

**STATE OF FINANCIAL INCLUSION OF  
PERSONS WITH DISABILITY (PWDS) IN  
PAKISTAN: A Case Study of District Charsadda  
K.P.K and Islamabad**



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**CERTIFICATE**

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## **Authors Declaration**

I **Muhammad Faheem Jan** hereby states that my MPhil thesis titled **State of Financial Inclusion Of Persons With Disability (PWDs) In Pakistan (A Case Study of District Charsadda K.P.K and Islamabad)** Is my own work and not been submitted previously by me for taking any degree from Pakistan institute of development economics or anywhere else in the country/world.

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***Dedication***

*Dedicated to my late Father*

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If the oceans turn into ink and all of the wood becomes pens, even the praises of "**ALLAH Almighty**" cannot be expressed. He is who created the universe and knows whatever, is there in it, hidden or evident and who bestowed upon me the intellectual ability and wisdom to search for the secrets. I must bow my head before Allah Almighty who is compassionate and merciful and whose help enabled me to complete this work, which marks an important turning point in my life.

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## **Abstract**

This study examines to what extent the financial inclusion is achieved especially for PWDs, in Pakistan. This study calculates the financial inclusion score on a sample of 58 PWDs respondents from two target locations, Charsadda and Islamabad, who fall into various categories. The Indexing strategy's estimation is based two stages. The first stage is an estimation of principal component analysis derived for the indexes, and three dimensions' sub-indices. The financial inclusion index classified into three dimensions: Use of financial services, Barriers in availing services and Access. The second stage constructing the normalization of each dimension's values. Data collected from PWDs through pre-developed questionnaire from two locales, the secondary sources, such as World Bank and Pakistan Bureau of Statistics, used to obtain data such as Disability Statistics. Only 15% of respondents are financially included, and the rest 85% are not, according to the estimated financial inclusion score, which is based on Usage, Barriers, and Accessibility data from the questionnaire. However, the majority of respondents were using the State Bank of Pakistan's services for people with disabilities, but they were not fully utilising them because of Usage Barriers and accessibility issues, such as affordability, the documentation process, issues with trust, infrastructure problems, etc. The importance of Financial Inclusion to the economy is highlighted by this study. From there, a Financial Inclusion solution built into and its effects on other factors examined. This study will make it easier for policymakers to implement effective steps to raise Financial Inclusion levels for PWDs and to the exclusion to make them benefactors instead of beneficiaries.

**Keywords:** Disability, State of Financial Inclusion, Financial Access, SBP Financial Inclusion policy

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## **LIST OF ABBREVIATIONS**

ANOVA	Analysis of Variance
CBR	Community-Based Rehabilitation
DFIs	Director Financial Institutions
FI	Financial Inclusion
ICT	Islamabad Capital Territory
LMICs	Low and Middle Income Countries
MFI	Micro Finance Institutions
NADRA	National Database and Registration Authority
NGOs	Non-Government Organizations
OECD	Organization for Economic Cooperation and Development
PCA	Principle Component Analysis
PWDs	Persons With Disabilities
SBP	State Bank of Pakistan
SME	Small and Medium-sized Enterprise
UFA	Universal Financial Access
WHO	World Health Organization

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of the Study

Disability is any physical or mental condition that makes it very tough for someone with that condition to perform certain tasks and communicate with the world around them. In other words, someone with a disability means that, due to an injury, disease, or congenital disability, he or she is not able to perform tasks completely as a normal person can do. These include individuals with visual impairment, hearing loss, and physical and mental illness.

According to the World Bank<sup>1</sup> (14-April- 2022) one billion people or 15% of the world's population, experience some form of disability, and disability prevalence is higher for developing countries. Persons with disabilities (PWDs) are more likely to revel in adverse socioeconomic outcomes such as lack of education, poor health effects, lack of employment, and higher poverty rates. Poverty may also increase the hazard of disability through malnutrition, insufficient access to education and health care, unsafe working conditions, a polluted environment, and the absence of access to secure water and sanitation.

Disability can also increase the chance of poverty, via lack of employment and education opportunities, decrease wages, and increased the cost of living with a disability. Hundreds of millions of persons with disabilities are fully capable of working and contributing to the economic well-being of their households but find, themselves unbanked and excluded from the global and national economies.

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<sup>1</sup> <https://www.worldbank.org/en/topic/disability#1>

Persons with disabilities (PWDs) are a significant human resource for any country, and they deserve the same opportunities as other citizens. Governments should develop policies that preserve their rights and enable them to contribute actively to society. Disabled persons constitute a sizable portion of any country's human resources. It may assist people to transition from tax consumers to taxpayers, from beneficiaries to benefactors, by providing chances for self-improvement and equal access to education, training, and work. Here, the following query may arise: Why it is essential to include the disabled? It is critical to be inclusive. and what does "disability inclusion" mean? Incorporating disabled individuals into daily activities and encouraging them to take on tasks similar to their peers who do not have disabilities is referred to as disability inclusion. It enables accessibility, allowing everyone to participate completely in society without limitations, achieving their objectives and desires to succeed in life. However, disability inclusion requires an organization or community's policies and practices to be adequate. Persons with disabilities need support mechanisms to get the right of entry to banking and financial services etc., as it is their social right.

Several persons with disabilities, and in particular, any up-to-date statistics of persons with disabilities along with the type of disability they are facing are not available in Pakistan. However, data on a cumulative basis was received from NADRA on date 28-Feb-2021 in the compliance decision of the honorable Supreme Court dated 28-Feb-2020. A disability could not be diagnosed in the census either, the question on "information on incapacity" suffered from inadequacies, which include a lack of standardized definitions. Pakistan has a population of around 207 million people, according to the sixth population and housing census of 2017.

According to the World Health Organization's (WHO) estimate of 15% global disability prevalence, around 31 million individuals in Pakistan are estimated to have some sort of disability.

However, Pakistan lacks credible statistics on disability. Until now, no large-scale countrywide survey has been conducted to ascertain the exact burden of disability in Pakistan. The last national census on disability was conducted in 1998 (Rathore & Mansoor, 2019).

Globally, one billion people, or 15% of the world's population, live with a disability, and the prevalence of disability is higher in developing countries. (Imandojemu, Nathaniel Toyosi, & Joseph Ndidi, 2018) Around 80% of the estimated 1,000 million individuals living with at least one disability are expected living in low- and middle-income Countries (LMICs) (Suhrcke, 2018). Realizing the number of people with disabilities, one can imagine the cost of exclusion of these to the economy.

The statistics about disabled humans reported by the government are also considered under-reported. These under-reported numbers do not reflect the gravity of the situation. One of the unavailability of updated statistics is the war of words at the definition of 'disability'. There is no consensus on the definition of PWDs. On the other hand, the respondents' refusal to cooperate, who frequently do not like to disclose disabilities in their children, affects any activity made in this aspect.

(Turmusani) stated that financial Inclusion remains a hot topic in today's modern financial system, with central banks, Financial Institutions, government and NGOs, international agencies, and contributors all promoting poor people's economic involvement. Historically marginalized groups, such as Persons with disabilities (PWDs) and the general youth population are anxiously waiting for Inclusion. The importance of financial Inclusion for people with disabilities stems from the perception that disability is more than a human difference, which includes age, gender, or ethnic origin, or a societal drawback including poverty, gender discrimination, or minority

marginalization. Disability is both a differentiation and a disadvantage that is conceptually related to a man or woman's financial well-being and, therefore, financial obligations. People with Disabilities PLWDs and Financial Inclusion are critical not only for economic well-being but also for the overall health of the financial system.

The idea of financial Inclusion arose globally around the turn of the millennium. It is defined as the availability and use of formal financial services, and it evaluates economic growth primarily.

Individuals who are financially involved can invest in the business, education, and entrepreneurship, paving the way for economic growth and poverty reduction (Beck, Demirgüç-Kunt, & Levine, 2007);(Bruhn & Love, 2014).

Financial Inclusion refers to an individual's access to and successful utilization of conventional financial services and goods (Clark et al 2005). Refinement of the financial market framework can convey more financial services and goods to users, allowing them to alleviate their financial issues, according to (Beck et al., 2007). Economic institutions' inclusiveness is linked to financial Inclusion, which supports investment and consumption plans rather than securing stable economic growth, according to a study by (Corrado & Corrado, 2015).

Financial Inclusion is one of the primary socioeconomic concerns on the agendas of international institutions, policymakers, central banks, financial institutions, and governments, and a topic of increasing interest. Financial Inclusion has been a popular topic among Central Banks, policymakers, and the business sector, making it an essential policy objective for several reasons. Most empirical investigations have demonstrated that financial Inclusion promotes economic growth. It is frequently seen as an effective instrument for reducing poverty and enhancing economic and social welfare. Financial knowledge and skills can lead to positive financial

behavior and are substantially connected with budgeting, paying and tracking bills, having a diversified portfolio, and maintaining an emergency fund and savings (Shayya, 2022).

According to the Global Findex report, 2017 More than 55 nations have made pledges to financial Inclusion since 2010, and more than 60 countries have initiated or are developing a national strategy, and in the last three years alone, 515 million adults have joined the formal financial system by creating an account. While 62% had an account in 2014 and 51% in 2011, the percentage of adults with an account has risen to 69% this year. Since 2014, digital payments have risen from 42 percent to 52 percent worldwide. Women are now more likely than males to hold a bank account, with 65% of women having one compared to 72% of men. Adults in low- and middle-income countries are less likely than those in higher- and middle-income countries to hold a bank account. According to World Bank (2020), the goal of achieving Universal Financial Access (UFA) is considered to be an important long-term sustainable goal to eliminate poverty. Many of those who are unbanked are poor families, women, and people who are out of work. Despite these facts, there are around 1.7 billion adults who do not have a formal account in the official financial system (Demirguc-Kunt, Klapper, Singer, Ansar, & Hess, 2018).

Since the nationalization of the State Bank of India in 1955, India has made a deliberate effort to expand financial Inclusion in the country. More nationalizations have taken place since then, all to expand access to financial services in rural areas. The Prime Minister's Jan Dhan Yojana has seen good results in the last three years, starting in August 2014. Individuals with disabilities, who lack a voice and are thus invisible, have yet to reap the benefits of these initiatives. Indians with disabilities have a legal obligation to adhere to the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), which came into effect in May 2008 (Singh, 2017).



The borrowing behavior of developing countries was discussed by (Asli Demirgüç-Kunt & Klapper, 2012) and even among people with a formal account, informal borrowing is the norm. Friends and family are more likely to provide them with a helping hand. This type of unofficial lending is common in poor countries because of the high cost of formal lending institutions in those areas. If the cost of borrowing is made low and people begin to use a formal account for this purpose, borrowing might have a large negative influence on income disparity.

According to the World Bank's most recent estimates, roughly half of the world's adult population does not have a bank account at a formal financial institution. However, the notion of financial Inclusion transcends specific measures, such as bank account penetration accounts and loans as well as the number of automated teller machines (ATMs) and bank branches. The Efforts to quantify financial Inclusion using multidimensional indicators are rare in the literature and insufficient. To our knowledge, the scientific literature lacks a comprehensive indication that can assemble data on financial Inclusion using a statistically valid weighting mechanism. It considers both demand- and supply-side information. Our research tries to fill this need.

In the 18th Constitutional Amendment (2010), uncertainties in roles and obligations between the federal and provincial governments increased. Issues related to disability have become a provincial matter since the 18th amendment. There are no centralized data collection and coordination structure attempts by the federal, provincial, and district governments. PWDs' employment, and rehabilitation training, are the responsibility of all provinces and the Islamabad Capital Territory (ICT). The applicable legal guidelines are implemented in all provinces. The Disabled Persons (Employment and Rehabilitation) Ordinance of 1981 is a major national law that governs disabled people's employment, rehabilitation, training, and education.

**Table 1. 1** Disability by Nature Population (Pakistan) 2021

<b>Executive Unit</b>	<b>Total Disabled Pop %.</b>	<b>Blind %.</b>	<b>Deaf/Mute %.</b>	<b>Crippled %.</b>	<b>Insane %.</b>	<b>Mentally Rtrd. %.</b>	<b>Multiple Disability %.</b>	<b>Others %.</b>
<b>Pakistan</b>	3.4	8.06	7.43	18.93	6.39	7.6	8.23	43.37
Rural	29.70	7.92	7.53	20.52	5.94	7.32	8.23	42.55
Urban	70.29	8.32	7.24	15.81	7.28	8.15	8.22	44.97
<b>Khyber Pakhtunkhwa</b>	1.9	7.24	7.69	31.73	5.9	7.43	8.11	31.9
Rural	87.2	7.46	7.52	32.25	5.81	7.26	8.22	31.48
Urban	12.8	5.71	8.84	28.21	6.55	8.63	7.31	34.75
<b>Punjab</b>	9.1	8.48	8.17	20.83	6.75	7.87	8.07	39.84
Rural	73.3	8.58	8.16	20.84	6.29	7.63	8.18	40.32
Urban	26.7	8.22	8.2	20.79	7.99	8.51	7.77	38.52
<b>Sindh</b>	4.6	7.48	6.18	10.56	6.13	7.45	8.92	53.29
Rural	41.5	6.24	6.02	11.25	5.34	6.81	9.06	55.28
Urban	58.5	8.36	6.29	10.07	6.69	7.91	8.82	51.86
<b>Balochistan</b>	0.7	8.42	5.24	14.81	4.6	5.61	6.35	54.96
Rural	80.6	7.11	5.2	14.31	4.25	5.53	6.24	57.36
Urban	19.4	13.87	5.42	16.86	6.03	5.97	6.83	45.02
<b>Islamabad</b>	0.0	9.22	12.09	29.89	12.46	8.05	4.55	23.73
Rural	47.4	9.78	12.16	29.65	6.03	8.63	4.02	29.73
Urban	52.6	8.72	12.03	30.1	18.25	7.53	5.05	18.32

Source: Pakistan Bureau of Statistics Government of Pakistan (Till 28-02-2021)

## 1.2 Problem Statement

Prior research has mostly focused on the financial Inclusion of the poor and disadvantaged but has mostly ignored specific difficulties in the disabled community, whose Inclusion in standard microfinance methods is still problematic. Disability is overlooked and ignored in Pakistan in many spheres, including administrative, financial, and legal factors. PWDs are the most marginalized group in the country since they are "unseen, unheard, and uncounted." Even though Pakistani law guarantees equal rights to all citizens, PWDs frequently subjected to discrimination and humiliation. The government has made no significant attempts to conduct a comprehensive survey to analyze the difficulties facing PWDs. It is difficult to assess and expertise the scale and significance of difficulties experienced by PWDs in the absence of data.

Persons with disabilities need support mechanisms to access banking and financial services, as it is their human right. Pakistan has legal provisions for equal rights; still, PWDs often face

discrimination and humiliation. The absence of a clear-cut definition has somehow affected the financial Inclusion of persons with disabilities. There is a disconnection between the lending policies designed by the State Bank and later adopted by commercial banks and microfinance institutes and the services provided to these (PWDs). The bank's infrastructure does not support the PWDs. There are no separate windows, nor appropriate ramps for wheelchairs.

The study answers several questions generally like; why PWDs are not financially included in Pakistan? Has any effort been made in the past? What is the current scenario in Pakistan? What is happening around the globe? How are developing countries ensuring the financial Inclusion of PWDs?

### **1.3 Research Objectives**

- Analysis of State Bank Policies on provision for PWDs in their different financing policies like housing finance, car loans, and small business loans.
- Analyzing the implementation and practice of these provisions as per the different categories of PWDs.
- To investigate the challenges PWDs face when accessing financial products/services.
- A comparison between the challenges faced by PWDs in District Chasadda (KPK) and the PWDs in Islamabad.

### **1.4 Research Questions**

- Is there any difference in the needs of different categories PWDs?
- What are the different financing policies of state banks regarding PWDs?
- To see the implementation of SBP policies regarding different categories of PWDs?
- What are the implementation gaps in State Bank Policies?

- What are the challenges faced by PWDs in access to financial products/services?
- What are the differences between the challenges faced by PWDs in Charsadda KPK and the capital Islamabad?

## **1.5 Research Gap**

Financial Inclusion is a well-discussed subject in literature. However, not enough studies conducted yet in Pakistan. PWDs ignored in every aspect of life and it is difficult for them to access their basic rights. The existing policies are even not designed according to their specific needs.

Therefore, it is clear that a lot of work needs to be done especially in the context of financial inclusion for special persons and this includes refining already existing policies according to the needs of PWDs.

Disabled people face multitudinous boundaries that restrict their entry to schooling, employment, housing transportation, fitness care, rehabilitation, and endeavor. The literature has discussed most of these barriers, however, the barriers to financial Inclusion remain an interesting issue to be investigated and discussed further in detail.

## **1.6 Significance of the Research**

Overall, the contribution of this study is to help develop a composite FI index a better measure of FI for PWDs. It will make it easy to analyze and assess the level of FI for PWDs as well as to study the relationship between FI and other relevant variables for making PWDs financially included. It can be a useful tool for policymaking and policy evaluation to make a more PWDs oriented Policy with a strong implantation strategy.

Ministry of Social welfare and Special Education, through State Bank, issues directives to all national and private banks. Therefore, the study will provide a better understanding of the needs

of the PWDs and assist in implementing more PWDs-centric policies for greater financial Inclusion.

## **1.7 Organization of the Study**

There is a total of six chapters. The first chapter is an introduction that includes the background of the research, the problem statement, the objectives of the research, research questions. Second chapter critical review of the policies. The third chapter is a literature review which includes all relevant studies to the topic. The fourth chapter is the methodology which includes a discussion of analytical techniques used in this research. The fifth chapter includes results and a discussion of analytical techniques and a conclusion based on our results. The sixth chapter includes a summary, conclusion, and recommendation.

## **CHAPTER 2**

### **PAKISTAN'S DISABILITY POLICIES ASSESSMENT**

#### **2.1 Introduction**

The main aim of this section is to identify policies for PWDs, explain how they work, and assess their current ability to explain key parts of the policy process.

#### **2.1 Disability**

Disability is any physical or mental condition (disability) that significantly limits a person's ability to do specific tasks and interact with their environment (participation limits). In other terms, having a disability denotes that you are as a result of an illness, congenital defect, or accident, he or she is incapable of performing any lucrative line of work that involves those with disabilities like visual impairment, hearing loss, and various ailments both mental and physical.

#### **2.2 Employment and Rehabilitation of Disabled Persons Ordinance 1981**

The ordinance for the welfare, employment, and rehabilitation of persons with disabilities was approved in 1981. Still, it lacks comprehensive laws to address the challenges and hardships that people with disabilities confront. Considering this objective, there is an essential and urgent need for such regulations to design, assess, manage, and treat the challenges and concerns that people with disabilities face from the ground up and vice versa. According to the Directorate preferred special education, shared in one program, Pakistan has 4 to 8 million people with disabilities, 45 percent of them are children under 18, and at least 3 million adults (both genders) require rehabilitation.

### **2.3 Ehsaas Kafaalat for Special Persons Policy**

The Ehsaas Kafaalat Policy was introduced on the International Day of Special Persons in 03-Dec-2020. For PWDs, the Ehsaas Kafaalat Policy expanded. Seven million families are eligible for Ehsaas Kafaalat living below the poverty line. Under the new "Ehsaas Kafaalat policy for special persons," this threshold increased for households with at least one special person Ehsaas Kafaalat and only these families will be funded by said policy. According to some estimates, Ehsaas Kafaalat for Special Persons there are 2 million families with at least one disabled man or woman, which will become the beneficiaries of the Ehsaas Kafaalat program. The policy for Special Persons is formed by using NADRA's database, and only those who are listed as "special men or women" in NADRA's database are declared qualified. Ehsaas encourages families to register their family members' special person status with NADRA as soon as possible so that they can be considered for the benefit. Households with at least one special member will receive Rs.2000 per month. Only one benefit in keeping with one's own family is possible. The existing Kafaalat payment system might be used to make the payment. Payment to amputees may be made under Ehsaas Kafaalat payment policies, as payment is biometrically based.

### **2.4 SBP Refinance scheme**

"Recognizing the vulnerability of persons with disabilities in the country and the cost associated with their exclusion from the economy, SBP has created a strategy for special persons in line with its priority sector development," stated by SBP Governor.

The State Bank of Pakistan introduced a comprehensive policy to enhance the financial inclusion of Persons with Disabilities (PWDs) On Monday, June 22, 2021; the President Dr. Arif Alvi was the Chief Guest of the said policy launching ceremony. The SBP instructions the board of directors

of banks that they should approve the policy and amp; strategy framework for the financial inclusion of PWDs andamp; management in need to ensure the implementation of policy. The policy framework was:

- i. Banks will offer products and services catering to the special needs of all categories of PWDs that includes the physically handicapped, visually impaired, and people with hearing and speech disabilities.
- ii. Banks were asked to make sure of the provision of important forms and files in Braille, sign language interpretation services, and ramps on the entrances in their branches and ATM vestibules.
- iii. An important feature of the policy calls for banks to fulfill prescribed job quotas for PWDs and align human resource regulations and practices to cater to their precise needs during the career cycle.
- iv. They will be an encouragement for females with disabilities to join the bank as an employee, and the job quota for PWDs at banks shall make sure at least 25 percent share for women with disabilities.
- v. Special individuals can borrow up to Rs 1.5 million for a maximum of 5 years, including a 6-month grace period. Under the scheme, the SBP will also offer banks and DFIs risk coverage of 60% on their existing loans. Finance will be offered to special people who have a CNIC with a disability mark or symbol.
- vi. The State Bank will provide Participating Financial Institutions (PFIs) with 0% refinancing for onward lending to special persons in the small business (SE) category at a rate of up to 5% per annum under the scheme.



## **2.5 Policy for Financial Inclusion of Persons with Disabilities (PWDs)**

Due to a combination of physical restrictions and beliefs about their capacity to manage money, Persons with Disabilities (PWDs) typically encounter significant barriers when attempting to utilize the financial services provided by financial institutions. It is necessary to make banking simple and convenient for them by accommodating physical infrastructure, accessible goods and services, advice technologies, and accommodating staff interactions. Furthermore, financial institutions must correctly implement provincial and federal legislation that specifies a minimum percentage of PWDs to be hired.

- i. Availability of accessibility infrastructure
- ii. Accessibility audits
- iii. Capacity building of staff to facilitate PWDs
- iv. Employment, Retention, and Career Development of PWDs
- v. Capacity building of PWDs for their Financial Inclusion

The SBP has directed banks and DFIs to submit applications for refinancing limitations under the scheme by April 30 to the Director, Infrastructure, Housing, and SME Finance Department. PFIs will be assigned limits under the plan after SBP receives a request from them. These limits will remain in effect until the SBP issues updated limits.

## **2.6 Review on Basis of Survey and Findings**

- i. There is no proper infrastructure accessibility to PWDs. Because as per our survey and findings most of the PWDs respondents from District Charsadda KPK and Islamabad did not agree with the statement of infrastructure accessibility.

- ii. Accessibility audits involve performing functional, automated, and manual tests to identify the accessibility violation. However, there are no accessibility audits in Banks or other Financial Institutions for PWDs to uncover the violation bugs.
- iii. There is no staff to facilitate the PWDs in services the facility just observed in the HBL Quaid-i-Azam University Islamabad Branch. There is a count with the title of the signboard “Only for PWDs and Old age customer.
- iv. Employment, retention, and career development for PWDs are almost zero in the banking sectors. According to Disability Act. 1981 there is 2% Job quota for PWDs. Instead of providing equal employment opportunity to male and females with disability, 25% job quota mentioned for females in already existing 2% quota in the recent refinance scheme for PWDs. Therefore, there should be equal opportunity for all categories of PWDs in employment, retention, and career development.
- v. Bank buildings are not capable of PWDS. Because buildings are not built according to their needs. As per direction from SBP to banks and other financial institution board of directors for making it possible the availability of elevators, ramps, and auto doors to make the bank building accessible for PWDs. The height of the ATM should be 15 to 48 inches for making it accessible to wheelchair users.

Being a Special person I am in need to make sure and confirm to the concerned authorities, that how we are getting facilitation from their launched policy. As from the residential locale, Charsadda KPK and currently residing in Islamabad to pursue my studies. As usual, I have to go to various banks to deposit my university fees or use the ATM. When PWDs observe such facilitations there, Persons with disabilities always thoughts, these are for the sake of their convenience. Therefore, they should take advantage of this because PWDs always find it very

difficult to climb stairs. However, as per my experience now it was just a formality, not a facility. Because its slopes are made too steeper, it is not only difficult but also impossible for a disabled person (especially physically disabled) to go up and down. In addition, this problem is faced not only by the disabled but also by aged people.

When investigating PWDs from Charsadda I felt that this problem was only due to the unavailability of proper checks in my hometown Charsadda. However, the situation in the capital was not much different. PWDs from Islamabad interviewed also reveal the same experiences. When they visit various Branches in Islamabad for any purposes as usually they go for they faced more difficulties such as building access, ATM heights Non-availability of ramps for wheelchairs users, sign-language barriers for deaf/mute documentation in brail and audio formats for blind customers.

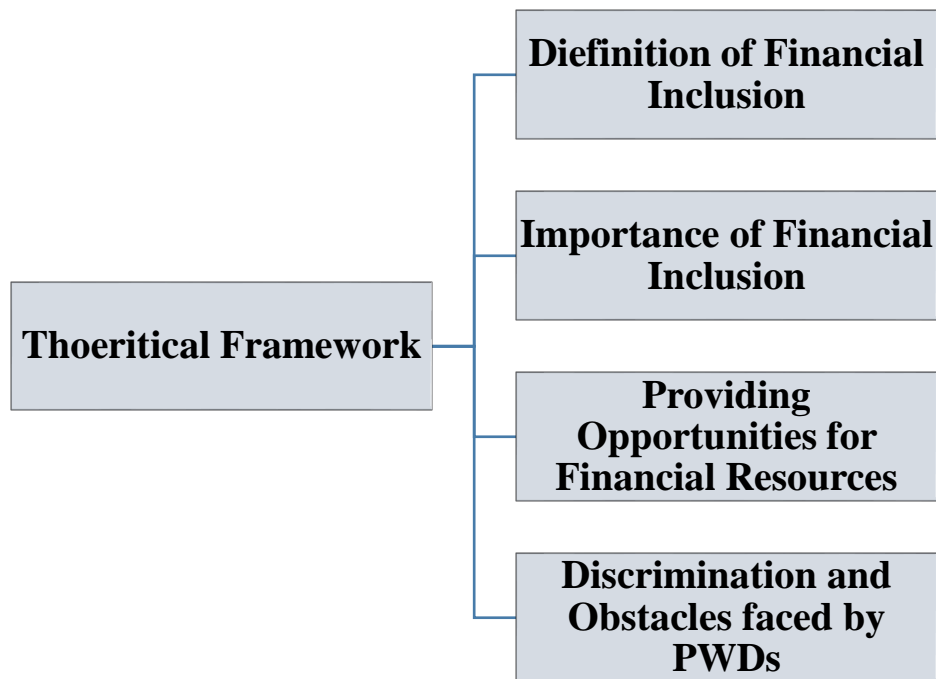
## CHAPTER 3

### LITERATURE REVIEW

#### 3.1 Introduction

This chapter discusses literature related to the subject of the study. The literature was reviewed under various major headings which included: Definition of Financial Inclusion, the Importance of Financial Inclusion, Providing Opportunities for Financial Resources, Discrimination and Obstacles faced by PWDs in access to financial services, and their behavioral response to risks and attitudes towards financial services.

#### 3.2 Theoretical Framework



##### 3.2.1 Definition of Financial Inclusion

The term "financial inclusion" refers to the availability of financial products and services to all citizens of a country (Hassan, Muhammad, Sarwar, & Zaman, 2020). Financial Inclusion is defined in a variety of ways by various authors. According to Damodaran (2013), financial Inclusion is

defined as the availability of affordable financial services to the underserved. Governments must ensure that individuals have easy access to essential financial services, such as banking, in an era of high economic expansion.

There is no uniform technique for measuring or evaluating a country's or economy's FI level, just as there is no consistent approach for defining FI. This factor can be measured in a variety of ways. Beck et al. (2007) performed one of the earliest attempts to measure the financial sector's access to nations.

The practice of including those without access to formal financial services is known as financial Inclusion. It was in the millennium that the term "financial inclusion" was coined; it refers to the availability and use of formal financial services. Individuals that are financially involved can invest in business, education, and entrepreneurship which can lead to poverty reduction and economic progress (Adil & Jalil, 2020).

Bhanot, Bapat, and Bera (2012) defined "Financial inclusion" as the process of ensuring that vulnerable populations have access to financial services such as savings, insurance, remittances as well as investment and risk management services at a reasonable cost.

There is no universally accepted definition of financial Inclusion. A panel of professionals coined and commented on the term "financial inclusion." On the other hand, many people have chosen to discuss financial exclusion by emphasizing what it is not. Financial Inclusion is the process by which regulated mainstream institutional players provide proper financial services and products to all parts of society in general, and too helpless sections of society such as the poor and low-income groups in particular, at an affordable price fairly and transparently (Chakrabarty, 2011).

According to the World Bank individuals and businesses have access to inexpensive financial goods and services that fit their needs and are delivered responsibly and sustainably. Savings, credit, insurance, and payment are among the financial services cited in the majority of the studies (Cámara & Tuesta, 2014);(Hannig & Jansen, 2010);(Ghosh & Ghosh, 2014).

As a result of policymakers' growing interest in the importance of FI, the measurement of FI has become a priority. Researchers create several metrics regularly. However, there is currently no metric that can be used to rank anything. Despite this, the majority of research has used FI measurement in one of two ways: Principle Component Analysis PCA or Factor Analysis FA (M Sarma, 2016); (Mandira Sarma & Pais, 2011).

Financial Inclusion is defined by Izquierdo and Tuesta (2015) as *"the process by which access to and the use of formal financial services are maximized, whilst minimizing unintended barriers, perceived as such by those individuals who do not take part in the formal financial system"*.

Financial Inclusion refers to the flow of money into the country Financial Inclusion. In recent years, financial Inclusion has become increasingly important since the needs of every country are expanding with limited resources, and organizations are eager to take advantage of the global market. A country's economic success can be measured in a variety of ways, and this is what is meant by the term "financial inclusion" (Beck et al., 2007).

Hannig and Jansen (2010) financial exclusion is defined as the absence of price or non-price obstacles to accessing financial services. They go on to say that, it strives to improve financial service access, which means increasing the level to which financial services are accessible to everybody at a reasonable cost. These three definitions highlight the issue of cost affordability for PWDs.

According to Andrianaivo and Kpodar (2011), the introduction of new financial products and services into the country and organizations has a favorable impact on economic development. There were numerous panel and one-on-one research studies conducted by these workers, and they concluded that financial Inclusion is essential to economic growth and development, as it helps businesses raise funds from a variety of sources and then invest this money in further investments, which not only affects an organization's revenue but also boosts the economy of the country in which it is located. Consequently, the country's economy and growth prosper, and the country is liberated from its previous negative aspects, such as dependency on its citizens, high unemployment and inflation, debts owed to other countries, and the idea of brain drain.

According to James F Devlin (2005), some financial services may not be used because of various sorts of exclusion, such as those stated, but it may also be due to voluntary non-use, known as self-exclusion.

Bakunzibake (2015) described financial Inclusion as a method that assures that all individuals in an economy have easy access to and use, the formal financial system. Briefly, financial Inclusion is the provision of low-cost banking services to large segments of the disadvantaged and low-income population, such as homes, businesses, SMEs, and traders. Individuals' access to relevant financial products and services is characterized as financial Inclusion. Executive study in Scotland (Hayton, Percy, Latimer, & Chapman, 2007).

One of them is financial inclusion, which is having the ability, aptitude, wisdom, and comprehension to make the most of such products and services. Financial Inclusion is the provision of inexpensive financial services via the formal economic system to individuals who are

responsible excluded, including access to payments and remittance facilities, financial savings, loans, and insurance services.

According to the World Bank Group (2018) Using data from the Access to Finance Surveys of 2015, it aims to map the current level of financial access for women and provide insights into their financial behavior for improving the financial Inclusion of Pakistani women. Increasing financial Inclusion is a top priority for economic policymakers in developing countries around the world. For nations like Pakistan, with low levels of financial Inclusion, this objective assumes increased significance. To address these issues and others, the Pakistani government has made several policy changes in Pakistan during the last 15 years including the expansion of microfinance and the expansion of small and medium-sized enterprise (SME) financing, as well as the development of digital finance. These measures are beginning to bear fruitful outcomes.

### **3.2.2 Importance of Financial Inclusion**

Financial inclusion is advantageous for a country because it increases the amount of savings amassed by the vast majority of people at the base of the pyramid by granting access to formal savings arrangements, which leads to an increase in bank lending and investment as well as the mobilization of savings when the weaker sections are given access to banking services. The main goal of the financial inclusion scheme is to eliminate poverty by bridging the gap between the poorer sections of society, the sources of livelihood, and means of income that can be generated for them if they get loans and advances on their income, which in turn leads to sustainable livelihood because the poorer sections of society get some money in loan to start their own business or support their children's education. Financial Inclusion is critical for poor farmers, rural non-farm firms, and other vulnerable populations to improve their living situations (Wambua & Datche,



2013). According to Aina and Oluyombo (2014), economic growth and the reduction of social inequity depend on the availability of formal financial services in developing nations.

To begin the process of financial Inclusion in a country, people must be made aware of the existing financial institutions, the products and services they offer, and the advantages they receive from using them (Sharma, 2014).

Financial Inclusion has been the most important challenge for policymakers around the world. Governments of different countries have been working on it for a long time. Reforms in financial sectors that tend to promote financial Inclusion are the principal agenda of international development for policymakers and institutions worldwide (Ardic, Heimann, & Mylenko, 2011).

Financial Inclusion benefits the entire country since it increases the amount of savings available to the vast majority of the population at the base of the pyramid, allowing banks to expand their lending and investment opportunities while also increasing the amount of money that can be saved. As a result of the financial inclusion scheme, the weaker sections in society can access the sources of livelihood and the means of income that can be generated if they receive loans and advances, which in turn leads to a sustainable livelihood because the weaker sections of society received some money in a loan which they can start up their own business or they can help support their e-commerce ventures, for instance. Poor farmers, rural non-farm firms, and other disadvantaged communities can benefit from financial Inclusion.

According to Serrao, Sequeira, and Varambally (2013) the capacity to access financial services and goods from formal institutions is known as financial access. Barriers and hindrances in accessing financial services, such as difficulties in obtaining and utilizing a bank account, are also included in the term Financial Access. Opening a bank account can be difficult for many people

because of high account opening fees, long commutes to and from a job or home, or a lack of proper documentation.

About half of the world's population have even no access to low-cost financial services such as loans, savings accounts, insurance, and payment systems. PWDs have the same problem. According to a recent World Bank-funded study, about 2.5 billion individuals worldwide do not have a bank account, the majority of them are poor and live in impoverished areas (Asli Demirgüç-Kunt & Klapper, 2012).

According to Shayya (2022) In industrialized countries, young people are the ones who will build the future economy and maintain its current stability. Therefore, students must have a solid understanding of personal finance and money management from the start of their studies. Other than business majors and particularly those in the department of finance, students in Lebanese curricula lack financial skill education. The results of their research show just how well-versed Lebanese youth are in personal finance, both in absolute terms and with other demographics.

Persons with disabilities (PWDs) have no proper access to financial services means that they need to have confidence in their property or social capital for investment in their education, grow to be entrepreneurs, take advantage of promising increase possibilities, or face the financial challenges of a lifecycle like illness, or death of a family member, among many others. Affordable, high-quality financial services assist to reduce human vulnerability and allow them to higher plan for their destiny. Crop insurance allows small farmers to alleviate risks related to intense climate; using an account to save facilitates poor households to easy consumption, to cover hoping for investments and to deal with surprising costs. A migrant worker can send money without limit to assist a relative back domestic; a mortgage affords investment for a woman micro-entrepreneur to

put money into her enterprise, or for a craftsman to shop for a system while keeping off the extortionate hobby costs charged via neighborhood informal cash creditors (Aslı Demirgüç-Kunt, Beck, & Honohan, 2008).

According to Norman (2010), a financially literate person can allocate money objectively or sensibly and there are varieties of financial skills that may be learned and applied, such as budgeting and investing. However, traditional education aims to educate the intellect, meet social and economic requirements, train individuals for employment, generate a workforce, promote social or political institutions, and benefit the economy as a whole.

Access to finance is critical for not only maintaining and improving a person's or organization's social and economic status but also for meeting all needs. As a result, sufficient credit at a reasonable cost is critical for socioeconomic development. As a result, a stable and evenly distributed banking sector is required to begin (i.e., financial Inclusion). Because only formal credit agencies are capable of meeting both conditions (i.e., to meet the need of demand for credit for households at an adequate level, timely, and at low cost). Numerous studies argue that providing low-income or poor groups, underprivileged areas, and covering sectors with safe, accessible, affordable credit and other financial services is necessary for accelerating growth, and reducing poverty and income disparities (Shankar, 2013).

Access to a functioning financial system allows economically and socially excluded people to participate more fully in the economic system, actively contribute to improvement, and shield themselves against economic shocks by creating equal opportunities. Despite widespread international agreement on the critical role of finance in poverty relief, it is estimated that over two billion people worldwide were excluded from financial services (Assembly, 2006).

However, in the majority of developing countries, a huge segment of society, especially poor individuals, has a lack of access to formal and semi-formal financial services, particularly for disabled persons. Either, therefore, consequence, many of them have necessarily depend on their own or informal sources of finance and generally at unreasonably high costs (Reserve bank of India, 2004).

In most of the least developed countries (LDCs) the condition is not good, where more than 90 percent of the population is excluded from access to the formal financial system (World Bank, 2008).

Bakunzibake (2015) investigate the status of financial Inclusion in Rwanda and its impacts on disabled people from 2010 to 2013. There is a strong need for attention on the status of financial Inclusion in developing countries. His findings showed that prejudice and accessibility constraints prevented people with a visual impairment from fully using financial services, particularly loans.

### **3.2.3 Providing Opportunities for Financial Resources**

For the empowerment of persons with disabilities, Community Based Rehabilitation (CBR) programs must go beyond teaching them how to fish and provide them with the required tools to catch the fish. PWDs who have completed professional training but have been unable to find wage-earning jobs require assistance in setting up workshops or other relevant income-generating activities (IGAs) to sustain themselves.

According to Lambi, Kometa, and Nguh (2007) in rural areas of Africa, Financial Inclusion and agricultural growth are critical. Access to credit, whether from formal or informal financial institutions, is critical for agricultural growth since this money provides much-needed investment capital for the rural masses. Due to its fertile soil, Cameroon's Ngoketunjia Division has been

referred to as an agricultural production basin; nonetheless, many households lack essential food items.

PWDs who are supported with both grants and loans are more likely to succeed than those who simply have access to loans, according to an international survey done to measure the success and failure of vocational training and livelihood initiatives (Caswell, 2003).

The experience of managing the economic incorporation program in Nigeria demonstrates that it does not always take a huge amount of money to make a difference in the lives of the majority of rural PWDs. Funding for PWDs interested in establishing (IGAs) could come from the government's Poverty Alleviation Programs (PAPs), community banks, local non-governmental organizations (LNGOs), international non-governmental organizations (INGOs), members of the community, and disabled people's families, and many others.

### **3.2.4 Discrimination and Obstacles faced by PWDs**

Financial activities need to design accessible to anyone in need of financing. Access to this system is complicated for people with disabilities due to a variety of restrictions or discrimination. The diverse study demonstrates that obstacles exist for a variety of causes. It ranges from societal prejudice to the design of microfinance programs. As human beings, everyone has a right to health, education, and financial security. However, disabled individuals have low access to all of these services, particularly financial services. Without a doubt, disabled individuals are excluded from regular development agendas, and they experience real challenges in their life when they are financially excluded (Mersland, Bwire, & Mukasa, 2009).

Disability, from a development perspective, is a development concern since it exposes people to bad experiences in society as well as extreme poverty. They not only suffer as a result of isolation

and poverty but also contribute to the inefficiency of others by absorbing their time and energy. When it comes to obtaining any form of social benefits, disabled persons are frequently excluded. Not only that, they are very dependent on other people, and this may have an effect on their daily lives as well. In comparison to men, disabled women are more vulnerable (Méon, Mersland, Szafarz, & Labie, 2011).

Women as well from rural areas, indigenous women, young and elderly women, lesbians, refugees, migrant women, sex trade workers, and women with impairments receive less emphasis in development projects. Occasionally, we observe that disabled people are unable to obtain the same amount of loan as someone able, even though their incomes are identical. Individuals with disabilities have historically been given less emphasis and were not the primary target group for Inclusion and socioeconomic integration. However, not all persons with disabilities fall into the lowest of the poor category and possess the ability to do well in the labor market. When there is a level playing field for job performance, disabled people have done well in self-employment (Lewis, 2004).

Various challenges prevent disabled people from accessing microcredit: exclusion by staff due to bias; normal members in credit groups; the disabled themselves due to low self-esteem and repeated rejection experiences throughout life; credit design; and mobility or communication problems caused by the disability itself. As a result, the analysis of challenges was based on the experiences and perspectives of disabled persons. It may be different. However, the major restricting factor is the design of loan programs. Due to a variety of factors such as loan size, interest rate, and repayment period, the disabled person believes that there are no perfect goods for them (Mersland et al., 2009).

Islamic banking and Islamic Finance get attention after the recent global crisis. They also mention that it is key for banks to understand consumer wants/desires. Their paper explores factors affecting consumer preferences for Islamic banking through study-based face-to-face interviews and a theoretical framework developed for the analysis of data collected through a questionnaire. Islamic banking's top objective, according to the findings, is sharia compliance. Then ethical and social considerations are introduced to attract investors to invest in Islamic banking (Kontot, Hamali, & Abdullah, 2016).

There are five factors effective in customer's cooperation system preferences. Demographic features of customers and factors were evaluated as well as also interpreted with ANOVA as methodology. According to analysis, there is a statistically significant difference observed between these factors (excluding education) and the demographic features of the customer. They also concluded that the demographic features of the customers do have not any indication impact on customers' cooperation system preferences (Kaya & Ergüvan, 2015)<sup>2</sup>.

There are several variables e.g. demographics, service quality, and satisfaction examine as factors affecting customers' preferences for taking the loan. A self-determined questionnaire was developed for factor analysis in Greek. Logistic regression shows that marital status customer service shop structure and interest rate are the most significant predictors for loan taking (Frangos, Fragkos, Sotiropoulos, Manolopoulos, & Valvi, 2012).

James Francis Devlin (2002) collected data from 200 respondents in India analyzed with factor analysis and ANOVA. According to the findings it -reveals that customer preferences for loans are mainly affected by a friendly environment, processing and scatters, interest rate, payment rules-

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<sup>2</sup> (09 Sep. 2015/Turkey)

regulation, and out that bank offers. Data was also further analyzed according to demographic variables e.g. occupation and income.

According to Loseva (2021), if one in four persons has a disability, it means that 61 million Americans are having some form of disability. They have \$490 billion in investible income. However, we currently do not design with people with disabilities in mind. Several challenges prevent disabled individuals from accessing financial services. Investing is not taught in schools and is often discouraged for persons with disabilities. Special education curriculum rarely includes financial wellness, and it is up to parents to educate their disabled children about money management. In this study, they also addressed the gap, which is the lack of financial education for people with cognitive disabilities. They also developed a tool, a game that teaches PWDs how to invest and manage money. That is also an interactive way to learn about money management and according to the study, the said game can be played individually or with family and friends.

Chia, Harun, Kassim, Martin, and Kepal (2016) examine consumer behavior toward purchasing a house, using the Theory of the Buyer Behavioral Model. Exogenous variables used in the model are superstition numbers, superstition ghosts, and developer-purchasing desire. Data used collected from 235 working individuals respondents. The study findings indicate that house feature finance in, distance, environment, and superstition numbers have a significant positive relationship with house-purchasing desire.

International organizations, politicians, central banks, financial institutions, and governments are increasingly concerned about financial Inclusion as one of the most pressing socioeconomic issues of our day. Another example of the importance of financial Inclusion for economic growth and poverty alleviation is the United Nations stated goal of reaching universal financial access by 2020.



Nearly half of the world's adult population does not have a bank account in a formal financial institution, according to the World Bank. When it comes to determining the level of financial Inclusion, it is important to look at more than just the number of ATMs and bank branches in an area. Research on multidimensional indices for measuring financial Inclusion is scant and insufficient. An indicator for Financial Inclusion that incorporates both demand and supply-side information is currently lacking in the literature, according to our best understanding (Cámara & Tuesta, 2014).

Algrnas (2016) discussed Housing in Saudi as an interesting but also strategically critical problem, due to the low degree of domestic ownership, and the truth that is houses do not know what fit client call for. It would be remarkable to apprehend consumer options and be able to offer a version clarifying the essential domestic variables, and additionally identify the cultural, economic, and demographic effects on house buying. Their studies were undertaken by using a combined methods research design. This was because of their take a look at entail fact-finding and anticipated to result in the components of answers and understanding inside the area of consumer domestic possibilities in Saudi. This study has a look at combining inductive and deductive approaches to analyze the housing hassle in Saudi and to become aware of an appropriate version of patron alternatives. The final home alternatives model was designed using the use of the inductive element. Furthermore, the result indicates variations among the purchasers' and specialists' views. In the very last section, the model was tested by using carrying out a focus organization, from which a few variables were added to the model.

Inclusive economic growth can be achieved in part through financial Inclusion. In most countries, especially in developing Asia, where economic growth is outstripped by the associated inequalities, inclusive growth has become an important policy goal. It focuses on the participation

of individuals in the growth process and emphasizes equal access to various economic opportunities (Zulfiqar, Chaudhary, & Aslam, 2016). Financial Inclusion has been shown to reduce poverty and inequality, which is why it is so important for broad-based economic growth (Beck, Demirguc-Kunt, & Levine, 2004).

According to Shayya (2022) because of the numerous financial crises that have resulted from a lack of financial literacy, the issue has now become a global one. There is a lack of understanding about personal finance in high-income and low-income countries, which is why the Organization for Economic Cooperation and Development (OECD) was founded to organize conferences, workshops, and instructional guides that help in increasing financial awareness.

Fatah (2018) determines factors, which influence Iraqi customers' decision to take out a loan from commercial banks in Sulaymaniyah. SPSS version 23.0 was used to analyze the survey data. To accomplish the study's objective, the researcher picked a random sample (clients from ten banks in the city of Sulaymaniyah) and relied on a questionnaire to collect data, which became subject to reliability scales. The results of the tests confirmed that service quality, bank loan policy, safety, and marital status all have a positive relationship with the consumer's decision to take out loans, as they are the most important predictors of borrowing, and thus the results of logistic regression corroborated our assumptions. Additionally, the investigation generated various conclusions and recommendations for the benefit of the parties involved.

In the Akwa Ibom State of Nigeria, a survey-based descriptive study was conducted by Effiong and Ekpenyong (2017) to conduct an examination of community-based rehabilitation (CBR) services and opportunities for people with disabilities (PWDs). A simple random sampling technique was used to identify 436 respondents who had participated in CBR initiatives in the

state. The findings indicate, among other things, that there is a substantial association between CBR and the five categories of livelihood enhancement for PWDs in Akwa Ibom state (skills development, self-employment, wage employment, financial services, and social protection). As a result, research determined that CBR initiatives have a considerable impact on the livelihoods of persons with disabilities in Nigeria's Akwa Ibom state.

The study was conducted by Moh'd Khamis (2021) in the United Republic of Tanzania Africa to formulate and provide measuring objects and constructs for evaluating Islamic finance's Financial Inclusion. It develops and evaluates a demand-side measuring instrument for Islamic finance's financial Inclusion based on four dimensions: quality, accessibility, usage, and satisfaction. The evaluation tool developed in this paper evaluates Islamic finance's real performance in terms of total financial Inclusion. Additionally, the study relied on a test of 129 respondents' survey responses.

Akinwunmi (2009) investigated elements influencing the availability of house finance in Nigeria. Between 2003 and 2007, time series information from sampling frequent cash Deposit Banks' (UMDBs) balance sheets was used to assess financial institutions' ability to participate in long-term lending. Using multiple regression techniques, the model determined that the housing finance supply in Nigeria is highly influenced by clusters of parameters linked with financial institutions' share capital and reserves. The relevance for practice is that financial institutions in emerging nations must appropriately expand their capital bases to provide effective home finance and actively mobilize sources of mortgage lending.

Bakunzibake (2015) defined in a study financial inclusion as the process of ensuring marginalized communities such as the poor and low-income groups have access to financial services and

effective and appropriate credit when needed at a reasonable cost. The study examines people with disabilities' financial Inclusion and socioeconomic empowerment. A descriptive and correlational research design was adopted in the study. The researcher collected primary data through a survey by the use of data collecting procedures, notably questionnaires and interviews presented to respondents using structured questions. The study's findings indicated that financial Inclusion had a beneficial effect on the socioeconomic empowerment of people with vision impairment at a rate of 43%. According to a few respondents who received bank loans, financial services enabled them to flourish in economic pursuits. However, the majority of respondents believed that discrimination against disabled youth and a lack of collateral continue to be significant barriers to disabled persons accessing finance.

Lubis, Dalimunthe, and Situmeang (2019) investigated in their research the effect of financial knowledge and financial technology (fintech) on Financial Inclusion in the people of North Sumatra and then evaluated the effect of financial knowledge and financial technology (fintech) on Financial Inclusion in the people of North Sumatra simultaneously. A total of 100 respondents were surveyed. Multiple linear regression analysis was used in this investigation. Financial knowledge and financial technology have a favorable and significant impact on financial Inclusion among the inhabitants of North Sumatra, according to the regression analysis's results. According to the survey, the most important factor determining financial Inclusion is financial literacy.

Mayengo (2014) investigated the impact of consumer safety guidelines on financial participation for People with Disabilities (PWDs) in the Kampala Capital City Authority. Three research objectives were established in the study: to determine the effect of the nature of consumer protection regulations on financial Inclusion; to determine the effect of consumer protection enforcement mechanisms on Financial Inclusion, and to determine the effect of financial literacy

on financial Inclusion among PWDs in the Kampala Capital City Authority. The study employed a cross-sectional survey design that incorporated qualitative and quantitative methods. Economically productive PWDs in Kampala Capital City Authority were included in the study population. The study implies that if consumer protection regulations are implemented properly, they will have a beneficial effect on Financial Inclusion. Additionally, the study discovered a substantial positive correlation between consumer protection financial literacy, and financial Inclusion among persons with disabilities PWDs. The study recommended that an independent entity should be established to educate PWDs about consumer protection rules.

Mitton (2008) investigated Financial Inclusion policy to examine the policy and practice of financial Inclusion in the United Kingdom. The study set out to accomplish several objectives. The study's initial objective was to locate, synthesize, and critically evaluate existing research on the nature and types of financial exclusion. The second objective was to compile a database of current work being done in the UK to assist persons at risk of financial exclusion. The following objectives were to conduct a critical analysis of policy initiatives with a focus on financial exclusion and to identify 'sensitive populations' that may be overlooked totally or partially by present measures. The final objective was to determine which groups would continue to be excluded in the future and how policymakers and practitioners might meet their needs.

Chen and Jin (2017) conducted a study with the title "Financial inclusion in China" which revealed that restricted bank lending can result in financial vulnerability for households and economic loss for countries. According to previous research included in the report, only a small proportion of the population in developing nations had access to formal credit, and just a few of those studies focused on Chinese people. The findings suggest that improving access to formal credit among

socially and economically disadvantaged households is a necessary component of promoting financial Inclusion in China.

In Nigeria Imandojemu et al. (2018) examine people living with disabilities (PLWDs) and Financial Inclusion. The disaggregated study was conducted to determine the extent to which PLWDs are financially included throughout Nigeria's geopolitical zones. The financial Inclusion of People Living with Disabilities Survey inventory was used to collect data. Principal component analysis was used to determine the tool's construct validity (PCA). Cronbach's alpha was used to determine the internal consistency. The data were analyzed using descriptive and inferential statistics, mean and standard deviation, analysis of variance (ANOVA), and the Sidak multiple mean comparison post-hoc-test. The findings demonstrated a considerable variance in the level of financial Inclusion of persons with disabilities across Nigeria's geopolitical zones. Additionally, the results indicated that financial Inclusion for persons living with disabilities is high in terms of mobile banking, currency differentiation, support services, and bank media provider access, but poor in terms of other financial services in Nigeria.

Singh (2017) evaluated the state of financial Inclusion of disabled people in India. The study demonstrates that the reason for PWD's active exclusion from ordinary economic activities is a combination of variables, many of which are more prominent in rural areas. Lack of awareness, limited access to education and work opportunities, prejudices, susceptible regulations, a lack of funding and oversight authority, and a host of other factors have all contributed to the situation's perpetuation. While Micro Finance Institutions (MFIs) have been instrumental in attempts to increase financial inclusivity in rural India, the term 'inclusion' has not yet been defined to encompass the necessity of extending financial services to the disabled community via MFIs. Commercial bank policies also result in a discriminatory attitude against PWDs when it comes to

opening autonomous accounts and requiring an external agent for communication interpretation or guardianship. About 11 Banks serving their class of customers with financial products have largely ignored PWDs, most likely due to concerns about profitability and knowing your customer. This is evident from the inaccessibility of many financial institutions' login pages, which feature a 'graphical captcha' without an audio message.

### **3.3 Conclusion**

We concluded from all of these studies that disability is not properly identified anywhere in the globe, including Pakistan. Thus, the primary issue here is a lack of awareness regarding the needs of PWDs. Thus, additional effort must be done in consideration of PWDs' requirements, such as accessibility. Access to financial services requires financial organizations to improve accessibility and develop a simple process for applying for any type of financial service.

## **CHAPTER 4**

### **METHODOLOGY**

#### **4.1 Introduction**

This chapter presents the following: research design; variables; location of study; population and sample selection; sampling procedure and sample size; data collection instruments, data collection procedures; and data analysis.

#### **4.2 Analytical Methods**

The study is conducted by using mixed methods. For the different definitions of disabilities, the literature is quoted and discussed. The financial policies of the State Bank are also analyzed. For the fourth objective, a survey has been conducted, and interviews were carried out from PWDs of both locales. Pre questionnaire draft was developed for data collection.

#### **4.3 Target Area**

The sample is selected from Federal Area and Charsada district. In the Federal area, Federal Social Welfare Department is contacted to confirm registered disabled PWD categories. Similarly in the Charsadda district, social officers provided information on registered PWDs. Face-to-face interviews and telephonic survey is conducted. Demographic features, Characteristics like gender, age, education, employment, etc., and financial statuses like a source of earnings, monthly income, and Bank account details relevant questions included in the questionnaire. The total target population/sample size is 58 collectively from both regions.

#### **4.4 Targeted Population**

The targeted population for our study is persons with disabilities (PWDs) from the targeted area. Convenient Sample methods are followed for data collection. Population finalized through a list



of (PWDs) obtain from the Social Welfare Office of District Charsadda and Islamabad. Pakistan Census Organization (PCO) in its 1998 census divided PWDs into seven different categories depending on their disability. It includes crippled, Insane, Mentally ill, Multiple disabilities, Deaf, Mute, and Blind. All these seven types of persons with disabilities will be included except insane in this e.g. crippled, mentally ill, multiple disabilities, visually disabled, deaf/mute, etc.

#### 4.4.1 Sample size of targeted Population

Collectively from both locales, Charsadda and Islamabad total population of the respondents is 58 interviewed through a pre-developed questionnaire. Of the total respondents, 27 were interviewed from Charsadda, which is almost 47 percent of the total population of the respondents. While 31 from interviewed from Islamabad which is 55 percent of the total respondents' population.

**Table 4. 1** Sample size Area wise

Area	Freq.	Percent
Charsadda	27	46.55
Islamabad	31	53.45
<b>Total</b>	58	100.00

Source(s): Calculated by the author using Stata 15

#### 4.4.2 Gender-wise sample distribution

Collectively Total of 58 individuals was interviewed from both locales Charsadda and Islamabad. Which includes 8 females 16 percent of the total population of respondents and 50 males, which is 84 percent of the total population of respondents. Only three females were interviewed from Charsadda, which is 11 percent of the total respondents' population from the said locale. Five females from Islamabad which is about 19.2 percent of the total population from the said locale.

Of the total population of the respondents, 27 were from Charsadda while the remaining 31 were from Islamabad. Which included 8 females, which is 14 percent, and 50 males, which is 86 percent

of the total population. Three females were interviewed from Charsadda while five were from Islamabad. 24 males were included from Charsadda while 26 were from Islamabad.

**Table 4. 2** Sample size of Gender Area wise

Area	Gender:		
	Female	Male	Total
<b>Charsadda (Freq.)</b>	3	24	27
<b>% age</b>	37.50	48.00	46.55
<b>Islamabad (Freq.)</b>	5	26	31
<b>% age</b>	62.50	52.00	53.45
<b>Total</b>	8	50	58

Source(s): Calculated by the author using Stata 15

#### 4.4.3 Type of Disability

The total population of the respondents includes six different types PWDs. In the total population, the respondents were One and 7 Deaf/Mutes from Charsadda and Islamabad respectively. Which is almost 12.50 percent and 87.50 percent.

**Table 4. 3** Sample Size of PWDs category wise

Area	Type of Disability						
	Deaf/ Mute	Vision Impairment	Physical	Intellectual	Multiple	Dwarf	Total
<b>Charsadda (Freq.)</b>	1	4	15	1	4	2	27
<b>% age</b>	12.50	57.14	53.57	33.33	50.00	50.00	46.55
<b>Islamabad (Freq.)</b>	7	3	13	2	4	2	31
<b>% age</b>	87.50	42.86	46.43	66.67	50.00	50.00	53.45
<b>Total</b>	8	7	28	3	8	4	58

Source(s): Calculated by the author using Stata 15

#### 4.4.4 Marital Status of PWDs

About half of the total population of respondents were married and half were unmarried from

Charsadda. The same situations were in Islamabad 54.3 percent unmarried and 52.2 percent total population of respondents were married.

**Table 4.4** Sample Size Marital Status wise

Area	Marital Status		
	Unmarried	Married	Total
<b>Charsadda (Freq.)</b>	16	11	27
<b>% age</b>	45.71	47.83	46.55
<b>Islamabad</b>	19	12	31
<b>% age</b>	54.29	52.17	53.45
<b>Total</b>	35	23	58

Source(s): Calculated by the author using Stata 15

#### 4.4.5 Occupation of PWDs

About zero were unemployed, six were Govt. Employed, three were students, 4 were daily Wagers, 8 were self-employed and 6 were involved in businesses from 27 total population of Charsadda. While only were unemployed, eight were Govt. employed, two were students, eight were also daily wagers, two were self-employed and seven were involved in Businesses from Islamabad locale.

**Table 4.5** Sample size Occupation wise

Area	Occupation						
	Unemployed	Govt. employed	Student	Daily Wage	Self-employed	Business	Total
<b>Charsadda (Freq.)</b>	0	6	3	4	8	6	27
<b>% age</b>	0.00	42.86	60.00	33.33	80.00	46.15	48.21
<b>Islamabad (Freq.)</b>	2	8	2	8	2	7	29
<b>% age</b>	100.00	57.14	40.00	66.67	20.00	53.85	51.79
<b>Total</b>	2	14	5	12	10	13	56

Source(s): Calculated by the author using Stata 15

#### 4.4.6 Account holders' distribution concerning the area

The total population from Charsadda was 27 of which account holders were 15 48.39 percent of the total respondent population and 12 were no account holders that 44.44 percent of the total

respondent population from the said locale. Situations from Islamabad were a little different. Here about of the population were account holders remaining half were not account holders.

**Table 4. 6** Sample Sizaccount Holders Area Wise

Area	Q1(A/C)		
	No	Yes	Total
<b>Charsadda (Freq.)</b>	12	15	27
<b>% age</b>	44.44	48.39	46.55
<b>Islamabad (Freq.)</b>	15	16	31
<b>%age</b>	55.56	51.61	53.45
<b>Total</b>	27	31	58

Source(s): Calculated by the author using Stata 15

#### 4.4.7 Account holders/No. Holders concerning qualification

Below table 4.7 shows that level of qualification also matters in the case of account holding/opening. We can see that from the intermediate level to the Master level of qualification the account holder are more than other levels of qualification.

**Table 4. 7** Sample size of account Holders occupation wise

Qualification	Q1(Account)		
	No	Yes	Total
<b>No Qualification (in numbers)</b>	2	0	2
<b>% age</b>	7.69	0.00	3.51
<b>Primary (in numbers)</b>	9	2	11
<b>% age</b>	34.62	6.46	20.54
<b>Middle (in numbers)</b>	2	1	3
<b>% age</b>	7.69	3.23	5.46
<b>Matric (in numbers)</b>	4	2	6
<b>% age</b>	15.38	6.45	10.53
<b>Intermediate (in numbers)</b>	4	4	8
<b>% age</b>	15.38	12.90	14.04
<b>Bachelor (in numbers)</b>	2	9	11
<b>% age</b>	7.69	29.03	19.30
<b>Master (in numbers)</b>	3	8	11
<b>% age</b>	11.54	25.81	19.30
<b>MPhil (in numbers)</b>	0	4	4
<b>% age</b>	0.00	12.90	7.02
<b>Ph.D. (in numbers)</b>	0	1	1

<b>% age</b>	0.00	3.23	1.75
<b>Total</b>	26	31	57
	100.00	100.00	100.00

Source(s): Calculated by the author using Stata 15

#### 4.4.8 Account holders/No. Holders concerning Occupation

Table 4.8 indicates that the percentage of account holders is more in case govt. employment which is about 45.16 percent of the total account-holding respondents. The second highest percentage of the account is in self-employment. In remaining all categories of employment, including students, there is no big difference.

**Table 4.8** Sample size of account Holders occupation wise

Occupation	Q1(Account)		
	No	Yes	Total
<b>Unemployed (In Numbers)</b>	2	0	2
<b>% age</b>	8.00	0.00	3.57
<b>Govt. employed (In Numbers)</b>	0	14	14
<b>% age</b>	0.00	45.16	25.00
<b>Student (In Numbers)</b>	2	3	5
<b>% age</b>	8.00	9.68	8.93
<b>Daily Wage (In Numbers)</b>	11	1	12
<b>% age</b>	44.00	3.23	21.43
<b>Self-employed (in numbers)</b>	1	9	10
<b>% age</b>	4.00	29.03	17.86
<b>Business (in numbers)</b>	9	4	13
<b>% age</b>	36.00	12.90	23.21
<b>Total</b>	25	31	56
	100.00	100.00	100.00

Source(s): Calculated by the author using Stata 15

#### 4.4.9 Accessibility to Banks with respect to Type of Disability

Table 4.9 shows the different categories of PWDs' accessibility to the bank. Physical disabilities are more difficult to access bank or bank services and other remaining categories also have

difficulties in accessibility to bank or bank services. Just a few respondents agreed with accessibility to the bank.

**Table 4. 9** Access Bank building and Type of Disability

Q18	Type of Disability						
	Deaf/Mute	Vision Impairment	Physical	Intellectual	Multiple	Dwarf	Total
No (In Numbers)	1	5	9	1	5	1	22
% age	50.00	83.33	64.29	100.00	100.00	33.33	70.97
Yes (In numbers)	1	1	5	0	0	2	9
% age	50.00	16.67	35.71	0.00	0.00	66.67	29.03
Total	2	6	14	1	5	3	31
	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source(s): Calculated by the author using Stata 15

#### 4.4.10 Bank Infrastructure accessibility for PWDs of different categories

Table 4.10 shows the in-bank infrastructure accessibility to different categories of PWDs. Half of the population respondents said that in-bank infrastructure is not suitable for PWDs. In the remaining half, some PWDs agreed with accessibility but in a few ways such as counters dealing with bank staff.

**Table 4. 10** Bank Infrastructure accessibility for different Types of Disability

Q43	Type of Disability						
	Deaf/Mute	Visual impairment	Physical	Intellectual	Multiple	Dwarf	Total
No (in numbers)	0	3	7	1	2	1	14
% age	0.00	50.00	50.00	100.00	40.00	33.33	45.16
Yes (in Numbers)	2	3	7	0	3	2	17
% age	100.00	50.00	50.00	0.00	60.00	66.67	54.84
Total	2	6	14	1	5	3	31
	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source(s): Calculated by the author using Stata 15

#### 4.4.11 Documentation process for different Types of Disability

The documentation process is somehow easy as compared to other financial services as shown in table 4.11. Because about 58 percent agreed with the easy process of documentation.

**Table 4. 11** Sample size Documentation process and Disability

Q42(DP)	Type of Disability						
	Deaf/Mute	Visual	Physical	Intellectual	Multiple	Dwarf	Total
<b>No (numbers)</b>	1	2	5	1	3	1	13
<b>% age</b>	50.00	33.33	35.71	100.00	60.00	33.33	41.94
<b>Yes (numbers)</b>	1	4	9	0	2	2	18
<b>% age</b>	50.00	66.67	64.29	0.00	40.00	66.67	58.06
<b>Total</b>	2	6	14	1	5	3	31
	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source(s): Calculated by the author using Stata 15

#### 4.5 Measuring Financial Inclusion

For the measurement of financial inclusion scores, we estimated three sub-indices, which include Usage, Barriers, and Access.

##### 4.5.1 Measurement of Usage Index

To gauge the extent to which people use formal financial services, we attempt to proxy the utility derived from using them by taking into account the use of a variety of products, including having at least one active financial product that permits sending and receiving payments as well as storing money, having a savings account, and having a loan from a bank or other financial institution.

##### 4.5.2 Measurement of Barriers index

Unbanked people's perceptions of financial Inclusion provide information more about hurdles that keep them from adopting formal financial services. This data adds to the picture of financial Inclusion by revealing the number of people who are financially excluded as well as the reasons for their exclusion from the formal financial system as viewed by these people. Personal or self-exclusion and enforced financial exclusion are the main types of financial exclusion.

### 4.5.3 Measurement of Access Index

Individuals that have access to financial services can utilize them. Greater access, on the other hand, often does not indicate greater financial Inclusion. There is a barrier to access because, once it reaches a certain point, a minor increase in access does not always increase financial Inclusion. It may raise the frequency with which financial services are used by improving the intensive margin of consumption, but it does not always increase the extensive margin, as measured by higher percentages of accounts kept or any other financial service.

## 4.6 Analytical Techniques

The collected data through questionnaire will be analyzed by Principal Component Analysis (PCA) and one-way Analysis of Variance (ANOVA) (Imandojemu et al., 2018).

### 4.6.1 PCA

Principle component analysis (PCA) is a statistical technique that aids in distilling the information contained in big data tables into a more manageable and accessible set of "precis indices." In order to identify trends, jumps, clusters, and outliers, it is crucial to describe a multivariate data table as a smaller number of variables (summary indices). This overview may uncover the relationships between observations and variables, and among the variables.

The dimensions, i.e. the three unobserved endogenous variables, as well as the parameters in the following equation system, are estimated in the first stage:

$$Y_i^u = \beta_1 \text{account}_i + \beta_2 \text{savings}_i + \beta_3 \text{loan}_i \dots \dots \dots \text{Eq. 4.1}$$

$$Y_{ii}^b = \theta_1 \text{distance}_i + \theta_2 \text{affordability}_i + \theta_3 \text{documentation}_i + \theta_4 \text{trust} \dots \dots \dots \text{Eq. 4.2}$$

$$Y_{iii}^a = \gamma_1 \text{bankbuilding}_i + \gamma_2 \text{autodoors}_i + \gamma_3 \text{elevators}_i + \gamma_4 \text{atmhight}_i \dots \dots \dots \text{Eq. 4.3}$$



Where  $Y_i^u$  denotes Usage,  $Y_{ii}^b$  denotes Barriers and  $Y_{iii}^a$  denotes Access.

For the estimation of Financial Inclusion FI scores, we have made three indices Usage, Barriers, and Access. First, we have estimated the Usage index which will be denoted by,  $Y_i^u$  and index is Account, Saving, Loan. Following Equation... (a), for the index of Usage.

$$Y_i^{usage} = \beta_1 account_i + \beta_2 savings_i + \beta_3 loan_i \dots \text{Eq. 4.4}$$

Secondly, we have estimated the Barriers index for which indicators are distance, affordability, documentation, and trust. We have used the following Equation... (b), for the index of barriers.

$$Y_{ii}^{barriers} = \theta_1 distance_i + \theta_2 affordability_i + \theta_3 documentation_i + \theta_4 trust + \varepsilon_i \dots \text{Eq. 2.5}$$

Thirdly, we have estimated the Access index for which the indicators are Bank\_Building, auto\_doors, elevators, and ATMs\_hights. We have used the following Equation... (c), for the index of Access.

$$Y_{iii}^{access} = \gamma_1 bankbuilding_i + \gamma_2 autodoors_i + \gamma_3 elevators_i + \gamma_4 atmheight_i + \varepsilon_i \dots \text{Eq. 2.6}$$

**Table 4. 12** Estimation of Financial inclusion Score and its Sub-indices

S No.	Sub-Indices	Financial Indicators	Locales
1	Usage	i. Account ii. Saving iii. Loan	Charsadda (KPK) Islamabad
2	Barriers	i. Distance ii. Affordability iii. Documentation iv. Trust	
3	Access	i. Bank Building ii. Auto Doors iii. Elevators iv. ATM Heights	

#### 4.6.2 One-way ANOVA

ANOVA is a statistical method used to determine whether the means of two or more groups differ from one another significantly. ANOVA compares the means of various samples to examine the

influence of one or more factors. The one-way analysis of variance (ANOVA) is used to determine whether there are any statistically significant differences between the means of two or more independent (unrelated) groups (although you tend to only see it used when there are a minimum of three, rather than two groups).

### 4.6.3 Policies Assessment

In this section different policies for PWDs in Pakistan has been reviewed. The discussion is mainly based on the first objective of this research. Which helped me to understand the proposed as to analyze through on-ground situations. The qualitative work is mainly based to learn more about the problem to suggest a better solution for the issue, which is examined in this research.

### 4.6.4 Linear Probability Model

LPM model, linear regression model applied to binary data is called a linear probability model (LPM). With binary independent variables, we can incorporate qualitative information as explanatory variables in a multiple regression model. In all of the models up until now, the dependent variable  $y$  has had quantitative meaning (for example,  $y$  is a dollar amount, a test score, a percent, or the logs of these). Our dependent variable,  $y$ , takes on only two values: zero and one (Wooldridge, 2015). What does it mean to write down a multiple regression model, such as:

$$y(FI\ Score) = \beta_0 + \beta_1 Bank\ access + \beta_2 AutoDoors + \beta_3 Elevators + \beta_4 ATMs\ Hight + \beta_5 Income + \beta_6 Qualification + u_i \dots \dots \dots Eq. 2.7$$

$$y(FI\ Score) = \beta_0 + \beta_1 Saving + \beta_2 Loan + \beta_3 Income + \beta_4 Qualification + u_i \dots \dots \dots Eq. 2.8$$

$$y(\text{FI Score}) = \beta_0 + \beta_1\text{Trust} + \beta_2\text{Affordability} + \beta_3\text{Distance} + \beta_4\text{Income} + \beta_5\text{Qualification} + u_i \dots \dots \dots \text{Eq. 2.9}$$

#### **4.7 Conclusion**

This chapter explained the method adopted by this research. This chapter has mentioned every component involved in conducting this research from the population, population frame, and sampling techniques used for the interview. Finally, this chapter provides a detailed explanation of the selected mode of analysis used and the data collection method. All the discussed methods and analytical techniques will be used to analyze the collected data. To make valuable recommendations based on findings of these techniques.

## **CHAPTER 5**

### **RESULTS AND DISCUSSION**

#### **5.1 Introduction**

This chapter describes the results that have been obtained from our analysis. This chapter contains a detailed presentation and discussion of data analysis and the results of this study. The findings are presented under the following major headings: PCA Analysis, One-way ANOVA, Ranking of Indices, and Linear Regression Analysis. The main determining factor of response was the proneness of PWDs from particular places towards Financial Services for Financial inclusion.

#### **5.2 Principle Component Analysis (PCA) Estimation**

Principle Component Analysis PCA is based on a correlation matrix when binary variables then there is criticism on using simple PCA. Although PCA is often used for binary data, it is argued that PCA assumptions are not appropriate for binary or count data and generalizations exist: the strategy is similar in spirit to the development of generalized linear models to perform a regression analysis for data belonging to the exponential family (Collins, Dasgupta, & Schapire, 2001).

Therefore, first, we calculate the correlation matrix and then apply Polychoric PCA. Because our variables are dichotomous so we need Polychoric PCA. First, calculate the Polychoric correlation matrix, and then use this as input for the principal component analysis for making indices. Because our variables are dichotomous so we need Polychoric PCA.

## 5.2.1 Matrix of Correlations

**Table 5.1** Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) account	1.000										
(2) savings	0.036	1.000									
(3) loan	0.148	-0.148	1.000								
(4) distance	-0.531	-0.177	0.350	1.000							
(5) affordability	-0.300	-0.039	0.431	0.784	1.000						
(6) documentation	0.225	-0.225	-0.065	-0.033	0.023	1.000					
(7) access_bank_bu~d	0.127	-0.127	0.244	0.262	0.235	0.412	1.000				
(8) auto_doors	0.051	-0.051	0.348	0.415	0.615	0.229	0.406	1.000			
(9) auto_doors	0.051	-0.051	0.348	0.415	0.615	0.229	0.406	1.000	1.000		
(10) elevator	0.064	-0.064	0.201	0.318	0.316	0.055	0.262	0.354	0.354	1.000	
(11) atm_heights	-0.127	-0.282	0.217	0.210	0.346	-0.110	-0.033	0.183	0.183	-0.262	1.000

Source(s): Calculated by the author using PCA on Stata 15

## 5.2.2 Estimation of weights

In terms of the weighting method, we notice that the relative contributions of the various indicators scarcely change over time. The indicator for holding an account has the largest weight (0.56) followed by savings (0.40) and loans (0.04) in the utilization dimension, (0.33), as shown in Table 5.2. It is worth noting that, despite the uneven distribution of weights, none of the indicators is dominant. . Finally, Table 5.2 lower panel displays the weights for the indicators in the obstacles dimension. Distance, affordability, and documentation are the first three characteristics, and their weights—0.36, 0.42, and 0.32, respectively—do not differ much over time. With a weight close to 0.24, lack of trust is the most critical factor in establishing the obstacles dimension.

**Table 5.2** Principle Components Analysis

<b>Principle Components Estimates</b>				
<b>Usage</b>				
<b>Variable</b>	<b>Comp1</b>	<b>Comp2</b>	<b>Weights</b>	
<b>Account</b>	0.456	0.707	0.56	
<b>Savings</b>	0.764	0.000	0.40	
<b>Loan</b>	-0.456	0.707	0.04	
<b>Eigenvalues</b>	1.713	1.287		
<b>Barriers</b>				
<b>Variable</b>	<b>Comp1</b>	<b>Comp2</b>	<b>Comp3</b>	<b>Weights</b>
<b>Distance</b>	0.704	-0.002	0.106	0.36
<b>Affordability</b>	0.673	0.276	0.058	0.42
<b>Documentation</b>	-0.071	0.736	-0.651	0.32
<b>Trust</b>	-0.213	0.619	0.749	0.24
<b>Eigen values</b>	1.88032	1.17829	0.823668	

<b>Access</b>				
<b>Variable</b>	<b>Comp1</b>	<b>Comp2</b>	<b>Comp3</b>	<b>Weights</b>
<b>Bank_Building</b>	0.590	-0.175	-0.725	0.823
<b>Auto_Doors</b>	0.636	0.247	0.154	1.826
<b>Elevator</b>	0.432	-0.562	0.626	0.376
<b>ATM_heights</b>	0.245	0.770	0.243	1.728
<b>Eigenvalues</b>	2.235	1.426	0.339	

Source(s): Calculated by the author using PCA on Stata

### 5.2.3 Cumulative Variances explained by Components

It is important to examine the makeup of these components to comprehend the structure of our predicted indices because weights are derived from the data in the principal components and the related eigenvalues. The percentage of the total variance explained by the various components is shown in Table 5.3 in a cumulative manner and by dimensions. For the usage dimension, we see that the three indicators—account, loan, and savings—each contribute equally to the first component, which comprises 56% of the factual data in this dimension displayed in Table 5.3. This shows that the latent structure being measured by these three indicators is the same. Finally, we discover that the first component of the dimension of the barrier, which is responsible for over 80% of the overall variation in the data, is equally contributed by the four indicators. Distance, cost, and documentation loadings are especially prominent in the first component. Despite having a smaller weight in the second component than it does in the first, lack of trust nonetheless contributes to the second component's new information, but in a different way. Because the coefficients in the eigenvector for the access dimension, which is defined in the final panel of Table 5.3, are equal, we find that the two indicators contribute equally to the first main component.

**Table 5.3** Cumulative Variance Explained by Components

<b>Component</b>	<b>Cumulative Variances</b>
<b>Usage</b>	
PC1	0.571
PC2	1.000
<b>Barriers</b>	
<b>Component</b>	<b>Cumulative Variances</b>
PC1	0.470
PC2	0.765
PC3	0.971
PC4	1.000
<b>Access</b>	
<b>Component</b>	<b>Cumulative</b>
PC1	0.682
PC2	0.869
PC3	1.000

Source(s): Calculated by the author using PCA on Stata 15

Like in Nigeria Imandojemu et al. (2018) examine people living with disabilities (PLWDs) and Financial Inclusion. The disaggregated study was conducted to determine the extent to which PLWDs are financially included throughout Nigeria's geopolitical zones. The financial Inclusion of People Living with Disabilities Survey inventory was used to collect data. Principal component analysis was used to determine the tool's construct validity (PCA). The findings demonstrated a considerable variance in the level of financial Inclusion of persons with disabilities across Nigeria's geopolitical zones. Additionally, the results indicated that financial Inclusion for persons living with disabilities is high in terms of mobile banking, currency



differentiation, support services, and bank media provider access, but poor in terms of other financial services in Nigeria.

As a result of policymakers' growing interest in the importance of FI, the measurement of FI has become a priority. Researchers create several metrics regularly. However, there is currently no metric that can be used to rank anything. Despite this, the majority of research has used FI measurement in one of two ways: Principle Component Analysis PCA or Factor Analysis FA (M Sarma, 2016); (Mandira Sarma & Pais, 2011).

### 5.3 One-way ANOVA

This section included One-Way ANOVA analysis results and discussion.

#### 5.3.1 Area and Usage Analysis of Variance

According to the analysis of variance, there is no difference in the usage of financial services in both locales. In Charsadda and Islamabad, the probability value is highly insignificant which indicates that PWDs are facing the same issues in the usage of financial services. PWDs have issues with the account opening process because they have no trust in banks or any other financial institutions. Usage is mainly based on Account holding, Loans, and saving it is more for PWDs' financial inclusion to make all these more accessible by providing them easy account process, availing loans, and suitable profit on saving. That will make them encourage to avail the of financial services.

**Table 5. 4** Analysis of Variance

Source	SS	Df	MS	F	Prob > F
<b>Between groups</b>	0.843065	4	0.210766	0.82	0.5203
<b>Within groups</b>	9.761586	38	0.256884		
<b>Total</b>	10.60465	42	0.252492		

Source(s): Calculated by the author using One-way ANOVA on Stata 15

### 5.3.2 Area and Barriers Analysis of Variance

The barrier index result shows that means of both locales are the same because the p-value is insignificant which means that there is no difference in the barrier means of both areas. So the PWDs are not fully included in either District Charsadda or Islamabad. Unbanked people's perceptions of financial Inclusion provide information more about hurdles that keep them from adopting formal financial services. So it is really important to make it easy for PWDs by removing the barrier which is the main hurdle in the FI of PWDs.

**Table 5.5** Analysis of Variance

Source	SS	Df.	MS	F	Prob > F
Between groups	4.651515	18	0.258418	3	0.222222
Within groups	0.666667	3	0.222222		
Total	5.318182	21	0.253247		

Source(s): Calculated by the author using One-way ANOVA on Stata 15

### 5.3.3 One-way ANOVA Area and Access

The one-way ANOVA results show that the accessibility in both locales is the same. The probability, value is insignificant which shows that there is no variation in the means of both locales. Some hurdles in both locales facing by PWDs. In the capital, Islamabad, and District Charsadda PWDs have no proper access to financial services. It may raise the frequency with which financial services are used by improving the intensive margin of consumption, but it does not always increase the extensive margin, as measured by higher percentages of accounts kept or any other financial service.

**Table 5.6** Analysis of Variance

Source	SS	Df	MS	F	Prob > F
Between groups	2.744086	7	0.392012	1.83	0.1299
Within groups	4.933333	23	0.214493		
Total	7.677419	30	0.255914		

Source(s): Calculated by the author using One-way ANOVA on Stata 15

### 5.3.4 Area and Financial Inclusion Scores

Based on both locales, Charsadda and Islamabad, the financial inclusion scores indicate that the accessibility, usage, and barriers are almost the same in both locales. The means of both groups are similar as indicated by the ANOVA results.

**Table 5.7** Analysis of Variance

Source	SS	Df	MS	F	Prob > F
Between groups	3.818182	18	0.212121	0.42	0.8942
Within groups	1.5	3	0.5		
Total	5.318182	21	0.253247		

Source(s): Calculated by the author using One-way ANOVA on Stata 15

James Francis Devlin (2002) collected data from 200 respondents in India analyzed with factor analysis and ANOVA. According to the findings it -reveals that customer preferences for loans are mainly affected by a friendly environment, processing and scatters, interest rate, payment rules-regulation, and out that bank offers. Data was also further analyzed according to demographic variables e.g. occupation and income.

Imandojemu et al. (2018) analyzed using descriptive and influential statistics, mean and standard deviation, analysis of variance (ANOVA), and the Sidak multiple mean comparison post hoc tests. The findings demonstrated a considerable variance in the level of financial Inclusion of persons with disabilities across Nigeria's geopolitical zones. Additionally, the results indicated that financial Inclusion for persons living with disabilities is high in terms of mobile banking,

currency differentiation, support services, and bank media provider access, but poor in terms of other financial services in Nigeria.

## 5.4 Ranking of Indices

In this section, we discussed the ranking of PWDs Financial with different aspects.

### 5.4.1 Ranking of Usage of Financial Services

On the bases of St. Deviation, we make ranges of indices. In each range define by two St. deviations 40 respondents lie in the first range, which is 0 – 0.64 which indicates these PWDs are partially availing financial services. However, inclusion ratios are below one. Only two PWDs are availing of FI services to their maximum. The reaming 18 nor availing and satisfied with FI.

**Table 5. 8** Ranking of Usage

Usage	Ranges	
	0 – 0.64	0.66 – 1.28
40	2	

Source(s): Calculated by the author using Stata 15

### 5.4.2 Ranking of Barriers to Financial Services

About 50 PWDs stated that barriers exist in availing of FI services. On the bases of St. Deviation, the same range we make for the index of Barriers. Only six PWDs partially agreed with the statement of there are no barriers to availing of FI services and only two PWDs highly with no barriers statement.

**Table 5. 9** Ranking of Barriers

Barriers	Ranges	
	0 – 2.74	2.74 – 4.11
6	2	

Source(s): Calculated by the author using Stata 15

### 5.4.3 Ranking of Access to Financial Services

On the base of our calculated St. Deviation, we make ranges for the index of Access. 26 PWDs stated that there is a lot of problem with accessibility. Twenty-eight respondents were somehow satisfied with accessibility and only 4 PWDs were highly satisfied in the case of accessibility.

**Table 5. 10** Ranking of Access

Access	Ranger		
	0 – 0.9	0.9 – 1.8	1.8 – 2.25
	28	2	2

Source(s): Calculated by the author using Stata 15

### 5.5.4 Ranking of Financial Inclusion scores

On the of basis Usage, Barriers and Accessibility the calculated financial inclusion score tells us that only 15% of the respondents are financially included and the remaining 85% are not financially included based on questionnaire data. However, the majority of the respondents were availing services but not with full inclusion services offered for PWDs by the State Bank of Pakistan they are facing issues in terms of Usage Barriers and accessibility e.g. Affordability, Documentation process, trust issues, infrastructure problems, etc.

**Table 5. 11** Ranking of Financial Inclusion

Financial Inclusion	Ranges	
	0 – 2.2	2.2 – 3.3
	8	1

Source(s): Calculated by the author using Stata 15

### 5.4.5 Linear Probability Model Result

The results of model 2.7 indicate that there is a positive impact of access to the bank building, elevators, ATM height, income, and qualification on the bank account holding of the PWDs. Amongst these, the ATM height, income, and qualification significantly increase the probability

of bank account holding in PWDs. The results coincide with the findings of Singh (2017) evaluated the state of financial Inclusion of disabled people in India. The study demonstrates that the reason for PWD's active exclusion from ordinary economic activities is a combination of variables, many of which are more prominent in rural areas. Lack of awareness, limited access to education and work opportunities, prejudices, susceptible regulations, a lack of funding and oversight authority, and a host of other factors have all contributed to the situation's perpetuation. The provision of appropriate ATM height has been an important determinant of PWDs' use of financial services. The interviewees also highlighted this in the formal discussions. If the height is appropriate, there is a greater probability of PWDs opening their bank account and using financial services. However, for the visually impaired the presence brail system is required. The non-provision of auto doors by the banks reduces the probability of bank account holding of PWDs. The non-provision of the auto door makes it difficult for the wheelchair to enter the bank building. It is also difficult for the physically handicapped and multiple disabled PWDs.

**Table 5. 12** Estimation Result of Indicators of Financial Inclusion

Dependent Variable: Financial Inclusion				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Access Bank Building	0.069869	0.108184	0.645835	0.5243
Auto doors	-0.168388	0.212756	-0.791462	0.4361
Elevators	0.066614	0.171712	0.387938	0.7013
ATMs Height	0.245594*	0.086518	2.83863	0.0089
Income	6.59E-06*	2.72E-06	2.425203	0.0229
Qualification	0.039255*	0.008633	4.546919	0.0001

Source(s): Calculated by the author using Eviews.1

\*Significant at 5%

The result of Model 2.8 indicates that there is a positive impact on the Account holding by Access to Bank Buildings, Auto Doors, Elevators, and ATMs. It is also concluded from the results that the Height of ATMs, Income, and Qualification has a significant impact on Account holding,

which means a change in any financial indicators will appropriate change in account holding. Therefore, The major restricting factor is the design of loan programs. Due to a variety of factors such as loan size, interest rate, and repayment period, disabled person believes that there are no perfect goods for them. According to Caswell (2003) PWDs who are supported with both grants and loans are more likely to succeed than those who simply have access to loans, according to an international survey done to measure the success and failure of vocational training and livelihood initiatives.

**Table 5. 13** Estimation Result of Indicators of Financial Inclusion

Dependent Variable: Financial Inclusion				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.040709	0.174278	0.233587	0.8166
Saving	0.24143	0.272448	0.886149	0.3813
Loan	0.347314*	0.131904	2.633082	0.0123
Income	1.00E-05*	3.50E-06	2.863233	0.0069
Qualification	0.022314	0.013773	1.620092	0.1137

Source(s): Calculated by the author using Eviews.10

\*Significant at 5%

The results of Model 2.9 shows that Account holding is effecting by Bank infrastructure, affordability, representative, Income availability, and Qualification. Except for trust and distance, all the indicators have a positive impact on Account holding, which indicates that if there is a change in any one from positive impact indicators it will affect the account holding of PWDs. The most important factors for the financial inclusion of PWDs are income, qualification, and access to Bank infrastructure. Because these values are significant. The factor which more important for PWDs is accessible bank infrastructure because it is more difficult PWDs to access financial services without proper access to Bank infrastructure. The results show that bank

infrastructure accessibility is highly significant at 10 percent which indicates Infrastructure plays a vital role to empower people with disabilities by making them part of societal and economic development in an inclusive manner helping them to overcome unnecessary barriers. Singh (2017) evaluated the state of financial Inclusion of disabled people in India. The study demonstrates that the reason for PWD's active exclusion from ordinary economic activities is a combination of variables, many of which are more prominent in rural areas. Lack of awareness, limited access to education and work opportunities, prejudices, susceptible regulations, a lack of funding and oversight authority, and a host of other factors have all contributed to the situation's perpetuation.

**Table 5. 14** Estimation Result of Indicators of Financial Inclusion

Dependent Variable: Financial Inclusion				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Trust	-0.02716	0.225529	-0.12043	0.9057
Distance	-0.1955	0.136727	-1.42985	0.1733
Affordability	0.11068	0.134889	0.820524	0.4248
Bank infrastructure access	0.183311**	0.098191	1.86688	0.0816
Representation	0.104722	0.154143	0.67938	0.5072
Income	1.01E-05*	4.18E-06	2.412539	0.0291
Qualification	0.038986*	0.011868	3.284924	0.005

Source(s): Calculated by the author using Eviews.10

\*Significant at 5%

\*\*Significant at 10%

Because there are limited opportunities for education and employment for these PWDs, the majority of them live dependent life. In Pakistan, due to a lack of facilities, most PWDs are unable to continue their education and therefore unable to get higher degrees which are the main hindrance in getting high-level posts. According to Norman (2010), a financially literate person can allocate money objectively or sensibly and there are varieties of financial skills that may be learned and applied, such as budgeting and investing. However, traditional education aims to



educate the intellect, meet social and economic requirements, train individuals for employment, generate a workforce, promote social or political institutions, and benefit the economy as a whole.

As with any other group, education is crucial to extending the life possibilities of persons with disabilities. In nations like Pakistan, where the social marginalization of PWD is severe, socialization of Persons with disabilities (PWDs) through schooling assumes an unusually important role. Even though it is crucial, children and adults with disabilities continue to have very poor educational outcomes. Both the overall PWDs population and school-aged impaired children continue to have substantially greater illiteracy rates than the general community.

According to the findings of the analysis, mostly the PWDs from District Charsadda and Islamabad are facing the same situation in access to financial services. FI is a matter of global concern because it brings many economic benefits to individuals, small businesses, and sustainable growth in general. It is also seen as a way to prevent social exclusion.

## **5.5 Conclusion**

From these findings, we concluded that all the indicators which include Usage, Accessibility, and Barriers are important factors that play a vital role in the inclusion of PWDs. The most important sub-indicators for PWDs inclusion are Qualification, suitable income, accessibility to bank infrastructure, a representative for PWDs and easy documentation process are the most effective factors for the fully inclusion of PWDs.

## **CHAPTER 6**

### **CONCLUSION AND RECOMMENDATIONS**

#### **6.1 Conclusion**

According to our findings, based on Usage, Barriers, and Accessibility, the computed financial inclusion score indicates that just 15% of respondents are financially included, while the remaining 85% are not, according to questionnaire data. However, the majority of respondents were using services, but not with the fully inclusive services offered for PWDs by the State Bank of Pakistan; they were experiencing Usage Barriers and accessibility issues such as affordability, documentation process, trust issues, infrastructure problem, and so on. Pakistan's financial Inclusion needs to be increased to eliminate poverty and inequality and generate productive employment possibilities for PWDs. According to the findings of this study for PWDs financial services should be made more accessible because they are disadvantaged and socially excluded by eliminating barriers to entry. For modest loans, banks can eliminate collateral requirements, streamline procedures, offer relevant products, and undertake marketing to raise awareness for Persons with Disabilities (PWDs). The eradication of poverty and the improvement of household standards of living may be more effectively achieved by increasing PWDs' access to financial resources. The reduction of gender inequities, the empowerment of PWDs, and an increase in inclusive growth are all benefits of Financial Inclusion. Small loans at reduced rates can be made available by financial institutions to the masses living in rural, underdeveloped, and underprivileged areas, allowing these people to participate in economic growth and, in turn, profit from it, so enhancing the general well-being of society.

Pakistan is, sadly, one of the least economically inclusive nations in the world. According to financial inclusion metrics, the country is significantly behind other countries of comparable

income. Various factors of Financial Inclusion in Pakistan have been examined in the study. For the study to reach solid conclusions and realistic policy choices, it has reviewed the problem from numerous viewpoints.

Financial Inclusion is a multifaceted concept that cannot be adequately represented with a single indicator but is governed by a far bigger range of variables than the few that have been included in previous studies. Financial systems are complex and diversified in character. In a welcoming environment, the financial system must stimulate the use of financial services by society's citizens. Most disadvantaged populations; that is, those who are most affected by financial inclusion barriers.

Our data shows that income, gender, age, and educational level are the most crucial considerations for PWDs when deciding on financial inclusion. Various demographic groups view a lack of resources, lack of documentation, distance, and the cost of financial services as major barriers to financial inclusion, according to the analysis based on microdata. Although these obstacles have an impact on everyone, PWDs are disproportionately affected by each situation. The study also looked at how demographic factors including income level, gender, age, handicap, and gender affect borrowing sources.

## **6.2 Recommendations**

1. There should be an updated database for PWDs because it is a significant hindrance to successful service delivery to PWDs. There is a critical need for accurate data on the scope of the country's disability problem.
2. The only law for the welfare of PWDs was passed in 1981; existing policies and laws must be revised to keep up with changes in society and advancements in various models for the rehabilitation and mainstreaming of PWDs.

3. To prevent exclusion, the right of a person to use official financial services must be a top concern. However, measurements of financial Inclusion are few and incomplete.
4. The financial system must specifically promote the use of financial services among the populace, the most vulnerable groups, or those most affected by financial inclusion barriers.
5. At a time when people are increasingly turning to consumer credit to fund their daily expenses, saving money and making long-term financial plans can be difficult due to low-interest rates and slow growth, everyone must have the knowledge, skills, and attitudes to improve their financial outcomes and well-being.

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**APPENDIX 1**  
**QUESTIONNAIRE**

1. Gender:

Male
Female
Prefer not to say

2. Age:

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3. Type of Disability

Deaf or hard of hearing
Multiple
Dwarf
vision Impairment
physical disability
Intellectual disability

4. Marital Status

Married
Unmarried

5. Qualification:

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6. Income:

--

7. Occupation:

--

8. Did you or your household having a bank account?

Yes Skip to question 10
No Skip to question 9

9. These are the reasons for not having a bank account.

Because financial institutions are too far away.
Because financial services are too expensive
Because you don't have necessary documentation (identity card, wage slip, etc).
Because you don't trust financial institutions.
Because of religious reasons.
Because you don't have enough money to use financial institutions.
Because someone else in the family already has an account.
Because you have no need for financial services at a formal.
Other:

10. Which type of Account you or your household have?

Saving A/C
Current A/C
Asaan A/C
Other

11. Is the bank account with Cheque-Book?

Yes
No

12. These are reasons that you or your opened bank account:

to govt. schemes payments
for receiving remittances
for saving money
to request loan
Salary

13. They help you to open an account.

Officials
Bank-Officials
Neighbor
Friends/Family
Officials

14. Are you aware that banks are opening zero min. balance accounts for everyone?

Yes
No

15. From following sources you find out that banks were opening such 'no-frills' accounts.

Bank Officials
SHG Members

NGOs
Neighbors
Posters/Newspapers/Advertisements
Don't know

16. Do you have any grievances in your 'no-frills' a/c?

Yes
No

17. Is there any policy of loan for PWDs?

Yes
No

18. Did you applied for any kind of loan?

Yes
No

19. How frequently do you save in your account?

At least once a month.
I put in money as and when I can
I have paid money in but not in past 12 months
I have not added money since account was opened.

20. Do you, by yourself or together with someone else, currently have a loan you took out from a bank or another type of formal financial institution to purchase a HOME, APARTMENT, OR LAND?

Yes
No

21. In the PAST 12 MONTHS, have you, by yourself or together with someone else, borrowed money for health or medical purposes?

Yes
No

22. In the PAST 12 MONTHS, have you, by yourself or together with someone else, borrowed money to start, operate, or grow a business or farm?

Yes
No

23. In the PAST 12 MONTHS, have you, by yourself or together with someone else, borrowed any money from any of the following sources?

From a bank
Another type of formal financial institution.
From family, relatives, or friends.
From an informal savings group/club such as [local terminology for savings group/club]
Not Borrowed

24. Following reasons led to this choice that you borrowed from banks?

Low rate of interest.
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Was offered/arranged by the banks
It is easy (vague)
Trustworthy lender
Other

25. The following reasons led to this choice to borrow from sources other than banks.

Being able to borrow relatively small sums.
I did not need to provide security or guarantees.
It was available locally.
I can make repayments in cash in small weekly or fortnightly sums
It is convenient because they come to the door to collect
It is because I know the lender/collector
Other

26. All cash and teller counters within the banking halls are sufficiently low for easy customer access (including those on crutches or wheelchairs) Mark only one oval.

Yes
No

27. There are automatic door openers to give access to those who may be on wheelchair

Yes
No

28. There are lifts or elevators to take physically challenged customers upstairs for their bank transaction:

Yes
No

29. Token numbers are made available to customers through visual and audio means

Yes
No

30. Braille lettering, large print and tactile signs are provided as sign age within and outside this Bank.

Yes
No

31. Documents are available in alternative formats such as Braille, plain or simple language, large print, and audio formats upon customer's request:

True
False

32. Devices that allow a customer and staff to communicate via text to facilitate communication are provided for customers with hearing impairments

Yes
No

33. There is at least one sign language interpreter employed for customers with hearing impairment.

Yes
No

34. The height and reach of ATMs are positioned within 15 and 48 inches such that it is appropriate for different customers, including those who use wheelchairs.



Yes
No

35. The ATM is physically accessible for users including those on crutches and wheelchairs who may wish to carry out their transaction without a third party:

Yes
No

36. The ATM area has signage in tactile signs.

Yes
No

37. ATMs are equipped with both voice guidance systems

Yes
No

38. There is a headphone jack added to the ATM in a manner that the audio is heard only by the user

Yes
No

39. Users of the ATM can turn off the screen display to enjoy some privacy

Yes
No

40. ATM displays has high color contrast to ensure screen information are legible for different customers including those with impaired vision.

True
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False
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41. Voice recognition is available to ATM users who are unable to use the tactile or touch screen menu.

True
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False
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42. Audio output is available for all transactions and processes

True
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False
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43. Braille signage is available to access ATM components and keys on the keypad

Yes
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No
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44. Error messages are provided in both visual and audio formats with clear articulation of the type of error or content of feedback.

Yes
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No
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45. How far away (in km) your bank branch is located from your resident/working place?

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46. Keep in view your disability do you think the nearest bank branch is accessible:

Yes
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No
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47. Do you know about the State Bank of Pakistan Policy for PWDs?

Yes
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No
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48. If yes, do you think that SBP policy is more PWDs oriented?

Yes
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No
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49. How much cost (in rupees) did you pay for reaching bank and bank services?

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50. Documentation process is easy:

Yes
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No
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51. Is Bank building infrastructure is accessible. (Ramps etc available)

Yes
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No
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52. There is a representative and separate help desk for PWDs in Bank Branch:

Yes
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No
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**END**