistan, this aspect is highlighted more in written concern. Which require more practical intakes to address the issue through eyes of respondents. Hence this study will abstract the opinions of targets that will highlight their state of understanding towards existing financial inclusion services. This will also depict how they marked the quality aspect related to provide services. Thus the prevailing kind of relationship between service suppliers and users can be evaluated. Further it will help to understand the barriers in their minds while availing such services. Thus filling this gap will also help in the formulation of new strategies by the policy makers.

1.1.4 Study Objectives

Demand side research focus over in-depth information related to explain how financial services are used and from whom. This study identify the missing gaps while forming the predicted relationship between suppliers and users and to depict that the factor of distance aspect is considered the key barriers in the mind of financially informed consumers. Then the state of financial literacy and capability in terms of analyzing existing knowledge base and behavioral output is considered. Further it illustrate the marketing interaction with the consumers while subjected to internal dispute resolution and also what measures are required to be considered while forming disclosure requirements. Thus following are the objectives of this study;

- ❖ To investigate the quality indicator of financial inclusion through existing level of Financial Knowledge (FK).
- ❖ To investigate the quality of financial inclusion through existing level of Financial Behavior (FB).
- ❖ To check the quality indicator of financial inclusion through Disclosure Requirement (DR).

- To check the quality indicator of financial inclusion through Internal Dispute Resolution (IDR).
- To investigate the quality indicator of financial inclusion through measuring aspect of barriers to use.

1.1.5 Study Hypothesis:

This study is based on investigating following hypothesis;

H1: Financial Knowledge (FK) has a significant influence over Quality Indicator of Financial Inclusion (QIFI).

H2: Financial Behavior (FB) has a significant influence over Quality Indicator of Financial Inclusion (QIFI).

H3: Disclosure Requirement (DR) has a significant influence over Quality Indicator of Financial inclusion (QIFI).

H4: Internal Dispute Resolution (IDR) has a significant influence over Quality Indicator of Financial Inclusion (QIFI).

H5: Financial inclusion in Bari Imam located in Islamabad is dependent on reducing the distance (considering barriers to use).

1.1.6 Significance of Study:

This study initially contribute to academics in literature to focus the measurement aspect towards demand side analysis of Financial Inclusion (FI) that will help to identify and even minimize the issues prevailing in the methodological aspects related to measure the output impact of financial inclusion. As quality indicator help to measure the relationship between both demand and supply side, it will further help to design practical studies to better perform market surveys. Quality indicator is the bridge between access and usage, where access describe the level of potential barriers for opening and using services and usage focus over performance and depth of using financial product and services aside from basic adoption to banking services. The usage lens require more detail related to duration, regularity and frequency of using services over time. But for measuring the complexity aspect of inclusion it required information that should reflect viewpoints of users and gathering data should be done from demand-side surveys. Fourth important aspect is the impact factor that is used to measure changes in lives of consumers after using provided services and it even poses serious methodological challenges to survey designs if output level of inclusion is not as per estimated (Burjorjee & Scola, 2015). All attention is towards improving relationship with customers and also to find the relationship between provided choices and consumers' understanding towards provided choices and implications. If consistent studies on quality indicator are performed will helped to form unified index for quality measurement. Furthermore it will contribute to improve existing level of inclusion.

Figure 1.2: Indicators of Financial Inclusion.

Source: Burjorjee & Scola, 2015, p. 2.

This study used the tool of Structural Equation Modeling (SEM), where it measure the relationship between the categories of quality indicator with state of financial inclusion. This indicate the scholars the importance of developing the quality index as the part of multidimensional index measurement of financial inclusion. After data analysis the goodness of fit for model testing is indicated that depict the relationship building between the proposed categories of quality indicator over the state of financial inclusion. For building the separate uniformed index, it require to conduct various studies on other rural areas to test the feasibility of study on further higher level.

Currently just focus over investigating and measuring the supply side factors of financial inclusion is not enough to increase the operating stance of financial inclusion in Pakistan. In Pakistan middle class audience is slighting aware with the provided financial inclusion products and services but this increase occur through introduction of agent banking and mobile money operators. While talking about the low class or poor class consumers, they are not aware with the accurate procedures and benefits provided by these institutions. Thus just focusing over aspect of increasing the number of adults to the banks by just opening an account is not the solution. Opening account by providing access is not enough to build inclusive environment. Hence studying the demand side aspects of financial inclusion provide clearer picture to the policy makers. More center of attention towards prevailing issues is captured by studying the quality indicator of financial inclusion. This highlight the relationship content between both sides and depict the opinions and attitudes of the consumers towards provided products and services. This study also bring attention towards using the most basic questions that will help to bring more information output from local audience. Further it provide the combine model form for using maximum existing categories of quality indictor in direct connection to state of financial inclusion. Like various frameworks and models are presented for analyzing the literacy aspect, few for measuring capability aspects, few for consumer understanding and dependence over financial systems, few for banking environment and various mechanisms but their direct link to measure the aspect of financial inclusion from lens of quality indicator is not presented. Hence this study highlight to measure state of inclusion by analyzing the quality indictor as highlighted by Global Partnership for Financial Inclusion, 2014, 2016 & 2018, Alliance for Financial Inclusion 2016, World Bank (Annual Report estimations), G20 Leaders 2016, 2018, Global Findex Database (Annual Report estimations) and few others.

1.1.7 Limitation of this Study

This study aimed to measure the quality dimension of financial inclusion through using categories of quality indicators. Currently around the globe there is no one unified quality index because it require to conduct various studies in different rural areas of the state. Which required much more time to forming the unified index. For completing the degree requirement we have limited time period. Because of this reason we confined our study to smaller area (Bari Imam) and conduct a local study. This help us to form an initiated platform that will help further researches to use it over other areas and end up to find unified index of quality indicator. More ever the access towards monitoring the usage patterns of individual adult is currently not available therefore we used data in combined statistics form. Which depict more content towards the access indicator. The issue of completing and filling the questionnaire was also difficult in Bari Imam as People of that place even including those having the basic education lack the understanding of the financial terminologies. Due to this reason we confined over study towards asking basic questions and not focus over gathering the direct viewpoint of audience in the form of introducing the nominal implementation of their described options.

1.1.8 Organization of Thesis

First chapter explained the introduction and background to the study, where issues that depict the low level of existence of financial inclusion in Pakistan is described. Continued by mentioning the literature gap, research problem, problem statement, objectives and hypothesis of study. Further practical and theoretical significance of study is mentioned. Lead by highlighting the limitation of the study.

Second chapter is focused over explaining the literature associated to this study. Starting from explaining the historical association to the concept of financial inclusion. Then measurement of financial inclusion through using its indicators is mentioned. Further quality indicator of financial inclusion is explained in detailed along with describing all the three categories and sub-categories of quality indicator. After this, lack of having uniformed index of quality indicator is mentioned along with describing barriers to financial inclusion in Pakistan is highlighted. At last underpinning theory is described along with interpreting conceptual framework of this study is explained.

Third chapter is focused over explaining the research methodology associate to this study. Where research design, research philosophy, research logic considerations and time horizon is explained. After this Structural Equation Modeling is described along with explaining the study variables and models. Then sample methodology along with descriptive statistics is explained.

Fourth chapter described the empirical data analysis, where measurement and structural models are explained in detailed associate to this study. It include to describe the composite and discriminate reliability of the data. All the result output of data after using Smart PLs is described in detail.

Fifth chapter discuss the study result output by associating with all the above written documents. Discussion uses the approach of describing all the objectives of study with comparing with already conducted studies. After this study is sum up by concluding the rest of finding in the most summarized way. At last few recommendations as the focus of Future Research Direction (FRD) are mentioned. After describing all the study content, references are provided at the end along with mentioning questionnaire as the part of study appendix.

CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

After the nationalization of banks certain developments occurred that help in promotion and expansion of functional and geographical reach by cooperative credit institutions, commercial banks, and by Regional Rural Banks (RRBs) around the world. The rest of all efforts are aimed at minimizing the role of credit provided by informal sectors and meeting the needs of rural audience through providing rural credit by development banks (Dev, 2006). Despite all the made expansion still large number of population are considered excluded from formal financial institutions. In 2007, United Nations (UN) reported that 3 billion people lack access to formal financial institutions such as bank accounts, insurance, credit, savings, and to receive benefits from social remittance (UN, 2007). However this is a universal problem but more than average citizen belong to developing nations are financially excluded (Chibba, 2008). This concept kept the attention after the worse recession (2008-2009) where rest of economics around globe suffer very badly. After the incidence, policy makers identify that the least affected group is unbanked population particularly poor households. Because they hardly rely over any financial system and depend upon their own savings and money in hand (Soederberg, 2013). Here the least affect groups are those who remain at maintaining the lives at same pace but are kept aside from the using benefits provided by the state. Hence the main focus of financial inclusion is to bring all unbanked population towards formal financial system and main focus is to target the poor class.

In broader context of this concept associate to the terms of development is viewed as essential method to tackle inequality and poverty (Chibba, 2009). Number of efforts are made in order to reduce the level of exclusion such as introducing Microfinance Banks (MFBs), Microfinance Institutions (MFIs), Mobile Money Operators (MMOs), and even system for digital finance (Gattoo & Akhtar, 2015). These institutions aimed to provide access to financial services to nearly 1.7 billion of individuals belong to low-income and poor class around the world (Tariq, 2021). Pakistan has very low level of inclusion as 11% to 13% in 2015 (Noor et al., 2020). This value is increased to 23% in 2020 (Noreen et al., 2022). If we make the comparison with other

South Asian countries then Bangladesh has 31%, India has 53%, and Sri Lanka has 82% financial inclusion level, which is much better than the Pakistan (Noor et al., 2020).

Financial Inclusion	Pakistan%	Bangladesh%	India%	Sri Lanka%	South Asia (%)
Account ownership	13	31	53.1	82.7	46.4

Figure 2.1: Financial Inclusion across SouthAsian Countries (% of Adults) for 2015
Source: Noor, Batool, and Arshad, 2020, p. 3.

Financial Inclusion is divided into three indicators as access, usage, and quality (Hanning and Jensen, 2010). Few added one more aspect to existing three indicators that is used to measure the methodological concerns associate to the rest of efforts put to improve financial inclusion environment and is known as impact factor (Burjorjee and Scola, 2015). These four aspects are used to measure the state of financial inclusion. This study is focused over explaining the quality dimension of financial inclusion. While breaking category aspect of quality indicators as provided by G20 leaders, GPFI, AFI, World Bank, and Global Findex Databases, it cut down to three main aspects as Financial Literacy and Capability (FLC), Market Conduct and Consumer Protection (MCCP), and Barrier to Use (BU). Globally investigating these aspects provide an idea about the overall picture of financial inclusion but for clearer picture it further required to break the investigating lens into smaller and clearer direction output (AFI, 2016). Financial Literacy and capability is considered among the most dominant issues by the government of Pakistan. In 2012, State Bank had introduced the program with name of NFLP (Nationwide Financial Literacy Program) and Sikka Baqida Program (SBP). Which aimed at increasing the access factor and also teach people money management skills and encourage them to use formal banking system. It produce dominant effect by increasing the number of open bank accounts. But further the issue is shifted towards operating account concerns (2012 - 2018). Where more than half of opened accounts are converted to dormant accounts. Further in 2018, State Bank introduced a new program NFLP-Y (National Financial Literacy Program for Youth) that aimed to educate the audience for increasing financial awareness from their School going age level.

For promoting financial inclusion SBP launched the program with name NFLP "Nationwide Financial Literacy Program" on 20th January 2012 (Noreen et al., 2022). This program aimed to increase the financial education among the audience. The target audience include the youth and middle income groups. The training sessions are conducted with collaboration of various educational institutions (Noreen et al., 2022). State Bank of Pakistan has introduced series of training sections in order to increase the knowledge criteria of the adults towards using these provided financial products and services. These training sections includes numbers of adults across different cities of Pakistan such as; "It covered total training sessions of 6020 in Khyber Pakhtunkhwa with including 170,177 participants, 38 sessions in Gilgit Baltistan with including 1,551 participants, 568 sessions in AJK with including 20,433 participants, 2,005 sessions in Federal with including 62,720 participants, 5,112 sessions in Punjab with including 173,967 participants, 10,158 sessions in Sindh with including 309,574 participants, and 4,181 sessions in Baluchistan with including 173, 825 participants.

NFLP-Y Program of State Bank of Pakistan to Increase Financial Inclusion (2018-2022)						
			Cities			
Sessions & Participants	Khyber Pakhtunkhwa	Gilgit	Federal	Punjab	Sindh	Baluchistan
Sessions	6020	38	2,005	62,720	10,158	4,181
Participants	170,177	20,433	62,720	173,967	309,574	173, 825

Figure 2.2: Number of conducted training sessions along with total count of participants.

Source: State Bank of Pakistan (SBP) (2021).

Furthermore the program is modified by specifically targeting the youth as NFLP-Y and collaborating with "National Institute of Banking & Finance" that aimed to increase the access factor by providing the knowledge base to youth and even to school going children across 45 different districts of Pakistan (Noreen et al., 2022). This program aimed to provide knowledge base related to use of financial inclusion products to almost 1.6 million of target in 2023. Still very low level of inclusion exits in Pakistan. According to Demirguc-Kunt et al., (2018) and Global Village Space (2021) indicate the level of financial inclusion in Pakistan is 23% in 2020. Which indicate that 77% of audience is currently considered as financially excluded.

Table 2.1: Rates in percentage of Financial Inclusion (FI) in Pakistan

Year	Rate of Financial Inclusion
2011	10%
2014	16%
2017	21%
2020	23%

Source: Global Village Space, 2021, p.40.

Therefore increasing the level of financial inclusion, is not required just to focus entirely over financial literacy and capability management. Because the major issue next to the level of understanding is the existing market infrastructure, where all the activities and interaction between supply and demand need to be measured. As Ledgerwood (2013), describe this issue as; "increasing the access not always increase the level of FI". Here the gap is between studying the viewpoint of the market where you are trying to implement your services. The main institutions such as microfinance banks and institutions need to figure out what their audience wants from them. Hence for disclosure requirements, there is hardly any study available in Pakistani context to investigate the relationship building with MFIs and MFBs. Instead few aspects are highlighted like used of local or plain language concerns as; Hassan et al (2020) highlighted the language issue by the consumers as 63.9% and also highlighted by Raza et al. (2019), and Atkinson & Messy (2013). Next issue of documentations and strict rule and regulation by Akhtar (2007), Ayyagari & Beck (2015), and Asian Development Bank (2015). Further for highlighting the issue of distance, Hassan et al. (2020) and Tariq (2021) conduct study in Pakistan where the factor of distance act as one of major barrier that stop customers to avail available services.

2.2 Quality Indicator of financial Inclusion

The aspect of **quality** reflects the relevance of financial product and services to lifestyle needs of concern client. Here experience of the customer is noticed that is demonstrated in his/her opinions and attitudes towards available products (Hannig & Jansen, 2010). This measure help to grasp the nature and depth of evolving relationship between service provider and consumer. This indicator also help to identify the relation between available choices and understanding level of customers towards those services and their significance (Ledgerwood et al., 2013). Hence after data collection through use of questionnaires, relationship between the variables will be analyzed.

G20 leaders (2011) agreed for recommendation at "Cannes Summit" given by GPFI (Global Partnership for Financial Inclusion) for collecting global and national FI data that is combined by providing defined harmonized types of indicators (GPFI, 2016). Basic types of FI is endorsed with support of key areas of financial literacy under "Russian G20 Presidency" to provide further comprehensive set of indicators (Imaeva, Lobanova, & Tomilova, 2014). If these indicators are investigated in combination with adding additional in-country information will help policy makers to monitor more thoroughly the financial inclusion development (Both nationally and globally) (AFI, 2016; GPFI, 2016).

This combine effort provide the rest of information related to three basic dimension of financial inclusion i.e. Access, Quality, and Usage along with clearly defining its level of targeted aspects, factors, and well defined categories associate to each dimension. The supply side focus of financial inclusion include Access dimension where three categories are studied as accessibility and affordability (Adil & Jalil, 2020), and point of services (GPFI, 2020). More ever this study focus on the demand side analysis in terms of obtaining output associate to quality dimension of financial inclusion. For Quality aspect this study focus over three main categories as first; Financial Literacy and Capability (FLC), Second; Market Conduct and Consumer Protection (MCCP), and third; Barrier to Use (BU).

2.2.1 Financial Literacy and Capability (FLC)

The quality aspect financial literacy and capability include two categories as; Financial Knowledge (FK) and Financial Behavior (FB) (Global Partnership for Financial Inclusion, 2014). Already conducted studies relate to Financial knowledge indicator cover the responses of consumers towards questions associate to basic financial concepts, such as "Inflation, Interest rate, Compound interest, risk diversification, and for insurance purposes" (GPFI, 2016). In this study, more difficult questions are not asked from the audience because context of study where the data will be cover compose of audience having particularly low level of financial literacy.

Next for Financial Behavior, it cover responses to arrange the money on urgent bases such as; where the audience will approach when they required emergency loans as; (Sell own assets, use savings, borrow from relatives or friends, approaching banks for loans, increasing working hours, or would not be able to arrange money) (GPFI, 2014). Already conducted studies show positive relationship between financial literacy and financial inclusion (Sanderson, Mutandwa, & Roux, 2018). Hence financial literacy is considered among good predictor of demand for financial products and services by the community (Cole, Sampson, & Zia, 2011). People who have financial knowledge are aware with the advantages and disadvantages of provided services, therefore are well informed with their decision making process (Lusardi & Mitchell, 2007).Uddin, Chowdhury, and Islam (2017), study to investigate the financial inclusion's indicators in Bangladesh and placed financial literacy rate as a demand side factors. While Zins and Weill (2016), identified that educational level has a higher influence over increasing the level of inclusion in Africa. Financial behavior depict the pattern of used services by the audience. Whether they make monthly budget or not, discuss with people before making investment decisions, are interested or not in sharing their financial position with the service providers or not and so on.

Inclusive finance is considered among important concept of finance that ensure the accessibility and affordability of various products and services to both adult households and to different businesses (Hasan & Hoque, 2021). The basic coverage is to provide opportunities to the adults consider excluded from the formal financial system of the state. Among rest of categories that affect the ability of people towards understanding and accessing the financial services, the most important one is the financial literacy level of the rural population (Hasan & Hoque, 2021).

The study conducted in Bangladesh for measuring the relationship influence of financial knowledge over financial inclusion shows positive influence (Hasan & Hoque, 2021). This study indicate that introducing long term and consistent educational program will produce dominant positive effect over increasing the inclusive environment in rural areas. It will also transform the evaluating lens of adults towards approaching the provided services and products. Next through improving the financial capacity range of adults will reduce the prevailing poverty level and boosting the existing prosperity.

The concept of financial inclusion highlight the contributed role that rural population could play in order to significantly influence the economic development of the concern state (Hasan, Yajuan, & Khan 2020; Johnston, 2005; Le, Chuc, & Taghizadeh-Hesary, 2019; Stein, 2010). Hence promoting the access and quality aspect of financial inclusion will help in building the strong connection with the growth of state's financial system (Hasan et al., 2020; Rashidin et al, 2020).

The low level of financial knowledge directly affect the financial behavior of people. As Hasan & Hoque (2021), conducted the experiment where the output of the study show that the rural adults are familiar with the limited numbers of provided financial services especially through banking sector. This is the major issue that is depicted through limited use of such services. They further considered that the activities of banks are just limited to the services of deposits and withdrawals. This existing mismatch reflects why they don't approach towards other provided services (Hasan & Hoque, 2021).

According to Kou et al. (2021), for building inclusive environment, basic is that the different national and international organizations has to considered the financial literacy aspect as the most influential component. Lyon and Kass-Hanna (2019), identified that endangered adult population is mostly considered excluded from the formal financial system. They also highlighted that majority of literate audience are engaged in saving behavior and majority are not dependent over borrowing through informal sources.

After series of downturns in the global economy, all the main players including policy makers initiate to build the system that helped the people to effectively manage personal finance that will help in improving their financial capability (Zakaria & Sabri, 2013). Financial capability help in managing the complexity of financial decisions. Majority of adults lack financial knowledge and therefore are unable to develop sufficient financial capacity base. This issue is dominantly captured the developing world. Survey conducted by FSA (Financial Services Authority) have found that poor young adults (having low qualification or are not trained or employed or not educated) lack basic understanding of personal finance (Taylor, 2011).

Poor financial capability is considered among the major seed cause for young adults to avail the provided access and evaluating the quality of provided services. Which will ultimately affect to examine the benefits provided by the institutes and result in increasing the level of financial exclusion (Zakaria & Sabri, 2013). Individuals with enhance financial capability can easily establish their financial security scream, manage their daily expenditure, able to easily get through unforeseen emergencies and even make long term money management.

Financial capability has both micro and macro environment effect over community and society. The main players including educators and policy makers had introduced the financial capability concept that plays a vital role in describing the ability of person to manage his/her demands of personal finance (Remund, 2010). The National Financial Capability Study (NFCS), defines the numerous aspects of financial capability, where it show the behavioral patterns that is linked to how adults manage their internal resources and even make different financial decisions (Mottola & Kieffer, 2017). Johnson and Sherraden (2007), defined it in terms of associating it with knowledge and opportunity of adults along with their ability to respond in the different ways that helped them to maximize the possibilities of life and allow fulfilling lives.

Hence financial capability is a separate construct that even goes beyond the concept of financial literacy. Financial literacy is referred to the individual's knowledge and understanding of existing financial concepts but capability in addition to this concept even covered the aspects of how individuals manage their financial resources and decision making (Zakaria & Sabri, 2013). This approach suggest that adults should learn both about the financial management and financial world at same time so that they can easily improve their standard of living along with acquiring the quality base and benefits associate with use of the provided services (Sherraden & Ansong 2016). The study conducted by Zakaria and Sabri (2013), after examine the existence level of financial capability in ten countries, the result suggest that younger individuals age below 45 years, married adults, women, people with low level of education and with lower earnings were recognized as lacking financial capability among them.

Number of scholars had studied the factor of financial literacy and financial capability, some with combination of two and some as a separate concept. Literature also highlighted the series of framework related to measuring the financial literacy aspect for inclusion. But there exists the gap for associating it properly as the category of quality indicator of financial inclusion. Hence this study will investigate the impact of Financial Literacy and Capability (FLC) by considering it the category of quality indictor in order to measure its Influence over the state of financial inclusion in Bari Imam Islamabad.

2.2.2 Market Conduct and Consumer Protection (MCCP)

Second quality indicator is market conduct and consumer protection include two categories as; Disclosure Requirements (DR), and Dispute Resolution (DR) (GPFI, 2014). It covers the variety of requirements related to enhancing the quality aspect of provided services as; for Disclosure Requirements it include certain requirements as (Ensure plain language concerns (like easily understandable and rule out the existence of hidden clauses while communicate to the targets), prefer local language concerns, formulate standardized disclosure requirement, design possible course of actions associate to rights and processes of financial system, and clear picture of cost associate to credit exchange) (GPFI, 2014).

Second Category is Dispute Resolution that include the internal and external mechanism for dispute resolution as internal mechanism include; setting standards for law/ regulation by financial institution for complaint handling (entitles factors of accessibility, time brackets and implement the handling procedures) and external mechanism include the system that allows the customers to seek third party services that are both inexpensive and efficient (e.g. supervisory board, financial advisor, or other similar organizations). In this study, the internal dispute resolution is taken under consideration because due to low awareness towards maintaining the disputes outside the organizations.

In Pakistan, majority of the clients don't even know that they can entered the complaint against the dispute, if occurred. This type of audience is majority related to low financial awareness and even belong to village side (World Bank, 2017). For providers' side, it include the aspects of time management and requirements of handling the issue smoothly (World Bank, 2016). But here system is again silent because training mechanisms of employees are also very weak and slow (Nenova, Niang, & Ahmad, 2017). If the audience are not aware with the procedure of internal dispute management, how we can assumed that they will be aware with external dispute resolution. Hence this study is focused to studying the viewpoint of audience for internal dispute resolution.

Next to measuring the aspects of quality indicator include the concerns for consumer protection along with reflecting community development (Gadaneez & Tissot, 2015). Consumer protection entitles the disclosure requirements, where the key duty of service providers is to build friendly relationship with their clients (Demir, Pesque-Cela, Altunbas, & Murinde, 2022). This demand side category is boosted by efforts of supply side management. There is very less concentration over building this aspect strong among both developing and less developing nations. The study conducted by Hassan et al. (2020) in Pakistan, showed that there exist high level of issues in improving the level of relationship with the audience of Quetta. Where the major issues come under the stance of quality indicator, "Where Basic Education is 64.8%, Low Financial Education is 40.7%, Prevailing Strict rules and regulation is 35.1%, System complication is 33.3%, Language issue is 63.9%, high transaction cost is 43.5%". The rest of developing world is facing the issue of measuring the quality dimension of financial inclusion through using one uniformed platform because their exist a lot of variation in the culture orientation, social acceptance, community formats and even for policy intakes (AFI, 2016).

Reasons	%
Low Education	64.8
Not known about Banking/EasyPaisa facility	52.7
Strict rules and regulations by Bank/EasyPaisa shop	35.1
Complicated Banking System	33.3
Because of low income and saving	25.8
Unsuitable Banking Product and services	35.1
Non-availability of Bank branches/easy paisa shop	60.8
Low financial Education	40.7
High transaction cost	43.5
Timing of bank branches/easy paisa shop	55.5
Language Problems	63.9
Religious reasons (Islamic rules and regulations)	51.8
Someone else in the family has an account	26.8
No need for financial services from financial institutions	25.9

Figure 2.3: Reasons for not relaying over the Formal Financial Institutions

Source: Hassan et al., 2020, p. 695.

Literature indicate the gap in measuring the uniform index for quality indicator as Camara and Tuesta (2014), just described the proxies for measuring quality dimension but they couldn't calculate their composite indicator because lacking reliability of data and even its availability. This issue is more dominant among the developing and less developed countries because these countries lack the proper professional operating financial system. Although the existing statistics around such countries show usage of these services through using alternate platforms more as compare to the systems and banks (GPFI, 2016).

Policy makers counts three degree for calculating the financial inclusion index as "Access, Usage, and Quality of provided financial products and services (Mialou, Amidzic, & Massara, 2017). Next prevailing issue is the calculation of the quality index of financial inclusion across large number of developing countries. Because of this reason, number of scholars ignore to measure this aspect while calculating the index of financial inclusion, they include; "Amidzic, Massara, and Mialou, 2014, Mialou, Amidzic, and Massara, 2017, and Ahamed and Mallick, 2019" (Nguyen, 2020).

Author	Variable
Nguyen, T. T. H. (2020)	3) Quality of financial services: (financial literacy, disclosure requirements, dispute resolution, and the cost of usage) Because the data on the quality dimension are rather scarce, this dimension is not considered.

Figure 2.4: Reasons behind Ignoring the Quality Indicator
Source: Nguyen, 2020, p. 23.

There exist series of problems in measuring the quality indicator of financial inclusion such as; in 2014, Central bank of France along the Federal Reserve's System (Board Members) highlight that financial institutions are failed to gathered the granular data that help to specify the identification of activities of individuals and their need of using the financial products and associate services (Gadanecz & Tissot, 2015). Second main issue is the incomplete availability of tracking the usage concerns of financial products and services especially through using qualitative lens. The data gathering is the issue from supply side as; study conducted by Alliance for Financial Inclusion (AFI) in Columbia reflect this issue and explained that this deficiency leads to create problems in correctly designing financial products for the market and even enhance the quality aspects of financial literacy and consumer protection.

While for demand side analysis, Central Bank of Malaysia conducted various studies related to the concern of financial literacy shows that survey conductions will produce good and supporting role in building the quality focus financial inclusive environment. If we reflect the state of India, where conducted studies related to factor of access describing positive output in terms of emphasize over flexibility and convenience aspect that encounters the numbers of available bank branches and ATMs (Automated Teller Machines). Because these services can be accessed by the individuals in their proximity. According to Gadanecz and Tissot (2015), described that their exist gap in present literature as; "The available data don't encompass quality issues, such as the suitability of the service supplied compared to users' actual needs, and the way these services will potentially be used" (p. 8).

Measuring financial inclusion is also a challenging task because there exist vast variation in acceptance of the term definition. Which act as the greatest barrier in meaningfully sum-up analysis and policy discussion. Some have very narrow and specific approach for considering the underbanked population but some consider the financial inclusion services is for the poor and for the SMEs (Small Medium Enterprises) (Gadanecz and Tissot, 2015). Next major concern is allocate the areas where the importance of contributing resources is important to boost the level of inclusion along with enhancing the associate quality platform (Mokhtar, & Sabri, 2020). This basically entitles dominantly the area for training programmers for the policy makers that should cover the specified topics as; "Regulation and supervision of the deposit exchange criteria of microfinance institutions", "Market Conduct and Consumer Protection", and "Islamic Microfinance" (Mokhtar, & Sabri, 2020).

Hence literature shows the importance of tackling the factors of quality indicator of financial inclusion from both the sides. First systems have to build a fruitful quality base standardized financial inclusion environment that will help in reducing the issues from methodological aspects of conducting the other side issues the demand side (Tariq, 2021). Financial stability of any state is based on three main pillars as financial inclusion, financial literacy, and financial stability (Gadanecz & Tissot, 2015). Therefore initially base is the ease of providing access, pricing/ cost and terms and conditions are required to be held smoothly for ensuring the good performance of formal financial system (Camara & Tuesta, 2014). Next the presence of decorum and appositeness of product is also the key dimension in ensuring the context of financial education of adults and for the market conduct and consumer protection (Boeddu, & Chien, 2022).

The factor of consumer protection is described by number of scholars but all are linked to other market conductions. For studying it as the category focus of financial inclusion is very limited and is more described in the written perspectives as few are shown by the above mentioned literature. In short, literature shows the gap in performing the practically studies related to the ensuring the context of consumer protection. Hence this study will analyze the impact of Market Conduct and Consumer Protection (MCCP) in term of considering the influence of relationship building (Disclosure Requirement) and Internal Dispute Resolution over state of financial inclusion in Bari Imam Islamabad.

2.2.3 Barrier to Use (BU)

Third quality indicator is Barrier to Use (BU) include two categories as; Cost of Usage (CU) and Credit Barriers (CB). For Cost of Usage include three indicators as; Average cost associate to opening account, Average cost associate to maintaining current account, and Average cost associate to credit transfer. Credit Barriers include two indicators as; loans given to percentage of Small Medium Enterprises (SMEs) on basis of their last loan withdrawal, and measuring extent of informational barriers for availing credits (GPFI, 2016). But cost intake is considered as the primary issue that is linked to the issue of lack of money and is being studied more frequently while availing services in analyzing the access side of inclusion. This is considered the dominant issue that diminishes all the concerns for availing services. According to AFI "Alliance for financial inclusion" (2016), measuring the quality dimension of financial inclusion is a comparatively new intake especially in developing world. Quality indicator of financial inclusion varies according to every state requirements related to market infrastructure and legal structural existence. Here in this study, the barrier to use is being modified to enter the factor of distance that is considered among the basic obstacle for availing services in the rural area of Pakistan. This factor is highlighted by 29.1 percent living in Quetta Pakistan (Hassan et al., 2020).

Camara and Tuesta (2014), measured the financial inclusion index among eight two developed and less developing countries by using a multidimensional index approach. Where the study indicators count for the factors of Usage, Access, and Barrier and Pakistan ranked at "80th number for category of Usage, 67th number for Access factor, and 50th number for Barrier to Use. For sum up rank among rest of countries for Financial Inclusion Index Country Ranking (FIICR), Pakistan ranked at 70th number out of eight two countries. Which reflects their exist series of problems among increasing and using the provided financial products and services.

Ramiz, Mangla, Naseem (2017), conducted a case study for studying the emergency of financial inclusion in China and Pakistan, they highlighted serious of barriers that stop customers to avail financial products and services. In 2014, 22% of Pakistani adults responded that they don't have account because the concern institutions are too far away from their destinations (Ramiz et al., 2017). In 2012, study conducted by Demirguc-Kunt and Kalpper, showed that 20% of poorest household has significant + (ive) relationship with distance, and Cost.

In 2015, Ayyagari and Beck, conducted study related to collect data over position of financial inclusion in the rest of Developing Asian countries. The state of financial inclusion across rest of Developing Asian counts for 26.7 %, where 93.3% in high income economies, 52.8% in Europe, 27.7 % in Latin American and Caribbean (LAC), 24.4% Middle East and North Africa (MENA), 17.5% in Sub-Saharan Africa (SSA). In 2013, Among the rest for account penetration Pakistan counts for Less than 5% of level of financial inclusion along with other counties as; "Bangladesh, Afghanistan, Marshall Islands, and Uzbekistan" (Asian Development Bank, 2015). For taking concern of distance as barrier to avail financial inclusion services, 21.89% of individuals across the developing Asia marked the factor of distance as the dominant barrier for using available services of financial inclusion (ADB, 2015).

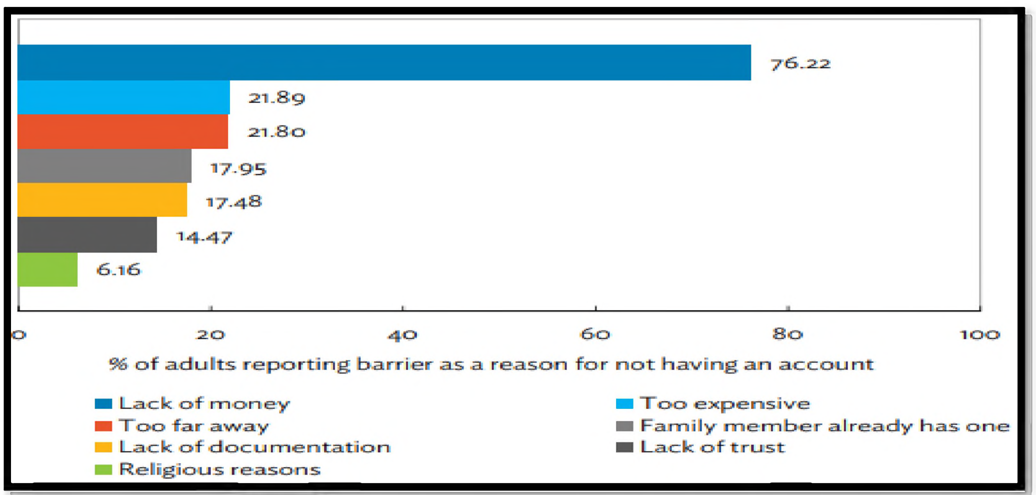

Figure 2.5: Barrier to Avail Financial Inclusion Services in Developing Asia.

Source: Ayyagari & Beck, 2015, p.6.

Financial inclusion is divided on the bases of factors of access, use and quality. Aside from focusing on providing effective and convenient access factor will always not result in increasing the level of inclusion (Dabla-Norris, Townsend, & Unsal, 2015). As access indicates the outreach depth of provided financial services, similarly use factor shows that how people use your provided financial services but quality factor depict the usefulness of provided product comparability with the need of customer (Arora, 2018). If product criteria matches to the demand of the customer then your environment will be easily converted to the inclusive base financial system.

Number of Scholars distinguished between financial inclusion and concept of access to finance. The World Bank defined the financial inclusion in its GFDR (Global Financial Development Report) 2014, "The proportion of individuals and firms that use financial services" (Arora, 2018, p. 4). It further highlighted that "This aspect has multitude dimensions, including various services as; payments, savings, pension, insurance, and securities market (GFDR, 2014, p. 168). Hence the concept of financial inclusion is different from just focusing over access to finance as; "it may include people who may have access to use services but they don't want to use provided financial inclusion services" (Arora, 2018, p. 5).

Further the various list of barrier are linked to the income, religion, gender, age and so on. According to the Ramiz et al. (2017), majority of elders living in villages refused to use the banking services due to distance issue along with the lack of money and operating cost of maintaining the account. Both supply side and demand side analysis of financial inclusion is linked to one and other as access (supply side indicator) factor is studied in terms of analyzing the category of availability and accessibility. Among both the supply side factor of availability is concerned with outreach of financial system along with considering the shape and size of provided bank branches (Allen, Demirguc-Kunt, Klapper, & Peria, 2016). According to the Adil and Jalil (2020), for measuring the availability factor of inclusion, distance (as demand side category) is considered the most important variable as it reflect how far the financial service point is for using the services and it can proved among the most crucial hindrances for using the available financial inclusion products and services. The issue of long distance can only be remove by providing inescapable outreach of formal financial system (Including networks of bank branches, agent banking, ATMs) (Ahamed & Malick, 2019).

The factor of distance is added new to the category framework provided by GPFI, because in Pakistan, this issue of availing services in villages and for behind located places is difficult due to number of issues, where the factor of location is considered among important, as above literature highlights. There are number of other barriers such as operating cost, money availability, issue of trust, security issues, gender discrimination, and disability factor and so on. This study will provide a comparatively new lens for measuring the influence of distance by considering it as a barrier over state of financial inclusion in village Bari Imam located within territory of Capital of State.

2.3 Barriers to Financial Inclusion

The low level of inclusion is due to barrier from supply side and demand side. Supply-side include "The existing weak market infrastructure, lack of competition, gender biases for physical ownerships, stick legal and regularity obstacles, and incomplete provision of financial products and services as per customers' needs (Kumar, Pal, & Pal, 2019; Noor et al., 2020). For demand side, the dominant barriers are "Lack of Money and due to personal reasons e.g. lack of financial knowledge, gender biases, lack of self-confidence, social and cultural issues stop the people not to use the provided products and services (Ghosh & Vinod, 2017; Noor et al., 2020). In Pakistan, it is studied that almost 53.8% of people consider heavy documentation and lack of constant income are the dominant barriers, next 50.7% of individuals consider their personal factors as a barriers towards having bank accounts (Nenova, Niang, & Ahmed, 2017; Noor et al., 2020).

Reasons for unbanked		% of adults in Pakistan
Requirement for becoming a customer	Lack of documentation	53.8
	Lack of money	
Personal reasons	Lack of financial literacy	50.7
	Lack of self-confidence	
	No need of an account	
Accessibility issues	Too far away	4.9
	Too expensive	
Socio-cultural reasons	Lack of trust	8.5
	Religious reasons	

Figure 2.6: Barrier to Financial Inclusion in Pakistan.

Source: Noor et al., 2020, p. 4.

Hence the main problem linked to this low of inclusion is the unbalanced research orientation among studying the measurement aspect of financial inclusion. Bundle of data is available for indicating the access factor and for measuring the number of opened bank accounts. But for measuring the quality aspect of provided financial products and services is available in constrained form (Ledgerwood et al, 2013). Observing financial inclusion process help to measure the process output and comparison with last made efforts over time. Assessing the impact dimension helps to evaluate and understand the quality of provided services, affordability, safety and outcomes of using such services over time (Jethani, 2013).

The most important missing aspect is the communication gap between the financial inclusion service providers and users as highlighted by Bhanot Bapat, & Bera (2012). This mismatch between demand and supply sides of financial inclusion further limit the access and use of provided services along with negatively affecting quality of available services (Burjorjee & Scola, 2015). Hence Literature shows the importance of studying both supply-side and demand-side of financial inclusive market but more projection of research output is towards measuring the access indicator as supply-side analysis. According to Ledgerwood (2013), increase in level of access factor and provided choices for financial products and services don’t always interpret into increase use. Hence, in addition to measure access factor understanding the quality and use of products and services along with monitoring their impact factor will further help to improve the financial inclusion environment.

2.4 Institutional Theory

This study used the institutional theory that is linked to explaining the financial well-being by addressing various characteristics of life that has an impact over improving quality and capacity base of the population by noticing objective and subjective conditions that is used to integrate indexes and depict the objective and subjective indicators of improving well-being of clients after using provided products and services (Sinani, 2021; Stiglitz, Sen, & Fitoussi, 2009). This theory is used to measure economic output including the stance of financial inclusion after assessing the improvements in the lives of people (Stiglitz, 2009). The initial focus of theory by government institutions and academics is that there exist vast functionality in considering financial well-being.

They initially associate the focus over financial literacy and capability (Kempson, Finney, & Poppe, 2017). Where the factors includes; state of possessed knowledge, skills, education, and attitudes that influence customers to make rational decisions while approaching to financial products and services. According to Fu (2020), “These capabilities seek to explain the interdependencies between financial literacy, access to formal financial products (financial inclusion) and structural characteristics link to environment provided by suppliers in which consumers are immersed” (p. 85).

Initially financial inclusion is linked to associate with just banking, electronic platform, use of formal financial services and ending at producing positive relationship between financial well-being (Gubbins, 2020). But with introduction of policy financial education and inclusion policy designing it required institutional approach that aim to promote behavior by maintaining regulatory conditions (Sinani, 2021). The institutional approach focus to improve financial well-being by focusing over financial market structures and institutions instead of narrowly targeting people's financial literacy, capacity, and inclusive characteristics (Fu, 2020). The aim of this theory is to build the improved institutional structure that focus over entire system of operating finance that help in increasing the financial well-being, improving financial inclusive environment and bringing positive changes in lives of consumers. The ultimate goal is to focus on the objective that financial inclusion process should not just optimizing the use of financial products and services or just increasing the public access to formal financial system but it is considered for financial well-being, subjecting to consumer protection authority and improving the characteristics of inclusive environment (Gubbins, 2020). This theory include all the factors of inclusive market such as; financial capacity, financial literacy, consumer protection authority and reducing the hurdles in approaching to rest of population in order to ensuring financial well-being.

In this study five variables are considered as the characteristics that institutes should considered for improving the lives of customers by ensuring the inclusive environment instead of just focusing over the access factor. The set of characteristics are linked to measuring the financial well-being as putting to measure the quality indicator of inclusion in Bari Imam. Characteristics variables are Financial Knowledge (FK) and Financial Behavior (FB) (factors of Financial Literacy and Capability), Disclosure Requirement (DR) and Internal Dispute Resolution (IDR) (factors of Market Conduct and Consumer Protection) and Distance (D) (factor of Barrier to Use). On other side by focusing over these factors by institutions have to improve the Quality Indicator of Financial Inclusion (as a factor of improving the people's financial well-being).

2.4.1 Conceptual Framework

This framework use the institutional theory, where the factor of financial well-being is subjected to analyzing the Quality Dimension of Financial Inclusion. Further the characteristics that financial institutions have to considered are divided into set of five independent variables as; Financial Knowledge (FK), Financial Behavior (FB), Disclosure Requirement (DR), Internal

Dispute Resolution (IDR), and Distance (D). These variables are abstract from the factors that has impact over financial well-being as described in the characteristics base of theory. As theory consider, financial capacity, financial literacy, consumer protection authority and reducing factors that act as hurdles in using the inclusive services. Here in this study these factors are not abstracting directly as what theory highlight for completely considering the financial inclusion indicators. Instead this study measures the financial well-being of audience in terms of considering just the quality indicator of financial inclusion. Further the characteristics focus of taking independent variables is based on reflecting the categories of quality indicator. These category dimensions are selected from the study data conducted by World Bank Global Findex Database, World Bank Financial Capability Surveys & OECD National Financial Literacy and Inclusive Survey, and Alliance for Financial Inclusion. This model consists of five independent variables and one dependent variable. Independent variables are FK, FB, DR, IDR, and D. while dependent variable is QIFI.

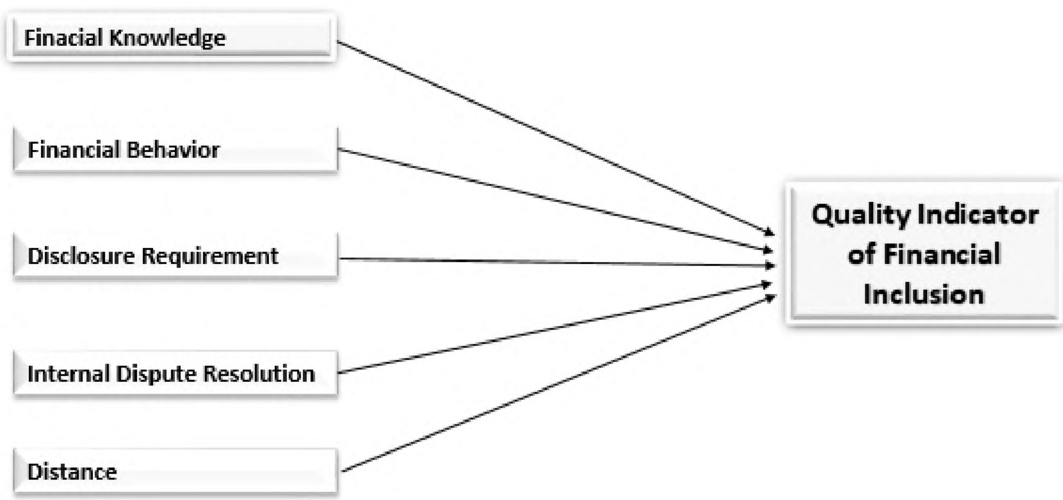

Figure 2.7: Conceptual Framework of this Study

2.5 Summary

The literature of this study explains the importance of building financial inclusion environment as the key instrument especially after the period of worse recession. It describes how different financial services are bring to functioning in various rural area around the globe after nationalization of banks. Further it explains the trends of financial inclusion around the South Asian Countries and making comparison with Pakistan. Then highlighting the platforms that are built to include the unbanked population as Microfinance Banks (MFBs), Microfinance Institutions (MFIs), and digital platforms. The effect of financial inclusion over improving the state economic growth and reducing inequality and poverty is described. Then measurement of financial inclusion through using indicator factors is described. Furthermore explaining different programs (NFIP, NFLP-Y, and SBP) that are introduced by the State Bank of Pakistan (SBP) is highlighted from 2012 to 2020. Then describing the yearly outcome of financial inclusion in Pakistan from 2011 to 2020. Then comparison between measuring supply side and demand side analysis of financial inclusion is explained and even described that the unbalanced research dominantly contribute to low level of financial inclusion.

Furthermore quality indicator is described in detailed. Then categorical distribution of quality indicator is discussed. Three categories are considered for analysis in this study as; financial Literacy and Capability (FLC), Market Conduct and Consumer Protection (MCCP), and Barrier to Use (BU). These categories are further sub-divided into other sub-categories are explained. Where FLC is divided into Financial Knowledge (KF) and Financial Behavior (FB), MCCP is divided into Disclosure Requirement (DR) and Internal Dispute Resolution (IDR), and BU is divided into one sub-category as Distance (D). These categories and sub-categories are described in detailed by linking it to factor of quality indicator only. Further weaknesses and shortcoming in determining the uniform index of quality indicator is explained. After lacking separate unified index of quality indicator, it is also kept aside while determining multidimensional index of financial inclusion. Therefore all the shortcomings with in quality indicator is explained and even with highlighting more focus over explaining the access factor of financial inclusion. Then barrier to use financial inclusion products and services by the customers in Pakistan is explained. At last underpinning theory (institutional theory) is explained and abstraction of variables from the theory is done that describe the rest of categories associate to the quality index of financial inclusion.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

This chapter will illustrate the research methodology associate to this study. This research is focus to determine the understanding level of the participants related to describing the level of financial inclusion through using its quality indicator. In other word to check that the prevailing state of financial inclusion can be influence by focusing over the quality indicator. Furthermore the quality indicator is break down into three separate categories, among which two categories are further divided into two sub-categories. First category, Financial Literacy and Capability (FLC) is divided into two sub categories Financial Knowledge (FK), and Financial Behavior (FB). Second Category Market Conduct and Consumer Protection (MCCP) is divided into two sub-categories Disclosure Requirement (DR) and Internal Dispute Resolution (IDR). Third category, Barrier to Use id divided into one as Distance (D). Data is collected through using questionnaire survey technique and is analyzed through using Structural Equation Modeling (SEM). The focus is to depict the impact of each category over state of financial inclusion such as by improving the level of financial literacy has a positive effect over improving access factor of financial inclusion but whether this financial literacy level has an influence over improving the state of quality indicator of financial inclusion or not. Similarly each category is analyzed to depict its influence over QIFI, which will reflect that whether the level of financial inclusion is just depend over increasing the level of access indicator or not. Questionnaire composed of total twenty eight set of questions/ items. Among twenty eight, three questions are not using likert scale and is based on other ordinal scale that is not recommended to be analyzed by using SEM analysis approach. Further this chapter explain the research design, research philosophy, research strategy, and time horizon associate to this study.

3.2 Research Design

Research Design act as a framework that is used for data collection and its analysis (Bell, Bryman & Harley 2018). Research design of this study is based on the questionnaire survey analysis aimed to check the influence of categories of quality indicator over state of financial inclusion in Bari

Imam. Data is collected through filling the questionnaires by the participants and is analyzed through using PLS-SEM (Partial Least Square- Structural Equation Modeling).

3.2.1 Research Philosophy

The aspect of ontology associate to this study is based on realist approach. According to Guba and Lincoln (2005), realist ontology assumes "Reality exists independent of perception of observers and it operate according to natural laws that circulate around cause and effect form" (p. 195). Here the issue of low financial inclusion is the universal problem and is based on the individuals to be part of it or not. This study does not circulate around the approach of direct impact of some natural law but here is the focus of problem that penetrate to the rest of systems across the globe and is based on establish system having defined laws, rules and regulations of State related to Formal Financial Institutions (FFIs) . For Quality of Financial Inclusion (QIFI) again literature indicate the not availability of unified index due to existing regulatory and management system failure. The global issue of the existing system to bring changes that will further influence the opinions of adults to be part of the system. Therefore this study is focus over institutional theory where the aim is to change the system, the governing body in order to bring changes in relativist environment.

3.2.2 Research Type

For Research logic consideration, this study used the deductive approach where the focus is to analyze the collected data through using quantitative approaches. Deductive approach uses the theory implication and then run the data analyses opposite to inductive approach (Malhotra & Birks, 2005). The used theory in this study is institutional theory that is considered the underpinning theory from which all study variables are abstracted and connected in cause and effect relationship. Furthermore for use research technique this study focus over using questionnaire survey. Survey is based on asking the questions through using 5 point Likert Scale.

3.2.3 Time Horizon

For describing time zone, researches focus over gathering data through focusing over different time horizon dependent upon the type and nature of research want to be conducted. This study is based on calculating the conclusive research type that is type of quantitative data analysis that is divided into two types of research. One is based on cross-sectional data analysis while using the descriptive approach. But this study is focus on using other type that is the cause and effect research. Where the focus is to find relationship between two phenomena (one is the reason behind the other). Here categories that are given by Global Partnership for Financial Inclusion (GPFI) and Alliance for Financial Inclusion (AFI) are linked to the model association of institutional theory as focus over aspect of financial well-being (here study is focusing over measuring quality aspect of financial inclusion). The focus of collecting data is based on once from the audience during given time period of analysis.

3.3 Partial Least Square- Structural Equation Modeling

This study will use the application analysis of PLS-SEM (Partial Least Square- Structural Equation Modeling). Ringle, Wenda and Will (2005) have developed this application software (Wong, 2013). This software is used frequently in various studies due to its easy availability to researchers and scholars and due to its easy use and modified reporting features (Wong, 2013). This study used this approach because it is not entirely dependent over assumptions related to strictly focus more over the data distribution criteria as highlighted by Vinzi, Trinchera, & Amato, 2010). Hence this approach become a better alternative to other approaches and entitles certain situations as; easily dealing with small sample size, determining the predictive accuracy, and accurate model specification is also determined (Hwang, Malhotra, Kim, Tomiuk, & Hong, 2010; Wong, 2011). In such situation Variance Base- Structural Equation Modeling (VB- SEM) approach or PLS-SEM (Partial Least Square- Structural Equation Modeling) approach is used. Instead of using the Covariance Base- Structural Equation Modeling (CB-SEM), where multiple linear regressions are tested (Hair et al., 2014). In variance base approach correlation between study constructs and their observed or measured variables (measurement model) are calculated, and regressions between all latent constructs (structural model) is calculated by using one model approach while using Smart PLs.

The people of Bari Imam possess comparatively less understanding towards financial terminologies, benefits of using various financial products and services through using formal financial system, and population count of natives is also small because this is a small village composite of small number of native adult population that are employed in organizations or towards various other jobs. During data collection, it is noticed that a half portion of employed audience lived outside the location of Bari Imam. On other side the used approach of measuring the state of financial inclusion in terms of analyzing the quality aspect is also comparatively new. The PLS-SEM approach is considered due to its usefulness for making ideal tackling for solving business problems for unobservable variables and measuring latent variables (usually hard to measure) (Bacon, 1999; Haenlein & Kaplan, 2004; Sarstedt, Ringle, & Hair, 2017; Wong, 2013). Here latent variable is Quality Indicator of Financial Inclusion QIFI that is not easy to measure. Hence the accurate model estimation or goodness of fit before the analysis is also not ensured but variables are abstracted from existing theory base the institutional theory. This theory is focused over the approach that organizations and institutes of the state have to change its system and its conducting behavior instead of changing behaviors of people that will produce good results of achieving improve state of financial well-being. We used PLS-SEM approach because it is good for analyzing the applied research projects as is based on less participants and even having less and varied response rate as highlighted by Wong (2011). During data collection the surveying audience has less awareness towards financial terminologies and processes and majority of employed audience is not comfortable while filling the questionnaires.

3.3.1 Description of Models

Structural Equation Modeling composed of two sub-models as; inner model and outer model. Inner model is used to specify the relationship between study independent variables and dependent latent variables and outer model is used to specify relationship between study latent variables (one or more) and its associate observed indicators (Sarstedt et al., 2017). While analyzing structural equation modeling, the study variables are either exogenous or endogenous in the nature. An exogenous (Independent) variable has path direction pointing towards outwards and no other variables are leading towards it (Hwang et al., 2010). In this study, exogenous variables are Financial Knowledge (FK), Financial Behavior (FB), Internal Dispute Resolution (IDR), Disclosure Requirement (DR), and Distance (D).

Endogenous (Dependent) variable required at least one direction path that is leading towards it and it reflects the effects of study variables (Hwang et al., 2010). In this study, only one latent variable exist and is named as Quality Indicator of Financial Inclusion (QIFI). Each construct variable further divides into different survey items depend upon the structure of designed questionnaire. For measurement specification each question is based on using five point Likert Scale (From strongly agree to strongly disagree).Total set of Twenty Eight (28) questions are asked, among which three (3) questions are based on exploratory assumptions because it is not based on one defined category information. 8th, 12th and 14th number Questions are not considered for SEM evaluation as mentioned in the Appendix A. In addition to low level of existing access factor, measuring quality aspect of financial inclusion is low especially in developing countries (Yangdol & Sarma, 2019). Hence there is no clear unified index available to measure the quality indicator of financial inclusion because currently the factor of quality varied according to the cultural and social circumstances. Measuring aspect of quality dimension is varying depend upon the context of study area. As AFI (2016), stated that;

"The core intake related to measuring the quality aspect of financial inclusion is to provide proper roadmap to improve quality of provided services through regulated service criteria that is within the umbrella of market oriented environment. All the focus is towards providing the importance to client's perspective. The main focus is to give an understandable idea list (but not complete) that the key people can utilize to select the appropriate set of quality indicators which they considered is appropriate to their concern social and policy context" (AFI, 2016, p.2).

Therefore we adopt and adapt the questions from major key sources that are linked to study the financial inclusion across the globe as GPFI (Global Partnership for Financial Inclusion), GFD (Global Findex Database), World Bank, AFI (Alliance for Financial Inclusion) and few are taken from existing literature. For including the distance factor we modified the barrier to use towards context of Pakistani state as developing nation. As GPFI (2016), focus over the maintaining cost as barrier to use but here the cost aspect is considered primary towards measuring access factor in Pakistan. Furthermore structural equation modeling for considering partial least square analysis is based on analyzing the result of two models as measurement model and structural model.

3.3.1.1 Measurement Model

Structural equation modeling is based on analyzing the two sub-models and the first is measurement model (Hwang et al., 2010). This study model is based on reflective measurement scale because the indicators/ variables are highly correlated and interchangeable. For measurement scale basic two criteria the reliability and validity have to measure before evaluating structural model. For measuring the construct reliability of this study constructs internal reliability and composite reliability scales are employed. For measuring the convergent validity Average Variance Extracted (AVE) and the factor loading criteria is used. For achieving the discriminant validity data is analyzed by using cross loadings among study constructs, Fornell-Larcker criterion, and Heterotrait-Monotrait ratio (HTMT) (Haenlein & Kaplan, 2004; Hair et al., 2013).

3.3.1.2 Structural Model

The second model is structural model that is analyzed by using partial least square analysis (Hwang et al., 2010). This model is used to create hypothesis (Wong, 2013). Initially the supposed hypotheses are given in the study that need to be test for development of the significant or insignificant influence among the variables (Petter, Straub, & Rai, 2007).

For evaluating the structural model four steps need to be performed as to analyze the study model for collinearity issue, assess the path co-efficient "Γ" given by Cohen (1988), assess the values for level of R2 (evaluation of co-efficient of Pearson's Determination) given by Hair et al. (2014), and assess the predictive relevance (Q2)/ Stone-Geisser Indicator given by Hair et al. (2014). Each step has defined range of threshold that need to be compared with the study output (Ringle, Silva, & Bido, 2015). For hypothesis testing, the value of t statistics and value of p is compared according to the set values given by researchers. According to Cohen (1988) value of t statistics should be greater than 1.96 ($t > 1.96$). According to hair et al. (2014), the value of p should be equal to and less than 0.05 ($p \leq 0.05$).

3.3.2 Sampling Strategy

In this study, population size is first measured through getting the data from Union Council Number UC2. According to Awais (n.d.), the population of Bari Imam is 21000. Further the adult population count is 14500. Hence for calculating the sample size of finite population, this study used the formula approach given by Yamane (1967) in mention in equation (3.1) and the level of precision (sampling error that provide a range in the which the true value of the population is estimated to be occur) or also known as margin of error is 5 %. Next non probability sampling method is used and among non-probability sampling method purposive sampling method is used.

$$\text{Yamane formula} = n = \frac{N}{1+N(e)2}$$

$$N = 14500, \quad e = 0.05 \tag{3.1}$$

N= 14500/ 1+14500 (0.05)2 = 389.

We calculated the sample size by using approach given by Yamane (1967) but after data collection out of 390 questionnaires 80 questionnaires are with more missing values, and next 99 were filled with just few questions. Hence remaining 211 sample data is considered for analysis and estimation. For calculating minimum sample size for using PLS-SEM we used the method given by Hair et al. (2013) where few assumptions need to be considered as; "Identify significance level, next estimate the statistical power, select the minimum co-efficient of determination (R2 value) for study model, and at last count the maximum number of arrows in model pointing towards a study latent variable. This study implied the significance level of 5%, for statistical power it focus over 80%, and for R2 value it focus over value of as (at least 0.25). Next for identifying the minimum sample size we used the guideline that is provided by Marcoulides and Saunders (2006) as, "the minimum sample size number is dependent on the maximum number of arrows pointing towards the study latent variable as specified by Structural Equation Modelling SEM" (Wong, 2013, p. 5).

Minimum sample size required	Maximum # of arrows pointing at a latent variable in the model
52	2
59	3
65	4
70	5
75	6
80	7
84	8
88	9
91	10

Figure 3.1: Calculating Minimum Sample Size.

Source: Wong, 2013, p. 5.

In our study model, five independent variables are pointing one single arrow towards one latent variable. Five independent variables are; "Financial Literacy and Capability (FLC) divided into two as; Financial Knowledge (FK) and second is Financial Behavior (FB), Second construct is Market Conduct and Consumer Protection (MCCP) that is divided into two as; "Disclosure Requirement (DR), and other is Internal Dispute Resolution (IDR), and Third is Barrier to Use (BU) is composed of one as the new variable Distance (D) based on study context as literature highlighted that quality indicator can be varied and changed based on the social, community, and policy context. Hence in this study five arrows are pointing directly towards the one latent variable. According to Marcoulides and Saunders (2006), the required minimum size is Seventy (70) to complete the minimum requirement for population selection as base on using this model approach (Wong, 2013). But we employed sample size of 211. According to Marcoulides and Saunders (2006), minimum sample size doesn't meant to be bound your self-fixed to that number range and further conducted study suggest to collect data within range of 100-200 in terms of collecting data for modeling. Further the size will be increased if objectives of research required more exploration of data for analyzing the difficult data set (Hoyle, 1995)

3.3.2.1 Purposive Sampling

It is the type of non-random sampling technique that does not focus over the any underlying theories or a defined number of participants. In this type of sampling researcher decide what required needs should be known and determine the number of participants who can willingly provide information base on the required set of experience or knowledge (Etikan, Musa, & Alkassim, 2016). This type of sampling is used because it concentrate over specified people that possess the particular characteristics who will better able to assist the requirement of research. Among purposive sampling Total Population Sampling (TPS) is considered because it count for entire population within given criteria of study. In this study, participants require to meet two requirements as income and education. Income bracket counts for lower class within range of 10,000-to-29000, and for middle class between 30,000-to-70,000. For education level B.A, BSC, and even master level are considered.

3.3.3 Descriptive Statistics

This study counts the concern of ***Income and Education***. For income, lower class and middle class adults are targeted. Lower class income boundary counts for range between 10,000-to-29,000, and for middle class range counts between 30,000-to-70,000. Among 211, 81 participants mark for lower income bracket range and other 130 for middle income range. Further for education level employed participants are asked to mention their educational level. From total, 87 mentioned that they have completed the B.A degree, 93 mentioned they have completed BSC degree, and 21 marked that they have completed master degree.

3.3.3.1 Specification of Variables

Further for measuring variables, certain specifications is formed to align the data, each construct is divided into specified numbers of items / questions such as Financial Knowledge (FK) is divided into set of six items (questions) from FB1 to FB6 ***(Q1, Q2, Q3, Q4, Q5, and Q6)***, next Financial behavior (FB) is divided into set of Six items (questions) from FB1 to FB6 ***(Q7, Q9, Q10, and Q11)***, for Disclosure Requirement (DR) is divided into set of five questions from DR1 to DR4 ***(Q13, Q15, Q16, and Q17)***, next Internal Dispute Resolution (IDR) is divided into set of four items (questions) from IDR1 to IDR4 ***(Q18, Q19, Q20, and Q21),*** for Distance (D) is divided into set of three questions from D1 to D3 ***(Q22, Q23, and Q24)*** and dependent variable Quality Indicator of Financial Inclusion (QIFI) is divided into set of four items (questions) from QIFI-1 to QIFI-4 ***(Q25, Q26, Q27, and Q28)*** that reflects the effect of other variables. From set of twenty eight questions three questions ***(Q8, Q12, and Q14)*** are placed separate for exploratory analysis because they are based on category scale that is usually not used for SEM evaluation.

Table 3.1: Measuring of Variables

Variables will be measured as			
Constructs	Codes	Items	Specifications
FLC (Financial Knowledge)	FK1	Q1	Likert Scale from strongly agree to Strongly disagree.
	FK2	Q2	Likert Scale from strongly agree to Strongly disagree.
	FK3	Q3	Likert Scale from strongly agree to Strongly disagree.
	FK4	Q4	Likert Scale from strongly agree to Strongly disagree.
	FK5	Q5	Likert Scale from strongly agree to Strongly disagree.
	FK6	Q6	Likert Scale from very high to very low.
FLC (Financial Behavior)	FB1	Q7	Likert Scale from strongly agree to Strongly disagree.

	FB2	Q9	Likert Scale from strongly agree to Strongly disagree.
	FB3	Q10	Likert Scale from strongly agree to Strongly disagree.
	FB4	Q11	Likert Scale from strongly agree to Strongly disagree.
MCCP (Disclosure Requirement)	DR1	Q13	Likert Scale from strongly agree to Strongly disagree.
	DR2	Q15	Likert Scale from strongly agree to Strongly disagree.
	DR3	Q16	Likert Scale from strongly agree to Strongly disagree.
	DR4	Q17	Likert Scale from strongly agree to Strongly disagree.
MCCP (Internal Dispute Resolution)	IDR1	Q18	Likert Scale from strongly agree to Strongly disagree.
	IDR2	Q19	Likert Scale from strongly agree to Strongly disagree.
	IDR3	Q20	Likert Scale from strongly agree to Strongly disagree.
	IDR4	Q21	Likert Scale from strongly agree to Strongly disagree.
Barrier to Use (Distance)	D1	Q22	Likert Scale from strongly agree to Strongly disagree.
	D2	Q23	Likert Scale from strongly agree to Strongly disagree.
	D3	Q24	Likert Scale from strongly agree to Strongly disagree.
Quality Indicator of Financial inclusion (QIFI)	QIFI-1	Q25	Likert Scale from strongly agree to Strongly disagree.

	QIFI-2	Q26	Likert Scale from strongly agree to Strongly disagree.
	QIFI3	Q27	Likert Scale from strongly agree to Strongly disagree.
	QIFI4	Q28	Likert Scale from strongly agree to Strongly disagree.

Note. *First column is filled with the variables used in this study, *second column is filled with entering their abbreviations, and third is linked to the questions in relation with associate variable mentioned in left, and in * last column scale used to measure these variables is mentioned.

First variable Financial Knowledge (FK) is divided into set of six questions (Q1 to Q6) that are aimed to grasp the prevailing knowledge base of people lived in Bari Imam related to basic set of formal financial system that is built to create an inclusive environment. These questions include few aspects as; to identified the familiarity level of people related to microfinance institutions and banks, whether they feel comfortable with prevailing financial terminologies related to banking services, there idea related to scene of business for winning and losing the monetary rewards, increase inflation rate would have affect over managing their daily life expenditures, and rating their financial knowledge base as compared to people surround them.

Second variable Financial Behavior (FB) is divided into set of six questions but two questions are considered for exploratory description and remaining four questions Q7, Q9, Q10, and Q11 is considered for the SEM evaluation and is associate to explain the their behaviors related to approaching different financial situations as; to note whether majority of participants use to make a financial budget each month or not, they approach banks to take loan for purchasing physical property, they behavior intakes related to using mobile money operators to conduct routine tasks such as sending or receiving money through easy paisa etc., and to identify whether they are feasible for paying exchange charges for using provided products and services.

Third variable Disclosure Requirement (DR) is divided into set of five questions and among them one question is separate for exploratory description and remaining four are considered here Q13, Q15, Q16, and Q17. This variable is considered to identify the relationship count between both parties the suppliers and users from side of participants as; to notice the level of discomfort or hesitation people feel while visiting banks, further to ask participants that they are comfortable to perform transactions with agents or bankers (here the main aim behind asking these two questions is to abstract the opinions of participants related to measure their state of discomfort is with the banking environment or with the bankers), furthermore to check whether microfinance banks are successful in communicating their message to the people, and to figure out whether financial institutions are working for increasing the financial educations by linking to various educational institutes or not. These questions reflect the state of efforts that institutes aims for building friendly relationship with their audience.

Fourth variable Internal Dispute Resolution (IDR) is divided into set four questions (Q18, Q19, Q20, and Q21) that are considered for SEM evaluation. This variable is selected to notice the level of understanding by the users related to internal mismanagement of banking system as; to identify whether they have idea related to reporting the disputes if occurred with banking staff or not, further they are agree that such mismanagement can be occurred by the staff or not, if occurred they can approach to consumer protection authority to consider the issue, and even if such situation occurred then problem is solve within next two months of occurrence or not. In Pakistan, awareness related to banking system is comparatively low and majority of people have no knowledge related to solving issues that is linked to service providers (banking staff).

Fifth variable Distance (D) is divided into set of three questions (Q22, Q23, and Q24). This variable is considered because distance factor is considered among the important barriers for availing the services. People avoid long distances for availing any provided services. the selected questions aimed to find whether decreasing this aspect will increase the usage of services by the adults or not as; to check whether people prefer to save their money at their homes or to approaching for located banks, further to note that satisfied number of branches are available to adults lived in Bari Imam, and to directly ask whether longer distance has a negative influence over using financial inclusion products and services.

One latent/dependent variable Quality Indicator of Financial Inclusion (QIFI) is considered. This variable is divided into set of four questions (Q25, Q26, Q27, and Q28). These questions aims to find the effect of independent variables over quality indicator. What people think about the statement that if their knowledge base is increased will have positive effect over quality aspect of provided financial inclusion services? Furthermore if separate course of financial literacy is provided to the schooling system will help the people in easily approaching banking environment. To ask people if service providers make their best efforts to solve the hurdles you faced while using banking services will help to increase the quality state of financial inclusion. And last question is related to ask people if institutes reducing the distance by increasing the access factor will increase the use of financial services.

3.4 Exploratory Data Analysis

Next three questions are excluded from the PLS-SEM data analysis because it is not based on the likert scale and are confined over using category scales (ordinal scale). According to Hair et al. (2010), avoid using categorical scales for studying measurement model in analyzing the structural equation modelling.

First question number eight (8), lead to grasp the concept of audience related to fulfil the requirement of emergency loan availability. Participants initially avoid to share their information because majority consider that sharing their financial state is not appropriate for them. In case of arrange monetary aspect for sudden uncertain situation, 63 (30%) participants out of 211 number select the option of borrowing from friends, while 57 (27%) participants select to concern for more working, next 48 (23%) participants select the option of selling their assets, 21 (10%) participants select the option of using their only savings, and 21 (10%) participants select the option of borrowing from banks.

Next twelve (12) number question is related to highlight the reason among mention options that is considered as inappropriate behavior to avoid while involving in financial trouble. Where 141 (67%) participants choose first option that is to avoid disclosing their information to a maximum extent, 13 (6%) participants make an effort to acquire knowledge base related to economics and finance, next nobody accept the third option that is "trusting and leaving the entire over providers when it is difficult to make a decision", 38 (18%) participants select the option of "checking the reviews of users before planning to purchase" and 19 (9%) participants select the option of "Don't know".

Last question (14) is linked to provide reason for feeling hesitation for visiting banks, where 21 (10%) participants select the option of "unfriendly environment", 10 (5%) participants select the option of "people's getup", 63 (30%) participants select the option of "Language issues", next 15 (32%) Participants select the option of "documentation issue", 40 (84%) participants select the option of "all of them" and 0 participants select the options of "none of them".

People of Bari Imam have a very diversify opinions towards using the financial inclusion services. Their dependence over banking system is very less as is depicted from these three questions as; "10% participants will relay over banks for arranging emergency loan requirement, nobody trust entirely over the service providers because they considered them as a source of being leading towards financial trouble, and forty percent participants consider all the options (unfriendly environment, people's getup, Language and Documentation issues) as a cause for their feeling of hesitation for approaching and using the provided services).

Table 3.2: Responses of Participants for the Exploratory Assessment

Q# 8 **If you had an emergency that required money/loan urgently, where would you get the Money/Loan?**	**Number of participants select the concern option out of 211**	**Percentage count of responses**
1-Borrow from friends	57	27%
2-Work more	63	30%
3-Sell assets	49	23%
4-Use only savings	21	10%
5-Loan from banks	21	10%
Q# 12 **Which of the following is inappropriate as a behavior to avoid being involved in financial trouble? Choose only one?**		
1-Avoiding disclosing your personal information as much as possible.	141	67%

2-Making an effort to acquire financial and economic knowledge.	13	6%
3-Trusting and leaving over providers when it is difficult to make a decision.	0	0
4-Checking the user reviews of the product you are planning to purchase.	38	18%
5-Don't know.	19	9%
Q# 14 If yes, then reasons for feeling hesitation or discomfort while visiting?		
1-Unfriendly environment.	21	10%
2-People's getup.	10	5%
3-Language issues.	63	30%
4-Documentation issue.	32	15%
5-All of them.	84	40%
6-None of them.	0	0

Note. *First column entered the questions, *second column counts for the number of answers given to the corresponding question, and *third columns give the percentage of responses.

Hence this study reflect the series of issues in building the quality base of financial inclusion in that Bari Imam area. Data gathering consumed a lot of time because majority of people are initially not much cleared with the concept of financial inclusion. Instead of introducing the name of financial inclusion, people are more familiar with the concepts of banking, savings, ATMs, and easy paisa services. We tried to get the maximum response output, in order to produce some initial intakes related to the concept of introducing the quality indicator of financial inclusion. Results shows the goodness of fit that reflect the acceptance of examine the inclusive market through this angel. This will further help to monitor the operating aspect in terms of statistical measures.

CHAPTER 4

DATA ANALYSIS

4.1 Introduction

This chapter performed the data analysis of the collected data by using the Smart PLs approach. Here this approach is used to analysis the data by finding the correlation between the constructs of this study instead of using the regression model approach for measurement model and for measuring the structural model it is based on using regression between the latent construct through using the data and model of measurement model. The detail associate to analyze both the models are described in this chapter. Where the core focus of this approach is to check the model fit. First the measurement model is used to analyze the correlation between all the latent or unobservable variables with its own observable items or variables. After checking the constructs own reliability and validity through finding correlation then structural model is analyzed. In structural model path analysis is tested that determine the goodness of fit. This model test the model hypothesis and generate the new tested hypothesis. Like it determine whether the proposed hypotheses are accepted or are rejected. Structural model is used to test the causal relation that is the coefficient of the path between the independent variable (latent variable) and dependent variable. All the analysis is describe in detail in this chapter with using tables and model figures.

4.2 Results of Measurement Model

Data is analyzed by adjusting two models and this is done in two steps; first measurement model is evaluated and after required adjustments path model is evaluated. This study is based on using the approach of finding correlations between the study variables instead of focusing over approach of finding regression analysis between study variables. Hence the matter of analysis is to find the correlation factor between the Observable Variables (OB) and Latent Variables (LV).

4.2.1 Outer Factor loadings

First step of measuring the measurement model is to identify the items with lower factor loadings if present in the data and remove it from the data set. First for checking the Indicator Reliability (IR) outer loadings numbers are checked and value is compared with the value given by the researchers in their previous studies such as 0.70 or higher (value $\geq$ 0.70) value is preferred but if study is based on exploratory research assumptions then 0.4 or higher is acceptable (Hulland, 1999). But in this study 0.70 criteria is used. After collection of primary data through questionnaire survey values are checked and among twenty five items five items shows the lower factor loadings and are not removed automatically from the data set and model shows it with lower factor loadings. These five removed items are DR1, FK1, FK2, FK3, and KF4. Disclosure Requirement (DR1) show value of 0.158 that is much lower than 0.70 instead is even more less than the used criteria for finding exploratory research assumptions (0.40). Similarly Fk1 show value of 0.007, Fk2 show value of 0.120, Fk3 show value of 0.149, and FK5 show value of 0.001. The results are present in the Table 4.1.

Table 4.1: Outer Loadings of Constructs

	D	DR	FB	FK	IDR	QIFI
D1	**0.892**					
D2	**0.880**					
D3	**0.877**					
DR1		**0.158**				
DR2		**0.896**				
DR3		**0.895**				
DR4		**0.903**				
FB1			**0.752**			
FB2			**0.831**			
FB3			**0.701**			
FB4			**0.846**			
FK1				**0.007**		
FK2				**-0.120**		
FK3				**0.149**		
FK4				**0.001**		
FK5				**0.896**		
FK6				**0.805**		
IDR1					**0.874**	
IDR2					**0.881**	
IDR3					**0.905**	
IDR4					**0.883**	
QIFI1						**0.828**
QIFI2						**0.856**
QIFI3						**0.900**
QIFI4						**0.901**

Note. Values in red color represent the outer loadings of data.

4.2.2 Convergent Validity

Second step is to check the Convergent Validity (CV) of the data. It is obtained by observing the Average Variance Extracted (AVEs) of the data. For acceptance the value of the constructs should be greater the value of 0.50 (AVE > 0.50) as given by Fornell and Larcker (Henseler et al., 2009). It showed that how much on an average the group of variables correlate positively with respected Latent Variable (LV) or variables. Here we have to check that how much the Observable Variables (OB) correlate with the study Latent Variable (LV). First latent variable for measurement model is ***Financial Knowledge (FK)*** that is divided into set of 6 observable items as; FK1, FK2, KF3, KF4, KF5, and KF6. But among 6, four variables show lower factor loading (FK1, FK2, FK3, and KF4) and software analyze the data for remaining two FK5 and KF6. Second latent variable is ***Financial Behavior (FB)*** that is divided into set of 4 observable items; as FB1, FB2, FB3, and FB4. Third latent variable is ***Disclosure Requirement (DR)*** that is divided into set of 4 observable items as; DR1, DR2, DR3, and DR4. Here again one OV show lower factor loading (DR1) and is removed from the data. Fourth latent variable is ***Internal Dispute Resolution (IDR)*** that is divided into set of 4 observable items as; IDR1, IDR2, IDR3, and IDR4. Fifth variable is Distance (D) that is divided into set of 3 observable variables as; D1, D2, and D3. Last latent variable is Quality Indicator of Financial Inclusion (QIFI) that is divided into set of 4 observable variables as; QIFI-1, QIFI-2, QIFI-3, and QIFI-4.

Convergent validity is acceptable for the latent variables when the value of Average Variance Extract is greater the 0.50 (AVE > 0.50) (Fornell & Larcker, 1981).which shows that model converges with satisfactory output. The AVE value of first latent variable Financial Knowledge (KF) is 0.571 that is greater than the required value and is acceptable. The value of second latent variable Financial Behavior (FB) is 0.616, for third latent variable Disclosure Requirement (DR) is 0.611, value for fourth latent variable Internal Dispute Resolution (IDR) is 0.785, value for fifth latent variable Distance (D) is 0.780, and for sixth latent variable Quality Indicator of financial Inclusion (QIFI) value of AVE is 0.873, and all these values are above the required value. Hence data indicate the presence of Convergent Validity (CV), which highlight that observable items of each latent variable correlates positively with its latent variable. The results for convergent validity is presented in Table 4.2.

4.2.3 Testing Reliability of Data

Third step is to test the reliability of study constructs and is based on values of Cronbach's Alpha (CA) and on Composite Reliability (CR). If the output value for CA of construct is 0.70 or higher (CA $\geq$ 0.70) than is acceptable. (Bagozzi & Yi, 1988). Cronbach's Alpha shows the inter-correlations of study variables and show whether the sample is free of biases or not (Hair et al., 2014). All the values are above the 0.7 and are acceptable. The Cronbach's Alpha (CA) value for Distance D is 0.859, CA for Disclosure Requirement (DR) is 0.741, CA value for Financial Behavior (FB) is 0.792, CA value for Financial Knowledge (FK) is 0.736, CA value for Internal Dispute Resolution (IDR) is 0.909, and CA value for Quality Indicator of Financial Inclusion (QIFI) is 0.902. Hence all the values shows reliability concern from comparing it with the value of Cronbach's Alpha (CA). Which indicate the inter-correlations between variables.

After removing the values for outer loadings the Composite Reliability (CR) for remaining items of study constructs are checked. This reliability finding criteria is most suited while using Smart PLs because it prioritize all study variables dependent about their reliability concerns. If the value for Observable Variable (OV) are reliable towards their subjected Latent Variable (LV) that is above 0.70 then is considered satisfactory (Hair et al., 2014). This study variables shows composite reliability as all the values are above 0.70. The value of Composite Reliability (CR) for construct Distance (D) is 0.904, for Disclosure Requirement (DR) value of CR is 0.840, for Financial Behavior (FB) value of CR is 0.864, for Financial Knowledge (FK) value of CR is 0.701, for Internal Dispute Resolution (IDR) value of CR is 0.836, and for Quality Indicator of Financial Knowledge (QIFI) value of CR is 0.905. The results for representing the reliability of data through using Cronbach's Alpha (CA) and Composite Reliability (CR) is presented in Table 4.2.

Table 4.2: Construct Reliability and Validity

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
D	**0.859**	**0.904**	**0.780**
DR	**0.741**	**0.840**	**0.611**
FB	**0.792**	**0.864**	**0.616**
FK	**0.736**	**0.701**	**0.571**
IDR	**0.909**	**0.836**	**0.785**
QIFI	**0.902**	**0.905**	**0.873**

Note. For CA, values $\geq$ 0.70, for CB, values > 0.70, and for AVE values > 0.50 is acceptable

4.2.4 Discriminant Validity

Fourth step is to test the Discriminant Validity (DV) among the study constructs. After testing the reliability and validity of latent variables with their subjective observable variables, now the differentiation among the all the constructs are tested by using discriminant validity criteria. This shows that all constructs are different from one and other. In this study, all constructs Financial Knowledge (KF), Financial Behavior (FB), Disclosure Requirement (DR), Internal Dispute Resolution (IDR), Distance (D), and Quality Indicator of Financial Inclusion (QIFI) are different from one and other. The DV is measured through using the different methods available in Smart PLs. these methods are Fornell and Larcker Criteria, Cross loadings and third is Heterotrait-Monotriat ratio (HTMT) criteria (Hair et al., 2014).

For Fornell and Larcker Criterion, the square root of Average Variance Extracted (AVE) for particular study construct should be higher than correlation with all other constructs in the same row. More simply it describe that the values of square root of AVE for the construct should be greater than inter-construct correlation (Henseler, 2015). In this study the value of square root of AVE for Distance (D) construct is higher than its values for rest of other constructs as; D-D is 0.883, D-DR is 0.601, D-FB is 0.531, D-FK is 0.521, D-IDR is 0.585, and for D-QIFI is 0.511. Which shows that value of D-D is greater than its correlation with all other constructs. Similarly all other constructs shows the same pattern. Where value for DR-DR is 0.782, value for FB-FB is 0.785, FK-FK is 0.756, IDR-IDR is 0.886, and QIFI-QIFI is 0.934 that is greater than rest of other values in same row. The result for Fornell and Larcker ratio is present in Table 4.3.

Table 4.3: Fornell and Larcker ratio

	D	DR	FB	FK_	IDR	QIFI
D	***0.883***					
DR	**0.601**	***0.782***				
FB	**0.531**	**0.496**	***0.785***			
FK	**0.521**	**0.518**	**0.531**	***0.756***		
IDR	**0.585**	**0.402**	**0.506**	**0.524**	***0.886***	
QIFI	**0.511**	**0.541**	**0.544**	**0.239**	**0.527**	***0.934***

Note. Values in italic represent Square-root of AVE.

Second method of determining the DV is through using Cross loading criteria. Here all the study latent variables are cross load with all other variables including with their own. The purpose of cross load is to check that particular one item of study should load better with its latent variable other the rest of all other variables (Henseler, 2015). The factor initially show low factor loading indicate lower cross loadings as well. Here the same 5 removed items that are removed showed the lower cross loadings. DR1 show the value of 0.156 that is already very low even much below than 0.50 value. Similarly the values of FK1, FK2, FK3, and FK4 display the same results. After the rest of items loads better to their own construct as comparing to the rest of others. As 80% of data cross load better to their own item, which shows the existence of discriminant validity. Results are presented in Table 4.4.

Table 4.4: Cross Loadings of Items

	D	DR	FB	FK	IDR	QIFI
D1	**0.892***	**0.158**	**0.520**	**0.413**	**0.671**	**0.606**
D2	**0.880***	**0.601**	**0.427**	**0.357**	**0.672**	**0.598**
D3	**0.877***	**0.668**	**0.456**	**0.342**	**0.603**	**0.592**
DR1	**0.116**	**0.156****	**0.068**	**0.130**	**0.133**	**0.038**
DR2	**0.743**	**0.896***	**0.436**	**0.347**	**0.606**	**0.564**
DR3	**0.602**	**0.895***	**0.414**	**0.304**	**0.807**	**0.669**
DR4	**0.590**	**0.903***	**0.487**	**0.366**	**0.618**	**0.669**
FB1	**0.319**	**0.308**	**0.752***	**0.473**	**0.325**	**0.358**
FB2	**0.432**	**0.397**	**0.831***	**0.529**	**0.367**	**0.505**
FB3	**0.437**	**0.449**	**0.701***	**0.586**	**0.442**	**0.573**
FB4	**0.441**	**0.368**	**0.846***	**0.571**	**0.420**	**0.527**
FK1	**-0.021**	**0.061**	**-0.053**	**0.007****	**0.044**	**0.018**
FK2	**-0.066**	**-0.103**	**-0.078**	**-0.120****	**-0.023**	**-0.040**
FK3	**-0.008**	**0.009**	**0.065**	**0.149****	**-0.015**	**0.112**
FK4	**0.136**	**0.032**	**-0.015**	**0.001****	**0.074**	**0.006**
FK5	**0.396**	**0.355**	**0.526**	**0.896***	**0.364**	**0.526**
FK6	**0.330**	**0.286**	**0.410**	**0.805***	**0.280**	**0.419**
IDR1	**0.612**	**0.590**	**0.415**	**0.346**	**0.874***	**0.634**
IDR2	**0.579**	**0.665**	**0.470**	**0.308**	**0.881***	**0.651**
IDR3	**0.701**	**0.612**	**0.458**	**0.323**	**0.905***	**0.626**
IDR4	**0.558**	**0.530**	**0.447**	**0.346**	**0.883***	**0.603**
QIFI1	**0.564**	**0.605**	**0.576**	**0.519**	**0.624**	**0.898***
QIFI2	**0.628**	**0.676**	**0.615**	**0.543**	**0.627**	**0.896***
QIFI3	**0.506**	**0.652**	**0.594**	**0.553**	**0.645**	**0.970***
QIFI4	**0.685**	**0.626**	**0.622**	**0.577**	**0.700**	**0.971***

Note: * represent the factors that are acceptable and ** represent the factors that are not acceptable.

Third method of calculating the discriminant validity is to assess the data through using HeteroTrait-MonoTrait (HTMT) ratio (Henseler, 2015). If value of HTMT for particular construct is less than 0.90 (HTMT < 0.90), than the construct show discriminant validity while using HTMT ratio criteria. All constructs (DR-D = 0.724, FB-DR = 0.597, FK-FB = 0.505, and QIFI-IDR = 0.780) shows values less than 0.90 and all are acceptable. Hence from using all the three define methods data shows the existence of Discriminant Validity. The results are presented in Table 4.5.

Table 4.5: Heterotrait-MonoTrait (HTMT) ratio

	D	DR	FB	FK	IDR	QIFI
D						
DR	***0.724***					
FB	**0.627**	***0.597***				
FK	**0.679**	**0.610**	***0.799***			
IDR	**0.554**	**0.541**	**0.584**	***0.505***		
QIFI	**0.664**	**0.807**	**0.721**	**0.738**	***0.780***	

Note. Values in italic represent HTMT ratios.

4.3 Figure of Measurement Model

The model here describes the cross loadings and outer loadings between the observable items and the particular construct associate to the observe variables. The description for the reliability and validity is already discussed where results show its presence. This model give image explanation for above conducted analysis. This model explain the relationship between the outer loadings recognize as the outer model. Where analysis of latent variable is measured associate to its observed study variables. It further shows the path influence between the study constructs such as 0.684% change in the QIFI will produce effect over other Independent Variables (D, DR, IDR, FK, and FB).

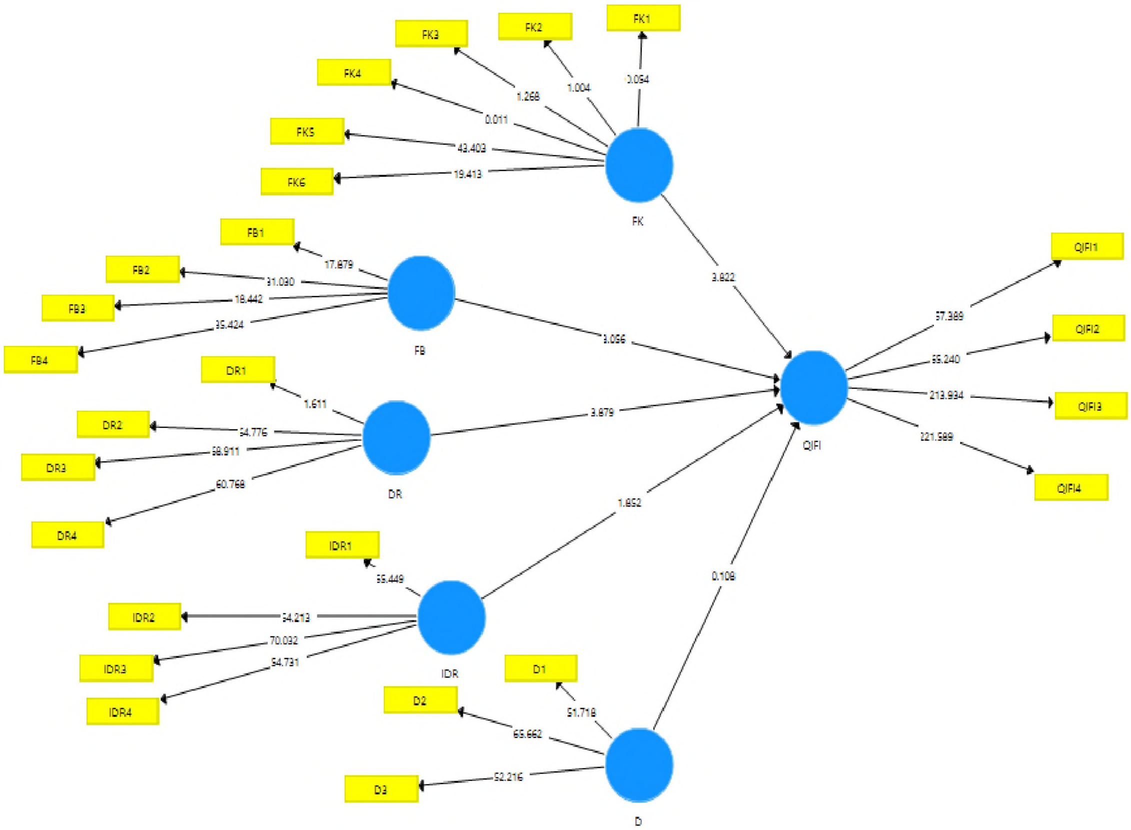

Figure 4.1: Diagram of Measurement model

4.4 Results of Structural Model

This model approach reflects the "path hypothesized in the study research framework". This model is used to evaluate the evaluation of path coefficients (relationship between constructs of the study) and their statistical significance. As this model approach is assessed on the bases of values of R2, Q2, and the significance of path (Wong, 2013). Where path co-efficient is "Γ", R2 is "evaluation of Co-efficient of Pearson's Determination", and Q2 Stone-Geisser Indicator is used to assess the predictive relevance.

The goodness of fit concern is a dependent variable on determining the strength of each structural path that is determined by the value of R2 for the study dependent variable (Hair et al., 2021). The value of R2 should be equal to or over 0.1 (R2 $\geq$ 0.10) (Falk & Maller, 1992). According to Cohen (1998) if value of R2 is equal to or above 0.26 then model is substantial (hair et al., 2014). The result in table 9 shows that all value of R2 is greater than 0.1 and is 0.684. Which shows the predictive capability of the model is established. *R^2 shows the determinant of coefficient measurement its overall impact size in dependent variable, it value is 0.684, which shows that 68.4% change comes in* quality indicator of financial inclusion through the independent variable which used in this study.

Secondly the value of Q2 is highlighted that show if the value of Q2 is above 0, it highlighted the predictive relevance of model. The result of this study (Q2= 0.585) shows that there is significance in the prediction of the constructs (see table 9). Furthermore model fit was assessed using SRMR (Standardized Root Mean Square Residual). The value of SRMR should be less than 0.9 or in some cases its value should be 0.8, in table 9 result shows that value of SRMR is 0.064 which shows that the model is fit in this case. This study used 5000 subsamples for generating bootstrapping with 97% confidence interval and it is all different from the zero which shows the significant relationship with the dependent variable, if they increase it increase the dependent variable, all results in table 9.

Furthermore assessment of the goodness of fit, hypotheses were tested to ascertain the significance of the relationship. H1 evaluates whether Financial Knowledge (FK) has a significant impact on Quality Indicator of Financial Inclusion (QIFI) or not. The result reveals that KF has a significant impact over QIFI (Beta value = 0.237, t = 3.770, p = 0.000). Hence H1 is accepted. H2 evaluate whether Financial Behavior (FB) has a significant impact over QIFI or not. The result reveals that KB has a significant impact over QIFI (Beta value = 0.180, t = 3.092, p = 0.002). Hence H2 is accepted. H3 evaluate whether Disclosure Requirement (DR) has a significant impact on QIFI or not. The result reveals that DR has a significant impact over QIFI (Beta value = 0.370, t = 3.960, p = 0.000) hence H3 is accepted. H4 evaluate whether Internal Dispute Resolution (IDR) has a significant impact over QIFI or not. The result reveals that IDR has insignificant impact over QIFI (Beta value = 0.222, t = 1.911, p = 0.056). Here the value of t statistics or the T test shows the value less than 1.96 and p value is above the value of 0.05. Hence H4 is rejected. H5 is to evaluate whether Distance (D) has a significant impact over QIFI or not. The result reveals that D has insignificant impact or influence over QIFI (Beta value = 0.009, t = 0.110, p = 0.912). Here for t statistics value is less than 1.96 (0.110) and for p value is it is greater than 0.05 (0.912). Hence H5 is rejected.

For considering the items of Financial Knowledge (KF) and Disclosure Requirement (DR), the responses of the participants' leads to create the issue of lower factor loadings and four (4) study items from KF and one (1) from DR are removed. Distance as the new variable to the construct of Barrier to Use is not considered important aspect to measure the quality state of inclusion in Bari Imam. Further for Financial Knowledge (FK) and Financial Behavior (FB) people are confused to separate them as the result shows different outcomes, for both literacy and capability aspect the outcome show positive influence. Further for measuring the Market Conduct and Consumer Protection (MCCP), the one among two categories is accepted as Disclosure requirement (accepted) and second category that is Internal Dispute Resolution (IDR) (rejected). Participants are aware with the issues for using the banking services. They feel hesitation and discomfort for using such services and considered the issues of language understanding, documentation issues, rules and regulation aspect, and even for security and trusting issues. In short, the aspect of quality is considered important in that small village but the efforts of key entities are very less to generate awareness programs and the associate training sections.

H1: Financial Knowledge (FK) has a significant effect over Quality Indicator of Financial Inclusion (QIFI).

H2: Financial Behavior (FB) has a significant effect over Quality Indicator of Financial Inclusion (QIFI).

H3: Disclosure Requirement (DR) has a significant effect over Quality Indicator of Financial Inclusion (QIFI).

H4: Internal Disclosure Requirement (IDR) has insignificance effect over Quality Indicator of Financial Inclusion (QIFI).

H5: Distance (D) has insignificant effect over Quality Indicator of Financial Inclusion (QIFI).

Table 4.6: Result of Structural Model

HYPOTHESES	B	SE	T	P	2.5%	97.5%	Results
FK -> QIFI	**0.237**	**0.063**	**3.770**	**0.000**	**0.115**	**0.361**	Supported
FB -> QIFI	**0.180**	**0.058**	**3.092**	**0.002**	**0.071**	**0.300**	Supported
DR -> QIFI	**0.370**	**0.093**	**3.960**	**0.000**	**0.186**	**0.554**	Supported
IDR -> QIFI	**0.222**	**0.116**	**1.911**	**0.056**	**0.010**	**0.450**	Rejected
D -> QIFI	**0.009**	**0.085**	**0.110**	**0.912**	**0.170**	**0.167**	Rejected
	SRMR	**R2**	**Q2**		**R Square Adjusted**		
	0.064	**0.684**	**0.585**		**0.676**		

Note. B = Beta Coefficient, SE = Standard Error, T = t- Statistics evaluate the significance of correlations and regression of the variables, P = Probability (P) value * Relationship are significant when value of P ≤ 0.05, FK: Financial Knowledge, FB: Financial Behavior, DR: Disclosure Requirement, IDR: Internal Dispute Resolution, D: Distance, and QIFI: Quality Indicator of Financial Inclusion.

4.4.1 Figure of Structural Model

Although Smart PLs used one model for analyzing the measurement and structural model but in structural model few things are added. In measurement model factor loading of single construct is loaded in respected to own latent variable. But in structural model inner model is analyzed by analysis the path between all latent variables. It shows the values of t- statistics for independent to dependent variables. In other word determine the influence criteria and what is discussed in testing hypothesis. The arrow heads lines marked with values of t-statistics and circle that show the dependent variable QIFI is marked with the value inside that shows the value of R2. These just describe the conducted calculation analysis into model form.

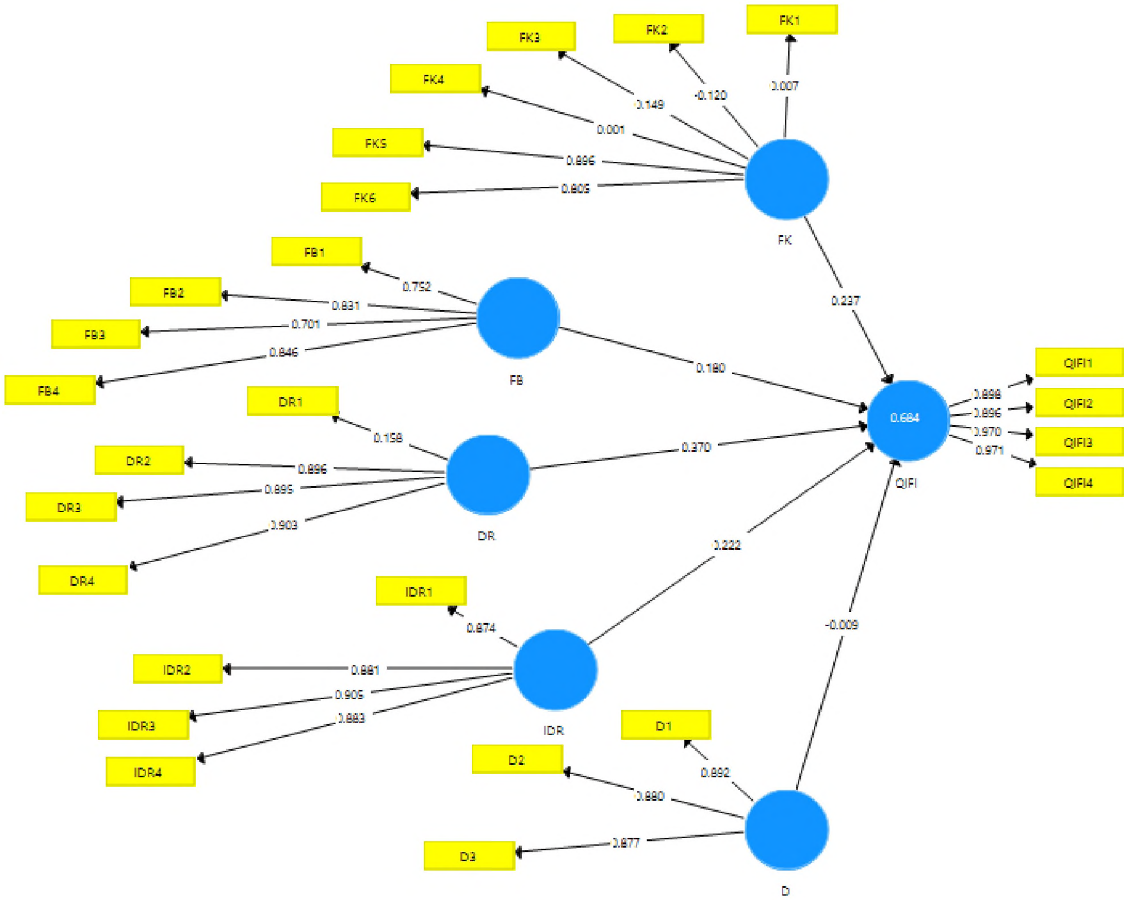

Figure 4.2: Diagram of Structural Model.

CHAPTER 5

CONCLUSION AND DISCUSSION

5.1 Discussion

This study is based on answering the few objectives that are linked to measure the quality dimension of financial inclusion in Bari Imam (Islamabad) through using the Smart PLs approach. Initially the data is gathered through filling questionnaires from the adults lived in Bari Imam. The study participants are belonging to income brackets of lower income and middle class audience. Then data is gathered that depict the level of understanding by the participants related to quality indicator of financial inclusion. Initiated by describing the measurement of financial inclusion indicators as highlighted by Haning & Jansen (2010), and Ledgerwood (2013). Furthermore quality indicator is explained through three existing categories that are Financial Literacy and Capability (FLC), Market Conduct and Consumer Protection (MCCP), and Barrier to Use (BU) was highlighted by Global Partnership for Financial Inclusion (GPFI) (2014 & 2016). Further FLC is divided into two sub-categories as Financial Knowledge (FK), and Financial Behavior (FB), MCCP is also divided into two as Disclosure Requirement (DR), and Dispute Resolution (DR') dispute resolution is further divided into Internal Dispute Resolution (IDR) and External Dispute Resolution (EDR) as highlighted by GPFI (2016).

Third category barrier to use was divided into aspects of lack of money, operating and maintaining cash but is somehow cover in measuring the assess factor as highlighted by Adil & Jalil (2020) but we have choose the factor of distance as the barrier new to include in quality category given by GPFI as; Alliance for Financial Inclusion (AFI) (2016) highlighted that quality indicator of financial inclusion is based on social community and policy context and is changed for every country and city. Hence we have used the factor of distance as a barrier was highlighted by Hassan et al. (2020), and Tariq (2021). Further the existence of account ownership behavior is indicated in the study by comparing the state of ownership in Pakistan as compared with South Asia, India, Bangladesh, and Sri Lanka, where Pakistan has lowest percentage of account ownership as 13% was highlighted by Noor, Batool, & Arshad (2020). Next the existing problem of conducted unbalance research work out for supply side and demand side of measuring financial inclusion is discussed was highlighted by Ledgerwood et al. (2013). The communication gap between the providers and users of the services is indicated as highlighted by Bhanot, Bapat, &

Bera (2012). Furthermore the more study focus over access factor will not always produce increase level in using of services is indicated was highlighted by Ledgerwood et al. (2013). Next various programs that are introduced by the State Bank of Pakistan (SBP) is described was highlighted by Noreen et al. (2022) and State Bank of Pakistan (SBP) (2018, 2019, & 2021).

Further the concept of quality instance associate to financial inclusion is linked to the existing institutional theory. Where the focus of the theory is explained that it is link to the financial well-being in terms of putting efforts by the institutions instead of forcing people to change their behaviors as given by Stiglitz, Sen, & Fitoussi (2009). In this study financial well-being is inclined towards measuring the focus of financial inclusion by improving the quality indicator that improves the well-being in terms of focusing over inclusive environment. This theory focus of few categories of quality indicator but here these factors were considered to produce their effects over the rest of financial institutions and markets as highlighted by Kempson, finney, & Poppe (2017). But in this study entire focus is over quality indicators and for this all categories of quality dimension is considered as given by GPFI (2014) and AFI (2016). The conceptual framework is designed based on application of this theory, where impact of improving the categories of quality indicator will increase the financial well-being and use of the provided financial inclusion products and services is explained.

First two objectives of the study is to investigate the quality indicator of financial inclusion through existing level of Financial Literacy and Capability (FLC). Literature include the training programs related to rest of cities located in Pakistan as highlighted by State Bank of Pakistan (SBP) (2021). Further the training sections given by “National Institute of Banking & Finance” to 45 different districts of Pakistan, aimed to provide knowledge base to the school going children for increasing the aspect of this factor is indicated was highlighted by Noreen et al. (2022). For financial knowledge the response output is focused over few questions related to few basic concepts of knowledge aspects as related to the concepts of Interest rate, risk diversification, insurance purposes and for inflation was highlighted by GPFI (2016).

Further literature show the positive influence among financial inclusion and financial literacy as highlighted by Abel, Muttandwa & Roux (2018). Further Cole, Sampson, and Zia (2011) conduct study where the financial literacy is considered the good predictor of demand for using formal financial services. Second knowledge category is considered the base factor for having idea about how to use the concern services and make better financial decisions was highlighted by Lusardi & Mitchell (2007). In short the literature highlight the positive link between knowledge and financial inclusion was highlighted by Uddin, Chowdhury, & Islam (2017), and Zins & Weill (2016). Six items or questions (KF1, KF2, Kf3, KF4, FK5, and FK6) are abstracted from difference sources as highlight in methodology section. Among which four items were removed due to lower factor loading are FK1, FK2, KF3 and KF4. Where values for outer loadings are; Fk1 shows value of 0.007, Fk2 show value of 0.120, Fk3 show value of 0.149, and FK5 show value of 0.001 Next value for Fornell-Larcker Criterion, where values for AVE are greater than inter-construct correlation (FK= 0.758) as highlighted by Kwong & Wong (2013). Next for HeteroTrait-Monotrait HTMT values are below the threshold of 0.90 (FK= 0.799) was highlighted by Henseler et al. (2015). For structural model interpretation the concern hypothesis H1 first objective shows positive influence over Quality Indicator of Financial Inclusion (QIFI) as value of p is below 0.05 (p = 0.000) as highlighted by hair et al. (2019).

Further for Financial Behavior FB study used total of 6 items where two are separately treated other than SEM data evaluation. Next among Four items three are included as (FB1, FB2, and FB3) and no item is eliminated because if there is no lower factor loadings. For Fornell-larker Criterion, where the values of AVE are greater than the inter-construct correlation (FB= 0.446). Next for HeteroTrait-Monotrait (HTMT) values are below the threshold of 0.90 (FB= 0.785) was highlighted by Henseler et al. (2015). For Structural model interpretation the concern hypothesis H2 second objective shows significance influence over the Quality Indicator of Financial Inclusion QIFI as the value of p is below 0.05 (0.002) was highlighted by Hair et al. (2019).

For MCCP, study describe the components of relationship building with the clients for making strong state of disclosure requirement such as use of plain language concerns, providing clear information related to maintenance of accounts and associate procedures as highlighted by GPFI (2014). For dispute resolution, this study focus over explaining the context of internal dispute mechanism where rules, regulations and handling mechanism is highlighted as indicated by GPFI (2014). The study indicate the low level of financial literacy due to which majority of the clients are even not aware with the presence of internal dispute mechanism as highlighted by World Bank (2017). Next the training of service providers are also very limited in area of Bari Imam as highlighted by Nenova et al. (2017). Further the issues of language concerns, low existing education level, getup of service providers, trust issues, and so on as highlighted by Hassan et al. (2020) in Quetta Pakistan.

Third and Fourth objectives are to investigate the relationship between categories of Market conduct and Consumer Protection and Quality Indicator of Financial Inclusion QIFI. For Disclosure Requirement DR of MCCP four items are included in the study as described in methodology. Among which DR1 is excluded due to lower factor loadings and other three variables IDR 2, IDR3, and IDR4 are included. Disclosure Requirement (DR1) show value of 0.158 that indicate the lower factor loading and is not considered good to be part of observable variables of DR. Next value for Fornell-Larcker Criterion, where values for AVE are greater than inter-construct correlation (IDR=0.782) as highlighted by Kwong & Wong (2013). For structural model interpretation the concern hypothesis H3 for third objective shows positive influence over Quality Indicator of Financial Inclusion (QIFI) as value of p is below 0.05 (p = 0.000) as highlighted by Hair et al. (2019).

Second is Internal Dispute Resolution IDR of MCCP where four items are included in the study as described in methodology and all items are considered because no item show the issue of lower factor loadings. For the value of Fornell-Larcker Criterion, where values for AVE are greater than inter-construct correlation (IDR=0.886) as highlighted by Kwong & Wong (2013). Next for HeteroTrait-Monotrait HTMT values are below the threshold of 0.90 (IDR=0.505) was highlighted by Henseler et al. (2015). For structural model interpretation the concern hypothesis H4 shows insignificance influence over Quality Indicator of Financial Inclusion (QIFI) as value of p is above 0.05 (p = 0.056) as highlighted by Hair et al. (2019).

Last aspect is related to include the factor of distance as the Barrier to Use (BU) for approaching towards formal financial services. According to Nguyen (2020), the quality indicator is ignored while measuring the multidimensional index of financial inclusion. Because it is difficult to measure this aspect due to its dependence over the state social and policy context. This study had used the distance as barrier for using services as highlighted by Ayyagari & Beck (2015), Demirguc-Kunt & Klapper (2012), Hassan et al. (2020), and Ramiz et al. (2017). Furthermore barrier to use the services is considered important aspect while measuring the demand side of existing inclusive environment. Pakistan is ranked at 50th number while calculating the barrier to use the services around the Developing Asia as highlighted by Camara & Tuesta (2014).

Fifth objective is to investigate the quality indicator of financial inclusion through measuring the aspect of barriers to use. Next for Distance (D) as Barrier to Use (BU). Three items are included in the study as described in the methodology section. Among which all the items D1, D2, and D3 are included into the SEM analysis. All factors are included because no factor is removed due to lower factor loading. Furthermore for value of Fornell-Larcker Criterion, where values for AVE are greater than inter-construct correlation (D=0.883) as highlighted by Kwong & Wong (2013). Next for HeteroTrait-Monotrait HTMT values are below the threshold of 0.90 was highlighted by Henseler et al. (2015). For structural model interpretation the concern hypothesis H1 shows insignificant influence over Quality Indicator of Financial Inclusion (QIFI) as value of p is above 0.05 (D=0.912) as highlighted by hair et al. (2019).

Hence results of the study shows that one among two categories measure of Market Conduct and Consumer Protection MCCP has a positive influence over measuring the Quality Indicator of Financial Inclusion QIFI and one had negative or insignificant effect over QIFI. For Financial Literacy and Capability FLC among two categories both one have positive effect over QIFI. The existing literature also highlight the positive effect as measuring the literacy and capability towards impacting over state of financial inclusion as highlighted by GPFI (2014 & 2016), AFI (2016), Hasan & Hoque (2021), Lusardi & Mitchell (2007), Remund (2010), Zins & Weill (2016), Sherraden & Ansingg (2016), and Zakaria & Sabri (2013). For distance aspect it show insignificant influence over quality indicator of financial inclusion but literature indicate the positive impact was highlighted by Hassan et al. (2020) and Tariq (2021). Further studies should include this factor to check its impact over QIFI on higher level than can be added to the existing categories of barrier to use by the GPFI (2016).

5.2 Conclusion

This study is focused over explaining the quality indicator/dimension of financial inclusion in study area Bari Imam (Islamabad). It described the aspects of financial inclusion in every aspect such as its measurement aspects of all the three indicators, the existing level of Financial Inclusion in developing Asia to Pakistan, then different programs run by State Bank of Pakistan. This study focus over highlighting the gap of missing the factor of noticing the operating stance of using the financial inclusion services but different concern organizations don't allow the access towards using the available statistical data. Therefore, we inclined the study focus over just measuring the stance of quality indicator. Further we faced difficulty in gathering data because quality aspect of financial inclusion is ignored by the scholars while measuring the multidimensional index of financial inclusion, the sited reason is due to difficulty in its measurement around the globe. Five defined objectives are studied FLC, MCCP, and BU. For FLC two categories are evaluated and both FK and KB have proved to be positively influence the QIFI. For MCCP further two Categories are studied where one among two categories DR has proved to be positively effect QIFI but IDR has proved to be negatively influence QIFI. And Fifth Distance D also have negative influence over QIFI. Further the study indicates the importance of implementing this aspect after performing studies on other village areas in Pakistan.

5.3 Future Research Direction

This study provides the initial idea related to consideration of quality indicator of financial inclusion. Which give initial study output associate to consider on small village as the place for investigation. For further refining, many other aspects can be included to form unified index of Quality Indicator of Financial Inclusion QIFI as;

- Measuring quality indicator or dimension of financial inclusion in other remote areas of Pakistan that will help to build even more refined set of uniform index of quality indicator.
- State Bank of Pakistan (SBP) should have to include the quality indicator next to involving the aspect if literacy. Currently prevailing program is associate to NLFP-Y linked to just improving the access factor through providing literacy content to adults.
- In future, other refine categories should be entered while accessing the Structural Equation Modelling SEM.
- Further prevailing literature gap will be addressed by working together of the government organizations with the policy makers linked to perform more practical studies.
- Next government organizations have to provide access towards data of banks link to provide the operating stance that indicate the number of dormant accounts that will help to provide clear picture of used patterns of banking services by the clients.

REEFERENCES

Adil, F., & Jalil, A. (2020). Determining the financial inclusion output of banking sector of Pakistan—supply-side analysis. *Economies*, *8*(2), 42.

Ahamed, M. M., & Mallick, S. K. (2019). Is financial inclusion good for bank stability? International evidence. *Journal of Economic Behavior & Organization*, *157*, 403-427.

Ahmed, N., Afzal, R., & Sumair, A. (2017). Quarterly Branchless Banking Newsletter. *Retrieved from Karachi: http://www. sbp. org. pk/publications/acd/2017/BranchlessBanking-Jul-Sep-2017. pdf*.

Akhtar, S. (2007). Building inclusive financial system in Pakistan. Growth, 31, 12-2006.

Allen, F., Demirguc-Kunt, A., Klapper, L., & Peria, M. S. M. (2016). The foundations of financial inclusion: Understanding ownership and use of formal accounts. *Journal of financial Intermediation*, *27*, 1-30.

Amidžic, G., Massara, M. A., & Mialou, A. (2014). *Assessing countries' financial inclusion standing-A new composite index*. International Monetary Fund.

Arora, R. (2018). Financial inclusion: understanding concept, barriers and measurement.

Atkinson, A., & Messy, F. A. (2013). Promoting financial inclusion through financial education: OECD/INFE evidence, policies and practice.

Ayyagari, M., & Beck, T. (2015). Financial inclusion in Asia: An overview. Asian Development Bank Economics Working Paper Series, (449).

Bacon, L. D. (1999, February). Using LISREL and PLS to measure customer satisfaction. In *Sawtooth Software Conference Proceedings* (pp. 2-5).

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the academy of marketing science*, *16*(1), 74-94.

Bell, E., Bryman, A., & Harley, B. (2018). Business research methods. Oxford university press.

Bhanot, D., Bapat, V., & Bera, S. (2012). Studying financial inclusion in north-east India. The International Journal of Bank Marketing, 30(6), 465-484.

Boeddu, G. L., & Chien, J. (2022). Financial Consumer Protection and Fintech: An Overview of New Manifestations of Consumer Risks and Emerging Regulatory Approaches.

Burjorjee, D. M., & Scola, B. (2015). A Market Systems Approach to Financial Inclusion Guidelines for Funders. Washington, DC: CGAP

Cámara, N., & Tuesta, D. (2014). Measuring financial inclusion: A muldimensional index. *BBVA Research Paper*, (14/26).

Chibba, M. (2008). Poverty reduction in Developing countries. *World Economics*, *9*(1), 197-200.

Chibba, M. (2009). Financial inclusion, poverty reduction and the millennium development goals. *The European Journal of Development Research*, *21*(2), 213-230.

Cohen, J. (1988). The effect size. *Statistical power analysis for the behavioral sciences*, 77-83.

Cole, S., Sampson, T., & Zia, B. (2011). Prices or knowledge? What drives demand for financial services in emerging markets?. *The journal of finance*, *66*(6), 1933-1967.

Dabla-Norris, M. E., Ji, Y., Townsend, R., & Unsal, M. F. (2015). *Identifying constraints to financial inclusion and their impact on GDP and inequality: A structural framework for policy*. International Monetary Fund.

Demir, A., Pesqué-Cela, V., Altunbas, Y., & Murinde, V. (2022). Fintech, financial inclusion and income inequality: a quantile regression approach. *The European Journal of Finance*, *28*(1), 86-107.

Demirgüc-Kunt, A. and L. Klapper (2012) Measuring Financial Inclusion: The Global Findex Database. World Bank. (World Bank Policy Research Working Paper 6025).

Demirguc-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution. The World Bank.

Demirgüç-Kunt, Asli, Thorsten Beck, and Patrick Honohan. 2008. Finance for All? Policies and Pitfalls in Expanding Access. World Bank Policy Research Report. Washington: World Bank (http://go.worldbank.org/HNKL9ZHO50).

Dev, S. M. (2006). Financial inclusion: Issues and challenges. *Economic and political weekly*, 4310-4313.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, *5*(1), 1-4.

Falk, R. F., & Miller, N. B. (1992). *A primer for soft modeling*. University of Akron Press.

FI (Alliance for Financial Inclusion). 2010. “Financial Inclusion Measurement for Regulators: Survey Design and Implementation.” Policy paper, Data Working Group, AFI, Bangkok.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, *18*(1), 39-50.

Fu, J. (2020). Ability or opportunity to act: What shapes financial well-being?. *World Development*, *128*, 104843.

Gadanecz, B., & Tissot, B. (2015). Measures of financial inclusion–a central bank perspective. *egional S*, 190.

Gattoo, M. H., & Akhtar, S. J. (2015). The Development of India's Financial Inclusion Agenda—Some Lessons for Pakistan. *The Pakistan Development Review*, 569-583.

Ghosh, S., & Vinod, D. (2017). What constrains financial inclusion for women? Evidence from Indian micro data. *World Development*, *92*, 60-81.

Global Partnership for Financial Inclusion (GPFI). (2014). G20 financial Inclusion Indicators.

Global Partnership for Financial Inclusion (GPFI). (2016). G20 Financial Inclusion Indicators.

Global Partnership for Financial Inclusion (GPFI). (2020). G20 financial Inclusion Indicators.

Global Village Space. (2021). Fintech revolution at Pakistan's doorstep – do you know what it is? Global Village Space.

GPFI. (2018). 2018 financial inclusion action plan. Retrieved from https://www.gpfi.org/sites/gpfi/files/documents/2018%20G20%20Financial%20Inclusion%20Action%20Plan%20final.pdf.

Guba, E. G., & Lincoln, Y. S. (2005). Paradigmatic Controversies, Contradictions, and Emerging Confluences.

Gubbins, P. (2020). The prevalence and drivers of financial resilience among adults: Evidence from the Global Findex.

Haenlein, M., & Kaplan, A. M. (2004). A beginner's guide to partial least squares analysis. *Understanding statistics*, *3*(4), 283-297.

Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). Partial least squares structural equation modeling (PLS-SEM) using R: A workbook.

Hair, J. F., Henseler, J., Dijkstra, T. K., & Sarstedt, M. (2014). Common beliefs and reality about partial least squares: comments on Rönkkö and Evermann.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2013). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks: Sage. *Handbook of market research*, *26*(1), 1-40.

Hannig, A., & Jansen, S. (2010). Financial inclusion and financial stability: Current policy issues.

Hasan, M. M., Yajuan, L., & Khan, S. (2020). Promoting China's inclusive finance through digital financial services. *Global Business Review*, 0972150919895348.

Hasan, M., Le, T., & Hoque, A. (2021). How does financial literacy impact on inclusive finance? *Financial Innovation*, *7*(1), 1-23.

Hassan, J., Muhammad, N., Sarwar, B., & Zaman, N. U. (2020). Sustainable Development through Financial Inclusion: The Use of Financial Services and Barriers in Quetta-Pakistan. European Online Journal of Natural and Social Sciences, 9(4), pp-691.

Henseler, J. (2015). Discriminant validity: Check out how to use the new htmt criterion. *A primer on partial least squares structural equation modeling (PLS-SEM).*

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing*. Emerald Group Publishing Limited.

Hoyle, R. H. (1995). The structural equation modeling approach: Basic concepts and fundamental issues.

https://www.bis.org/ifc/publ/ifcb38.pdf

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic management journal*, *20*(2), 195-204.

Hwang, H., Malhotra, N. K., Kim, Y., Tomiuk, M. A., & Hong, S. (2010). A comparative study on parameter recovery of three approaches to structural equation modeling. *Journal of Marketing Research*, *47*(4), 699-712.

Imaeva, G., Lobanova, I., & Tomilova, O. (2014). Financial inclusion in Russia: the demand-side perspective. *Consultative Group to Assist the Poor, World Bank, Moscow*, 37-40.

Jethani, A. (2013). Savings groups and financial inclusion. *Savings Groups at the Frontier. Candace Nelson, ed*, 13-38.

Johnson, E., & Sherraden, M. S. (2007). From financial literacy to financial capability among youth. *J. Soc. & Soc. Welfare*, *34*, 119.

Kempson, E., Finney, A., & Poppe, C. (2017). Financial Well-Being.

Khan, N., Akhtar, S., Khan, M., Naz, S., Tanveer, J., & Kaleem, M. (2018). Maize productivity enhancement through credit program of Zari Tarqiati Bank Limited (ZTBL) in rural areas of District Mardan. *Sarhad Journal of Agriculture*, *33*(1), 139-143.

Kim, K. (2022). Assessing the impact of mobile money on improving the financial inclusion of Nairobi women. *Journal of Gender Studies*, *31*(3), 306-322.

Kim, K., & Prabhakar, B. (2000). Initial trust, perceived risk, and the adoption of internet banking. ICIS 2000 Proceedings, 55.

Kou, G., Xu, Y., Peng, Y., Shen, F., Chen, Y., Chang, K., & Kou, S. (2021). Bankruptcy prediction for SMEs using transactional data and two-stage multi-objective feature selection. *Decision Support Systems*, *140*, 113429.

Kumar, A., Pal, R., & Pal, R. (2019). Usage of formal financial services in India: Demand barriers or supply constraints?. *Economic Modelling*, *80*, 244-259.

Le, T. H., Chuc, A. T., & Taghizadeh-Hesary, F. (2019). Financial inclusion and its impact on financial efficiency and sustainability: Empirical evidence from Asia. *Borsa Istanbul Review*, *19*(4), 310-322.

Ledgerwood, J., Earne, J., & Nelson, C. (Eds.). (2013). *The new microfinance handbook: A financial market system perspective*. World Bank Publications.

Lee, C. C., Wang, C. W., & Ho, S. J. (2022). Financial aid and financial inclusion: Does risk uncertainty matter?. *Pacific-Basin Finance Journal*, *71*, 101700.

Lusardi, A., & Mitchell, O. S. (2007). Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth. *Journal of monetary Economics*, *54*(1), 205-224

Lyons, A. C., & Kass-Hanna, J. (2021). Financial inclusion, financial literacy and economically vulnerable populations in the Middle East and North Africa. *Emerging Markets Finance and Trade*, *57*(9), 2699-2738.

Malaquias, R. F., & Hwang, Y. (2016). An empirical study on trust in mobile banking: A developing country perspective. Computers in human behavior, 54, 453-461

Malhotra, N. K., & Birks, D. F. (2005). Marketing Research An Applied Approach, 3º.

Marcoulides, G. A., & Saunders, C. (2006). Editor's comments: PLS: a silver bullet?. *MIS quarterly*, iii-ix.

Martinez, M. V. (2011). The political economy of increased financial access (Doctoral dissertation, Georgetown University).

Mialou, A., Amidzic, G., & Massara, A. (2017). Assessing countries' financial inclusion standing—A new composite index. *Journal of Banking and Financial Economics*, (2 (8)).

MOKHTAR, N., SABRI, M. F., & HO, C. S. F. (2020). Financial capability and differences in age and ethnicity. *The Journal of Asian Finance, Economics, and Business*, *7*(10), 1081-1091.

Mottola, G. R., & Kieffer, C. N. (2017). Understanding and using data from the national financial capability study. *Family and Consumer Sciences Research Journal*, *46*(1), 31-39.

Nenova, T., Niang, C. T., & Ahmad, A. (2017). *Bringing Finance to Pakistan's poor: Access to Finance for Small enterprises and the Underserved*. World Bank Publications.

Nguyen, T. T. H. (2020). Measuring financial inclusion: a composite FI index for the developing countries. *Journal of Economics and Development*.

Noor, N., Batool, I., & Arshad, H. M. (2020). Financial literacy, financial self-efficacy and financial account ownership behavior in Pakistan. *Cogent Economics & Finance*, *8*(1), 1806479.

Noreen, M., Mia, M. S., Ghazali, Z., & Ahmed, F. (2022). Role of Government Policies to Fintech Adoption and Financial Inclusion: A Study in Pakistan.

Petter, S., Straub, D., & Rai, A. (2007). Specifying formative constructs in information systems research. *MIS quarterly*, 623-656.

Ramiz-ur-Rehman, I. U. M., & Naseem, M. A. (2017). Emergence of Financial Inclusion in Developing Economies: A Case Study of China and Pakistan. In *33rd annual conference of PIDE, Islamabad, Pakistan* (Vol. 1).

Rashidin, M. S., Javed, S., Liu, B., & Jian, W. (2020). Ramifications of households' nonfarm income on agricultural productivity: evidence from a rural area of Pakistan. *Sage Open*, *10*(1), 2158244020902091.

Raza, M. S., Tang, J., Rubab, S., & Wen, X. (2019). Determining the nexus between financial inclusion and economic development in Pakistan. *Journal of Money Laundering Control*.

Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *Journal of consumer affairs*, *44*(2), 276-295.

Rhyne, E. (2018). Financial Services through the Eyes of Customers. *Center for Financial Inclusion, https://www. centerforfinancialinclusion. org/financial-services-through-the-eyes-of-customers*.

Ringle, C., Da Silva, D., & Bido, D. (2015). Structural equation modeling with the SmartPLS. *Bido, D., da Silva, D., & Ringle, C.(2014). Structural Equation Modeling with the Smartpls. Brazilian Journal Of Marketing*, *13*(2).

Ringle, C., Wende, S., & Will, A. (2005). SmartPLS 2.0 (Beta). Hamburg, (www.smartpls.de).

Russell, D. W., Kahn, J. H., Spoth, R., & Altmaier, E. M. (1998). Analyzing data from experimental studies: A latent variable structural equation modeling approach. *Journal of counseling psychology*, *45*(1), 18.

Sanderson, A., Mutandwa, L., & Le Roux, P. (2018). A review of determinants of financial inclusion. *International Journal of Economics and Financial Issues*, *8*(3), 1.

Sarma, M. (2010). Index of financial Inclusion Discussion papers in Economics (Vol. 10-05): Centre for International Trade and Development, School of International Studies Jawaharlal Nehru University India.

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Partial least squares structural equation modeling.

SBP. (2018). National Financial Inclusion Strategy Pakistan.

SBP. (2019). National Financial Inclusion Strategy Pakistan through NFLP-Y.

SBP. (2021). Annual Report over Increasing Access Factor of Financial Inclusion.

Sherraden, M. S., & Ansong, D. (2016). Financial literacy to financial capability: Building financial stability and security. In *International handbook of financial literacy* (pp. 83-96). Springer, Singapore.

Sinani, M. (2021). Financial Well-Being, Theoretical Concepts. *International Journal of Social Science and Education Research Studies*, *1*(3), 82-89.

Soederberg, S. (2013). Universalizing financial inclusion and the securitization of development. *Third World Quarterly*, *34*(4), 593-612.

Stein, P. (2010). Towards universal access: financial inclusion: addressing the global challenge of financial inclusion. In *Korea-World Bank high level conference on post-crisis growth and development* (pp. 1-35).

Stiglitz, J. E., Sen, A., & Fitoussi, J. P. (2009). Report by the commission on the measurement of economic performance and social progress.

Tariq, S. (2021), Use of Neuro-Market Approach to Provide Better Marketing Proposition for Banking Products/ Financial Banking Accounts to Solve Issue of Financial Inclusion (Unpublished master's dissertation). Pakistan Institute of Development Economics (PIDE), Islamabad, Pakistan.

Taylor, M. (2011). Measuring financial capability and its determinants using survey data. *Social Indicators Research*, *102*(2), 297-314.

Toolkit, AFI. (2016). National Financial Inclusion Strategies.

Uddin, A., Chowdhury, M. A. F., & Islam, M. N. (2017). Determinants of financial inclusion in Bangladesh: Dynamic GMM & quantile regression approach. *The Journal of Developing Areas*, *51*(2), 221-237.

UN. (2007) Press Conference on best practices for financial inclusion, UN Department of Public Information, 30 May.

Vinzi, V. E., Trinchera, L., & Amato, S. (2010). PLS path modeling: from foundations to recent developments and open issues for model assessment and improvement. *Handbook of partial least squares*, 47-82.

Wong, K. K. K. (2011). Book review: Handbook of partial least squares: Concepts, methods and applications.

Wong, K. K. K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, *24*(1), 1-32.

World Bank (2016). Global Surveys on Consumer Protection and Financial Literacy, and Financial Capability: http://responsiblefinance.worldbank.org

World Bank Group. (2013). *Global financial development report 2014: Financial inclusion* (Vol. 2). World Bank Publications

Yamane, T. (1967). *Problems to accompany" Statistics, an introductory analysis"*. Harper & Row.

Yangdol, R., & Sarma, M. (2019). Demand-side factors for financial inclusion: A cross-country empirical analysis. *International Studies*, *56*(2-3), 163-185.

Zakaria, N. F., & Sabri, M. F. (2013). Review of financial capability studies. *International Journal of Humanities and Social Science*, *3*(9), 197-203.

Zins, A., & Weill, L. (2016). The determinants of financial inclusion in Africa. *Review of development finance*, *6*(1), 46-57.

APPENDIXES

APPENDIX A

This study is based on analyzing the survey technique that is designed on gathering the study items from different data sources and organizations. These institutions work on generating and aligning the quality indicator of financial inclusion. The aim purpose is to build one unified index of quality dimension. These institutions includes World Bank, Alliance for Financial Inclusion (AFI), Global Partnership for Financial Inclusion (GPFI), Global Findex Database (GFD) and few already existing literature. Few questions/ items are adopt and few are adapt from the literature. Here in this appendix all the 28 set of items/ variables are mentioned along with describing it's linked to Quality Dimension/ Indicator and even with its category associations. Each reference of each question whether adopt or adapt is presented. Each category is divided into specified number of items as; Financial Knowledge (FK) is divided into set of six items from FK1-to-FK6, Financial Behavior FB is divided into set of six among which two are separated for exploratory data analysis and other four items are included for Smart PLs FB1-to-FB4, Dispute Resolution (DR) is divided into set of five but one item is used for exploratory data analysis and remaining four for software analysis, Internal Dispute Resolution (IDR) is divided into set of four items IDR1-to-IDR4, Distance (D) is divided into three items D1-to-D3, and Quality Indicator of Financial Inclusion (QIFI) is divided into set of four items QIFI1-to-QIFI4.

Questions	Quality indicators	Concept Taken From
Q # 1 Are adults of Bari Imam are familiar with terminology of microfinance banks in Pakistan? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	**Financial Knowledge (FK1)** Modified (Adapt)	**GFD "Global Findex Database"** (2016, 2018, 2019).
Q # 2 Are you comfortable with currently prevailing difficult terminologies related to banking services? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	**Financial Knowledge (FK2)** (From Literature)	**Ledgerwood** (2013) Book *"A Financial Market System Perspective"*
Q # 3 What you agree with the statement or not; "If someone offers you the chance to win a lot of money, it also means you may lose a lot of money"? 1- Strongly agree	**Financial Knowledge (FK3)** Adopt	**AFI "Alliance for Financial Inclusion"** (2016).

2- Agree 3- Neutral 4- Disagree 5- Strongly disagree		
Q # 4 Do you think high inflation means that it would more difficult to meet your daily life expenditure? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	**Financial Knowledge (FK4)** Adopt	**AFI "Alliance for Financial Inclusion"** (2016).
Q # 5 What do you think that investing in more than one business can help you in losing your all money in one business? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	**Financial knowledge (FK5)** Adopt	**AFI "Alliance for Financial Inclusion"** (2016).
Q # 6 How would you rate your overall knowledge about financial matters compared with other people? Choose only one answer. 1. Very High 2. Quite high 3. About average 4. Quite low **5.** Very low	**Financial Knowledge (FK6)** Adopt	**CCFSI "Central Council for financial Service Information"** (2016).

Q # 7 What you think Bari Imam people prepare a budget each month? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	**Financial Behavior (FB1)** Adopt	**AFI "Alliance for Financial Inclusion"** (2016).
Q # 8 If you had an emergency that required money/loan urgently, where would you get the Money/Loan? 1. Borrow from friends 2. Work more 3. Sell assets 4. Use only savings **5.** Loan from banks	**Financial behavior** (Adapt) Separate Question, exploratory data description.	**Global Findex Database** (2018).
Q # 9 Do Bari Imam people prefers to take loan out of bank to purchase land or home? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	**Financial Behavior (FB2)** (Adopt)	**World Bank** (2016 & 2019)
Q # 10 Do people use a mobile phone to pay bills or to send/ receive money using a service such as (Easy paisa, Upaisa) in case of emergency exchange? 1- Strongly agree	**Financial Behavior (FB3)** **Adopt**	**GFD "Global Findex Database"** (2018).

2- Agree 3- Neutral 4- Disagree 5- Strongly disagree		
Q # 11 While making financial tractions, do you think the fees and charges for the transactions are expensive? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	**Financial behavior (FB4)** Adapt	**AFI "Alliance for Financial Inclusion"** (2016).
Q # 12 Which of the following is inappropriate as a behavior to avoid being involved in financial trouble? Choose only one? 1. Avoiding disclosing your personal information as much as possible 2. Making an effort to acquire financial and economic knowledge 3. Trusting and leaving the entire over providers when it is difficult to make a decision 4. Checking the user reviews of the product you are planning to purchase 5. Don't know	**Financial Behavior** **Adopt** Separate Question, exploratory data description.	**CCFSI "Central Council for financial Service Information"** (2016).
Q # 13 Do people feel hesitation or discomfort while visiting banks? 1- Strongly agree 2- Agree 3- Neutral	**Disclosure Requirement (DR1)**	**Tariq** (2021).

4- Disagree 5- Strongly disagree	(Adapt from literature)	
Q # 14 If yes, then reasons for feeling hesitation or discomfort while visiting? 1. Unfriendly environment. 2. People's getup 3. Language issues 4. Documentation issue 5. All of them 6. None of them	**Disclosure Requirement** (Adapt from literature) Separate Question, exploratory data description.	**Tariq** (2021).
Q # 15 Do you feel comfortable to visit bankers or agents for conducting transactions? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	**Disclosure Requirement (DR2)** (Adapt from literature)	**Tariq** (2021).
Q # 16 Do you think Microfinance banks and institutions are not successful in communicating their messages to you? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	**Disclosure Requirement (DR3)** (Adapt from literature)	**Tariq** (2021).
Q # 17	**Disclosure Requirement (DR4)**	**CCFSI "Central Council for financial**

Do you agree that financial education is offered by a school or college you attended, or a workplace where you were employed? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	(Adopt)	**Service Information"** (2016).
Q # 18 Do you agree with the statement that "People are mistreated by staff of microfinance banks"? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	**Internal Dispute Resolution (IDR1)** (Adapt)	**AFI "Alliance for financial Inclusion"** (2016).
Q # 19 Do you think that bankers are able to solve disputes with consumers (if occurred) 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	**Internal Dispute Resolution (IDR2)** (Adapt from literature)	**Tariq** (2021).
Q # 20 Do you think people of Bari Imam used to contact a consumer protection authority to solve a problem regarding a microfinance banks? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree	**Internal Dispute Resolution (IDR3)** (Adapt)	**AFI "Alliance for Financial Inclusion"** (2016).

5- Strongly disagree		
Q # 21 (If agree to the above statement) whether you agreed with the statement that "The problem is being solved within next two months of contacting the authority or not"? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	**Internal Dispute Resolution (IDR4)** (Adopt)	**AFI "Alliance for Financial Inclusion"** (2016).
Q # 22 Whether you like to safe your money in banks inside of saving at home? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	**Distance (D1)** (Adapt from literature)	**Hassan, Muhammad, Sarwar, & Zaman** (2020).
Q # 23 What do you think that satisfied numbers of bank branches are provided to area of Bari Imam? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree	**Distance (D2)** (adapt from literature)	**Hassan et al.** (2020). But new to this study area.
Q # 24 Do you think, the longer the distance to the nearest financial access point reduces the chances of people being financial included?	**Distance (D3)** (Adopt)	**Abel, Mutandwa & Roux** (2018).

1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly disagree		
Q # 25 What you think about the statement "The quality of financial inclusion can be increased by improving the knowledge base of the customers in Bari Imam"? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly Disagree	**Quality Indicator of Financial Inclusion (QIFI-1)** Adapt from literature	**Ahmed, Afzal, & Sumair** (2017).
Q # 26 Whether you believe that people will start using banking products and services if system provide them financial literacy as a separate course in their education system? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly Disagree	**Quality Indicator of Financial Inclusion (QIFI-2)** Adapt from literature	**Tariq** (2021).
Q # 27 If service providers make their best efforts to solve the hurdles you faced while using banking services will help to increase the quality state of financial inclusion in Bari Imam? 1- Strongly agree 2- Agree	**Quality Indicator of Financial Inclusion (QIFI-3)** Adapt from literature	**Global Partnership for Financial Inclusion (GPFI)**

3- Neutral 4- Disagree 5- Strongly Disagree		(2016).
Q # 28 If government increased the number of Bank branches and ATMs in Bari Imam near to people destination will increased the usage of financial services? 1- Strongly agree 2- Agree 3- Neutral 4- Disagree 5- Strongly Disagree	**Quality Indicator of Financial Inclusion (QIFI- 4)** Adapt from literature	**Asian Development Bank (ADB)** (2015).