

**FINANCIAL INCLUSION AND SOCIO-ECONOMIC
DEVELOPMENT WITH SPECIAL REFERENCE TO PUBLIC
SECTOR BANKS IN PUNJAB**

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in

Commerce

By

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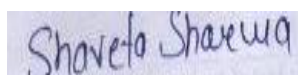


LOVELY PROFESSIONAL UNIVERSITY, PUNJAB

2026

DECLARATION

I, hereby declared that the presented work in the thesis entitled “**Financial Inclusion and Socio-Economic Development with Special Reference to Public Sector Banks in Punjab**” in fulfilment of the degree of Doctor of Philosophy (Ph. D.) is the outcome of research work carried out by me under the supervision of Dr Abhishek Pandey, working as Associate Professor, in the Mittal School of Business of Lovely Professional University Phagwara, Punjab, India. In keeping with the general practice of reporting scientific observations, due acknowledgements have been made whenever the work described here has been based on the findings of another investigator. This work has not been submitted in part or whole to any other University or Institute for the award of any degree.

A handwritten signature in blue ink on a light blue background, reading "Shaveta Sharma".

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CERTIFICATE

This is to certify that the work reported in the Ph. D. thesis entitled “**Financial Inclusion and Socio-Economic Development with Special Reference to Public Sector Banks in Punjab**” submitted in fulfillment of the requirement for the award of the degree of **Doctor of Philosophy (Ph.D.)** in the Mittal School of Business, is a research work carried out by Shaveta Sharma, Reg No. 41800210, is a bonafide record of their original work carried out under my supervision and that no part of the thesis has been submitted for any other degree, diploma or equivalent course.



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Preface

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List of Abbreviations

Abbreviation	Full Form
FI	Financial Inclusion
RRB	Regional Rural Banks
PSB	Public Sector Banks
PVB	Private Sector Banks
GOI	Government of India
GFDR	Global Findex Database
AFI	Alliance For Financial inclusion
IMF	International Monetary Fund
UN	United Nations
FSDC	Financial stability and development council
RBI	Reserve Bank Of India
KYC	Know your Customer
FIAC	Financial Inclusion Advisory Committee
UPI	Unified Payments Interface
AePS	Aadhaar-Enabled Payment System
NSFE	National strategy for financial Education
BC	Business Correspondents
CRISIL	Credit Rating Services of India Limited
FII	Financial Inclusion Index
FIP	Financial Inclusion Plan
PMJDY	Pradhan Mantri Jan Dhan Yojana
PMJJBY	Pradhan Mantri Jeevan Jyoti Bima Yojana
PMSBY	Pradhan Mantri Suraksha Bima Yojana
PMMY	Pradhan Mantri Mudra Yojana
APY	Atal Pension Yojana
SLBC	State Level Bankers Committee
SAA	Service Area Approach

RSETIs	Rural Self Employment Training Institutes
SHGs	Self Help Groups
NDP	National Development Plan
EFA	Exploratory Factor Analysis
ACS	Access to Services
ACE	Employee Accessibility
USA	Service Usage
AVLS	Service Availability
AVLP	Process Availability
EDI	Income Growth
EDS	Growth in Saving
EDW	Growth in Wealth
SDT	Self- Determination
SDW	Subjective Well Being
BI	Blockchain Technology
SSTs	Self-service Technologies

Chapter 1- Introduction

1.1 Financial Inclusion- Global Scenario

Each country's development and long-term prosperity depend on its inclusive financial system, in which everyone easily accesses financial services (Naili et al., 2023). It makes people's lives easier and more pleasant by facilitating services such as safe savings custody, loans for various purposes, risk diversification through investments in multiple channels, and risk coverage through different insurance products (Khelkhal, 2024). Therefore, inclusive banking benefits individuals and the economy by reducing poverty, promoting equitable income distribution, and empowering Indigenous communities rather than relying on external banks (Singh, S., 2022).

Financial inclusion is increasingly recognized in academic discussions due to its direct and indirect links to various developmental objectives, such as poverty reduction and sustainable, inclusive growth in countries (Ozili, P.K., 2023). In 2015, the United Nations (UN) identified financial inclusion as an essential target within the Sustainable Development Goals (SDGs). The Global Findex Database, a comprehensive resource released by the World Bank, plays a crucial role in global initiatives aimed at advancing financial inclusion. It monitors how adults manage their finances—savings, borrowing, and expenditures, including payments—and is refreshed every three years. According to GFDR (Global Findex Database Reports) 2021, 76% of adults globally had an account with a financial institution or a regulated financial service provider, which includes banks, credit unions, microfinance institutions, or mobile money platforms. This represents a significant increase from 51% in 2011, signifying a 50% growth in global account ownership over the past decade. In developing nations, the proportion of adults with accounts increased from 63% in 2017 to 71% in 2021, representing an eight-percentage-point rise. Notably, the growth in Sub-Saharan Africa has been primarily driven by the rapid adoption of mobile money services. Many developing nations have recently experienced a general uptick in account ownership. This geographical variance sharply contrasts with the growth observed in China and India between 2011 and 2017, signalling an optimistic outlook for global financial inclusion.

According to the Indian Census Report (2011), India has approximately 600,000 villages and 640 districts, making it the most populous country in the world. India has the second-largest population (1.22 billion, as of the 2011 census) and the largest unbanked population globally, in which only 40% of the Population with Bank accounts (Maity et al.,

2022). Despite several efforts made by the Indian government, especially in rural areas, to provide them with basic banking services. Further, the Reserve Bank of India (RBI), as the central banking institution, plays a crucial role in creating an environment that enables financial access. Their role is not just about ensuring access to financial instruments, but also about striking the right balance to protect banks from instability and risks a task of immense importance in the journey towards financial inclusion. The RBI's proactive measures and policies, such as the Pradhan Mantri Jan Dhan Yojana (PMJDY), provide strong reassurance about the country's unwavering commitment to financial inclusion, instilling confidence in the audience about the future of financial access in India. Overall, Financial inclusion not only important for India but equally important for other countries as well.

1.1.1 International Agencies' Contribution towards Financial Inclusion

Today, financial inclusion has become a global agenda. Various international agencies collect data, conduct surveys, and make alliances to create a world without poverty where peace and prosperity can be ensured for all.

Table 1.1 Agencies and their contribution in Financial Inclusion

Agency	Contribution towards financial inclusion
The World Bank	The World Bank is the largest global database tracking how adults save, borrow, and spend money, including their payment transactions. The World gathers the data through a survey. By covering more than 150,000 adults, you can bank with Gallup Inc. from nearly 140 nations. It has published data every three years since 2011.
Alliance for Financial Inclusion (AFI)	The Alliance for Financial Inclusion (AFI) is a collaborative alliance owned and operated by the central banks of member nations. It was founded to serve as a global knowledge enhancement platform and develop financial inclusion policies. Currently, 89 nations are members of AFI.

International Monetary Fund (IMF)	The IMF aims to bring prosperity and long-term growth to all its member nations, creating a future where financial inclusion is the norm. It publishes financial access annually, using data to disseminate information about the banking operations sector of member nations that offer financial services to their inhabitants, thereby paving the way for a more inclusive and prosperous future.
Asian Development Bank	The mission of the Asian Development Bank is to ensure an inclusive, sustainable, and prosperous Asia and the Pacific by constantly working to alleviate poverty. The bank offers its members financial and technical support, promotes policy dialogue, and provides consulting services.
United Nations	Nations must establish and implement all the UN Development Agenda Policies based on internationally agreed-upon development goals. The United Nations Holds Various summits and conferences to address poverty in the economic and social fields. Nations have already declared two UN Decades for poverty alleviation (1997-2006 and 2008-2017), and a third UN Decade for poverty elimination is currently being proposed (2018-2027).

Source: <https://www.worldbank.org>

1.2 Financial Inclusion in India

Financial inclusion generally refers to the delivery of essential financial services to all parts of society, especially economically disadvantaged and marginalized groups, at accessible and reasonable prices. The idea began to gain considerable policy focus in India during the 1960s, when regulations on branch licensing were established to encourage the growth of banking services in rural and underserved areas (Mir et al., 2024). Over time, financial inclusion became a key strategic focus for the banking industry. This commitment was formally emphasized when the Reserve Bank of India, in its Annual Policy Statement for the financial year 2005–2006, encouraged banks to assess and enhance their efforts aimed at improving financial inclusion. As part of these initiatives, Mangalam village in Tamil Nadu was the first village in India to attain universal access to banking services.

Following this, numerous committees were established to investigate the issue of financial inclusion, recommending various strategies to combat financial exclusion (Chariva et al., 2024). Under this, the Financial Stability and Development Council (FSDC) has been specifically established to promote financial inclusion and literacy nationwide. The FSDC, a high-level body chaired by the finance minister, coordinates the work of various financial sector regulators and ministries to ensure financial stability and promote financial inclusion. The technical support group of FSDC oversees all the financial sector regulations. Under the chairmanship of the RBI Governor, a group named the FIAC (Financial Inclusion Advisory Committee) was formed to manage all financial inclusion operations. India has undergone various phases of financial inclusion over the years, driven by government policies, technological advancements, and socio-economic factors. The overview of the financial inclusion phases is given below.

1.2.1 Phase One (1960 – 1980):

In 1969, the nationalization of several commercial banks was the first step toward mass banking from the classical banking system (Srinivasan K. et al., 2024). A significant change was observed in this step, and the banks introduced numerous new services in remote control areas. However, the Government of India still appears unsatisfied and recognises that many urban and rural people still lack bank accounts (Government of India, 2008). At this time, the RBI had a similar mindset to that of other developing countries regarding inflation and financial growth (Rastogi, et al., 2018).

1.2.2 Phase Two (1980-2005):

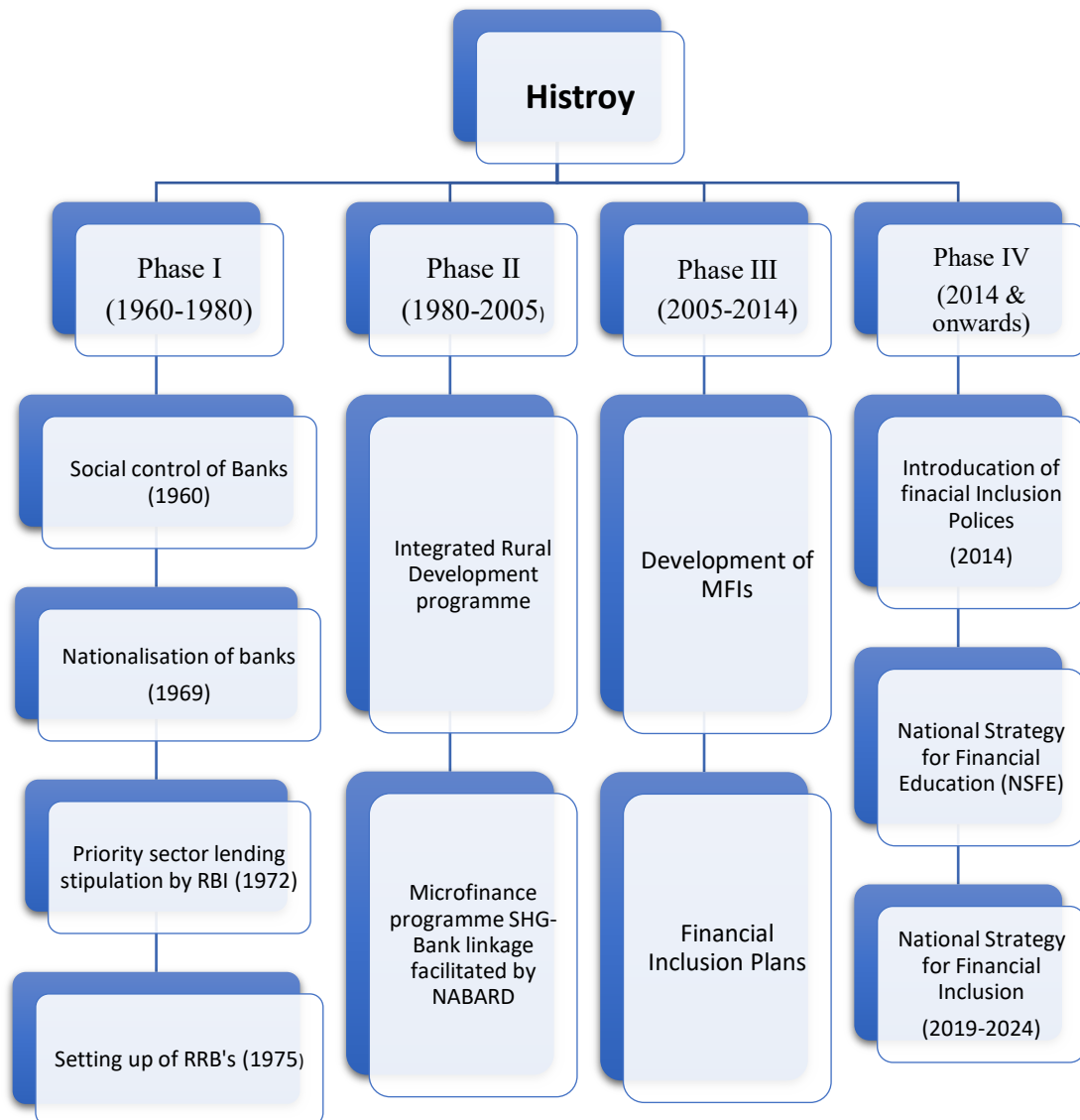
The establishment of economic liberalization in 1991 paved the way for banking sector reforms (Ofoeda et al., 2024; Rahma, 2022). Private Banks began to emerge during this period, and technological advancements were introduced, laying the groundwork for later attempts at financial inclusion.

1.2.3 Phase Three (2005–2014):

During this period, the RBI introduced several initiatives to promote FI, including the establishment of business correspondents (BCs) and Self-Help Groups (SHGs). Microfinance institutions enabled reaching the unbanked population (Baliester R., 2022; Singh R., 2024). In 2014, the Pradhan Mantri Jan Dhan Yojana (PMJDY) aimed to provide everyone with access to banking services, including insurance, pension plans, and savings and deposit accounts. Its

primary goal was to uplift the use of banking services for the underbanked and unbanked, particularly in rural and remote areas.

Figure 1.1: Overview of Financial Inclusion Phases



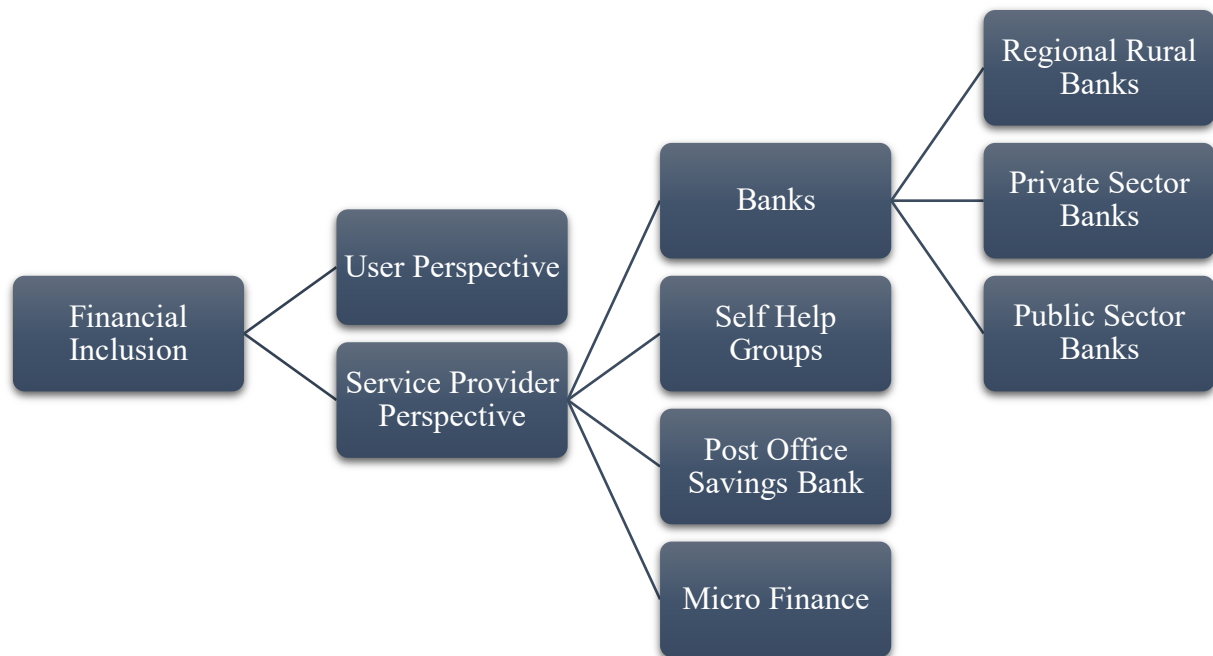
Source: Researcher's own depiction

1.2.4 Phase Four (2014 -Onwards):

Financial inclusion has made significant strides, primarily due to the Digital India program (Pnevmatikakis et al., 2021; Kandpal et al., 2023) and the proliferation of digital payment systems, such as the Unified Payments Interface (UPI) and the Aadhaar-enabled Payment System (AePS). These technologies have revolutionized banking services, making them more

accessible and convenient, particularly in rural areas. The emergence of fintech companies, which leverage technology to provide innovative financial solutions, has further accelerated efforts to promote financial inclusion. New technologies, such as UPI, digital wallets, and other payment modes, have significantly improved access to banking services, bringing transformative power to the financial sector.

Figure 1.2: Financial Inclusion Perspective



Source: Researcher's own depiction

Financial inclusion, a key driver of societal development, can be measured through user perspectives (the Customer side) and Service provider perspectives (the Institutional side). The supply-side perspective on financial inclusion stems from a 'top-down' methodology, initiated by financial service providers. The data from the supply side mainly relies on the network of branches, ATM availability, operating hours, documentation requirements, and the appropriateness of the offered products. On the other hand, demand-side data can be derived from a 'bottom-up' approach, which involves understanding the financial needs and behaviors of individuals and communities. Financial inclusion encompasses all social groups that are excluded within a nation. It plays a prominent role in addressing problems such as poverty, as it provides equal freedom, opportunities, and chances for all people in a country to improve their living standards and income sources.

The RBI, in its Statement on Developmental and Regulatory Policies released on April 7, 2021, has introduced a comprehensive composite Financial Inclusion Index (FI-Index). This index, which assesses the level of financial inclusion nationwide, is a comprehensive metric encompassing aspects of banking, investments, insurance, postal services, and pension schemes, developed in collaboration with the Government and relevant sector regulators. The Index yields a single score between 0 and 100, where 0 signifies total financial exclusion, and 100 represents complete financial inclusion. The comprehensive nature of the Index ensures that the audience is well-informed and aware of all aspects of financial inclusion.

The FI-Index comprises three primary parameters: Access (35%), Usage (45%), and Quality (20%), each composed of various dimensions evaluated through multiple indicators (Reserve Bank of India). The Index reflects the ease of access, availability, service usage, and quality, covering all 97 indicators. A distinctive aspect of the Index is the Quality parameter, which emphasizes the quality dimension of financial inclusion, as represented by financial literacy, consumer protection, inequalities, and service shortcomings. The FI Index's value for March 2024 was recorded at 64.2%, representing a notable increase from 60.1% in March 2023 to 56.4% in March 2022. This improvement is evident across all sub-indices, indicating an optimistic trend for financial inclusion.

1.3 Financial Inclusion and various types of Indicators

Table 1.2: Various Aspects and Indicators

Author	Aspect	Indicators
World Bank	For economic growth, the urgency and importance of this crucial initiative should be evident to the audience.	Credit, insurance, and Deposit
RBI Committee on Financial Inclusion, headed by Dr.	“Financial inclusion refers to providing affordable access to suitable financial products and services for every segment of society, with a particular focus on vulnerable groups, including low-income and marginalized populations.”	financial services

C. Rangarajan		
Credit Rating Information Services of India Limited (CRISIL)	“The extent of access by all sections of society to formal financial services such as credit, deposit, insurance, and pension services”	Access to services like deposit, credit, and pension
Stephen P. Sinclair (2001)	Individuals or businesses should be able to access necessary financial services promptly and appropriately. This exclusion can result from marketing or self-exclusion, either in response to or as a result of perceived risk.	Core banking services for transferring funds, borrowing, insurance, debt management, assistance, long-term investments, and financial education.
United Nations (2006)	Individuals and companies deemed 'bankable' and those eligible for insurance, referred to as 'insurable', are considered part of an inclusive system. The term 'bankable' applies to people or businesses that satisfy the standards established by financial institutions to secure credit, whereas 'insurable' pertains to those who fulfill the criteria necessary to obtain insurance.	Credit, insurance, savings, and payment services.
Mandira Sarma(2010)	They assessed the IFI values for 54 nations using comparable data to identify the three core elements of financial inclusion: the availability, accessibility, and utilization of banking services. Accessibility has been measured through the number of bank accounts per 1,000 individuals and the availability of services based on the number of bank branches and the usage of credit deposits in banks. Based on this, they measure the financial inclusion index of India, that used by	Access and Availability of financial products and services, along with their usage

	various agencies in India over a long period of time	
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Source: Annual Reports RBI, CRISIL and World Bank 2020

1.3.1 Distinction between Financial Inclusion, Inclusive Growth and Socio-Economic Development

The conceptual boundaries of financial inclusion, inclusive growth, and socio-economic development reveal that although the concepts are interconnected, they differ substantially in terms of scope, dimensions, and objectives. Financial inclusion is limited to access and usage of financial services or inclusive growth extends to equitable economic participation and opportunity distribution, while socio-economic development encompasses comprehensive improvements in economic and social well-being. These concepts strengthen theoretical clarity and improve the empirical validity of research studies related to banking, development, and public policy. Thus, financial inclusion forms only one component of inclusive growth, while inclusive growth itself contributes to the larger objective of socio-economic development.

The conceptual relationship among these constructs can be understood hierarchically:

- Financial inclusion acts as a facilitating mechanism.
- Inclusive growth functions as an economic process.
- Socio-economic development serves as the broader developmental outcome.

1.4 Objectives of Financial Inclusion

1.4.1: Economic objectives: The primary motivation for financial inclusion is to provide financial services and products to users at an affordable cost, including digital payments, low-cost loan facilities, and insurance services (Kandpal, V., 2024; Ofoeda, I., et al., 2024).

1.4.2: Institutional objectives: Financial inclusion is created to fulfil the needs of the population, and it is possible only when people are aware of financial management importance in their daily lives (Ellili et al., 2024; Singh J., 2023) and made people aware that there are

many financial institutions open in the various areas of society which provide the clear cut rules and regulations and maintain the respective standards that exist in the finance sector.

1.4.3: Sustainability: Continuous efforts should be made to achieve the desired result through all relevant policies and initiatives. Another aim of financial inclusion is to provide regular access to financial services for the weaker sections of society (RBI et al., Committee, 2005). It always maintains and builds the sustainability of funds for vulnerable groups, which will help them in times of difficulty.

1.4.4: More extensive market availability: To provide affordable services to customers, financial inclusion develops a type of economic market where the users have numerous options. Due to the vast competition, many financial firms provide financial facilities at a meagre rate.

1.4.5: Social objectives: Another aim of financial inclusion is to raise society's awareness of the financial importance of money (Hussain et al., 2023; Asif et al., 2023), enabling those who still lack access to essential banking services to understand its significance. Through financial products and services, individuals can participate in financial activities to enhance their lives and contribute to the nation's economic growth. Financial inclusion improves financial literacy among unprivileged groups.

1.4.6: Mobilisation of savings: Financial inclusion aims to give people free access to bank deposits. Banks and other financial institutions provide interest on deposit amounts (Shah et al., 2022).

1.5 Importance of Financial Inclusion

Previously, finance was the centre of attraction and the most discussed topic. However, many types of research show the importance of financial inclusion. The central point is to make financial inclusion workable (Mishra et al., 2024). While defining financial inclusion, we understand its meaning, as it is the process by which vulnerable groups in the nation can access various financial services and products at a minimum cost. Adequate and easy financial access ensures that all individuals in the lower strata of the population have sufficient funds to meet their basic and household needs. They will contribute to the country's financial growth (Maity et al., 2022) and inclusion, thereby mitigating financial shocks to vulnerable sections during times of emergency. Therefore, for policymakers, providing access to financial services at a high level is becoming a daily concern, as the social and economic implications are too far-reaching to achieve (Bahal et al., 2022).

In India, middle-class and lower-income individuals have only one loan option: through moneylenders. Due to political involvement and bureaucratic constraints, a significant portion of the Indian population lacks access to these services, which, as a result, limits their economic contribution (Kandpal, V., 2024; Ofoeda, I., et al., 2024). Whatever the Indian leaders give statements of development, the bitter truth is that still, Indian vulnerable sections of Indians, like low-income people, farmers, and unskilled wage workers, do not have access to the formal financial system. Many small employers and enterprises are unable to utilize formal financial services due to their exclusion from this system. According to a report, around 40 percent of Indians work and earn, but do not have savings for future use. Here, the importance of financial inclusion can be understood as saving people with low incomes who are under the control of greedy moneylenders.

In some areas where financial services are available, accessing them can be very costly. Such high usage charges prevent low-income individuals from accessing these services, excluding them from financial inclusion. Next, to access formal financial services, financial institutions have a complex structure that requires identity proof, income proof, and other documentation, which can be difficult for uneducated and low-income individuals to obtain. They need access to these services, and all these factors demonstrate the strong need for well-defined financial inclusion.

According to behavioral economics, many people feel uncomfortable using these services because financial language, document requirements, and conditions imposed by financial institutions deter them from utilizing them. Nowadays, many developing nations prioritize finance alongside other basic needs, such as water and education, and this is also demanded daily by their population, as financial inclusion benefits the country's financial system at a broader level (Kumar, I., 2024). Financial inclusion encompasses a significant portion of the economy's productive sector through a formal financial network, which enhances the nation's economic growth (Rastogi, S., 2018; Bahal, S., 2024).

1.6 Barriers to Financial Inclusion

These barriers, which can be viewed from two perspectives — supply and demand — are often created or exacerbated by financial institutions. On the demand side, aspects of psychology, culture, and financial literacy play a role, while the supply side consists of physical barriers, a lack of suitable products, and documentation barriers. Financial institutions must recognize and address these barriers to ensure that financial services are accessible to all.

1.6.1: Distance Barrier

Distance, a significant obstacle for rural individuals, often leads to the disregard of fundamental financial services due to the considerable distances to the closest bank office. However, these individuals could benefit significantly from financial inclusion with the right initiatives and support. The scholarly writing also supports the possibility that distance may hinder people's ability to benefit from financial services. In their review, Boachie et al, (2023) characterized the Global Findex study, which found that 20% of adults in non-industrial nations cite separation as a reason for not having an account.

1.6.2: Language Barrier

Language is an obstruction for country individuals. Individuals in different countries use their native languages to communicate with one another. They do not have an order in any other language, and this obstacle prevents them from using formal monetary services. Aggarwal (2014) instructed banks to provide all material related to opening records, disclosures, and so forth in the local language to increase financial transactions.

1.6.3: Timing Barrier

The timing of banking transactions is also a justification for financial avoidance. Every day, breadwinners use banking offices after working hours, and no bank provides its services outside of regular office hours, hindering individuals in the provinces. Damodaran characterised one of the inventory-side explanations behind monetary prohibition as branch timings.

1.6.4: Attitude Barrier:

Attitude is likewise a hindrance to monetary consideration. Many individuals prefer not to use a bank for their financial needs, believing brokers will ask numerous questions and bother them repeatedly. Falaiye et al., (2024) likewise cited research in conducting financial matters, showing that, for many reasons, individuals do not feel open to utilising formal monetary administrations.

1.6.5: Lack of education Barrier

Ignorance is also a significant factor in the financial planning process. A lack of education implies a limited understanding of financial data. Individuals need to be more aware of the economic services provided by the Government for regional development. Due to this

boundary, individuals in rural regions were unable to access the benefits of monetary services, as noted by Asif et al., (2023) in their study. The fundamental explanation of economic policy is the need for more information about the monetary framework.

1.6.6: Documentation Barrier

Banks require a specific character when an individual needs to interact with them, and individuals who live in rural areas often lack the personality to demonstrate to bankers. Aggarwal (2014) characterized many difficulties, one of which was accessing formal monetary services, which required various documents of evidence. However, destitute individuals still need these reports and avoid these administrations

1.6.7: Income Barrier

Income is additionally a significant barrier to financial consideration. Individuals living below the poverty line (BPL) have limited income, even though it barely covers their basic needs, so how might they afford to save indicates that pay level determines monetary access. For the most part, low-income individuals believe that banks are just for the rich.

1.6.8: Psychological and Cultural Barriers

It is also a significant issue before India's legislature. A large portion of individuals readily avoided themselves because of mental hindrances. Dangi & Kumar (2013) identified one mental boundary in their review, and it was established that individuals encountered trouble when using ATMs, which is the most convenient form of banking assistance.

1.7 Financial Inclusion (FI) Index

The FI index is a quantitative assessment tool used to evaluate the level and efficacy of financial inclusion in a specific region, country, or demographic (Sarma, M., 2010; Chavriya, S., 2024). It typically consists of a range of indicators or metrics representing different areas of financial inclusion, including access to banking services, utilization of financial products, the fairness of those services, and the availability of necessary infrastructure. These indicators help policymakers, researchers, and financial institutions measure the progress and impact of initiatives aimed at enhancing financial inclusion. Recently, the RBI launched the Financial Inclusion Index (FI-Index) as part of its regulatory and developmental strategies. This index, a comprehensive gauge of financial inclusion, encompasses information from the banking, investment, insurance, postal, and pension sectors. Its all-encompassing nature highlights its

significance in comprehending and assessing financial inclusion in India, ensuring that policymakers, scholars, and financial analysts can evaluate its effectiveness.

The FI-Index, a unique tool, is structured around three key areas: Access, Usage, and Quality. Each parameter encompasses a range of dimensions, computed based on several indicators. The Index's responsiveness to the ease of access, availability, and quality of services is a standout feature. It covers all 97 indicators, with the Quality parameter particularly noteworthy for capturing the quality aspect of financial inclusion, including financial literacy, consumer protection, inequalities, and service deficiencies. The FI Index for March 2024 was 64.2%, a significant growth from 60.1% in March 2023 and 56.4% in March 2021, reflecting substantial progress across all sub-indices and keeping the audience well-informed about the latest developments.

1.8 Mandira Sarma Index

The Financial Inclusion Index (FII) serves as a crucial indicator of a nation's financial sector's inclusiveness. This detailed index is meticulously designed to gather information on various financial inclusion elements, including the use of banking systems, the availability of banking facilities, and the accessibility of banking services, which makes it highly important. The FII is expressed as a single figure ranging from 0 to 1, where a score of 1 signifies total financial inclusion within an economy, and 0 indicates complete financial exclusion. The methodology for calculating the IFI, which was developed by Sarma M., (2008), has significantly advanced this field. The FII is calculated based on the availability, accessibility, and usage of banking services, with each component serving a distinct purpose in the final score. Accessibility has been measured through the number of bank accounts per 1,000 individuals and the availability of services based on the number of bank branches and the usage of credit deposits in banks. Based on this, they measure India's financial inclusion index (Mondal 2022, Cicchiello et al. 2021, Raichoudhury 2015), which various agencies in India have used over a long period.

The latest research continues to support the significance of multidimensional financial inclusion indices based on Sarma's framework, even in current academic settings. Barik et al, (2023) utilized an IFI-based construct to explore the demand and supply factors influencing financial inclusion across various Indian states, while Prasuna (2024) applied a similar approach to investigate how socio-economic factors affect financial inclusion on a national scale. A study published in 2025 in the Journal of Rural Development and Social Change

further used the IFI model to assess regional differences in the access, availability, and use of financial services. Similarly, Yadava et al. (2024) evaluated the financial performance of Indian states by employing supply- and demand-side indices that align with IFI dimensions. Furthermore, Ozili (2024), in a thorough review of financial inclusion and fintech research in India, pointed out that the IFI approach continues to be one of the most commonly used tools in empirical studies, despite the increasing prominence of digital finance metrics. Collectively, these recent contributions illustrate that the IFI methodology remains a leading, validated, and academically rigorous framework for evaluating financial inclusion in the research context after 2020.

1.9 Overview of the Banking Sector

The entire global emphasis is on inclusive growth. In India, the Financial Stability and Development Council (FSDC) and the RBI play pivotal roles in this regard. The FSDC, chaired by the finance minister and responsible for promoting financial inclusion and literacy, makes a significant contribution to this global initiative. The FSDC coordinates the work of various financial sector regulators and is responsible for ensuring financial stability, financial sector development, and financial inclusion. As the central regulatory body in the financial sector, the RBI is steadfast in its commitment to this mission. Its role underscores the understanding that financial inclusion is crucial for achieving these objectives, highlighting the indispensable and vital role of financial policymakers and economists in this endeavor (Hussain et al., 2023; Asif, 2023).

Financial inclusion is not merely an option in policy formulation but a necessity. It serves as a key driver for inclusive growth, promoting savings behavior, fostering a culture of thrift, and providing access to credit for entrepreneurial and emergency needs. Additionally, it supports effective payment systems, strengthens the financial institutions' resource base, and has a positive impact on the economy. Research indicates that countries with a considerable portion of their population excluded from formal financial services typically experience higher poverty levels and greater inequality. Therefore, the benefits of financial inclusion are theoretical and manifest in practical, real-world effects on individuals and the economy, highlighting its urgency and significance as an issue to address (Sarma, 2011).

Banks play a vital role in mobilizing and allocating resources within any nation (Singh, J., 2023; Govindapuram, S., 2023). In addition to opening accounts, banks engage in activities like GCC, KCC, and micro-insurance to promote financial inclusion. They facilitate

partnerships between the financial sector and rural development personnel, integrating financial expertise into rural initiatives that include financial aspects. Furthermore, they offer financial services tailored for low-income individuals, enhancing offers for rural customers by adopting modern technologies. This involves providing adaptable grant funding to financial institutions that seek to modify or launch new financial products to lower transaction costs and offer farmers a wider, more transparent range of financial services. The present study exclusively examines the role of the banking sector in promoting financial inclusion, considering that banks typically have the most branches in rural areas (Annual et al.). In India and Punjab, a significant section of the population resides in rural areas (Punjab Census Report, 2011).

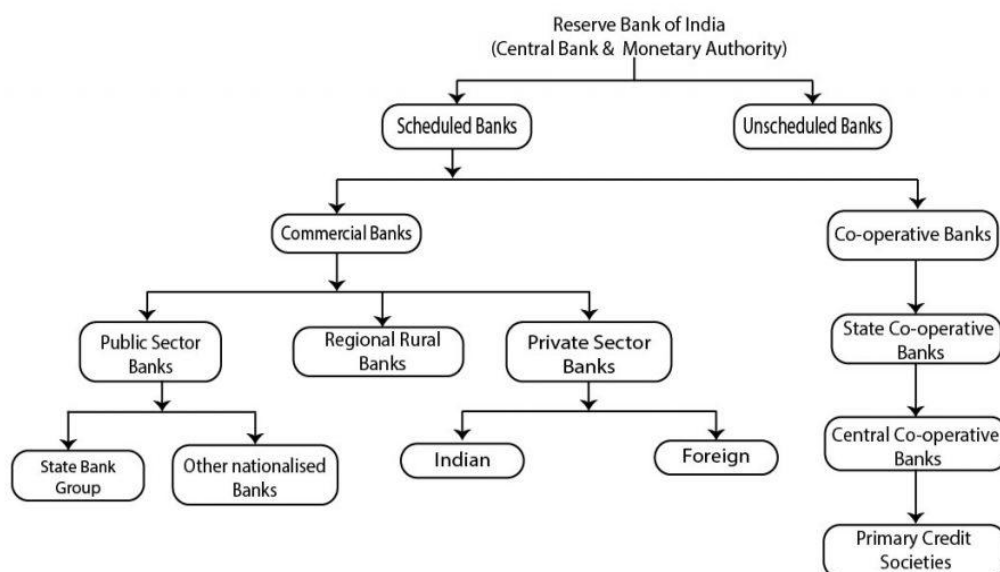
Indian Banking Structure is divided into two types by the RBI. Public sector banks, which are directly governed by either state or central authorities, play a crucial role in facilitating financial inclusion. This research primarily focuses on public sector banks in India. These banks play a vital role in advancing financial inclusion due to their extensive reach in terms of access, availability, and usage. Furthermore, the banking sector is divided into regional rural banks (RRBs) and private sector banks, as defined by scheduled banks. Apart from this, co-operative banks also fall under the banking sector's structure. Overall, the banking sector not only facilitates monetary and credit operations but also promotes inclusive development by ensuring that individuals, businesses, and vulnerable sections of society have access to formal financial services. Its continuous modernization and expansion remain essential for sustaining economic progress and achieving national development goals

1.10 Structure of Banking Sector

The banking industry is organized into multiple layers to address various financial requirements. At the highest level is the Reserve Bank of India (RBI), which oversees and regulates all banking institutions. After the RBI, banks are divided into Scheduled and Non-Scheduled Banks, with Scheduled Banks further categorized into Public Sector Banks, Private Sector Banks, Foreign Banks, Regional Rural Banks, Small Finance Banks, and Payments Banks. An essential aspect of this structure is the Co-operative Banking System, which consists of State Co-operative Banks, District Central Co-operative Banks, and Primary Agricultural Credit Societies aimed at facilitating rural and agricultural financing. Furthermore, specialized development agencies like NABARD, SIDBI, EXIM Bank, and NHB offer long-term funding for agriculture, industry, exports, and housing. Collectively, these entities create a well-

rounded and interconnected framework that aids financial intermediation, promotes economic growth, and enhances financial inclusion.

Figure 1.3: Types of Banks in India



Source: Annual Report RBI 2021-22

1.11 Role of RBI in Promoting Financial Inclusion

1.11.1: Easy admittance to KYC standards:

KYC access was more complex, and a substantial amount of documentation was required. Moreover, this was a significant reason why the weaker part of the public remained excluded from fundamental financial services. To consider this element, the RBI made attractive strides and issued rules to all banks, allowing them to open a ledger based on essential evidence of character and private verification provided by the government, such as a passport, NREGA work cards, or any letterhead confirmed by a gazetted official. Furthermore, it was the great strides made by a substantial portion of the barred population visiting banks and opening accounts, as well as beginning to utilize essential services like investments, money transfers, and other services. The RBI took a significant step to raise the degree of monetary incorporation, inspiring hope for a more inclusive financial system.

1.11.2: Expansion of the bank offices:

In 2009, there were few bank branches, particularly in the provincial regions. To extend monetary consideration, the RBI authorized all private and public banks to expand their branches in such regions, and any bank could open a branch in areas with a population of under

50,000. Therefore, the people of that town had access to fundamental financial frameworks and services, and they could also be willing to contribute to the country's economic development.

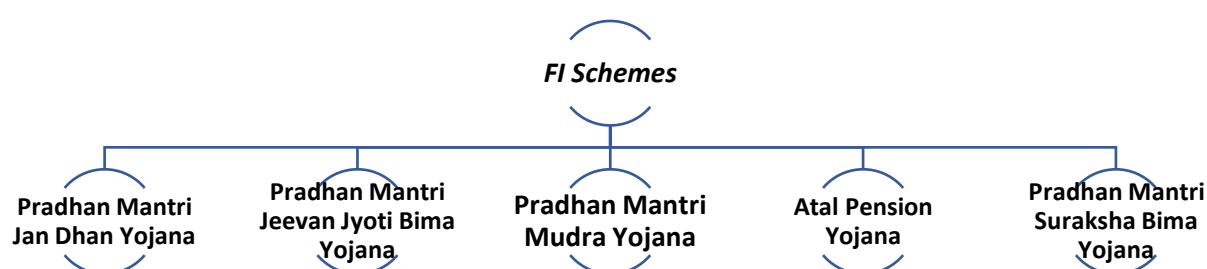
1.11.3: Report from all banks concerning monetary consideration:

All banks require specific objectives and plans to manage financial considerations effectively. The RBI took a similar approach, allowing banks to set their targets and submit a three-year monetary incorporation plan (FIP) report to the Bank of India for review. These three successive years were 2011, 2012, and 2013. RBI gave unmistakable directions. This report should incorporate field-tested strategies, financial management measures, and performance benchmarks for assessing staff. Also, the RBI itself observed the entire cycle and its execution.

1.12 Financial Inclusion Schemes in India

In India, the government has introduced various policies, plans, and schemes to enhance financial inclusion and promote growth. These efforts are designed to provide social security to underprivileged segments of society. In this roadmap, after 2014, a large number of policies have been introduced by the Government of India. The following major initiatives are discussed below.

Figures 1.4: Financial Inclusion Schemes in India



Source: Department of Financial Services (India)

1.12.1 Pradhan Mantri Jan Dhan Yojana (PMJDY)

Launched in 2014, the Pradhan Mantri Jan Dhan Yojana is a comprehensive initiative aimed at achieving financial inclusion across the country. The program is designed to ensure that all citizens have access to formal financial services by allowing them to open basic savings and

deposit accounts. Besides access to banking, PMJDY offers essential financial services such as remittance, credit, insurance, and pension schemes, particularly targeting those who have been previously unbanked and underserved.

1.12.2 Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)

The Pradhan Mantri Jeevan Jyoti Bima Yojana is a life insurance initiative supported by the government, aimed at individuals who hold savings bank accounts. This scheme provides life insurance protection against death from any cause, requiring an annual premium of ₹436, which covers one year and can be renewed. Individuals between the ages of 18 and 50 who have savings bank accounts are eligible to participate in this scheme. Once the premium is successfully paid, the subscriber receives a life insurance coverage amounting to ₹2,00,000.

1.12.3 Pradhan Mantri Suraksha Bima Yojana (PMSBY)

The Pradhan Mantri Suraksha Bima Yojana is a government-backed insurance program that focuses on financial protection in the event of accidental death or disability. Available to savings bank account holders, this scheme entails a nominal annual premium of ₹20. Subscribers are entitled to accident insurance coverage of up to ₹2,00,000, thus providing affordable risk protection for economically vulnerable individuals.

1.12.4 Pradhan Mantri Mudra Yojana (PMMY)

Initiated in 2015, the Pradhan Mantri Mudra Yojana was created to encourage entrepreneurship and bolster the micro-enterprise sector. The scheme grants collateral-free loans of up to ₹10 lakh to micro and small businesses engaged in income-generating activities, including non-farm enterprises in manufacturing, trading, and services, as well as related agricultural activities such as dairy, poultry, and beekeeping. PMMY plays a crucial role in enhancing self-employment prospects and fostering local economic development.

1.12.5 Atal Pension Yojana (APY)

Introduced in 2015, the Atal Pension Yojana is a government-sponsored pension scheme designed to provide social security for workers in the unorganized sector, including small farmers, self-employed persons, and daily wage earners. The target demographic for this scheme is individuals aged 18 to 40 years who do not participate in formal pension systems. APY promotes systematic retirement savings and guarantees pension benefits, thus addressing longevity risks and promoting income security in old age for informal sector workers.

1.13 Financial Inclusion and Its Role in Socio-Economic Development

Financial inclusion is crucial in promoting socio-economic development by providing equitable access to affordable and appropriate financial products and services for individuals, households, and businesses. By integrating marginalized groups into the formal financial system, financial inclusion aids in poverty alleviation, fosters sustainable economic growth, empowers women, encourages entrepreneurship, and promotes inclusive development. Beyond merely providing access to banking services, financial inclusion serves as a driving force for wider socio-economic change by enhancing financial stability, improving livelihoods, and bolstering economic resilience. The following discussion explores how the advancement of various aspects of financial inclusion impacts the overall socio-economic development of customers.

Table 1.3 FI Dimension and its Impact

Dimension	Impact
Poverty Reduction	Access to credit, savings, and insurance reduces vulnerability.
Employment Generation	Credit availability spurs entrepreneurship & SMEs
Women Empowerment	Financial independence through microfinance & SHGs
Social Equity	Bridging rural-urban and rich-poor divides
Economic Growth	Mobilization of savings, increased investment, and consumption
Resilience	Insurance and pensions help mitigate life risks and provide financial security.
Improved Governance	Direct Benefit Transfers (DBT), reduced leakages & corruption

Source: Ramesh A. et al., 2024

Financial inclusion is crucial for promoting inclusive and sustainable growth by tackling various socio-economic issues. One of its most significant effects is the reduction of poverty, as access to financial services, including credit, savings, and insurance, enables low-income individuals to manage risks and improve their livelihoods. It also stimulates job creation by empowering people to start their own businesses and allowing small and medium-sized enterprises (SMEs) to thrive through improved access to funding. Furthermore, financial inclusion serves as an effective means of empowering women by providing them financial autonomy through microfinance and Self-Help Groups (SHGs), which boosts their

involvement in decision-making at both household and community levels. By making banking services accessible to marginalized populations, financial inclusion promotes social equality, helping to close the gaps between urban and rural areas, as well as between the wealthy and the poor. It also facilitates economic growth by mobilizing dormant savings, expanding investment opportunities, and promoting consumer spending. Additionally, financial instruments such as insurance and pension plans enhance resilience, offering protection against unexpected life events. Lastly, financial inclusion strengthens governance through processes like Direct Benefit Transfers (DBTs), which minimize leakages and corruption, ensuring that subsidies and benefits reach their intended recipients effectively. Ultimately, financial inclusion is not merely about access to banking; it is a driving force for comprehensive development, equity, and empowerment.

1.14 Overview of Punjab State (India)

Punjab is one of the most renowned states in India, spanning 50,362 square kilometers on the Indian map. This State comprises 48,265 sq km of rural and 2,097 sq km of urban areas. According to the 2011 census report, the total population of Punjab is 2.77 crore, of which 173.44 lakh are rural and the remaining urban. This state consists of 23 districts and has a literacy rate of 75.80%. Financial institutions play a crucial role in driving economic progress. A state's financial institution infrastructure determines the availability and quality of financial services. A financial institution offers a variety of deposit, credit, and investment options for individuals and corporations. Banks, insurance businesses, and brokerage firms are vital financial institutions that mobilize public savings and provide credit to investors and borrowers.

Punjab has 12 public sector banks, 20 private sector banks, seven small finance banks, one regional rural bank, and one cooperative bank, totaling 7,168 branches (Punjab Economy Survey 2022-23). Public Sector Banks have the highest number of bank branches, with 56%, followed by 27% for private sector banks and 17% for RRBs and cooperative banks (Punjab Economy Survey 2022-23). Furthermore, public sector bank branches account for 56.2% (4,027 branches), with 1,515 branches located in rural areas, 1,244 in suburban areas, and 1,268 in urban areas. Punjab has one of the highest concentrations of commercial bank branches among the select states. A robust banking network promotes financial inclusion, enabling the diversification of economic activities and productive investment by facilitating the mobilization of public savings.

1.15 Financial Inclusion Initiatives in Punjab

The World Bank Group views financial inclusion as a vital tool for reducing extreme poverty and fostering shared prosperity. As a result, the organisation has set an ambitious global objective to achieve Universal Financial Access (UFA) by 2020. The following provides a brief overview of Punjab's Financial Inclusion Strategy:

1.15.1 State-Level Bankers' Committee (SLBC)

The SLBC is an advisory and coordinating body that includes all of the State's financial institutions. By RBI guidelines, Punjab was established under the Lead Bank Scheme. It is a state-level inter-institutional forum that ensures coordination between banks and the government on banking development issues. The SLBC Punjab Convener Bank is Punjab National Bank. The SLBC facilitates the implementation of development programs aimed at reducing poverty, creating employment opportunities for the unemployed, establishing banks in areas without access to financial services, and educating people on financial management and other essential skills. The SLBC Punjab is making significant efforts to investigate the underlying causes of financial inclusion in the state of Punjab. It meets regularly to discuss various topics related to Punjab's economic inclusion. The subcommittees may examine issues related to agriculture, micro, small, and medium industries/enterprises, financial inclusion, and State government-related issues.

1.15.2 Lead Bank Plan

Under this plan, each state region has been assigned to a designated bank, the Lead Bank of the region. To achieve the goal of financial inclusion, 23 lead banks, including 2,335 Bank Mitra, were established in the districts.

1.15.3 Service Area Approach (SAA)

Introduced in 1989, this approach identified villages and assigned them to bank branches based on proximity. For each branch's service area, annual credit plans were developed with various developmental agencies and financial institutions. Additionally, a high-level Committee established in 2007 advised banks to focus on the urgent need to achieve 100 percent financial inclusion through expanding banking services in rural areas. The RBI has accepted this Committee's recommendations and provided banks and SLBC conveners with action areas for implementation.

1.15.4 Rural Self-Employment Training Institutes (RSETIs)

RSETIs refer to Rural Self-Employment Training Institutes, specialized institutions that provide essential skills training and skill enhancement for rural youth living below the poverty line, addressing unemployment issues. Banks initiate and oversee these institutions, with significant collaboration from state governments. The RSETI model is derived from RUDSETI (Rural Development and Self Employment Training Institute), an organization formed through the partnership of three entities: Syndicate Bank, Canara Bank, and the Sri Manjunatheswara Trust, based in Ujire, Karnataka. Each district in the state has one RSETI, where the designated lead bank is responsible for its establishment and administration. The Government of India will offer a one-time grant, limited to a maximum of Rs. 1 crore, to cover costs related to building construction and other infrastructural needs. The state has 22 Rural Self Employment Training Institutes. RSETIs operate under the management of banks, with the support of the Government of India and state authorities. The branches of the respective banks in the districts are expected to provide relevant credit assistance to trainees from RSETI centres, helping them start their businesses. In Punjab, 10 RSETIs are overseen by Punjab National Bank, while State Bank of India manages 7, Punjab & Sindh Bank handles 3, and UCO Bank operates 2.

1.15.4 Financial Literacy Centres

The Government prioritizes financial inclusion, and addressing financial literacy is essential for achieving this goal. It generates demand for financial products and services, enabling banks to capitalize on previously untapped business opportunities. Financial Literacy Centres (FLCs) and rural bank branches in Punjab are responsible for promoting financial literacy. The Financial Literacy Counsellor or Director overseeing the Financial Literacy Centre plays a pivotal role in implementing financial literacy programs at the community level.

1.16 Summary

A summary of the Reserve Bank of India's efforts to promote financial inclusion, as well as the Initiatives of International organisations and the banking sectors of a few nations, reveals that inclusion is essential for any economy to achieve the goal of inclusive growth. Financial literacy is being developed in addition to making banking services more widely available. They are designed so that people regularly utilise the formal banking system. Financial inclusion is widely recognized as a means of helping people escape the downward spiral of poverty. Various nations and international organisations have identified versatile, advanced, and organisational banking as solutions to the difficulty in reaching remote areas to meet people's financial needs. In addition to financial technology, appropriate measures are being taken to ensure consumer protection. This chapter summarises the global financial

inclusion scenario and the Indian perspective. The RBI plays a crucial role in promoting financial inclusion (FI) within India's banking sector. Punjab is one of the growing states in our country, which falls under the medium category (0.30 to 0.50) of the financial inclusion index (Ramesh A. et al., 2024). This study examined the growth of financial inclusion in the state of Punjab through the banking sector and its impact on the socio-economic development of its customers.

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Chapter 2 - Review of Literature

2.1 Financial Inclusion

Although India is one of the fastest-growing economies in the world, it still lags behind many developing nations in terms of its citizens' financial literacy. Financial literacy is crucial for improving one's quality of life. The adverse effects of insufficient financial education and money management skills have been detrimental to individuals facing class inequality and injustice. Access to financial services among the general population is considerably lower compared to that in developed nations. This highlights the significant financial disparity that many people in India endure. This chapter provides an in-depth overview of existing literature regarding the impact of banks on advancing financial inclusion. It also investigates how banking initiatives affect customer growth, while emphasizing the obstacles that impede this process in the banking industry.

2.1.1 Definition Aspect of Financial Inclusion

“The test of our progress is not whether we add more to the abundance of those who have much; it is whether we provide enough for those who have too little.” — Franklin D. Roosevelt.

“If the misery of the poor be caused not by the laws of nature, but by our institutions, great is our sin.” - Charles Darwin

2.2 Classification of the Literature Review

For the purpose of systematic presentation, the studies have been classified under the following headings.

2.2.1 Banks' Role in Financial Inclusion (FI)

2.2.2 Financial Inclusion and Its Impact

2.2.3 Barriers to Financial Inclusion

2.2.4 Reports on Financial Inclusion

2.2.5 Financial Inclusion and Growth

2.2.1 Banks' Role in Financial Inclusion (FI)

- Ozili (2025) built upon his earlier work by concentrating specifically on the ways banking institutions affect financial inclusion. His review highlighted that the

managerial strategies of banks, including product diversification and the adoption of digital platforms, have a significant impact on the outcomes of inclusion. The study also highlighted that financial inclusion enhances the long-term stability of banks by expanding their deposit base and improving customer engagement. Ozili recommended that future research should explore how strategic decision-making within banks, particularly in partnership with fintech companies, can enhance inclusion without compromising profitability or compliance.

- Singh et al. (2025) evaluated the effectiveness of Indian banks in implementing the PMJDY scheme using Data Envelopment Analysis (DEA). Their findings showed that public sector banks—most notably the State Bank of India (SBI)—exhibited greater operational efficiency in reaching unbanked communities compared to their private counterparts. The study identified key elements, including policy dedication, presence in rural regions, and employee involvement, as essential factors contributing to performance. The authors advocated for the adoption of efficiency-based performance targets and localized banking approaches to enhance financial inclusion initiatives, particularly in underdeveloped states.
- Choudhary et. al. (2025) examined the strategic measures employed by banks to promote financial inclusion in line with Sustainable Development Goals (SDGs). The study illustrated how commercial banks are incorporating environmental, social, and governance (ESG) criteria into their inclusive finance approaches. Utilizing data from various Indian states, the research demonstrated that sustainable banking methods, when aligned with inclusion objectives, can enhance economic resilience and contribute to poverty alleviation. The authors suggested additional policy incentives for banks that focus on inclusive and responsible banking practices.
- Amnas et.al, (2024), in their article investigated the behavioral and psychological factors that influence financial inclusion. Through a survey utilizing structural equation modeling (SEM) among fintech users, the authors found that merely using fintech does not ensure inclusion without the backing of digital literacy, and that regulatory support enhances user trust. A limitation of their study is that the survey sample predominantly consisted of urban users, limiting its applicability to rural and low-literacy populations.
- Sharma et. al. (2024) examined the success of the Pradhan Mantri Jan Dhan Yojana (PMJDY) and its implementation by nationalized banks. Their results indicated that the initiative significantly boosted the number of basic bank accounts, yet they highlighted

the ongoing problem of account inactivity. The study credited much of the program's outreach achievements to the proactive engagement of banks in door-to-door campaigns and partnerships with self-help groups. The authors concluded that banks play a crucial role in maintaining inclusive growth by providing tailored financial products and fostering trust in formal financial institutions.

- Gautam et. al. (2024) investigated the correlation between financial inclusion and the performance of banks using data from Indian commercial banks. Their research created a composite Financial Inclusion Index that incorporated metrics such as branch accessibility, ATM distribution, and PMJDY account coverage. The findings revealed a positive yet statistically insignificant relationship between financial inclusion and profitability indicators for banks, including Return on Equity (RoE) and Return on Assets (RoA). At the same time, a significant negative impact was noted on Net Interest Margin. The authors contended that, while financial inclusion fosters social objectives, it does not always align with traditional profit-driven goals, thus requiring regulatory backing and innovative banking approaches.
- Gill et al. (2024) conducted a study using primary data that focused on informal sector employees in the Delhi NCR area to evaluate how banks influence financial inclusion. Their results indicate that the distance to bank branches, awareness of the Pradhan Mantri Jan Dhan Yojana (PMJDY), and fundamental financial literacy are significant factors affecting account ownership and usage. The research highlighted the beneficial role that banks play in serving economically disadvantaged groups, mainly when supported by government schemes and targeted awareness initiatives. The researchers concluded that banks have the potential to significantly narrow the financial inclusion gap among informal workers, provided that efforts in financial education and improvements in accessible infrastructure accompany them.
- Kaur et al. (2023) conducted an empirical analysis of the changing role of public sector banks in promoting financial inclusion across rural India. The study highlighted that the growth of banking correspondents (BCs), simplified Know Your Customer (KYC) regulations, and the introduction of digital banking services have significantly enhanced access to financial services in traditionally underserved areas. The research highlighted that, despite infrastructural challenges, banks have successfully narrowed the urban-rural gap through targeted outreach initiatives and financial literacy programs.

- Rajasekaran et al. (2023) evaluated the effectiveness of regional rural banks (RRBs) in promoting inclusive finance. The study highlighted the banks' local presence and their essential role in providing microcredit, savings accounts, and insurance products to disadvantaged communities. The research recognized strong institutional backing and regulatory flexibility as key factors that have enabled RRBs to operate successfully in remote and economically challenged areas. It also emphasized the necessity for ongoing training of bank staff to navigate the specific challenges associated with financial inclusion.
- Veena et al., (2022) explored the evolving contribution of the Indian banking sector toward advancing financial inclusion. Their study outlines the major policy interventions from the 1960s onwards, such as the creation of Regional Rural Banks (RRBs) in 1975, NABARD's linkage programs, and recent initiatives including the Pradhan Mantri Jan Dhan Yojana (PMJDY), Pradhan Mantri Mudra Yojana (PMMY), and Pradhan Mantri Jeevan Jyoti Bima Yojana (PMSBY). The findings underscore that banks, along with other financial institutions, have played a central and sustained role in expanding the reach of inclusive financial services.
- Adeola et. al, (2021) examined how digital financial platforms influence women's participation in socioeconomic activities. They utilized a mixed-methods strategy that included household surveys and focus-group discussions across five Sub-Saharan nations, revealing that mobile-based savings and micro-credit significantly enhanced women's decision-making power and their income from businesses. However, the study recognized that low smartphone ownership and concerns over cyber-security were obstacles that hindered broader adoption
- Roy (2021) conducted an empirical investigation into the relationship between banking activities and financial inclusion in India. The study confirms that banks serve as the primary channel for delivering financial services nationwide and play a crucial role in facilitating savings and credit. While banking services contribute to economic growth, research indicates that only specific elements, such as loans, advances, and deposit mobilization, show a measurable positive impact on the country's GDP.
- Gogia (2017) analyzed how banks have contributed to financial inclusion, especially after the launch of PMJDY in 2014. The study highlights that this government scheme significantly increased the number of bank accounts in previously unbanked regions. Additionally, the Financial Stability and Development Council (FSDC) helped direct

greater institutional focus on inclusion efforts. According to official statistics, over 26 crore Jan Dhan accounts were created, covering a substantial share of the population.

- Srinivas et.al. (2014) examined how banks and regulatory bodies like the RBI have influenced economic development through the lens of financial inclusion. Using secondary data from RBI reports, government documents, and online sources, they found that more than half of the Indian population still lacks access to formal financial systems. Furthermore, many existing bank accounts remain underutilized. The study emphasizes that while financial inclusion can lift people out of poverty and drive development, actual engagement with financial services must be improved for it to have a transformative economic impact.
- Ranjan et.al. (2012) the paper examines how financial inclusion (FI) through cooperative banks can serve as a viable means of promoting inclusive growth in India. The report on the trend and progress of banking in India by the RBI, the annual report of NABARD, and Suggestions for measures to strengthen it by the RBI have been used as the database. Compound growth rates and percentage changes, presented in both graphical and tabular representations, have been used for the analysis. The study underscores the potential of cooperative banks to play a significant role in promoting inclusive growth in India, offering a hopeful perspective on the issue. The research spans from 1981 to 2011. India's growth is not inclusive, as the annual percentage changes in real GDP and the increase in real GDP per capita follow an upward trend. However, consumption inequality in India has surged quickly since 2004-05. While the number of people living in poverty has declined over the years, the change is insignificant. Cooperative banks have much lower labor expenses than commercial banks, and their operating costs are generally low. This paper proposed that cooperative banks present viable options for promoting inclusive growth by focusing on rural development and generating employment and income opportunities.
- Srikanth (2013), in his study noted that in many developing nations, a significant portion of the population, especially those with low incomes, has limited access to financial services, whether formal or semi-formal. This limitation leads to their reliance on expensive informal finance options. He suggested that financial inclusion should be given priority in policy, as it is currently being implemented in India. The study highlights the crucial role of policymakers in promoting financial inclusion, enabling them to have a positive impact on the issue. Since formal financial institutions have not

covered most marginal farmer households, bankers need to be sensitized to a comprehensive strategy for revitalizing the quiescent role of the credit mechanism. The documentation procedures need to be simplified, and the rural post offices can be utilized to accelerate financial inclusion activity. The study suggested strengthening the effective use of IT solutions and adequate publicity for financial inclusion.

- Irrinki et.al. (2017) their research aims to provide people with access to various financial services, including overdraft facilities, credit facilities, life and accidental insurance, and pension plans. Providing financial inclusion to all the country's citizens is considered a challenge. The scheme aims to have at least one bank account for every citizen of the country.
- Unnamalai. T. (2015) The authors indicate that public sector banks excel in account openings, maintaining account balances, and distributing Rupay debit cards. The researcher also recommended that regional, rural, and private-sector banks should be allowed to establish additional branches.
- Shettar R, (2016) this study analyzed the status, progress, and challenges faced by the Pradhan Mantri Jan Dhan Yojana. The research utilizes secondary sources, including published articles, journals, reports, newspapers, books, and the official PMJDY website. It emphasizes that the PMJDY program benefits individuals in both urban and rural areas by enhancing access to government initiatives and services. The findings suggest that while the PMJDY initiative has made significant strides in the banking sector, particularly in combating financial exclusion across the nation, simply opening bank accounts will not fulfill the scheme's aims; continued activity in these accounts is essential for the program's success, making the audience feel responsible for the success of the PMJDY program.
- Singh et.al. (2018) study primarily aimed to evaluate the success, outreach, and utilization of accounts opened under PMJDY, examine the use of the RuPay Card, investigate how various institutional arrangements enhance access to and the cost of credit with particular emphasis on common service centers, and assess the borrowing costs across different sources while determining if PMJDY has contributed to their reduction. It also aimed to gather feedback from PMJDY beneficiaries regarding their expectations and experiences. The BC Point or CSC provides essential services to individuals in rural regions. Banks, SHGs, and BCs are increasingly vital in facilitating the opening of PMJDY accounts.

- Singh P., (2017) the study's Main objective is to understand financial Inclusion and the progress and role of the banking system under PMJDY in India. The study concluded that the country's people lack access to banking services due to financial illiteracy. The banking system across the government is contributing to the success of this scheme, but further efforts are still needed to make it completely effective. Furthermore, PMJDY ensured access to various financial services and contributed to the nation's inclusive growth.
- Gupta et al. (2018) the study suggests that banks provide financial services to all segments of society and are easily accessible to all. Moreover, they must be accessible to the entire population without discrimination, as banking services are akin to public goods. Only then can total financial inclusion be achieved. The primary hurdle to financial inclusion in India is its large population and low transaction volumes, which lead to unnecessary costs.
- Mukherjee et.al. (2012). The Reserve Bank of India (RBI) is primarily responsible for ensuring financial inclusion. Commercial banks rely on various social and economic entities to serve diverse customers, including cooperative banks, RRBs, SHGs, joint liability groups, and non-banking finance companies. The objective was critically analyzed, highlighting the role and efficacy of commercial banks operating in Jharkhand, as well as their responsibilities in promoting financial inclusion. The study aims to assess the capacity and function of the stated institutions in promoting financial inclusion in the state. They suggested that every bank, whether in the public or private sector, report to the RBI on achieving financial inclusion more frequently as a statutory requirement.
- Kuppan S., (2012) found that financial exclusion was primarily due to insufficient or irregular income. He discovered that, in most cases, those with modest incomes were not eligible for a loan. The challenges faced by these individuals, including the proximity of financial services, commuting costs, and loss of daily income, were significant. Most excluded consumers were unaware of bank products that would have been favorable to them. Receiving money for their financial needs from a local money leader was more accessible than obtaining a bank loan. Most banks require collateral for their loans, making it challenging for low-income individuals to secure loans. Moreover, banks often prioritized meeting their financial targets, sometimes at the

expense of smaller accounts. It was not profitable for banks to provide small loans and make a profit.

2.2.2 Financial Inclusion and Its Impact

- Verma et.al. (2025) investigated the impact of financial inclusion on economic resilience and the well-being of communities in post-COVID India. Gathering primary data from 500 rural households, the study indicated that financial inclusion helped mitigate the economic effects of the pandemic by enabling access to emergency credit and government assistance. Households with active bank accounts, insurance, and digital payment access demonstrated a greater capacity to regain employment and maintain educational continuity for their children. The authors concluded that financial inclusion promotes lasting economic stability and social safety nets.
- Ali et. al., (2025) evaluated 25 emerging economies from 2013 to 2023 using panel regression methods. Their findings revealed that the adoption of digital banking significantly enhances the financial inclusion index, with more pronounced effects in nations that have better information and communication technology (ICT) infrastructure and higher education levels. Despite encompassing a large sample, the study is constrained by its reliance on national-level datasets, which do not capture variations at state, regional, or demographic levels.
- Kushwaha et. al.,(2025) investigated how the growth of digital payments fosters financial inclusion across states. Utilizing panel data from 28 Indian states covering the years 2015 to 2023 and a composite inclusion index, the authors discovered that a 10% rise in digital payments correlates with a 7.2% enhancement in inclusion, particularly benefiting rural and low-income areas. Their research also revealed a 23% decrease in the gender gap and a 31% increase in formal credit access among previously unbanked individuals. However, the study did not examine factors such as product affordability or literacy hurdles, which could limit service utilization.
- Nyoni et.al. (2024) examined the influence of financial inclusion on socio-economic progress in Sub-Saharan Africa utilizing panel data from 10 countries over a decade. Their results showed that inclusive financial systems promoted greater income equality, encouraged female entrepreneurship, and boosted household investments in education. Mobile money platforms, such as M-Pesa, were identified as transformative tools for marginalized populations. The research suggested that enhancing digital infrastructure

and financial literacy is essential to optimize socio-economic benefits from inclusion initiatives..

- Mwangi et al. (2023) studied the connection between financial inclusion and social development in East Africa using a mixed-methods approach. Their findings suggested that increased access to financial services had a positive impact on youth employment, gender empowerment, and productivity in the informal sector. However, the authors also warned against "shallow inclusion," where access exists but is not effectively used due to a lack of trust or digital literacy. To address this issue, they called for the development of inclusive policy frameworks and community-level initiatives to enhance financial literacy.
- Ali et.al. (2023) investigated how financial inclusion correlates with socio-economic improvement in rural India. By developing a multidimensional financial inclusion index that covers 12 states, the research revealed that enhanced access to banking, credit, and digital payment systems led to significant reductions in poverty, improved health outcomes, and increased household savings. The study highlighted that areas with higher financial literacy and specific government initiatives, such as the Pradhan Mantri Jan Dhan Yojana (PMJDY), achieved greater socio-economic advancements.
- Demir, et. al., (2022) in their publication "Financial Inclusion, Poverty and Income Inequality in Developing Economies" explored the impact of expanding financial services on income distribution in emerging economies. They utilized a panel dataset covering 67 low- and middle-income countries from 2000 to 2020, applying Generalized Method of Moments (GMM) and structural regression methodologies. The results indicated that financial inclusion notably decreases poverty rates and income inequality when digital banking and account ownership are prevalent. However, the research pointed out that the benefits of financial inclusion were not evenly distributed due to limited rural access, emphasizing the need for policy initiatives to specifically target remote areas for a greater impact.
- Singh et.al. (2022) assessed the contribution of digital financial inclusion to mitigating social inequalities in urban and semi-urban regions of India. The research utilized data from the National Financial Inclusion Survey and observed that digital platforms have broadened access to credit, insurance, and payment systems among low-income groups. Nevertheless, significant challenges remain due to digital divides related to education, age, and gender. The researchers recommended combining digital financial services

with social development initiatives to promote inclusive growth and equitable socioeconomic progress.

- Kumar et al. (2022) explored the relationship between financial awareness and financial inclusion by surveying two demographically diverse districts of Telangana—Nalgonda and Medak. These districts were strategically selected based on CRISIL's financial inclusion rankings to ensure representation of contrasting financial realities. The study constructed financial awareness and financial inclusion indices and found a strong positive relationship between the two. Notably, the research highlighted a gender disparity, with women experiencing higher exclusion rates. This highlights the crucial need for gender-sensitive financial literacy programs, particularly in rural and underserved areas. The study adds to the broader discourse by suggesting that awareness is not merely complementary but foundational to inclusion, calling for educational interventions tailored to vulnerable demographics.
- Nandru et al. (2021) focused on the informal economic sector, particularly street vendors, who often fall outside the purview of formal financial systems. By surveying 371 vendors, the study measured financial inclusion in terms of affordability, accessibility, availability, usage, and financial literacy. Using CFA and SEM, the study empirically validated that financial inclusion has a direct positive impact on the social and economic well-being of this marginalized group. The research provided actionable insights for policymakers, suggesting the design of customized digital financial tools such as mobile banking solutions that accommodate the unique needs and cash flow patterns of street vendors. This study adds practical value to the financial inclusion narrative by demonstrating its transformative role at the grassroots level.
- Ababio et al. (2021) examined financial inclusion's contribution to human development in 20 frontier markets using a dynamic panel data framework spanning 12 years. The analysis confirmed that financial inclusion—measured by account ownership, credit access, and savings habits—positively influences HDI indicators, including life expectancy, education, and income levels. Furthermore, enabling factors like infrastructure, FDI inflows, and governance quality (e.g., control of corruption) were also positively associated with development. This study significantly extends the financial inclusion discourse beyond poverty reduction, presenting it as a multidimensional tool that drives comprehensive human development when supported by institutional and infrastructural enhancements.

- Datta et.al. (2019) utilized data from 102 countries and employed principal component analysis to derive a financial inclusion index based on banking variables. Their findings illustrate a robust correlation between financial development and human development, with countries like Canada and Mongolia outperforming their peers within respective income groups. This cross-country comparison reveals that even low-income nations can achieve high inclusion through effective policies and targeted interventions. The study also suggests that the development of financial infrastructure and digital banking strategies could leapfrog traditional barriers in developing economies, thereby facilitating faster socio-economic progress.
- Raza et al. (2019) conducted a meta-analysis focusing on Pakistan's financial landscape between 2010 and 2015. The study confirmed that geographic location, literacy, income, and age have a significant influence on financial access. While the presence of banking facilities positively impacted human development, excessive dependence on ATMs over full-service branches was found to be detrimental, possibly due to limited financial literacy or inadequate infrastructure. The study emphasized that digital access alone is insufficient—it must be paired with awareness and trust-building measures. These findings advocate for a balanced strategy, combining both physical and digital banking presence to optimize inclusion outcomes.
- Ratnawati (2020) studied ten Asian countries to assess how financial inclusion can mitigate poverty and inequality. By leveraging IMF data and employing the generalized method of moments, the research confirmed that financial penetration (number of accounts, loans, and credit access) is a key lever for equitable development. The study emphasized the need for pro-poor banking strategies, especially those that enable micro-entrepreneurship and savings among rural populations. Its regional focus on Asia provides contextual relevance, showing that countries with targeted financial policies saw significant reductions in inequality and multidimensional poverty.
- Inoue (2019) focused on India's 25 states over 31 years to evaluate the long-term effects of financial development on poverty reduction. Using historical data on bank accounts and branches, the study found that public sector banks have played a pivotal role in poverty alleviation through extensive rural outreach. In contrast, private banks exhibited limited impact, likely due to their urban-centric operations. The findings underscore the importance of state-led financial strategies in addressing developmental

disparities and reinforce the role of public banking infrastructure as a catalyst for inclusive growth.

- Rastogi et.al. (2018) conducted an empirical study in Tamil Nadu to analyze how different financial inclusion mechanisms contribute to economic development. Using factor analysis and structural equation modeling (SEM) on responses from 311 individuals, they identified key drivers, including online banking, customer awareness, and financial literacy. The study highlighted that informed usage of financial services leads to increased participation in the formal economy, greater household savings, and access to credit, thereby facilitating micro-level economic growth. Their findings suggest that mere access is insufficient; active and informed usage is essential for development.
- Iqbal et.al. (2017) applied multiple regression using SPSS to examine how inclusion indicators relate to India's GDP. They found a strong positive correlation between GDP and indicators such as branch density and the credit-deposit ratio, indicating that deeper banking networks promote economic growth. However, ATMs were found to have **no** significant contribution, possibly due to their limited service range. The study reiterates that full-service banking infrastructure—not just ATM networks—is essential for driving inclusive macroeconomic growth.
- Shruti et.al. (2015) evaluated financial inclusion in Andhra Pradesh and Kerala by focusing on the relationship between income generation and access to financial services. She found that formal credit access, higher education levels, and ownership of productive assets enhanced household incomes. Conversely, participation in MGNREGA negatively correlated with income growth, suggesting a need to re-evaluate such welfare schemes. This research underscores the importance of productive financial services over short-term subsidies and highlights the need for financial education to maximize the benefits of these programs.
- Purvi et.al. (2015) emphasized the need for banks to treat financial inclusion as a strategic priority rather than a regulatory obligation. She proposed partnerships with NGOs, microfinance institutions (MFIs), and self-help groups (SHGs) to expand outreach and deepen trust in formal financial systems. By leveraging no-frill accounts and CSR-driven initiatives, banks can foster long-term engagement, especially among rural populations. Her study offers a pragmatic roadmap for banks to transform inclusion into a viable business model, thereby ensuring sustainability.

- Kainth, S.G. (2011) conducted a regional analysis to explore the relationship between financial development and economic growth in Punjab by utilizing a three-dimensional index that concentrated on the availability and usage of banking services. The study categorized districts based on their index scores and discovered a strong, statistically significant correlation. Although it relied on data from 2008–09, the results highlight how unevenness in financial infrastructure and access can directly affect economic outcomes at the sub-state level. This research underscores the importance of targeted policy interventions aimed at fostering inclusive growth.
- Barik (2009) examined the effects of financial inclusion on the economic empowerment of rural households in India through secondary data analysis. The study revealed that the absence of access to financial services is closely linked to ongoing poverty and economic instability. It stressed that financial inclusion—especially access to affordable credit and insurance—is a crucial enabler of economic opportunities, supporting self-employment and income generation. The research concluded that initiatives like 'no-frills accounts' hold promise, yet further comprehensive evaluation is needed to assess their effectiveness in empowering rural communities.
- Ellis (2010) investigated the influence of financial services on household investment in Kenya and Tanzania, utilizing data from the Finscope survey. The findings indicated that enhanced financial access allows households to direct resources toward ventures that offer greater future income potential. Furthermore, it suggested that eliminating financial hurdles, such as high service fees and a lack of financial literacy, can substantially improve economic engagement and alleviate poverty. The study provides compelling evidence that supports financial inclusion as a strategy for reducing poverty and promoting economic growth in developing countries.
- Murari et.al. (2010) analyzed the role of financial inclusion and microfinance in alleviating poverty through the examination of secondary data. Their results indicated that access to financial resources not only enhances the creditworthiness of disadvantaged groups but also supports self-employment initiatives that can help individuals rise out of poverty. The study underscores the crucial role that microfinance can play when correlated with comprehensive financial inclusion policies. However, the authors call for more empirical and longitudinal research to assess the impact over time and in various regions.

- Pathania et al. (2016) investigated the financial inclusion practices of four banks—SBI, PNB, J&K Bank, and JKGB—in Jammu and Kashmir. By interviewing bank personnel and analyzing qualitative information, the study evaluated the accessibility, availability, and utilization of financial services. It introduced the concept of "quality dimension" as an essential yet frequently overlooked aspect of financial inclusion. The findings revealed that merely increasing infrastructure, such as ATMs and branches, is inadequate without guaranteeing service reliability, user satisfaction, and effective outreach. The research advocates for refining the financial inclusion index to incorporate service quality, thereby improving analytical precision and policy development.
- Anjuman (2011) explored the influence of Self-Help Groups (SHGs) and bank linkage programs in promoting financial inclusion in Tamil Nadu. Through purposive and random sampling of 30 households, the study assessed SHG participation and gender-related access to financial services. The results showed a notable improvement in the flow of institutional credit to landless households through SHG programs, along with a decrease in their dependence on informal finance sources. However, the impact was minimal for households with small or marginal landholdings. The research highlights SHGs as a crucial instrument for inclusive finance, especially for vulnerable populations; nonetheless, broader outreach and gender-sensitive designs are essential.
- Sarma et al., (2011) employed regression and correlation methods on secondary data to explore the link between financial inclusion and human development across various countries. Their findings indicated that increased financial inclusion is closely tied to improved human development results. Key factors, including GDP per capita, education, urbanization, and communication infrastructure, were positively correlated with financial inclusion. Conversely, elements such as income inequality, the percentage of rural population, and banking performance metrics displayed weak or no significant correlation. The research emphasizes that financial inclusion serves as both a result and a catalyst for development, suggesting policy measures that align with broader socio-economic objectives.
- Singh et.al, (2011) carried out an extensive statistical investigation to assess the impact of financial inclusion on economic growth, utilizing data from several national sources, including the RBI and NABARD. The analysis revealed a significant correlation between financial inclusion and per capita Net State Domestic Product (NSDP), while

the employment rate did not serve as a strong predictor of financial inclusion. Social development aspects such as urbanization were found to be significantly related, whereas literacy and demographic variables showed no significant connection. Although the study was limited to 15 states in India, it offered valuable insights for crafting region-specific strategies to enhance economic growth through financial inclusion.

- Kuri et.al (2011) examined the relationship between financial inclusion and the Human Development Index (HDI) using various secondary data resources. Their outcomes validated the premise that improved financial inclusion has a positive influence on human development. This result reinforces the notion that access to financial services is crucial not only for economic empowerment but also for advancing human development in areas such as education, health, and social mobility. The study calls for further empirical validation across diverse geographic and socioeconomic settings.
- Sharma et.al. (2013) assessed the effect of financial inclusion on both economic and social development. Through their analysis of secondary data, they demonstrated how financial inclusion fosters growth by enhancing access to savings, credit, and insurance, particularly for marginalized groups. However, the study noted that, despite policy efforts, rural areas in developing nations, including India, continue to experience low levels of banking infrastructure and service penetration. This suggests an apparent need for research based on primary data and a more detailed examination of local issues in achieving universal financial inclusion.

2.2.3 Barriers to Financial Inclusion

- Veeramani et al. (2025) this recent field study conducted in the slums of Mumbai and Delhi reveals that language barriers, mistrust of bank employees, and a lack of awareness continue to obstruct effective financial inclusion. Suggested measures include recruiting culturally aware bank correspondents and organizing financial literacy campaigns. The research focuses solely on public sector banks, overlooking the potential impacts of private and cooperative banking initiatives.
- Ozili et. al, (2024), analyzed the financial inclusion landscape in India, assessing fintech initiatives, demographic factors, and policy changes. The review highlighted that while access to accounts has improved, significant barriers remain, such as low usage frequency, insufficient financial literacy, high transaction costs, the digital divide, and

a mismatch between banking products and the needs of lower-income users. A limitation of the review is that most of the studies analyzed relied on secondary data, thus ignoring micro-level evidence from customers.

- Bansal et al. (2024) this article highlights the digital divide as a significant barrier to financial inclusion, particularly in underserved areas. Inadequate digital infrastructure, low smartphone usage, and cybersecurity concerns impede the adoption of digital banking. The research highlights the necessity of public-private collaborations to enhance digital connectivity and build trust. Since the study primarily relies on secondary data, it may not accurately capture user behaviors or immediate on-the-ground challenges.
- Al-Qahtani et. al, (2024) investigated the systemic and behavioral challenges that hinder rural populations from accessing banking services. Utilizing primary surveys from 2,200 households across six rural districts and applying logistic regression analysis, the research found that distance to bank branches, inadequate documentation, and a lack of trust in formal banking institutions constituted significant barriers. A limitation of this study is its focus on a specific region, which may affect the ability to generalize findings across different cultural contexts.
- Choudhury et al. (2023) “this review evaluates reforms such as Jan Dhan Yojana, direct benefit transfer schemes, and the banking correspondent model. While these reforms have led to increased account ownership, issues such as account dormancy and infrequent transactions persist. The study encourages banks to prioritize customer engagement over merely facilitating account enrollment. The research is primarily centered on policy analysis and lacks comprehensive qualitative insights from banking reform beneficiaries or end-users.
- Kumar et al. (2023) this research examines the ongoing structural and institutional obstacles that hinder rural communities from obtaining formal banking services. Through a primary survey conducted in 10 villages in northern India, the authors discovered that factors such as low financial literacy, distrust in banks, insufficient physical access to branches, and complicated documentation requirements are significant barriers. The study advocates for simplified Know Your Customer (KYC) procedures, the introduction of mobile banking solutions, and the implementation of financial education initiatives. However, the geographical focus on a limited number of villages in a single state may restrict the applicability of the findings to other areas.

- Goel, A. (2023). this article conducts a thematic literature review focusing on the factors that contribute to financial exclusion, the latest trends in inclusion, and the policies initiated by government and regulatory agencies. The literature indicates that issues such as low income, gender disparities, neglect of marginalized groups, inadequate financial literacy, remote locations, and cultural obstacles are significant challenges to achieving financial inclusion.
- Ahmed, T. et al. (2022) Barriers to Banking Access in the Informal Sector: A South Asian Perspective Targeting informal sector workers, this paper identifies challenges such as income volatility, absence of formal identification documents, and bias in service provision as key issues. The authors recommend implementing agent banking, easing documentation requirements, and using biometric identification to enhance access. While the analysis spans several South Asian nations, it does not provide specific policy recommendations that cater to individual countries.
- Ambarkhane et. al. (2022) this study examines the impact of the Prime Minister's Jan Dhan Yojana (PMJDY) across 30 states and six union territories in India during the years 2016, 2017, and 2018; it aims to develop a strategy for the geographic expansion of outlets at the state level to improve the initiative's overall effectiveness. The results suggest that the scheme has performed better in states with higher illiteracy rates, contrary to earlier research that identified illiteracy as a barrier to financial inclusion. A tailored approach for the geographic proliferation of outlets is suggested to optimize the program's overall efficacy and recommend further improvements.
- Babych et al. (2018) outlined Georgia's current financial inclusion and financial literacy. The available literature has classified financial inclusion indicators into four categories, i.e., access, outreach, usage, and quality. The supply-side barriers are categorized as market-driven barriers, regulatory barriers, and infrastructure-related barriers. Market-driven barriers are high maintenance costs, high costs of providing financial services in rural areas, information asymmetry, and lack of convenient access points. Regulatory barriers include opening branches and ATMs, stringent identification requirements, and restrictions on foreign ownership. Infrastructure-related barriers include a lack of trustworthy payment and settlement systems, limited phone access, inconvenience related to transport to ATMs, and a lack of reliable internet connections. Low income, lack of knowledge, lack of trust, and institutional

characteristics, such as bankruptcy laws and creditworthiness assessments, are the demand-side barriers to financial inclusion.

- Kempson et al. (2006) examined the various physical and geographical barriers that can lead to financial exclusion for different products and individuals in particular situations. They identified multiple dimensions or categories of financial exclusion. The main dimensions of financial exclusion include (i) access exclusion - barriers to access that arise from the risk management methods employed by financial service providers; (ii) condition exclusion - specific stipulations associated with financial products that may render them unsuitable for specific demographic groups; (iii) price exclusion - some individuals can only acquire financial products at prices that exceed their financial means; (iv) marketing exclusion - specific individuals are effectively marginalized due to marketing tactics aimed at specific populations; and (v) self-exclusion - individuals choose not to use financial products due to the fear of being denied access by service providers. A notable observation is that numerous low-income groups lack access to basic financial services. Furthermore, even amongst those who do have access to financial services, many find themselves inadequately served concerning the quality and variety of available products and services. Many low-income families rely on unsustainable financial institutions, depend on subsidies, and face underperformance.
- Basu (2006) stated that banks hesitate to serve the rural poor due to various challenges. However, he also highlighted the potential of new approaches, such as the SHG-Bank linkage program and microfinance institutions (MFIs), to improve rural India's financial access. These innovative solutions, with their flexible products, doorstep services, comprehensive financial services, and, most importantly, effective technology use, demonstrate a way for traditional banks to operate effectively in rural areas. Technology in financial services offers a promising avenue for improving access and reducing costs, thereby increasing financial inclusion.
- Thorat (2007) identified financial inclusion as a lack of access to formal payment systems and credit markets. The author emphasized the importance of recognizing the various obstacles to financial inclusion, taking into account both demand and supply factors. In India, individuals such as farmers, landless laborers, oral tenants, self-employed persons, urban slum residents, migrants, ethnic minorities, senior citizens, and women are often excluded from financial services. On the demand side, barriers like unawareness, low income, social isolation, and illiteracy play a significant role. At

the same time, supply-side challenges include distance from bank branches, limited branch operating hours, complex documentation and procedures, inappropriate financial products, language barriers, and unfavorable staff attitudes. Grasping these obstacles is essential for creating effective initiatives to enhance financial inclusion.

2.2.4 Reports on Financial Inclusion

- Digital Finance & SDGs Review (2025) “Digital Finance and Financial Inclusion: A Bibliometric Review of Contributions Toward Achieving the SDGs” examined over 700 scientific documents to explore the connection between digital finance and sustainable development. The research indicated that financial inclusion contributes to several Sustainable Development Goals (SDGs), such as poverty alleviation, empowering women, and stimulating economic growth, while identifying digital finance as the leading factor in inclusion research on a global scale. A limitation of this review is that it focuses on publication volume and keyword analysis rather than empirical social outcomes, thus failing to establish causal relationships
- World Bank Report (2007)- was ready in close cooperation with the Bank of Albania. This report focused on exchange, services, and agriculture; however, the limited scope of their activities leaves a potentially significant unmet credit need in the farming sector. This report focuses on issues identified with the Undaunted Property Registry System (IPRS) activity and various organizations, as well as the formalization of property rights and the registration of home loans. This review accepts the change with the ideal effect on maintainable credit development will be engaged in (I) working on the quality, breadth, and depth of monetary intermediation, (ii) development and improvement of credit associations and microfinance organizations, and (iii) work with the development of new instruments. The specialists will likewise focus on implementing changes to become compliant with the Financial Action Task Force (FATF) recommendations.
- The World Bank (2008) report emphasizes that attaining financial inclusion, defined as unrestricted access to financial services, presents significant challenges. Nonetheless, it also highlights the potential of financial inclusion in overcoming these barriers. Many developing nations face challenges in overcoming these obstacles, which complicate the definition and measurement of financial access. Financial market imperfections, such as information asymmetries and transaction costs, can be particularly challenging

for talented individuals living in poverty and small businesses that lack collateral, credit histories, and established networks. The report emphasizes that without inclusive financial systems, these individuals and enterprises with valuable opportunities are limited to their savings, thereby restricting their growth potential.

- World Bank Report (2009) - added to the proceedings with a strategy exchange on monetary area improvement. It is planned that the investigation and proposals from this report will contribute towards the arrangement and execution of the National Development Plan (NDP) and the Financial Markets Development Plan. The report recommends strategies and institutional changes to foster rural and farming finance. This report has two parts: further developing access to financial services and improving the inventory of term loans. The initial segment focuses on three key areas: expanding access to the banking framework, developing local and agricultural finance, and enhancing payment and settlement systems. The subsequent part focuses on three key areas: reforming the benefits framework, developing the housing finance market, and enhancing the private funding of the foundation.
- The Asian Development Bank (2011) noted that during the 20th century, ADB primarily adopted inclusive economic growth as one of its three vital strategic priorities in Strategy 2020. ADB's strategy was crucial in promoting inclusive growth across the region through financing, policy recommendations, knowledge solutions, technical assistance, and capacity building. The bank's emphasis on infrastructure development, essential public services such as water, sanitation, and education, as well as enhancing the financial sector, promoting financial inclusion, and improving food security, has been key to realizing inclusive growth.

2.2.5 Financial Inclusion and Growth

- Ha et al., (2025) set out to chart the global advancements in financial inclusion research with an emphasis on fintech. Through a systematic review of 96 peer-reviewed articles sourced from Scopus and Web of Science, the research identified three primary clusters: the emergence of fintech services, shifts in financial market structures, and evolving roles of regulators and stakeholders. The authors concluded that fintech significantly enhances inclusion but noted a lack of substantial long-term evidence regarding regulatory challenges and sustainability. A limitation of the study is that it included

only articles published in English and from major databases, thus overlooking reports from practitioners and grey literature from developing countries.

- Le et al., (2023) highlighted the connection between banking literacy levels and outcomes related to financial inclusion. Through a cross-sectional survey involving 3,200 participants and structural equation modeling, the authors established that financial literacy is a strong predictor of both account ownership and savings habits. One limitation of the study is that financial literacy was based on self-reporting, which may not accurately reflect actual financial knowledge.
- Hussain et al, (2023) aimed to assess the influence of fintech services on improving access to financial systems. The authors analyzed survey data collected from 5,480 respondents in 10 Asian nations, employing Partial Least Squares Structural Equation Modeling (PLS-SEM). The study found that mobile wallets, UPI platforms, and app-based banking effectively promote financial inclusion by lowering transaction costs and reducing documentation hurdles. However, a significant limitation was its concentration on urban technology users, which limited its relevance for low-literacy and offline demographics.
- Singh, et al., (2023) assessed the PMJDY scheme's contribution to promoting inclusive financial development. They used secondary data from the RBI and Ministry of Finance reports (2015–2022) and conducted an index-based comparative analysis. Their findings concluded that PMJDY was instrumental in facilitating the opening of bank accounts and connecting rural households to formal financial systems. Nevertheless, they noted that low account activity and digital illiteracy hinder the scheme's ability to promote lasting changes in financial behavior.
- Okoro et al., (2022) explored the role of mobile money in facilitating the expansion of small businesses. The researchers gathered data from 450 SME proprietors and utilized multivariate regression analysis to assess the relationship between transaction frequency and business performance. The findings indicated that mobile money enhances cash flow management and improves access to credit, leading to increased business growth. Nevertheless, substantial transaction fees and frequent network disruptions were highlighted as ongoing challenges.
- Balbir (2012) discovered that inclusive growth, which emphasizes economic growth benefiting all segments of society, would empower individuals and enhance their participation in economic and social processes. Banks aspiring for global outreach must

align with local expectations. Providing financial access would enable individuals to engage with global market players in our country, thereby enhancing employment and business prospects. A review of the advancements indicates that banks have effectively scaled and maintained their initiatives. India was optimistic that the goals established by banks, along with achieving universal financial inclusion, were attainable.

- Makarand (2012) indicated that the goal of promoting inclusive growth with stability, highlighted in the Eleventh Plan (2007-2012), could not be realized without attaining universal Financial Inclusion. It is crucial to view inclusion as a process that encompasses previously excluded agents whose engagement is vital to the foundation of development programs. Banks need to prepare promptly to carry out their financial inclusion plans effectively. If accomplished, India could serve as a global role model. Therefore, financial inclusion has evolved from a policy option to a policy necessity, with financial institutions playing a pivotal role in this transformation.
- Soumya et al. (2012) proposed that a mutually beneficial solution for both the provider and the beneficiary is essential for the success of financial inclusion. This means it should serve as a feasible investment alternative for financial institutions while being an appealing option for borrowers. Financial inclusion is a method to achieve inclusive growth, provided it is bolstered by supporting elements such as proactive initiatives from financial institutions, advancements in technology, increased financial literacy, and the significant involvement of the Central Government and RBI in policymaking, along with the state's role in land settlement rights and infrastructure development. The moment has arrived to implement the policies and programs endorsed by various authorities to elevate the living standards in rural India and ensure access to vital financial services. Consequently, grassroots efforts must be made to actualize these ideas while considering India's broader vision of inclusive growth.
- Srinivasan, K. et al. (2024) carried out a descriptive study titled “Reforms in the Indian Banking Sector: A Paradigm Shift in Growth and Financial Inclusion in India,” which investigated the role of the banking sector in India in fostering financial inclusion and assessed various reforms in that sector along with their effects on financial inclusivity and performance. The research employed secondary data sourced from the Reserve Bank of India for its analysis. The results show that over the last five years, there has been a rising trend in the number of active branches of scheduled commercial banks. Notably, commercial banks achieved the highest growth rate in semi-urban areas at

42.3%. During these five years, the count of branches increased from 19,126 to 27,219. While rural regions are experiencing a slower growth rate of 20.5%, which is lower than that of other areas, the trend is still promising. It is expected that conditions will improve significantly due to efforts made by the RBI to enhance financial inclusion. From 2009 to 2013, the number of bank branches in urban areas grew by 24%, reaching a total of 14,325 branches by the close of 2013.

- Kumari et al. (2024) studied the proportion of individuals utilizing various Fintech applications was analyzed, comparing different age groups in terms of fintech literacy, examining gender disparities in fintech literacy, and assessing how fintech literacy affects digital financial inclusion. The analysis revealed that Gpay was the most popular Fintech application, used by 60.90% of respondents, followed by Paytm at 48.20% and PhonePe at 46.40%. The papers' findings indicated that fintech literacy has a significant influence on digital financial inclusion; as fintech literacy improves, it correlates with greater digital financial inclusion. The government should implement various initiatives and programs to educate people across different age demographics and genders about fintech services, enabling individuals to take control of their financial well-being and fully benefit from it.

2.3 Need of the Study

Financial education, financial inclusion, and financial stability are three essential components of financial literacy that collectively contribute to a nation's advancement (Ozili et al., 2021). Financial inclusion operates from the supply perspective by ensuring sufficient and prompt access to various financial services. Conversely, financial education operates from the demand side by fostering and raising awareness among the public about the significance and advantages of financial services provided by the banking and financial industry. The combination of these two strategies, working in perfect harmony, is vital for the financial stability that is essential for any country (Rangarajan et al., 2008).

Inclusive Growth represents the most significant challenge our nation confronts at present. It is critical to offer financial services to all households that lack access to formal financial systems. Consequently, one of the tools that the Government of India has positively embraced to achieve inclusive growth is Financial Inclusion. An examination of the current literature has highlighted that previous studies have been limited. However, they have been conducted from varying viewpoints, and researchers have focused primarily on specific aspects

of financial inclusion, such as measurement and evaluation. Extent (Sarma M., 2008), (Chattopadhyay K.C., 2011), financial inclusion initiatives (Gupta et al., 2018), identifying determinants (Kempson et al. 2006), studying problems, but there is need of comprehensive and integrated study which will examine the role of banking sector in financial inclusion, identify barrier which the customers face in banks for essential banking services. Furthermore, (Agarwala et al., 2023) also suggested that, in the present scenario, financial inclusion is not limited to the opening of bank accounts and bank branches alone; these indicators of financial inclusion have significantly impacted the socio-economic growth of the customer.

Recently, significant progress has been made in the government's policy framework regarding financial inclusion. Equity in finance fosters inclusive development. Additionally, initiatives to promote financial inclusion push the large population to develop consistent banking practices. In the Indian context, the Financial Inclusion Drive could not provide the intended outcomes until 2014, despite the Government's persistent efforts. However, the introduction of the Pradhan Mantri Jan Dhan Yojana, a national mission for financial inclusion, in 2014 significantly increased the percentage of the impoverished and previously unbanked population with bank accounts.

The issue of financial inclusion varies across countries and is particularly pronounced between developed and developing nations. In the Indian economy, mainly when focusing on achieving sustainable development, maximum participation from all sectors of society must be ensured. This will help people experiencing poverty and women in society by empowering them to become self-dependent and well-informed, enabling them to make sound financial decisions. Financial inclusion primarily encompasses the participation of underrepresented groups, including low-income individuals and weaker sections of society, in accessing financial services. Focusing on monetary considerations in India is a critical and multifaceted issue. Monetary incorporation ensures that people and organizations have access to valuable and affordable financial products and services that address their needs. This issue has been a key focus for policymakers and organizations in India due to its impact on economic development, poverty reduction, and equitable development.

Beginning around 2005, financial inclusion has been viewed as a rapidly emerging concept and a component of inclusive development. A creative thought advances individuals' financial propensities. Access to a well-functioning monetary framework empowers financially and socially marginalized individuals to coordinate more effectively and contribute more

significantly to the economy's growth, while also safeguarding themselves against financial loss. Hence, monetary consideration is critical to financial development, as it allocates resources from the base to the top. Therefore, the need arises to empirically test the relationships, overcome barriers to financial inclusion, and enhance the process of financial inclusion, which is the focus of this study. Consequently, the present study aims to bridge this gap by examining these objectives at the state level. This study will enable the central bank and government to make substantial contributions to inclusive growth.

2.4 Research Gap

The existing body of literature provides substantial evidence on the importance of Self-Help Groups (SHGs), microfinance institutions, and community-based models in advancing financial inclusion across India (Chakrabarti, 2011; Uma et al., 2013; Verma et al. 2025, Kapoor et al., 2014). Numerous studies have also examined conceptual frameworks of financial inclusion and the broad determinants influencing access and usage (Singh et al., 2011; Garg, 2014). While these contributions are valuable, they predominantly highlight the role of SHGs and microfinance rather than focusing on public sector banks (PSBs) which remain the backbone of India's formal banking system, especially in states like Punjab. Recent literature further indicates that digitalisation, fintech adoption, and technological innovations have significantly reshaped the financial inclusion landscape (Dalit et. al., 2016; Kaur et. al., 2023; Kumar et. al., 2023). Yet, there remains insufficient empirical evidence on how these developments have influenced financial inclusion outcomes specifically through PSBs in Punjab. Additionally, the Punjab Economy Survey (2020) categorizes the state as having a medium financial inclusion index, signaling persistent structural and operational barriers to inclusive financial growth.

A review of empirical studies reveals limited research with focused geographical coverage on Punjab. Existing works primarily explore Punjab's overall financial inclusion index and its determinants but do not examine the role of PSBs in enhancing financial inclusion or improving the socio-economic development of bank customers (Sharma et al., 2011; Das, 2012; Satpathy et al., 2014). Similarly, only a few recent studies discuss how fintech, digital banking services, and innovative platforms contribute to expanding inclusion in the region (Preet et al., 2025; Gupta et al., 2018). This creates a clear knowledge and theoretical gap regarding how financial inclusion dimensions access, usage, and availability operate within the public banking structure in Punjab. Furthermore, a population gap exists, as very few empirical

studies specifically target bank customers of PSBs in Punjab. The contextual gap also persists due to the absence of region-specific evidence on the effectiveness of financial inclusion policies implemented through public sector banks. Additionally, an empirical gap emerges because comparative research across different bank groups within Punjab is lacking, despite the presence of PSBs, private banks, RRBs, and cooperative banks.

Despite the massive progress in India's financial inclusion landscape through PMJDY, DBT, digital payments, and Jan Suraksha schemes, recent studies (2022–2025) show that inclusion is still uneven across states. Many recent works (Agarwala, 2023; Prasuna, 2024; Mishra, 2024) measure national-level inclusion indices and determinants, but there is limited empirical work that specifically examines state-level disparities, especially in economically advanced but regionally imbalanced states like Punjab. While Punjab economic survey (2021) reports evidence on Punjab's gender gap and rural-urban variation in financial access, the role of Public Sector Banks (PSBs) in driving socio-economic development through savings, credit, insurance, and digital channels remains under-researched.

Most recent studies (Abrol et al., 2018; Asif et al., 2023) evaluate FI using composite indices or digital adoption trends, but very few studies integrate customers' primary data—particularly focusing on access, usage, availability, and socio-economic outcomes. Studies on PSB efficiency (Schuetz et al., 2019; Sanderson et al., 2018) focus largely on operational performance and DEA efficiency, not on how PSB-led inclusion improves household income, well-being, empowerment, or development indicators in Punjab. Additionally, existing literature rarely connects financial inclusion with social development outcomes such as education, health security, risk protection (insurance), and subjective well-being, despite theoretical frameworks (like Sen's Capability Approach) highlighting these linkages. Therefore, a research gap exists in (i) Punjab-specific empirical assessment, (ii) customer-level perception of FI dimensions, (iii) PSB-led inclusion and its socio-economic impact, and (iv) SEM-based modelling of the relationship between financial inclusion and socio-economic development. This research, therefore, attempts to fill existing knowledge, theoretical, population, contextual, and empirical gaps by employing financial inclusion index dimensions within a robust empirical framework. The findings will support policymakers, the Reserve Bank of India, and state-level authorities in strengthening inclusive growth initiatives and designing more effective and targeted financial inclusion strategies for Punjab.

2.5 Importance of the Study

Financial exclusion impacts economies worldwide, including those of underdeveloped, developing, and developed nations. Despite fast economic progress and the modernization of the global economy, financial access gaps still need to be improved. This malaise has led to financial insecurity for lower-income individuals who require access to banking products and services. India has the world's second-biggest unbanked population, with around 191 million adults (Global FINDEX Database, World Bank, 2014). The Government of India and the Reserve Bank of India have taken steps to address financial exclusion among India's population and promote inclusive growth. The primary goal of all these programs is to provide financial services to a significant portion of the previously financially excluded Indian population. However, it is distressing to notice that a significant portion of rural people, mainly the weaker and poorer portions, as well as those living below the poverty line, continue to be excluded from even the most basic possibilities and services given by the banking sector. Even those with access to these services, particularly the poor, disadvantaged, and illiterate in rural locations, use them sparingly. Several obstacles prevent individuals from utilizing these products and services regularly.

Although the Indian economy is rapidly becoming a global economic superpower, financial marginalization remains a persistent stigma. Fifty percent of its people are poor, and sixty-nine percent of its masses are marginalized and lack access to any financial resources. The unreached must be reached and brought into the mainstream economy through financial inclusion. Access to credit and savings can start or accelerate several interconnected and mutually supporting "virtuous spirals" that lead to societal empowerment. Utilizing financial facilities to mitigate risks and shocks has made financial inclusion a necessity in the era of financial globalization. Hence, increasing the opportunities for earning money. The study's significance lies in understanding the role of public sector banks in promoting financial inclusion and their impact on the social and economic development of their customers.

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Chapter 3 - Research Methodology

3.1 Introduction

According to Merriam-Webster's Dictionary, research is a thorough and attentive search, particularly an investigation or experimentation directed at uncovering and understanding facts, modifying established theories of law based on new information, and applying such new or updated theories or laws in practice. The Methodology refers to methods or rules for collecting and analyzing data. The research methodology refers to the procedures or techniques used to identify, select, and analyze information about a specific topic. It also reveals new facts related to the dynamic changes in society.

3.2 Statement of Problem

The banking and financial services sectors are crucial in fostering growth and development within an economy. Access to financial services is a vital factor in promoting economic progress and human development (Agrawal, A., 2008). It aids in development by diminishing economic inequality. A financial system that lacks inclusivity obstructs the attainment of substantial and sustainable economic growth rates, leading to serious economic repercussions (Ajani et al., 2013). Over the last decade, both the volume and complexity of the banking industry have seen significant increases. Although there have been notable improvements in financial stability, profitability, and competitiveness, challenges remain as basic banking services have yet to reach a large portion of the population, especially the most disadvantaged groups.

Financial inclusion, an essential element of economic development, seeks to tackle the issue of financial exclusion (Ali et al., 2012). In 2011, the Global Partnership for Financial Inclusion characterized financial inclusion as "a state in which all working-age adults have effective access to credit, savings, payments, and insurance from formal service providers." Despite its considerable influence on broader economic growth, financial inclusion has not been sufficiently addressed by Indian scholars. Thus, this study endeavors to bridge this gap by examining the reach and scope of financial inclusion in India. The study defines "financial inclusion" as granting affordable and transparent access to financial products and services for all societal segments, including vulnerable demographics such as low-income individuals (Alfansi et al., 2000; Anjuman et al., 2011).

Financial inclusion, which emphasizes converting areas without banking services (Arputhamani et al., 2011) into areas that are banked, holds the potential for a more inclusive and prosperous society. It encompasses the accessibility of banking services to the entire population without discrimination. The current research aims to investigate how financial products and services are being used, particularly highlighting the possible advantages they can provide. Much of the existing research has overlooked the hurdles individuals face when attempting to access and utilize financial products and services. These challenges can hinder efforts toward financial inclusion. This study seeks to identify the barriers that obstruct financial inclusion within society, address them, and ultimately benefit from a financially inclusive environment.

3.3 Research Objectives

1. To study the role of Public Sector Banks in financial inclusion.
2. To analyse the Socio-Economic Development of customers through financial services in public sector banks.
3. To identify the barriers/Challenges customers face in Public Sector Banks.

3.4 Hypothesis

The proposed model comprises three developments: monetary consideration, social position, and financial status. In the proposed aspect of the model, revised budgetary consideration measurements have been proposed, which depend on various audit reports and precise examinations. One of the principal endeavors in estimating three specific aspects of budgetary consideration across various countries was advanced by Bansal et al. (2006), who proposed new markers of the financial sector's effort. Effort incorporates three sorts of banking services, specific stores, acknowledgment, and installments, regarding three measurements: a) physical access, b) convenience, and c) qualification. The Partnership for Monetary Inclusion (2010) characterizes budgetary incorporation as a multifaceted concept with various segments, comprising four central components: specific access, quality, use, and government assistance (Banerjee et al., 2014).

In the context of India, various studies conducted by Sarma (2008, 2010, and 2012) and Chakravarty and Pal (2010) have put forward composite indicators of financial aspects that integrate various economic factors to represent the level of openness, accessibility, and utilization of banking services. Doepke et al. (2010) identified three components for a

comprehensive evaluation of monetary inclusivity across different countries. Access to financial services can be measured through physical availability, effort assessment, user-friendliness, and cost factors. Barrett P. (2007) assessed financial inclusivity by examining three indicators: utilization, barriers, and access to financial services. Dias et al. (2013) created an Inclusiveness Financial Index (IFI) by employing a core set of indicators that include usefulness, take-up rate, reliable usage, and satisfaction.

A body of collective research (Raman et al., 2012; Rao N., 2012; Uma H. et al., 2013; Verma et al., 2014) suggests that the calculation of IFI takes into account three multidimensional aspects of an inclusive financial framework: banking penetration, availability of banking services, and their utilization. Raman et al. (2012) advanced this concept by calculating the Financial Inclusion Index (FII), which considers four essential dimensions: outreach (accessibility and penetration), usability, transaction ease, and transaction costs. Verma et al. (2014) quantified financial inclusion by focusing on two key dimensions: the outreach of financial services (demographic or geographic penetration metrics) and the utilization of financial services (the fraction of households with deposit and loan accounts). Based on this comprehensive literature review, the following hypotheses are formulated:

H1a: Public sector banks contribute to financial inclusion through access, usage, and availability of banking services.

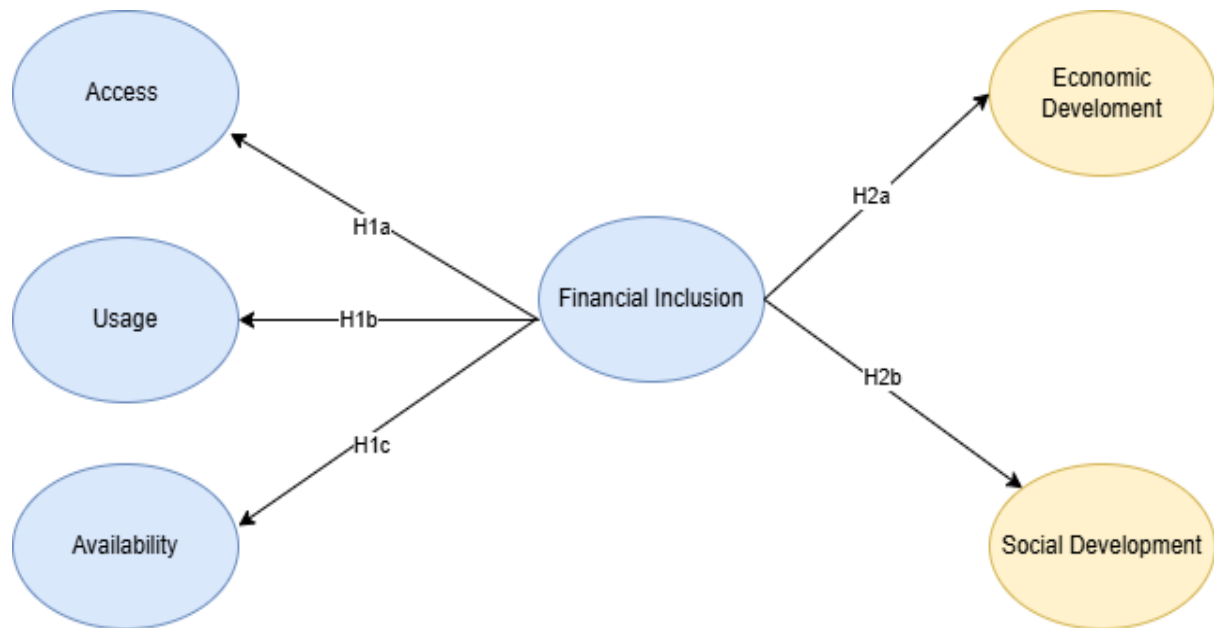
Anjuman (2011) explored the relationship between the economic conditions of households and their level of financial inclusion, finding a significant correlation. Being a customer of a bank greatly improves the economic situation of households. In a similar vein, Ghatok et al. (2016) discovered that involvement in financial inclusion, mainly through microfinance initiatives like self-help groups (SHGs), plays a crucial role in elevating women from marginalized positions to mainstream society. Access to loans from SHGs positively influences the socio-economic development of rural women. Furthermore, enhancing the availability of financial services has the potential to boost economic growth. The limited accessibility of financial services in developing countries has been recognized as a major barrier to income generation and social protection (Doepke M. et al., 2010). From this review of the literature, the following hypotheses have been developed:

H_{2a}: Financial inclusion has a direct impact on social development.

H_{2b}: Financial inclusion has a direct impact on economic development.

3.5 Research Model

Figure 3.1: Research Model Framework



Source: Author's Self Conceptual Framework

3.6 Research Method

The research method has two main categories: quantitative and qualitative research. Quantitative data are used when a researcher is trying to quantify a problem or address the “what” or “how many” aspect of a research question. It is data that can be compared on a numeric scale. Qualitative research provides insight and an understanding of the problem at hand. It involves collecting empirical material based on personal experiences, interviews, and observation. The present study primarily adopts a quantitative research approach because the research objectives require systematic measurement and statistical analysis of financial inclusion and socio-economic development among customers of public sector banks. Quantitative research enables the researcher to analyze relationships among variables through numerical data and statistical techniques.

3.7 Research Design

A research design is a comprehensive set of methods and events used in collecting and analyzing measures of the variables specified in the research problem. It determines goals, information collection, examination techniques, time, costs, obligations, plausible results, and

activities (Agrawal et. al., 2008). The current research configuration is exploratory, demonstrating the thoroughness and thoughtfulness of the study's methodology. This examination aims to investigate or examine an issue or circumstance to gain a deeper understanding.

The study utilized expert opinion to form the research instrument, with pilot surveys being conducted initially to test its effectiveness. On the other hand, descriptive studies involve collecting data through surveys or questionnaires to obtain the necessary information. A descriptive research design is based on six 'Ws': who, what, when, where, why, and how the research is conducted. The study employs an explanatory research design that incorporates both descriptive and exploratory data. The study's research design is limited to the state of Punjab only.

3.7.1 Source of Data

The effectiveness of a research methodology is fundamentally reliant on the accuracy and dependability of the data used. Utilizing incomplete, irrelevant, or incorrect data can result in misleading interpretations and unreliable conclusions. Thus, it is crucial to thoughtfully choose appropriate data sources and data collection methods. This highlights the essential role of the researcher in ensuring data accuracy and upholding the overall rigor of the study (Wilkinson et al., 2007). In the current study, both primary and secondary data sources were utilized, with the researcher being actively engaged throughout the data collection process. Primary data were gathered through a systematically designed questionnaire distributed to participants. Secondary data were sourced from various reputable references, including academic journals, books, research articles, official websites, State-Level Bankers' Committee reports, Census 2011 data, and annual reports from the Insurance Regulatory and Development Authority of India (IRDA), CRISIL, and the Reserve Bank of India (RBI). Furthermore, financial access survey reports from the International Monetary Fund and the Global FINDEX database of the World Bank were referenced to support the analysis.

3.7.2 Questionnaire Design

A structured questionnaire was used to gather primary data. The instrument was adapted from Salathia (2014) and created using a five-point Likert scale, which is widely accepted for gauging respondents' attitudes and perceptions in social science research. The response options ranged from "1 = Strongly Agree" to "5 = Strongly Disagree." The five-point Likert scale was

chosen for its clarity, ease of understanding for respondents, and capability to yield reliable and interpretable results.

3.7.3 Generation of scale measurement items

Through a comprehensive review of both theoretical and empirical literature, the present study sought to develop measurement items that reflect various aspects of financial inclusion and socio-economic status (Sarma, 2015; Gupte et al., 2012; Arora, 2012; Amidzic et al., 2014; Swamy, 2013; Beck et al., 2009; Prabhakar et al., 2017). Initially, 95 items were created to capture 42 dimensions of financial inclusion. Additionally, 20 items were crafted to assess social status, while 17 items were devised to evaluate economic status and related barriers to financial inclusion. In summary, pertinent literature was rigorously reviewed to formulate items that represent various facets of financial inclusion and socio-economic development. As no universally recognized or standardized scale was discovered in existing literature, prior empirical studies informed the development of a self-constructed, context-specific measurement tool tailored to the aims of the current study.

Table 3.1: Overall Construct's from literature Review

Dimension	Measurement Items	Key Literature Sources
Access to Financial Services	✓ Proximity of banking outlets	Gupte et al. (2012); Arora (2012); Amidzic et al. (2014); Swamy (2013); Beck et al. (2009); Prabhakar et al. (2017)
	✓ Ease of reaching bank employees	
	✓ Availability of ATM facilities	
	✓ Access to mobile ATM services	
	✓ Availability of alternative banking channels	
	✓ Responsiveness of bank officials	
	✓ Facilities for differently abled customers	
	✓ Effectiveness of grievance redressal mechanisms	
	✓ Convenience of transaction hours	
	✓ Simplicity of account opening procedures	
	✓ Adequacy of banking institutions in the area	
	✓ Comparative ease of approaching banks	
	✓ Accessibility during emergency situations	
	✓ Adequacy of staff strength	
	✓ Availability of financial information	
	✓ Courtesy and conduct of bank employees	

	✓ Competence and knowledge of bank staff	
Usage of Banking Services	✓ Regularity of savings transactions ✓ Frequency of cash withdrawals ✓ Extent of credit facility utilization ✓ Frequency of bank visits ✓ Use of banking services for insurance payments ✓ Utilization of banking channels for loan repayments ✓ Use of banks for deposit purposes ✓ Adoption of advanced banking schemes ✓ Perception of interest rates charged ✓ Purpose of bank visits for savings and withdrawals	Chakravarty & Pal (2010); Sarma (2008); Nandru et al. (2015); Pal & Pal (2014)
Availability of Financial Products	✓ Availability of loan facilities ✓ Access to savings schemes ✓ Provision of overdraft facilities ✓ Availability of insurance products ✓ Access to debit card services ✓ Locker facility availability ✓ Transparency regarding service charges ✓ Availability of zero-balance accounts ✓ Time required for loan processing ✓ Issuance of passbooks and cheque books ✓ Simplicity of loan procedures ✓ Information related to interest rates ✓ Awareness of newly introduced banking schemes ✓ Role of field staff in service promotion ✓ Bank initiatives in information dissemination ✓ Presence of customer help desks ✓ Bank's approach towards resolving customer issues	Sarma & Pais (2008); Kumar (2011); Gupte et al. (2012); Yorulmaz (2013); Amidzic et al. (2014); Nandru et al. (2015); Beck et al. (2006); Ghosh (2011)
Social Development	✓ Participation in household decision-making ✓ Improvement in educational opportunities	Duflo (2012); Dias (2013);

	✓ Positive changes in lifestyle patterns ✓ Enhancement of social standing ✓ Development of personal competencies ✓ Improvement in technical skills ✓ Family support in financial decisions ✓ Perceived improvement in social recognition ✓ Construction or ownership of housing ✓ Increase in self-confidence ✓ Reduction in household vulnerabilities ✓ Improvement in health and living conditions ✓ Freedom of expression and discussion ✓ Awareness of financial inclusion benefits ✓ Participation in community-related activities ✓ Ability to influence social change ✓ Engagement in democratic processes ✓ Opportunity to raise grievances ✓ Freedom of movement in public spaces ✓ Awareness of government welfare schemes ✓ Utilization of special financial schemes ✓ Participation in Self-Help Groups (SHGs) ✓ Involvement with Non-Governmental Organizations (NGOs) ✓ Feedback and response mechanisms - Overall improvement in social well-being	Barik (2009); Raman et al. (2012); Verma et al. (2014)
Economic Development	✓ Improvement in life expectancy ✓ Enhanced access to education ✓ Empowerment of household members ✓ Economic progress of the village ✓ Sustainable rural development ✓ Growth in production of goods and services ✓ Increase in economic activities ✓ Reduction in financial stress levels ✓ Growth in agricultural output	Nandru et al. (2015); Beck et al. (2006); Ghosh (2011); Duflo (2012); Dias (2013); Barik (2009); Raman et al.

	✓ Rise in per capita income ✓ Appreciation in asset values ✓ Reduction in financial dependency ✓ Improvement in standard of living ✓ Preparedness for emergencies ✓ Savings during unforeseen situations ✓ Support in economic decision-making ✓ Autonomy in expenditure decisions ✓ Increase in purchasing power ✓ Improved educational opportunities for children ✓ Employment generation ✓ Impact on capital formation and investment	(2012); Verma et al. (2014)
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3.7.4 Terms used in the questionnaire

1. **Financial Inclusion:** It refers to ensuring access to financial services and timely, adequate credit whenever the weaker sections of society need them at an affordable cost. In other words, it refers to the access, usage, and availability of financial services from financial institutions.
2. **Access:** It refers to the use of available financial products or services from various supply-side institutions. It includes costs such as bank fees and branch expenses.
3. **Availability:** This refers to services provided by a formal institution, including loans and passbooks.
4. **Usage:** It is consistent, regular, and periodical. It focuses on various financial services and policies.
5. **Economic Development:** Development refers to an event constituting a new stage in a changing situation. Economic development is the process by which the economic well-being and quality of life of a nation, region, or local community are improved. When the local quality of life is improved, there is more economic development.
6. **Social Development:** Social Development refers to individuals' creation of social and joyful talents throughout their lifespan, specifically considering youth and immaturity. Solid social improvement enables us to form constructive relationships with family, friends, educators, and others.
7. **Customer:** Buying goods and services from any business or financial sector.

3.8 Sampling Design

3.8.1 Locale of Study

The study's location is limited to the state of Punjab, India. Punjab provides an important regional context because despite relatively strong banking infrastructure, disparities in financial usage and socio-economic inclusion persist in rural areas. Further, data is only collected from rural customers of public sector banks.

3.8.1.1 Rationale for Focusing on Rural Customers in Punjab

The current research examines rural customers in Punjab, as these populations continue to be one of the most financially neglected segments, despite numerous policy efforts aimed at improving financial inclusion. Previous research has repeatedly indicated that rural households encounter more obstacles in accessing and using formal financial services due to issues such as inadequate banking facilities, lower levels of financial literacy, limited income, lack of digital access, and the physical distance from financial institutions (Sarma et.al., 2011; Demirgüç-Kunt et al., 2022). As a result, the impact of financial inclusion initiatives can be more effectively evaluated in rural areas where disparities in access are most evident.

Punjab presents a particularly relevant scenario because, despite its relatively advanced economic status, there are still significant disparities in access to banking services in rural regions. Then analyzing rural customers enables this study to explore the factors that continue to obstruct financial inclusion, even within a relatively affluent state. Additionally, rural communities are a primary focus of government programs such as the Pradhan Mantri Jan Dhan Yojana (PMJDY), Direct Benefit Transfer (DBT) schemes, and initiatives aimed at expanding digital banking. Consequently, the study provides contextual insights that have wider implications for financial inclusion efforts in rural India, while also recognizing that any direct extrapolation to urban areas or other states should be done carefully.

3.8.2 Sampling Technique

The research utilizes a multi-stage sampling process, where distinct clusters such as districts, blocks, cities, and villages are systematically chosen at each level. Once the clusters were established, random sampling was employed to select rural blocks and villages, taking into account the spread-out nature of the population. The sampling process unfolded in four stages. Initially, the total population of Punjab was divided into two categories: rural and urban. The second stage concentrated on selecting blocks and villages, while the third stage involved

the choice of public-sector bank branches using a convenience sampling method. Convenience sampling at branch level was adopted due to accessibility constraints and operational limitations in rural banking locations. This organized approach ensured extensive coverage of geographically varied regions while also upholding the feasibility and representativeness of the sample.

3.8.3 Selection of District

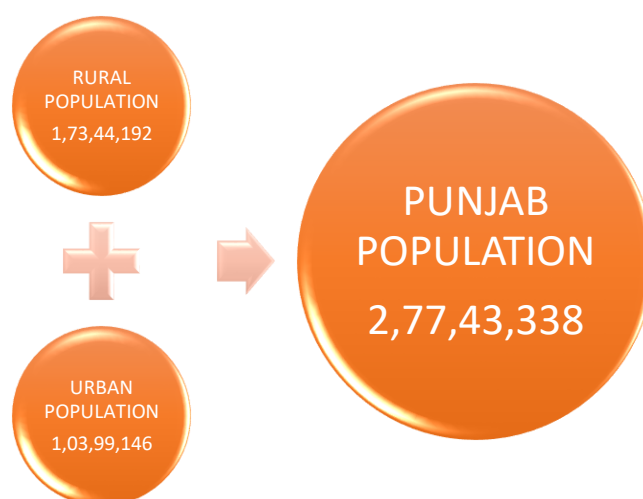
There are 22 districts in Punjab, but only 15 districts were taken at the time of this research. All the districts have been divided into three categories based on population. The population of each district is further divided into rural and urban populations. Based on the high rural population, all districts of Punjab are categorized into three groups: high population, medium population, and low population.

Data have been collected from rural customers of public sector banks in the state of Punjab who have accounts or policies with the banks. In India and Punjab, most of the population resides in rural areas (Punjab Census Report, 2011). In Punjab, most of the population resides in rural areas compared to urban areas. The size of the rural population is 1,73,44,192 (Punjab Census Report, 2011), from which the sample size of this study is 400 rural customers of Punjab, calculated using the Solvin formula. To analyze financial inclusion and socio-economic development, a systematic questionnaire is distributed among bank customers, and data are collected through interview techniques.

- **FIRST STAGE:**

In the first stage, the total population of Punjab, as reported in the 2011 Census Report, is divided into two categories: rural and urban. Then, the district population is further divided into two parts: rural and urban. Finally, all districts are categorized into three sections: high, medium, and low.

Figure 3.2: Total Punjab Population



Source: Punjab Census Report 2011

Table 3.2: Total Districts and Classification of Population

SN	District	Rural	Urban	Total Population	
1	Ludhiana	1429031	2069708	3498739	High Population
2	Amritsar	1156045	1334611	2490656	
3	Jalandhar	1032419	1161171	2193590	
4	Patiala	1132406	763280	1895686	
5	Sangrur	1139204	515965	1655169	
6	Gurdaspur	1260572	361153	1621725	
7	Hoshiarpur	1251656	334969	1586625	
8	Bathinda	889308	499217	1388525	Medium Population
9	Tarantaran	977832	141795	1119627	
10	Fazilka	759111	267089	1026200	
11	Firozpur	717407	285467	1002874	
12	Moga	768500	227246	995746	
13	SAS Nagar Mohali	450017	544611	994628	
14	Shri Muktsar Sahib	649705	252191	901896	

15	Kapurthala	532706	282462	815168	Low Population
16	Mansa	606147	163604	769751	
17	Rupnagar	506820	177807	684627	
18	Pathankot	378432	298166	676598	
19	Faridkot	400457	217051	617508	
20	SBS Nagar	486894	125416	612310	
21	Fatehgarh Sahib	414681	185482	600163	
22	Barnala	404842	190685	595527	
	Total	17344192	10399146	27743338	

Source-www.esopb.gov.in.2011

- **SECOND STAGE:**

The districts were initially divided into three groups—high, medium, and low population categories according to their overall population size. Within these groups, the selection process aimed particularly at rural population density, as rural areas are crucial for understanding the challenges and opportunities associated with financial inclusion. From each population category, the five districts with the highest rural populations were selected. This two-step approach ensured that the sample reflected demographic diversity while also emphasizing districts where issues of rural banking access and financial inclusion are most significant. Consequently, a total of fifteen districts five from each category were chosen for a more balanced and thorough analysis.

Table 3.3: Selected Districts and Its Section

SN	District	Rural Population	Section
1	Ludhiana	1429031	High Population
2	Gurdaspur	1260572	
3	Hoshiarpur	1251656	
4	Amritsar	1156045	
5	Sangrur	1139204	
6	Tarntaran	977832	Medium Population

7	Bathinda	889308	Low Population
8	Moga	768500	
9	Fazilka	759111	
10	Firozpur	717407	
11	Mansa	606147	
12	Kapurthala	532706	
13	Rupnagar	506820	
14	SBS Nagar	484842	
15	Fatehgarh Sahib	414681	
	Total	12893862	

Source: Census Report Punjab 2011

The total rural population of 15 districts is 12893862. The sample size has been finalized using the Solvin formula. The Confidence level is 95%.

By using Solvin's formula

$$n = N / (1 + N e^2)$$

n- Sample Size

N-Total Rural Population

e- Margin of error

$$n = 12893862 / (1 + 12893862 * 0.05^2) = 12893862 / 32234.6575$$

$$= 399.9 \text{ approximately, Sample size} = 400$$

• THIRD STAGE

In the third phase, a total sample size of 400 respondents was evenly distributed among the 15 selected districts, leading to approximately 27 respondents per district ($400 \div 15 \approx 27$). To guarantee fair representation in each district, these 27 respondents were selected using a multistage random sampling technique. Initially, a random selection of blocks within each district was made. From these blocks, specific villages were then identified through random sampling to eliminate any selection bias. Lastly, within each chosen village, 27 customers from public sector banks—namely SBI, PNB, and Punjab & Sind Bank—were surveyed. This

organized approach ensured geographical variety, reduced sampling error, and offered a more precise representation of financial inclusion trends throughout rural Punjab.

Table 3.4: List of selected Villages

Sr. No.	District	Rural Population	Villages/City
1.	Ludhiana	279688	Gill pind
2.	Gurdaspur	674345	Tibri
3.	Hoshiarpur	371035	Bhavnour
4.	Amritsar	395492	Verka
5.	Sangrur	255689	Malerkotla
6.	Tarn-Taran	426778	Millian
7.	Bathinda	397190	Bhagat Bhai ka
8.	Moga	404234	Sukhanand
9.	Fazilka	321890	Jalabaad(laduka)
10.	Firozpur	367255	Mudki
11.	Mansa	240030	Bhaini Bagna
12.	Kapurthala	218983	Phagwara
13.	Rupnagar	178163	Ropar
14.	SBS Nagar	327350	Nawanshahar
15.	Fatehgarh Sahib	144237	Mandi Gobindgarh

Source: Census Report Punjab 2020

3.8.4 Selection of Banks:

The present study is geographically confined to the state of Punjab. To assess the role of the banking sector in financial inclusion, three major centrally administered public sector banks State Bank of India, Punjab National Bank, and Punjab & Sind Bank were purposively selected. These banks were chosen based on their extensive branch network and significant outreach, particularly in rural areas, which collectively represent the highest coverage across Punjab (SLBC Reports, 2020–2021).

3.8.5 Characteristic of the sample

A Bank customer is an individual who has a bank account or policy with the bank. Each customer needs a savings bank account. This research focuses exclusively on customers with a savings account at a public sector bank. The study focuses on existing banking customers, as they actively engage with formal financial institutions and have first-hand experience with savings, credit, digital banking, and government-backed financial inclusion schemes. Their responses offer realistic and informed perspectives necessary to evaluate the reach, efficiency, and challenges of financial inclusion in Punjab.

3.9 Pilot Study

Pre-testing involves conducting a trial run with a small group of respondents to identify and address fundamental problems in the design of a questionnaire. Items on the questionnaire were tested through the pilot test to measure a construct before a larger sample. This study takes 50 customers of public sector banks for its pilot study. In the pilot study, data were collected from 50 respondents, of whom 23 were male and the remaining were female. All these customers are from public sector banks. After the data collection, Cronbach's alpha was applied to it. The reliability of all dimensions exceeds 0.70, indicating an acceptable level of data, and the overall reliability of the questionnaire is 0.921. Customers and experts gave suggestions on this questionnaire, which are considered for the final data collection. In the social sciences, scales are consistent measurements; social researchers must be sure that scales are reliable for measuring the contrast they claim to measure. Reliability refers to a measure of the stability or consistency of test scores. In this study, the role of financial inclusion and its relationship with the socio-economic profile of customers have been ascertained using an administered scale

This study uses the internal consistency reliability test to assess the consistency of results across items within a test. It refers to the extent to which items intercorrelate with one another. Internal consistency implies that multiple items measure the same construct and intercorrelate with one another. The commonly used measure of internal consistency is Cronbach's Alpha. Cronbach's alpha is a widely used technique for estimating the reliability of scale items (Kennedy et al., 2002). It was developed by Lee Cronbach in 1951. All the values under an acceptable range of reliability and validity. Further final data collection has been proceeding with same questionnaire. The final data were collected from 15 districts of Punjab

from three public-sector banks. Each district represents a minimum of 27 customers from three banks. The final sample size is 436, whereas the proposed one was 400.

3.10 Processing and Analysis of data Objective wise

The data collected through the survey method have been analyzed using appropriate statistical techniques to derive meaningful findings. Prior to the application of advanced statistical tools, it is imperative to establish the reliability and validity of the constructs in order to ensure the precision, consistency, and credibility of the results. Accordingly, the subsequent section provides a comprehensive discussion of the reliability and validity tests employed in this study.

3.10.1 Reliability

Reliability pertains to the extent to which a measurement tool such as a survey, assessment, or observation yields consistent results when utilized repeatedly under comparable conditions. Essentially, it reflects the consistency and stability of scores over time or among different respondents. Absent reliability, research outcomes cannot be reproduced, and the theories or generalizations derived from such results may be deemed lacking in credibility. The following are various ways that are used to check the reliability of construct in the research work.

3.10.1.1 Cronbach's Alpha

Cronbach's alpha assesses the internal consistency of items, indicating how closely multiple items that gauge the same construct are related. A high level of correlational strength between items suggests they are derived from the same domain, while low correlations indicate a lack of reliability. A Cronbach's alpha value of 0.70 or higher is generally perceived as the minimum acceptable threshold for internal consistency (Kennedy et al., 2002).

3.10.1.2 Composite Reliability (CR)

Composite reliability measures the reliability and internal consistency of indicators that represent a latent construct. It is derived from the standardized factor loadings and error variances of a construct (Hair et al., 2001). A reliability score of 0.70 or above indicates adequate reliability (Fornell & Larcker, 1981).

3.10.2 Validity

Validity addresses the degree to which a study accurately assesses the concept it aims to measure. While reliability emphasizes the consistency of a measurement tool, validity evaluates its precision. In other words, reliability guarantees stability, whereas validity ensures the measurement's accuracy. Various types of validity were examined in this study, as detailed below:

3.10.2.1 Content Validity

Content validity illustrates how well the measurement items effectively capture the definition of the construct (Hinkin, 1995). It is typically established by reviewing existing research and consulting experts in the relevant field.

3.10.2.2 Construct Validity

Construct validity assesses the extent to which a collection of measured variables authentically represents the theoretical latent construct. It can be analyzed through mainly two sub-dimensions: convergent validity, discriminant validity.

- **Convergent Validity**

Convergent validity investigates the degree to which indicators of the same construct converge or share a substantial amount of common variance. It can be evaluated by Items with standardized loadings of 0.50 or higher (ideally 0.70 or more) exhibit strong convergence. AVE reflects the average amount of variance accounted for by the construct. An AVE value exceeding 0.50 confirms convergent validity.

- **Discriminant Validity**

Discriminant validity evaluates the extent to which a construct is separate from other constructs measuring distinct concepts. It assures that variables do not overlap or become redundant. Fornell and Larcker (1981) suggested that discriminant validity is established when the square root of AVE for each construct exceeds the correlations between that construct and all other constructs.

3.10.3 Statistical tool Objective wise

In this study, three main objectives were established. The first objective is to study the role of public sector banks to enhancing financial inclusion. To achieve this, the role of public sector banks was examined as a singular variable through univariate analysis. This analysis

employed a variety of statistical methods, including the mean, standard deviation, and percentage, to gain insights into the distribution of data and the overall trends in responses.

Specifically, the research applied measures of central tendency and variation, focusing on the mean and percentage. The mean was used to calculate the average of the responses, effectively offering a representative overview of the typical opinion or experience among participants. As a statistical tool, the mean condenses large amounts of data into a single figure, making it easier to compare different categories. Conversely, the percentage was utilized to indicate the proportion of responses in relation to the total, reflecting values as parts of 100. Percentages are especially effective in emphasizing the relative significance, frequency, or weight of responses, allowing for meaningful comparisons across groups of differing sizes. Collectively, the mean and percentage furnish a well-rounded understanding of how public sector banks contribute to the advancement of financial inclusion.

In pursuit of the second objective, the aim is to examine the socio-economic development of customers through financial services provided by public sector banks. In this analysis, only those services included under financial inclusion were considered. Additionally, the responses from participants were evaluated through Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA), followed by the application of Partial Least Squares Structural Equation Modeling (PLS-SEM) to investigate the relationships. All analyses were carried out with the help of R and RStudio. A concise overview is provided below.

3.10.3.1 Exploratory Factor Analysis (EFA)

Exploratory factor analysis was utilized to condense and simplify the data for additional analysis. Using SPSS version 17.0, the study implemented factor analysis to explore interrelationships among variables and to condense a large variable set into a smaller, more manageable subset. EFA serves two main functions: (i) data summarization, by recognizing underlying dimensions that encapsulate the original variables in a more simplified format, and (ii) data reduction, by calculating factor scores for each dimension and replacing them with the original variables.

The study employed principal component analysis with varimax rotation, the most prevalent orthogonal rotation technique (Kakati et.al. 2002). High communalities and reliability measures were evaluated to refine the factor organization and diminish the number of variables.

Factors were extracted according to the Kaiser criterion, keeping only those factors with Eigenvalues of one or greater (Alfansi et. al., 2000).

3.10.3.2 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis was subsequently applied to evaluate the measurement theory and to affirm the constructs. CFA assesses how well the observed variables adequately represent latent constructs and offers proof of construct validity and reliability (Hair et al., 2009). In contrast to EFA, where all variables are freely allowed to load on any factor, CFA demands that the researcher defines the relationships between variables and factors following previous theories. Therefore, CFA delivers a statistical evaluation of how accurately the proposed factor structure aligns with the empirical data. Measurement models in CFA can be either reflective or formative. Reflective models, which are more common in social science studies, suggest that latent constructs are manifested through observed variables and that errors stem from insufficient measurement (Hair et al., 2007).

3.10.3.3 Partial Least Squares Structural Equation Modeling (PLS-SEM)

Partial Least Squares Structural equation modeling was additionally utilized, merging both the measurement and structural models. PLS-SEM has emerged as a frequently employed technique in business and social science research due to its capability to simultaneously evaluate the reliability and validity of measurement models while testing the theorized structural relationships among latent constructs. The measurement model delineates the connections between manifest variables and their respective latent constructs, while the structural model investigates the relationships between the latent constructs themselves (Hair et.al. 2011). Estimation was performed using the Maximum Likelihood Estimation (MLE) method, which is recognized as a reliable and widely used technique. One of the primary advantages of PLS-SEM is its capacity to concurrently assess validity, reliability, and intricate interrelations among variables. Unlike conventional regression methods, PLS-SEM permits the simultaneous examination of multiple dependent and independent relationships, rendering it a more comprehensive and suitable analytical instrument for the current study.

PLS-SEM was considered appropriate for the present study because the research model contains multiple latent constructs and complex relationships among variables. Furthermore, PLS-SEM is suitable for prediction-oriented research, exploratory model development, and studies involving relatively moderate sample sizes. It also allows simultaneous assessment of

measurement reliability, construct validity, and structural relationships. The structural model's complexity, characterized by a large number of indicators and interrelated constructs, further supports the adoption of the PLS approach (Chin, 2010; Henseler et al., 2009; Hair et al., 2017). The research framework consists of multiple latent constructs. All independent and dependent variables used in the model are quantified on a ratio scale, ensuring higher precision and supporting advanced statistical analysis. All analyses were conducted using R and R Studio (Robert et al., 1993).

3.10.3.3.1 Use of R and R studio

The statistical analyses for this research were carried out using the R programming language within the RStudio platform. R was chosen because it is open-source, versatile, and offers a wide range of advanced statistical and graphical packages. The analysis using Partial Least Squares Structural Equation Modeling (PLS-SEM) was conducted with the *plspm* package. To assess the structural model and evaluate the proposed relationships among constructs, PLS-SEM was implemented using the *plspm* package in R (Sanchez et al., 2017). PLS-SEM was preferred over covariance-based SEM because it is more appropriate for research focused on predictions, accommodates smaller sample sizes, and handles complex models involving multiple indicators and latent variables. The path coefficients, R^2 values, and effect sizes (f^2) were computed to assess the strength and significance of the relationships. Graphical representations of the findings, such as path diagrams and reliability plots, were created using the *ggplot2* and *semPlot* packages, which improved the clarity of the results.

Last, the third objective of the study was to identify the barriers and challenges faced by customers in accessing services of public sector banks. This objective is exploratory in nature, as it seeks to uncover and understand the underlying difficulties that hinder effective financial inclusion. To achieve this, barriers were identified through a structured questionnaire administered to respondents. The responses obtained were then systematically organized and presented in the form of tables and diagrams to ensure clarity and ease of interpretation.

For the preliminary stage of analysis, descriptive statistics were employed to provide a concise summary of the identified barriers. Specifically, measures such as frequencies, mean values, percentages, and standard deviations were used. Frequencies helped in determining how often a particular barrier was reported, thereby highlighting the most commonly faced challenges. The mean values were calculated to present the average level of agreement or

intensity of each barrier, giving a representative measure of the respondents' experiences. Percentages were applied to express the proportion of respondents encountering each barrier relative to the total sample, which enabled comparisons across different categories of challenges. By combining these statistical measures, the study not only identified the major barriers but also offered a detailed understanding of their prevalence, intensity, and variation across respondents. This descriptive approach thus formed the foundation for further interpretation and discussion of the challenges that limit the effectiveness of public sector banks in advancing financial inclusion. Further, EFA were applied on it to summarise the barriers under some categories.

3.11 The Structure of the work

This thesis is organized into seven distinct chapters.

Chapter 1 provides an overview of the study's background. It then provides an overview of financial inclusion globally and in India, as well as the actions taken to promote it. Moreover, it provides an overview of financial inclusion in Punjab.

Chapter 2: Literature analysis provides insight into prior studies on financial inclusion. This section explains the relationship between finance, inclusive growth, and economic development. Furthermore, this chapter delves into the concept of financial inclusion. It also recognises projects that increase financial inclusion. It then provides a brief overview of the current state of financial inclusion.

Chapter 3 focuses on the methodological approach and methods employed in the study. It includes the introduction, problem statement, objectives, hypothesis, research design, sampling methods, and research instruments and tools for analysis.

Chapter 4 focuses on how public sector Banks are essential to financial inclusion and includes various ways to understand their role.

Chapter 5 begins by examining the impact of financial inclusion on customers' socio-economic development through public-sector banks in the state of Punjab.

Chapter 6 addresses various barriers and challenges that customers face in public sector banks in the state of Punjab.

Chapter 7 This chapter gives an overall conclusion of all the objectives and discusses the limitations and future research gaps of the study.

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Chapter 4 - Role of Public Sector Banks in Financial Inclusion

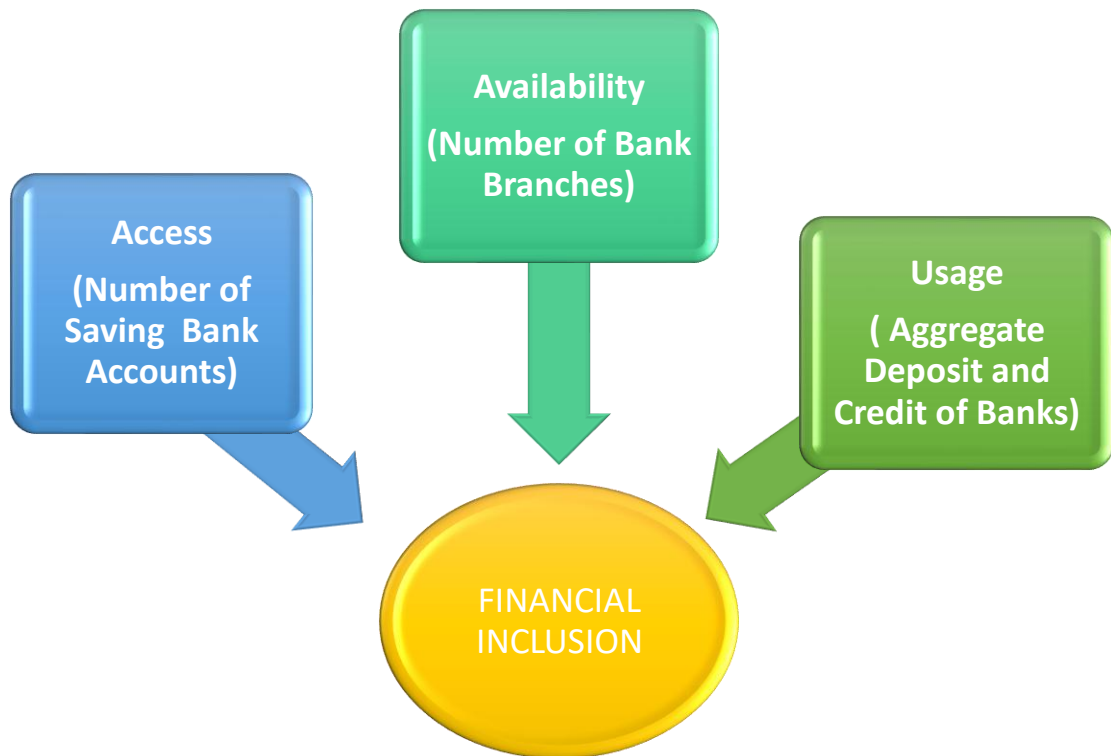
4.1 Financial Inclusion

Financial inclusion is a process that guarantees easy access, availability, and utilization of the formal financial system for all individuals within an economy (Sarma M., 2008; Chakrabarty K.C., 2009). This definition highlights several aspects of financial inclusion, namely accessibility, availability, and usage of the financial system. These aspects contribute to creating an inclusive financial system (Nugraha D. et al., 2022). Since banks serve as the initial point for accessing fundamental financial services, banking inclusion or exclusion often parallels financial inclusion or exclusion (Iqbal B.A., 2017). This study also treats banking inclusion as equivalent to financial inclusion. The financial inclusion index evaluates three fundamental aspects of an inclusive financial system: banking penetration (BP), availability of banking services (BS), and usage of the banking system (BU). These aspects are primarily influenced by the availability of data across various countries and recent advancements in research. This study adopted the dimensions of the Mandira Sarma FI index to analyze the progression of financial inclusion at both the national and state levels (Sarma, M., et al., 2008). The dimensions of this index are similar to those utilized by the UNDP to calculate prominent development indexes such as the HDI and HPI.

4.2 Mandira Sarma Index

This section elucidates the selection of the Mandira Sarma index dimensions for this research. Utilizing a distance-based approach, this index fulfills several appealing and intuitive characteristics of a development index: normalization, symmetry (or anonymity), monotonicity, proximity, uniformity, and signaling (collectively referred to as CAMPUS). This method gauges the distance of each entity from an ideal hypothetical entity, ensuring that the index serves as a multi-faceted measure of financial inclusion. The index encompasses insights into three aspects of financial inclusion: accessibility, availability, and usage of banking services. The IFI is calculated to consolidate information on banking penetration, the availability of banking services, and banking system utilization into a single value ranging from 0 to 1. A higher IFI value indicates an elevated level of financial inclusion. By encapsulating various dimensions of financial inclusion into a single figure, the IFI offers a superior measure compared to individual indicators. Based on these dimensions, this research selects the Mandira Sarma index dimensions as the criteria for exploring the banking sector's role in the growth of financial inclusion.

Figure 4.1 Mandira Sarma Financial Inclusion Index

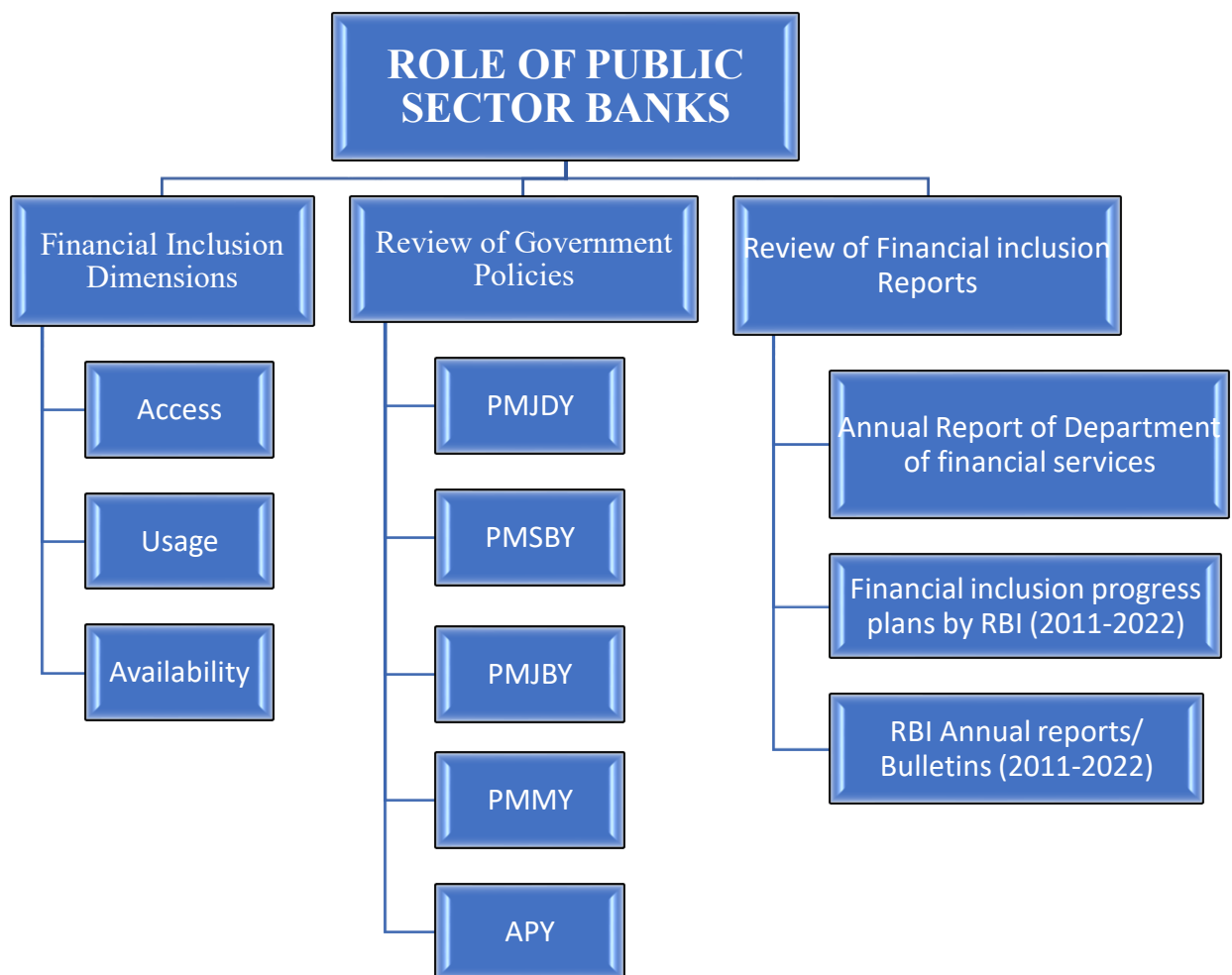


Source: Sarma, M., & Pais, J. (2011). Financial inclusion and development. *Journal of International Development*, 23(5), 613-628

4.3 Role of PSBs in Financial Inclusion: The Country Review

Public-sector banks (PSBs), which are owned by the government and hold a majority stake, play a significant role in promoting financial inclusion (Raina, N., 2014). After the merger of banks, there are now only 12 public-sector banks in India. This research examines the role of Public Sector Banks (PSBs) in financial inclusion at the national level in India and replicates the study at the state level in Punjab. This longitudinal study clarifies how these banks improve their financial inclusion goals through performance. For this analysis, a minimum of seven years of data was considered. The diagram below provides an overview of the structures established to investigate the role of public sector banks in promoting financial inclusion.

Figure 4.2 Conceptual Framework for Analyzing the Role Variable of Public Sector Banks in Financial Inclusion



Source: Researcher's own depiction

4.4 Financial Inclusion Dimension (FID)

4.4.1 Access Dimension

As the first dimension in studying financial inclusion growth, access to banking services is measured by the number of savings bank accounts held by each bank. The data indicates a significant increase in the number of bank accounts in the country over the last seven years, a promising sign for financial inclusion. This growth instils optimism in the audience about the increasing accessibility to banking services, highlighting the positive trend in financial inclusion.

Table 4.1: Access -Number of Saving Bank Accounts (In Thousand)

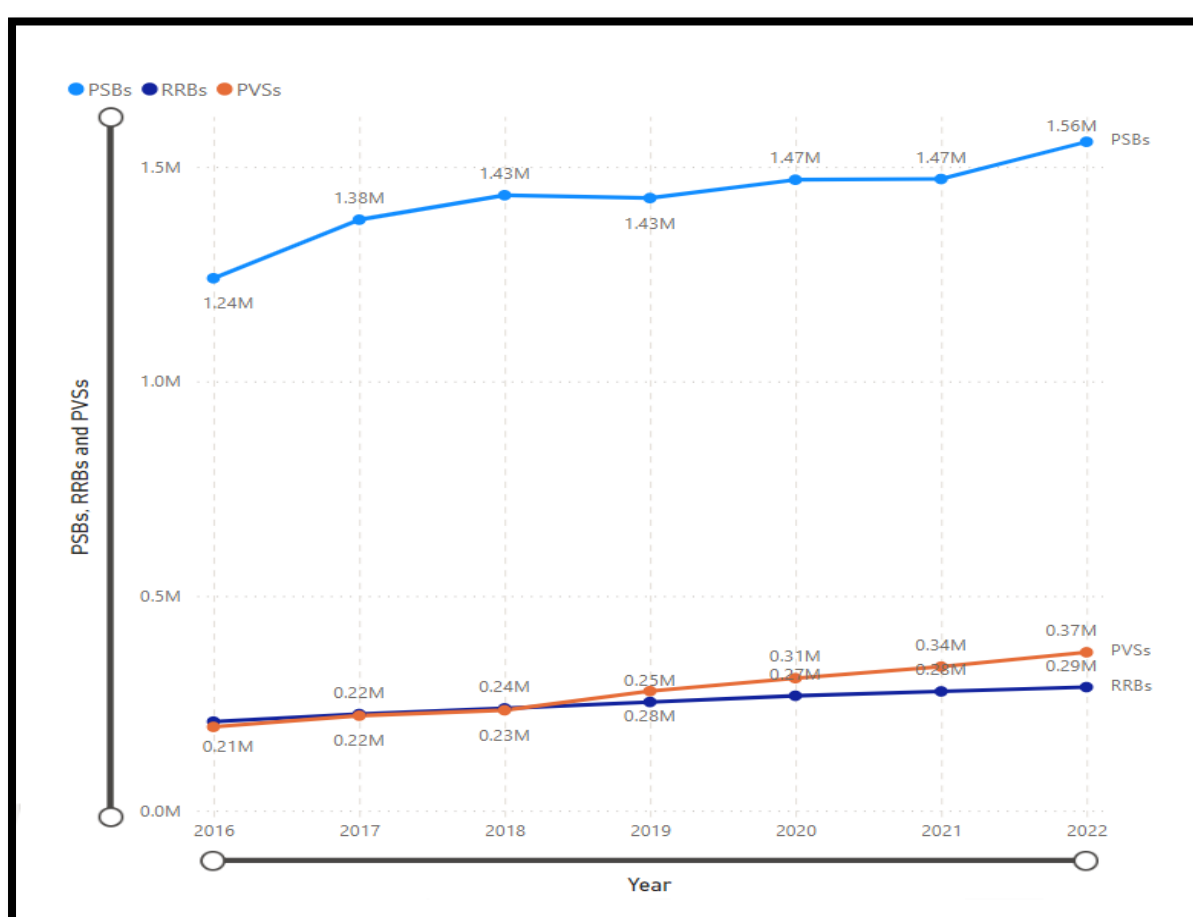
MONTH(YEAR)	PSBs	RRBs	PVSs
MARCH 2022	15,58,262	2,87,617	3,68,786
MARCH 2021	14,71,583	2,77,614	3,35,262
MARCH 2020	14,69,886	2,67,495	3,08,489
MARCH 2019	14,27,206	2,52,987	2,78,345
MARCH 2018	14,33,758	2,38,114	2,33,800
MARCH 2017	13,76,754	2,24,951	2,21,044
MARCH 2016	12,40,289	2,07,283	1,94,983

Source: <https://dbie.rbi.org.in/BOE/OpenDocument/>

Table 4.1 highlights the total number of bank accounts by the three major banking sectors: public sector banks (PSB), regional rural banks (RRB), and private sector banks (PVB). These three sectors effectively provide essential banking services. The data on the number of bank accounts opened by these three banks during the last seven years is crucial in understanding the growth and distribution of bank accounts across different banking sectors. Data also indicates the number of enrollments and customers accessing bank services,

which leads to the result that, compared to RRB and PVB, PSB has had more bank accounts over the last seven years. 2016 PSB opened 12, 40,289 accounts compared to RRB 2, 07,283 and PVB 1, 94,983. During the seven years, the 2022 PSB reached 15, 58,262, compared to RRB at 2, 87,617 and PVB at 3, 68,786. This indicates that customers use more banking facilities through PSBs than RRBs and PVBs. The above data suggests that customers quickly access public sector banks for savings accounts, leading to effortless and efficient access to banking services under financial inclusion (Muralidharan, T., 2023; Saha, A., 2000; Singh, D., 2016).

Figure 4.3: Access -Number of Saving Bank Accounts (In Thousand)



Source: <https://dbie.rbi.org.in/BOE/OpenDocument/>

The survey reveals the annual growth in the number of bank accounts held by Public Sector Banks (PSBs), Regional Rural Banks (RRBs), and Primary Agricultural Cooperative Banks (PACBs). The number of PSB bank accounts is almost three times that of the RRB and PVB (Trend and progress of banking sector 2016 to 2022). The increase in bank accounts is due to the RBI's policy of zero-base or non-frill accounts, which are essential, as well as no-

frills accounts that do not require a minimum balance. This policy, combined with easy access to bank branches in rural areas, has significantly increased the number of bank accounts. The increasing participation of PSBs in financial inclusion schemes reflects their wider rural outreach, stronger public trust, and active involvement in government-sponsored initiatives. The findings indicate that PSBs continue to play a dominant role in extending formal financial services to financially excluded populations. This significant contribution reveals that the accessibility of banking products is more by public sector banks.

4.4.2 Availability Dimension

The availability of banking products is the second dimension to measure financial inclusion growth. This dimension is measured through the number of bank branches in the banking sector. Table 4.2 indicates the total number of PSB, RRB, and PVS bank branches from 2016 to 2022. Data suggest that from 2012 to 2017, there was an increase in PSB bank branches; however, after that, there was a reduction in bank branch growth from 2018 to 2022 (Basic Statistical Return Reports). The decline in bank branches is due to the merging of banks. Due to this, several bank branches were closed because of their low turnover or distance-based approaches.

Table 4.2: Availability- Number of Bank Branches

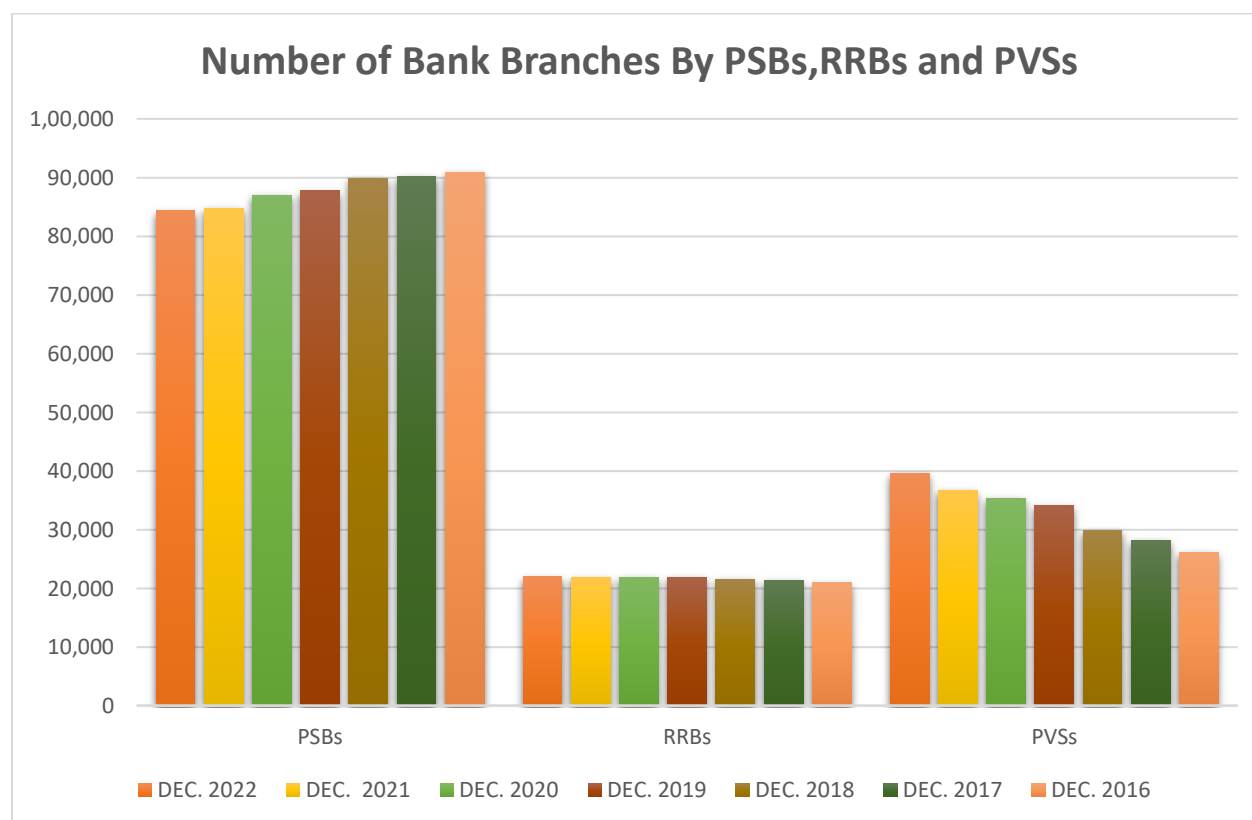
Month (YEAR)	PSBs	RRBs	PVSs
DEC. 2022	84,327	21,946	39,630
DEC. 2021	84,714	21,873	36,723
DEC. 2020	86,961	21,849	35,319
DEC. 2019	87,736	21,841	34,066
DEC. 2018	89,819	21,557	29,906
DEC. 2017	90,247	21,273	28,165

DEC. 2016	90,885	20,910	26,146
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Source: Basic Statistical Return (BSR) - branches with SCBs

Over the years, the number of bank branches in RRB has shown significant growth, reaching a level comparable to that of PVB. However, the table clearly shows that there is still a substantial difference in the bank branches of PSB, RRB, and PVB. The public sector continues to lead, with more bank branches and a wider coverage area than RRB and PVB. The y-axis indicates the growth of several bank branches in India over the period. The increase in bank branches can be attributed to several factors, including the RBI's focus on opening bank branches in rural areas and the relaxation of KYC norms, both of which enable PSBs to provide facilities. The growth in the availability of bank branches is a crucial driver of increased financial inclusion (Anjum, 2012; Rajput, 2015).

Figure 4.4: Availability- Number of Bank Branches



Source: Basic Statistical Return (BSR) Report 2012 to 2022

4.4.3 Usage Dimension through Bank Deposit

Under this dimension, the role of public sector banks was examined by assessing the extent to which people have used banking services for deposits and credit facilities over the years.

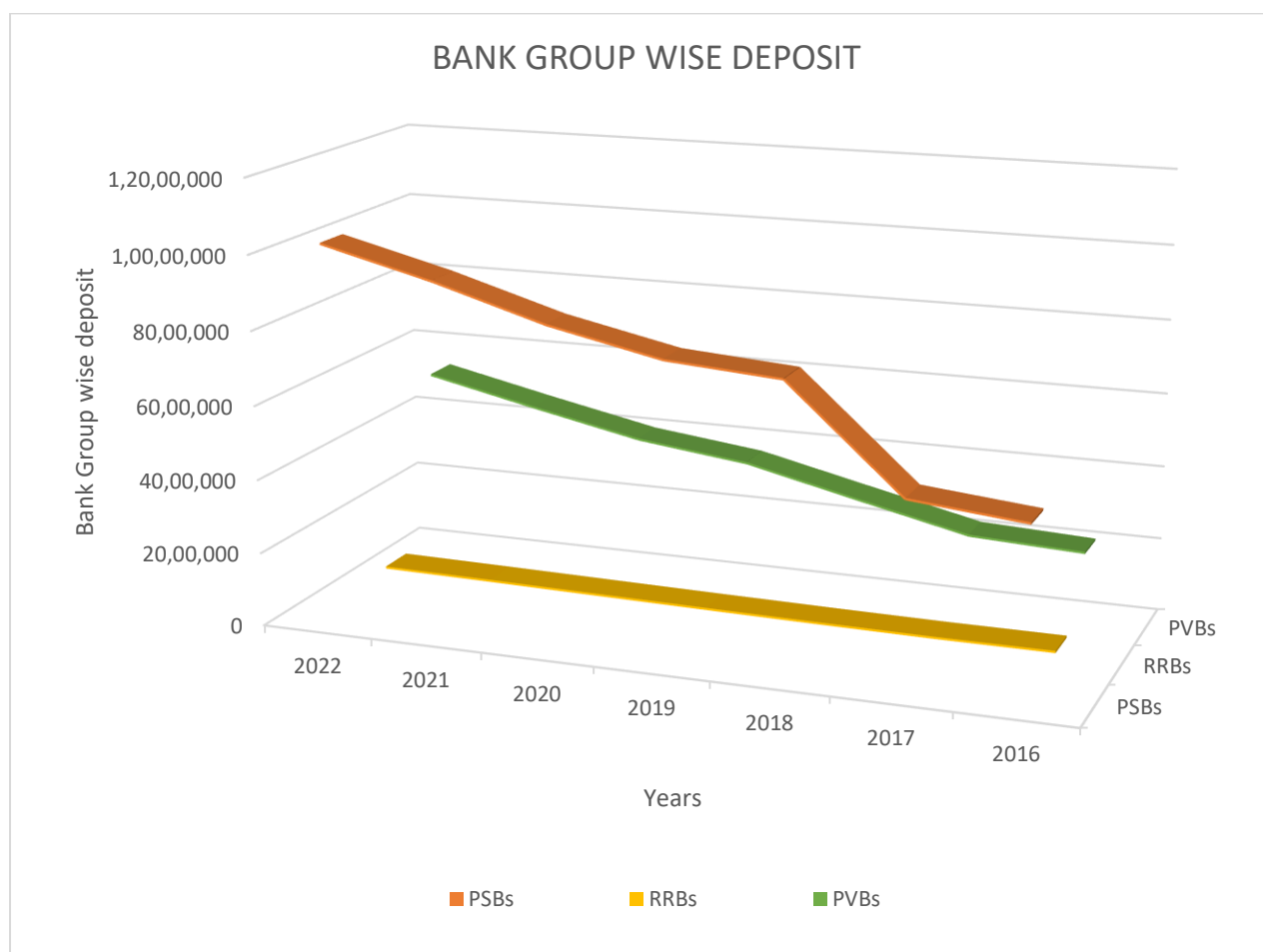
Table 4.3 displays the Aggregate deposit of all PSB, RRB, and PVB. Each bank has shown a steady increase in its bank deposits over time. In 2016, the Bank deposit of PSB was 46, 68,054 crores at the end of the quarter, and it reached 1, 02, 19,840 crores at the end of the quarter of 2022. This significant increase in deposits is due to the presence of more PSB branches in rural areas and the lower charges on savings and other accounts (Yeshu P., 2016; Thomas T., 2023). The bank-wise analysis of bank deposits in the table reveals that all the banking sectors are progressing, but PSBs are leading the way. Over the years, deposits of all banks have increased, but PSBs are on the front foot, among others (Ahmad D., 2018; Sathye M., 2003; Shafi M., 2012).

Table 4.3 Usage: Aggregate Bank Deposit (Quarter March) In crores

YEAR	PSBs	RRBs	PVBs
2022	1,02,19,840	5,46,227	52,92,737
2021	94,59,891	5,10,901	46,23,587
2020	85,67,760	4,67,422	39,86,856
2019	79,20,795	4,26,568	36,10,218
2018	76,96,442	3,91,126	29,03,300

2017	49,63,741	3,65,706	22,10,437
2016	46,68,054	3,65,057	20,68,069

Figure 4.5 Usage: Aggregate Bank Deposit (Quarter March) In crores



Source: Basic Statistical Return Report 2016 to 2022

Using banking products indicates that customers are actively participating in their banks' financial activities. The data reveals that public sector banks are the preferred choice due to their easy accessibility and availability to all customers. This underscores the significant contribution of public sector banks to the goal of financial inclusion.

4.4.3.1 Usage Dimension through Bank Credit

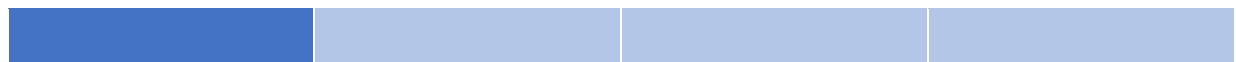
Commercial banks' functions give them a special economic status in the country (Sethy, 2016). Credit is a crucial catalyst that can be leveraged effectively to enhance people's ability to become productive. Table 4.4 reveals that advances in all banks increased over the period.

Over the seven years from 2016 to 2022, bank credit increased due to the RBI providing various platforms that enabled customers to easily avail themselves of loans or credit from banks at low interest rates.

PSB again takes the lead from RRB and PVB in the case of bank advances. The figure shows that PSB gives more credit or advances. The credit sector is experiencing significant growth due to the RBI's policies and initiatives aimed at promoting financial inclusion. In the financial inclusion plan, RBI directs all banks to give more loans under the financial inclusion policy, i.e., stand-up India (a government scheme to promote entrepreneurship among women and SC/ST communities), Udyog Aadhar (a unique identification number for small and medium enterprises), and KCC (Kisan Credit Card) and GCC (General Credit Card) cards to require customers. Public sector banks are more commonly the ones implementing these policies, and the results shown in the above figure indicate that PSBs play a vital role in financial inclusion. Thus, PSB's branches, accounts, deposits, and credit increased faster over the year than those of other banks, except for the COVID year.

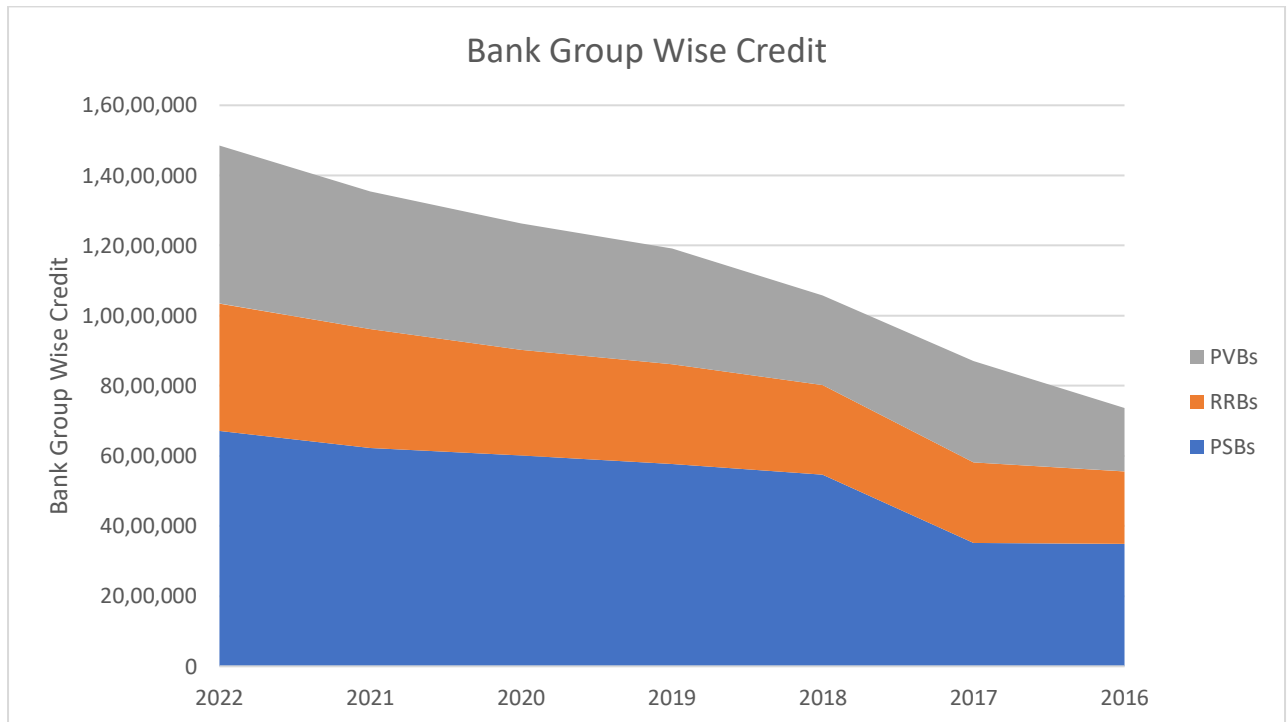
Table 4.4 Usage: Aggregate Bank Credit (Quarter March) In Crore

YEAR	PSBs	RRBs	PVBs
2022	67,13,032	36,29,601	45,09,489
2021	62,29,049	33,96,092	39,16,994
2020	60,12,694	30,10,510	36,06,192
2019	57,70,605	28,44,941	32,98,236
2018	54,70,094	25,52,521	25,58,820
2017	35,12,545	22,97,041	29,03,710
2016	34,91,913	20,68,435	18,12,921



Source: Basic Statistical Return Report 2016 to 2022

Figure 4.6 Usage: Aggregate Bank Credit (Quarter March) In Crore



Source: Basic Statistical Return Report 2016 to 2022

This research concludes that public-sector banks (PSBs) play a pivotal role in financial inclusion (BSR Reports, 2016-2022). The data on bank branches, account numbers, and credit deposits indicate that all banks contribute to the financial inclusion goal. However, compared to other public-sector banks, PSBs stand out, demonstrating their essential role in promoting financial inclusion (Sathye, M., 2003; Shafi, M., 2012; Anjum, B., 2012; Mala, 2016).

4.5 Financial Inclusion: Punjab State

Punjab is one of the most famous states in India, spanning 50,362 square kilometers on the Indian map. This consists of 48,265 sq km of rural and 2097 sq km of urban (Punjab Economy survey 2020-2021). According to the 2011 census report, the total population of Punjab is 2.77 crore, of which 173.44 lakhs are rural and the remaining urban. This state consists of 23 districts and has a literacy rate of 75.80%.

Punjab has 12 public sector banks, 20 private sector banks, and seven small finance banks, one regional rural bank, and one cooperative bank, with a total of 7168 branches (Punjab

Economy Survey 2022-23). Public Sector Banks have the highest number of bank branches, with 56%, followed by 27% by private sector banks and 17% by RRBs and cooperative banks (Punjab Economy Survey 2022-23). Furthermore, public sector bank branches account for 56.2% (4,027 branches), with 1,515 branches in rural areas and 1,244 and 1,268 branches in suburban and urban areas, respectively. Punjab has one of the highest numbers of commercial bank branches among other states. A strong banking network promotes financial inclusion and enables the diversification of economic activities and productive investment as it facilitates the mobilisation of public savings. This research covers the maximum area of Punjab for data analysis.

4.6 State-Level Bankers' Committee (SLBC)

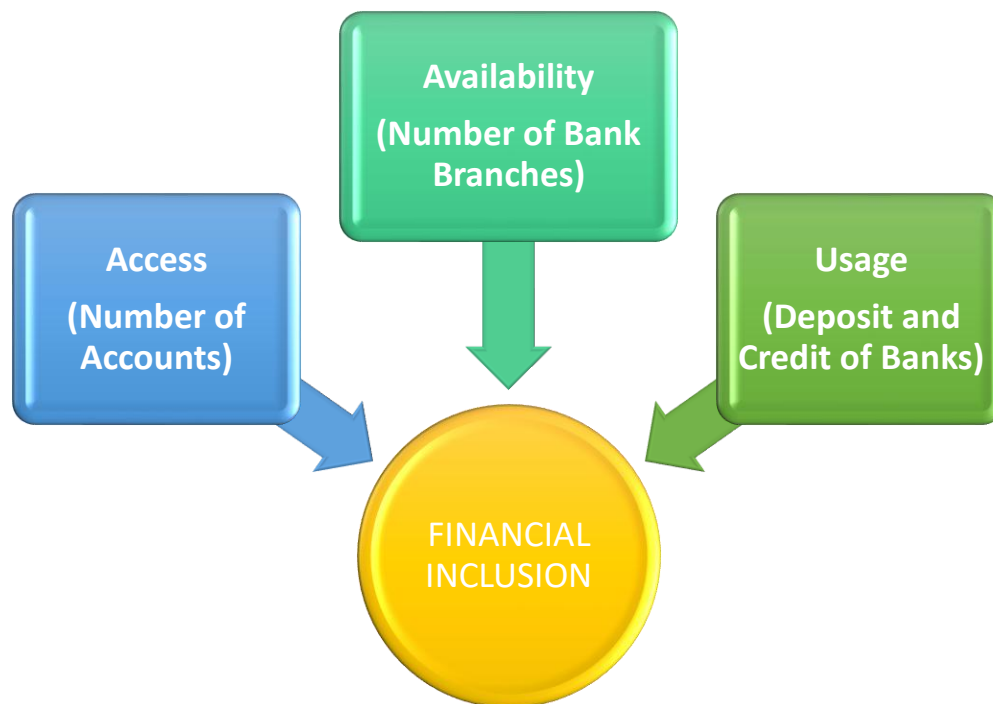
Banking is one of the critical segments of the service sector in the Punjab economy, acting as the backbone of the economy. There are various types of banks in Punjab, including public and private sector banks, Rural and Regional Banks (RRBs), and cooperative banks. Punjab has been declared a surplus state in terms of banking facilities (Punjab Economy Survey 2016). Punjab is one of the wealthiest and most outperforming states in the country. Therefore, this research work aims to investigate the role of public sector banks in promoting financial inclusion and how this financial inclusion contributes to the socio-economic development of their customers.

This research collected state-level data on the banking sector from the state-level Bankers' Committee (SLBC). In Punjab, its head office was established in Chandigarh. In each state, the leading bank maintains the records of all other banks regarding their performance in that state. The Punjab National Bank is the leading bank in Punjab, so it became the head of SLBC. To see the role of PSB in financial inclusion through its dimension, the data was collected from SLBC through personal visits and websites.

4.7 Role of PSBs in Financial Inclusion: An Analysis of state of Punjab

This research discusses the role of PSBs in financial inclusion at the state level. To study this role, data from 2014 to 2024 has been considered for analysis. The same methodology was used with similar dimensions to examine these banks' state-level roles. Access is the first dimension used to study financial inclusion further; this variable is measured by the number of bank accounts in each bank. The data below indicates the growth of the number of bank accounts in the state by the banking sector over the last eleven years.

Figure 4.7 Mandira Sarma Financial Inclusion Index



Source: Sarma, M., & Pais, J. (2011). Financial inclusion and development. *Journal of International Development*, 23(5), 613-628

4.7.1 Access Dimension

As the first dimension in studying financial inclusion growth, access to banking services is measured by the number of savings bank accounts held by each bank. The data indicates a significant increase in the number of bank accounts in the country over the last ten years, a promising sign for financial inclusion. This growth instills optimism in the audience about the increasing accessibility to banking services, highlighting the positive trend in financial inclusion.

Table 4.5 Access: Number of Saving Bank Accounts

Year	PSBs	RRBs	PVBs
2014	2,71,05,549	16,07,637	10,09,970
2015	3,29,57,234	19,09,964	17,99,821

2016	3,80,04,804	22,29,548	18,29,507
2017	4,27,90,514	24,70,995	49,22,176
2018	4,72,61,540	26,55,134	51,65,122
2019	4,68,73,771	28,94,361	65,87,325
2020	3,99,96,118	30,95,747	66,65,757
2021	5,06,29,137	32,80,728	90,65,024
2022	3,16,98,890	38,20,131	1,04,38,103
2023	3,16,92,079	38,88,263	99,81,079
2024	3,32,91,507	39,42,568	98,59,278

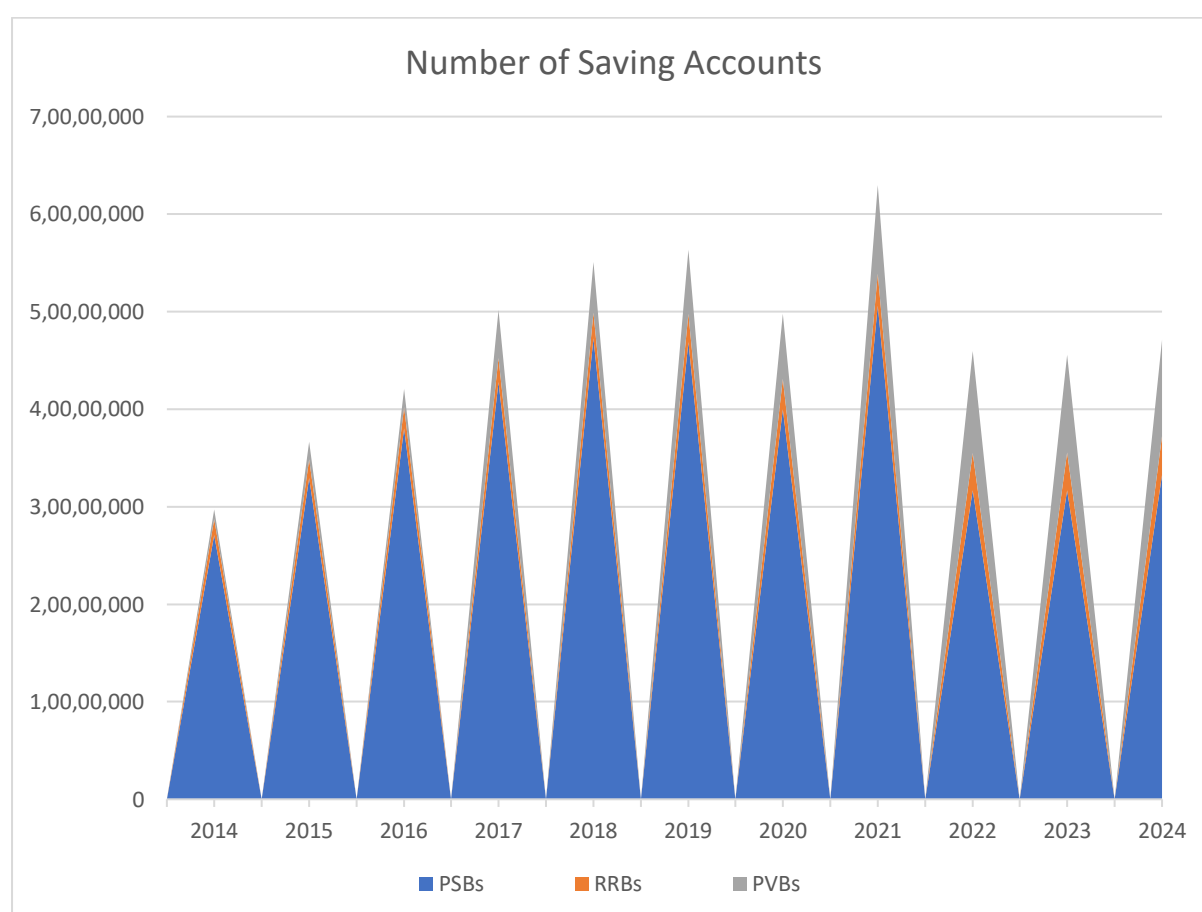
Source: SLBC Reports Punjab

Table 4.5 indicates that between 2014 and 2024, the increase in the number of savings bank accounts at Public Sector Banks (PSBs), Private Sector Banks (PVBs), and Regional Rural Banks (RRBs) signifies a considerable enhancement in accessibility, which is a pivotal aspect of financial inclusion. PSBs have consistently maintained the largest share of savings accounts throughout the decade. Beginning with 2.71 crore accounts in 2014, their numbers surged to over 5.06 crore in 2021. This extraordinary growth can be attributed to the proactive measures taken by PSBs in implementing government-sponsored financial inclusion initiatives, such as the Pradhan Mantri Jan Dhan Yojana (PMJDY). Their extensive branch network and public confidence positioned them as the primary means of improving access to formal banking, particularly for the underbanked segments of the population. However, a downturn is noted after 2021, with account numbers falling to 3.16 crore in 2022, which may be due to account rationalization or the cleaning up of dormant accounts. A slight upturn by 2024 indicates ongoing efforts, albeit possibly with a more focused approach.

Regional Rural Banks (RRBs) have shown consistent and gradual growth in enhancing access to banking services in rural areas. From merely 16 lakh accounts in 2014, RRBs expanded their reach to over 3.94 crore accounts by 2024. This steady yet deliberate growth underscores their essential role in providing financial services to remote and agriculture-centric regions, where barriers to access are typically more significant. Their success emphasizes the

effectiveness of targeted outreach initiatives and the growing demand for formal financial services in rural India. Private Sector Banks (PVBs), starting from the smallest base of just 10 lakh accounts in 2014, exhibited rapid growth in numbers after 2016. By 2022, they had surpassed the one crore milestone, reflecting a growing footprint in the financial inclusion arena. This increase likely stems from their focus on digital banking, mobile financial services, and innovative delivery methods that enhance accessibility, particularly in urban and semi-urban areas. Although a slight decrease was observed after 2022, it suggests a potential shift in strategy from focusing on the number of accounts to prioritizing account activity and profitability.

Figure 4.8 Access: Number of Saving Bank Accounts



Source: SLBC Reports Punjab

In conclusion, the data demonstrate a significant expansion in access to savings accounts across all banking sectors, reinforcing the influence of policy, institutional commitment, and technological advancements on financial inclusion in India. PSBs have been integral to this movement; RRBs have enhanced their penetration in rural areas, and PVBs have

provided convenience and options, collectively improving access to the formal financial system for millions. It suggests that public sector banks play a more significant role in this area, fostering optimism for Punjab's economic development (Goswami S., 2022).

4.7.2 Availability Dimension

The availability of banking products is the second dimension to measure financial inclusion growth. This dimension is measured through the number of bank branches in the banking sector. Table 4.6 indicates the total number of PSB, RRB, and PVS bank branches from 2014 to 2024.

Table 4.6 Availability: Number of Bank Branches

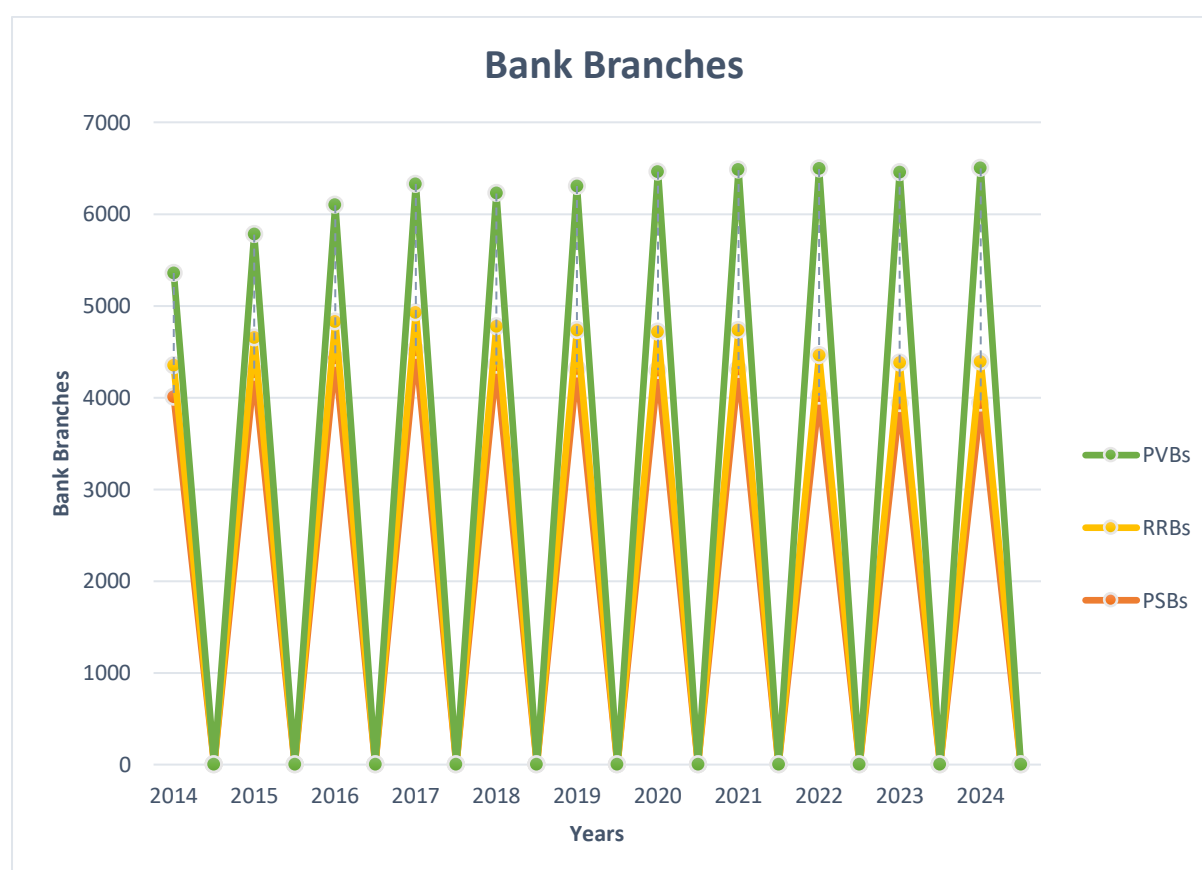
Year	PSBs	RRBs	PVBs
2014	4008	340	1008
2015	4277	373	1129
2016	4429	395	1273
2017	4520	407	1401
2018	4357	416	1452
2019	4316	416	1573
2020	4297	419	1746
2021	4310	422	1749
2022	4018	439	2036
2023	3936	442	2073
2024	3944	446	2108

Source: SLBC Reports Punjab

The idea of “availability” in the context of financial inclusion encompasses not just the sheer number of branches but also the way financial institutions organize their presence to serve

varied populations effectively. Public Sector Banks (PSBs) established a strong physical footprint with 4,008 branches in 2014, and this footprint expanded only slightly until 2017. The subsequent gradual decline in branch numbers after 2017, decreasing to 3,944 by 2024, indicates a strategic consolidation effort. This trend may be influenced by several mergers (such as those between Bank of Baroda and Vijaya Bank), initiatives for cost efficiency, and a growing reliance on digital platforms. Crucially, this reduction does not inherently signify a decrease in service availability, but rather an adjustment of resources where digital access compensates for fewer physical branches. PSBs continue to provide a widespread institutional foundation for financial services across various regions. Conversely, Regional Rural Banks (RRBs) have exhibited a slow yet steady growth, increasing from 340 branches in 2014 to 446 by 2024. This incremental development emphasizes their targeted focus on financial inclusion in rural and agricultural areas, where physical access is vital due to lower digital adoption. Unlike other banking categories, RRBs have not downsized but have progressively expanded their presence, reinforcing their function as essential service providers in the financial landscape.

Figure 4.9: Availability: Number of Bank Branches



Source: SLBC Reports Punjab

Private Sector Banks (PVBs) have pursued a more vigorous expansion approach, nearly increasing their branch count from 1,008 to 2,108 during the same timeframe. This significant growth illustrates their strategic aim to tap into emerging markets, particularly in urban and semi-urban regions. Their expansion broadens the variety and competitiveness of financial service offerings and signifies a deeper systemic availability, albeit focused more on economically viable areas. Thus, while PSBs signify stability and realignment, RRBs highlight concentrated outreach in rural areas, and PVBs reflect competitive growth. These trends reveal a complementary availability distribution: PSBs provide foundational reach, RRBs bolster rural presence, and PVBs extend their influence in growth-oriented markets. The changing dynamics suggest a more balanced and resilient framework for financial inclusion, where availability transcends mere numbers, embodying strategic placement and functional diversity. Table 4.6 Compared to PVBs, PSBs have opened more branches in rural areas (SLBC reports), which improves the availability Dimension of financial inclusion. Apart from this, PSBs are still a lead in bank branch penetration in Punjab. As per RBI reports, the availability of bank branches in rural areas indicates a good sign of financial inclusion growth.

4.7.3: Usage Dimension through Bank Deposit

Under this dimension, the role of public sector banks was examined by assessing the extent to which people have used banking services for deposits and credit facilities over the years.

Table 4.7 Usage: Aggregate Bank Deposit

Quarter March (In Lacs)

Year	PSBs	RRBs	PVBs
2014	1,96,58,634	4,69,144	29,66,777
2015	2,18,77,020	5,52,723	39,58,294
2016	2,46,31,948	6,56,261	45,66,616
2017	2,76,61,629	7,88,577	53,60,319

2018	2,79,89,395	8,28,077	60,30,818
2019	2,84,65,347	8,67,997	75,73,478
2020	3,06,17,155	9,45,226	90,48,844
2021	3,40,70,962	10,80,323	1,11,31,115
2022	3,98,99,283	13,63,790	1,83,63,546
2023	4,13,15,092	14,69,783	1,82,99,059
2024	4,12,83,851	14,27,474	1,87,47,364

Source: SLBC Reports Punjab

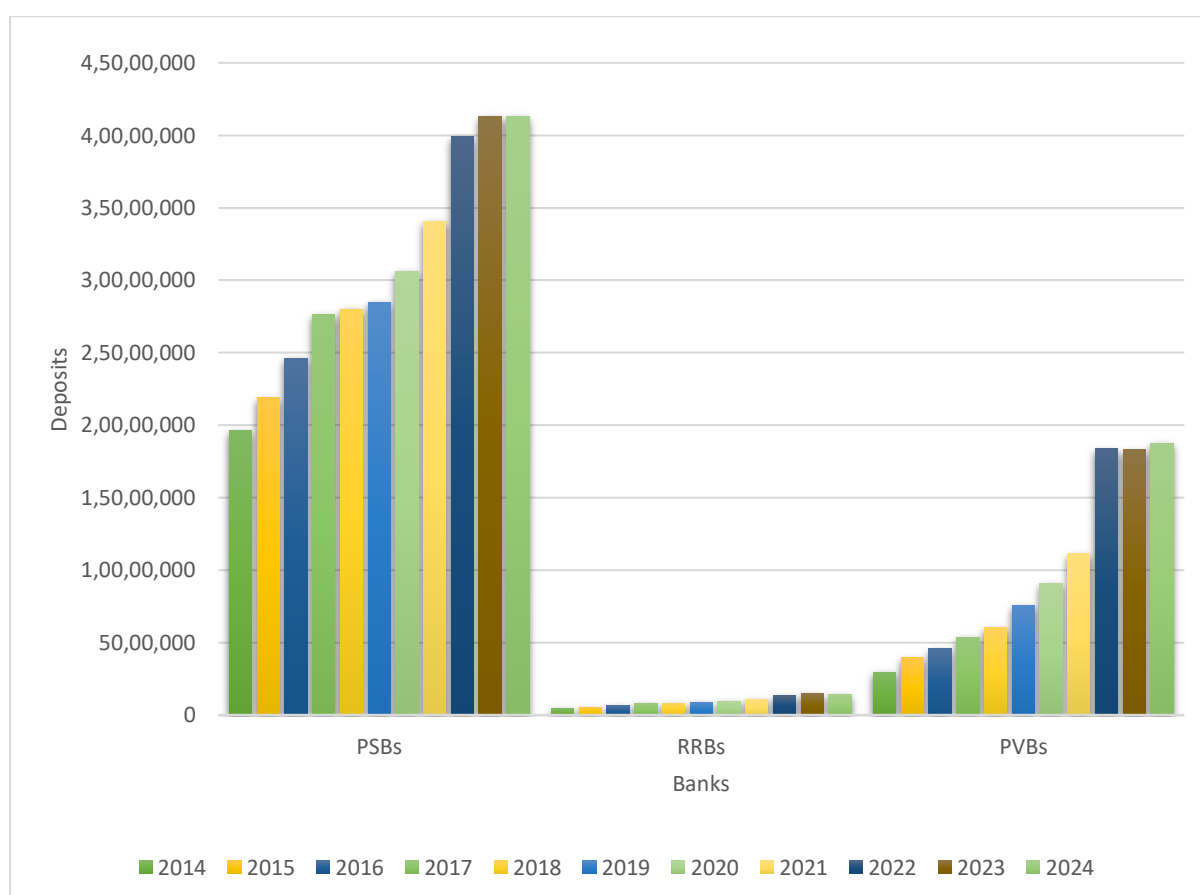
The trends in total bank deposits among Public Sector Banks (PSBs), Regional Rural Banks (RRBs), and Private Sector Banks (PVBs) in Punjab from 2014 to 2024 reveal a notable enhancement in the use of formal financial services, which is essential for financial inclusion. Throughout this decade, all three banking categories have exhibited consistent growth in deposit amounts, indicating that more individuals are not only accessing the banking system but are also actively participating in it.

Public Sector Banks (PSBs), which have historically been a key player in Punjab's banking sector, experienced an increase in aggregate deposits from ₹1.96 lakh crore in 2014 to ₹4.13 lakh crore in 2023. This ongoing growth demonstrates the general population's rising trust and reliance on PSBs for savings and financial transactions. PSBs have played a crucial role in serving both urban and rural demographics, particularly through government initiatives, pension distributions, and agricultural support services. Nonetheless, a slight dip in 2024 could suggest emerging competition from private banks or a stagnation in deposit growth. Regional Rural Banks (RRBs), essential for rural financial systems in Punjab, showed a nearly threefold growth in aggregate deposits—from ₹4,691 crore in 2014 to ₹14,274 crore in 2024. This indicates increased financial activities in rural areas, especially among small farmers, laborers, and low-income families. The growth is indicative of improvements in financial literacy, trust in the banking system, and rural income levels, resulting in increased deposit mobilization.

RRBs have played a significant role in instilling savings habits in previously underserved rural communities, a positive indicator for inclusive financial progress.

Private Sector Banks (PVBs) exhibited the most dynamic expansion, increasing their deposit totals from ₹29,667 crore in 2014 to ₹1.87 lakh crore by 2024 — a more than sixfold increase. This reflects a significant adoption of modern, technology-focused banking services among Punjab’s middle and upper-class individuals, particularly in urban and semi-urban regions. The rapid growth of PVBs underscores the changing preferences of consumers seeking digital convenience, superior service, and tailored financial products. Their increasing portion of total deposits points to a broader integration of Punjab’s populace into a varied and competitive formal financial system.

Figure 4.10 Usage: Aggregate Bank Deposit Quarter March (In Lacs)



Source: SLBC Reports Punjab

In conclusion, Punjab has experienced a distinct growth trend in utilizing financial services across all banking sectors. Public Sector Banks remain the cornerstone of financial activity, RRBs enhance financial involvement in rural communities, and PVBs gain a larger

share of the urban market. The overall rise in deposits signifies a developing financial behavior among Punjab’s citizens, highlighting a stronger savings culture, improved income levels, and increased confidence in the formal banking system—key outcomes of the financial inclusion initiative. However, the growth of PVB banks has not increased as much as that of PSBs due to fewer branches in rural areas and high bank charges. RRBs' deposits are much less than PSBs and PVBs because these banks are less facilitated in their basic savings accounts.

4.7.3.1 Usage Dimension through Bank Credit

An examination of the credit and deposit trends among Public Sector Banks (PSBs), Private Sector Banks (PVBs), and Regional Rural Banks (RRBs) from 2011 to 2024 underscores the critical function PSBs serve in promoting the “usage” aspect of financial inclusion. In this context, usage refers to how actively customers utilize formal financial services, particularly regarding deposits, credit acquisition, and transactional practices.

Table 4.8 Usage: Aggregate Bank Credit

Quarter March (In Lacs)

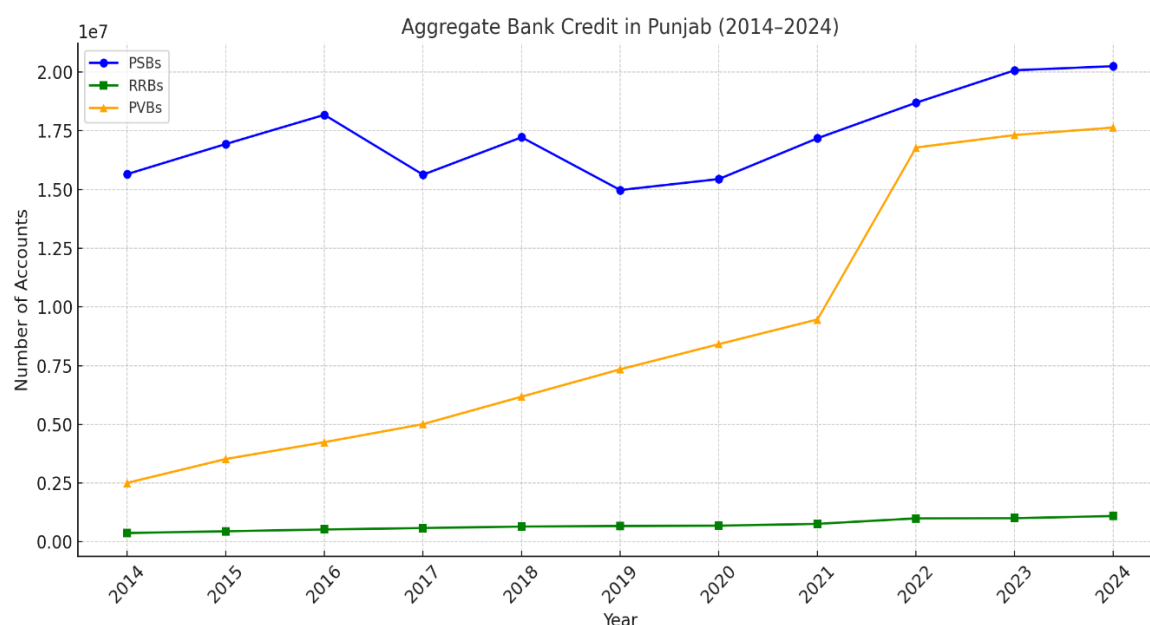
Year	PSBs	RRBs	PVBs
2014	1,56,56,119	3,72,203	25,07,550
2015	1,69,38,346	4,46,780	35,24,021
2016	1,81,81,752	5,22,561	42,41,215
2017	1,56,32,507	5,85,180	50,09,549
2018	1,72,25,801	6,47,764	61,79,314
2019	1,49,78,079	6,70,027	73,44,423
2020	1,54,48,073	6,84,496	84,15,754
2021	1,71,84,345	7,62,590	94,68,245
2022	1,86,97,447	9,96,284	1,67,90,444
2023	2,00,79,018	10,03,160	1,73,21,502

2024	2,02,54,699	10,95,656	1,76,39,616
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Source: SLBC Reports Punjab

The analysis shows that PSBs saw a significant surge in credit distribution during 2015–2016, primarily due to new loan policies introduced to meet national financial inclusion goals. Following the Reserve Bank of India’s directives for priority sector lending, PSBs broadened their credit offerings through initiatives such as Udyog Aadhaar, Kisan Credit Card (KCC), and various financing programs for micro and small enterprises. These targeted measures significantly increased credit accessibility for underserved and priority sectors, emphasizing PSBs' contribution to grassroots financial empowerment.

Figure 4.11: Usage: Aggregate Bank Credit Quarter March (In Lacs)



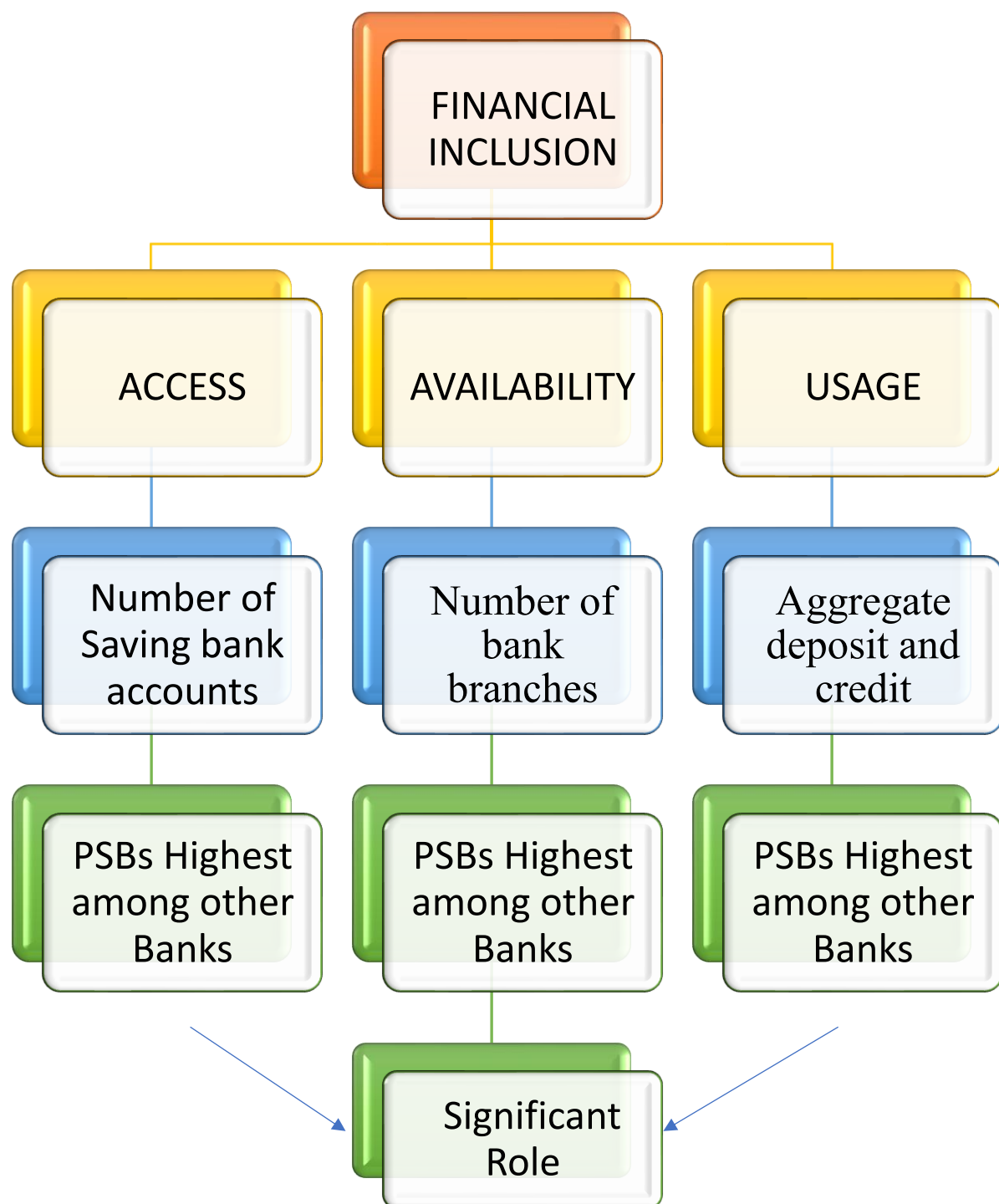
Source: SLBC Reports Punjab

While PVBs also experienced a consistent and gradual rise in credit distribution throughout this period—illustrating their deeper penetration into urban and semi-urban markets—the growth rate of credit volumes in PSBs was almost double that of PVBs in most years. There were notable exceptions in 2017 and 2020, when systemic factors, such as the mergers of several public banks and the COVID-19 pandemic, disrupted regular banking activities and impacted credit growth across the industry. Despite these interruptions, the long-term trend indicates that PSBs have remained fundamental to India’s inclusive financial development. Their extensive outreach in rural areas, the trust placed in them by lower-income

and rural communities, and their alignment with government-sponsored financial schemes have all contributed to a greater utilization of formal banking services. This is further demonstrated by the sustained growth in total deposits at PSBs over the decade, reflecting a more substantial financial commitment from the general populace.

Conversely, PVBs and RRBs have made significant contributions, albeit with distinct approaches—PVBs through digital advancements and expanded urban outreach, and RRBs via concentrated local efforts in rural areas. Nevertheless, the scale and reach of PSBs continue to position them as the primary catalysts for financial inclusion. In summary, the empirical evidence supports the assertion that Public Sector Banks have been instrumental in enhancing the usage aspect of financial inclusion within India. Their capability to mobilize deposits and provide credit, especially via inclusive programs and a focus on priority sectors, highlights their ongoing significance in developing an inclusive and fair financial landscape (Bull G. et al., 2023; Rajput B., 2015; Ahmad D., 2018; Yesu P., 2016).

Figure 4.12 Performance of PSBs in Financial Inclusion at National and State Levels

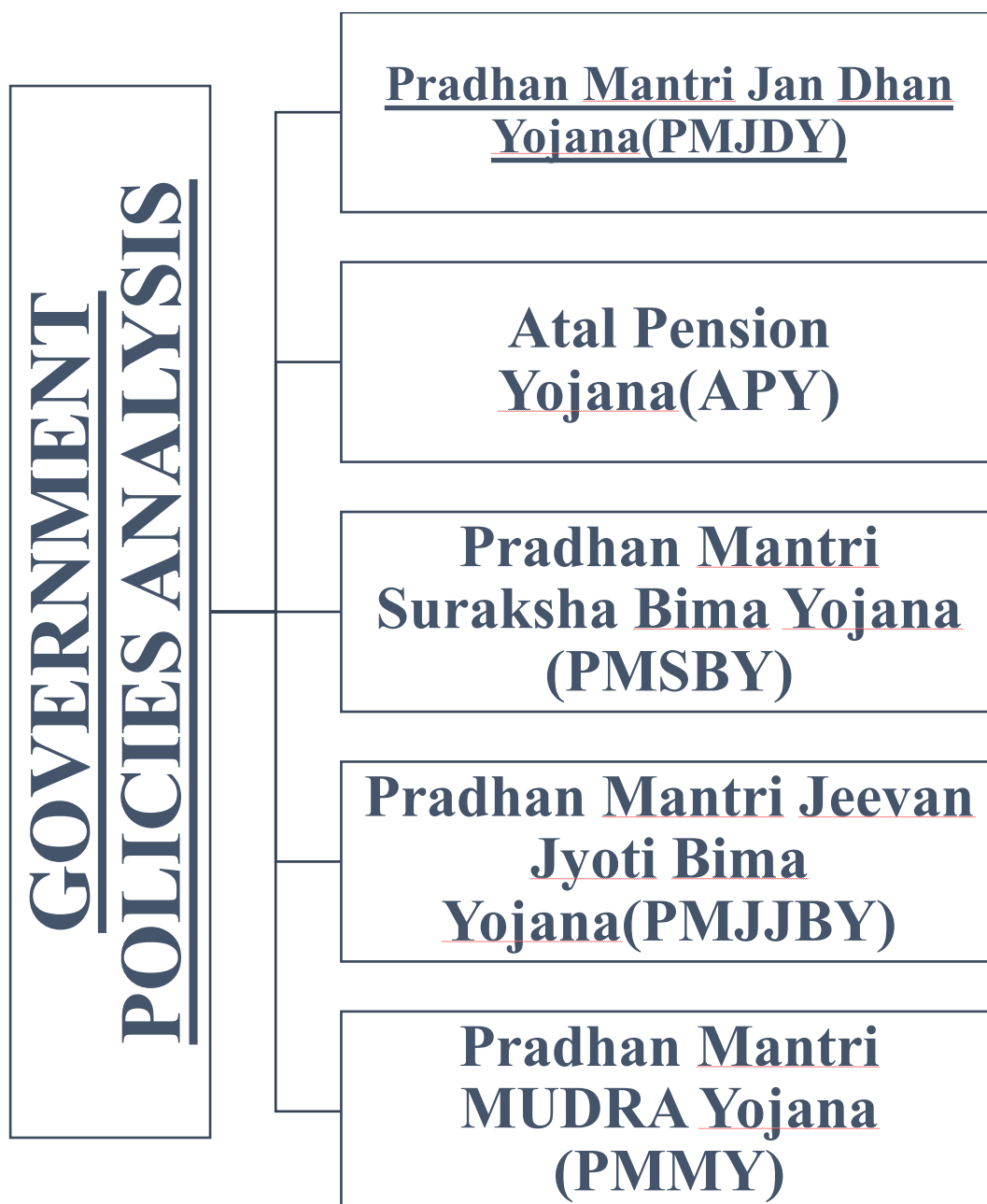


Source: Researcher's own depiction

4.8 Role of Public Sector Banks in Implementing Government Policies for Financial Inclusion

Before the introduction of the GPA, the role of public sector banks was measured based on the dimension of financial inclusion. In India, the Government of India (GOI) has formed various policies to improve financial inclusion. Further review of these policies demonstrates the extent to which people utilize them. So, the role of banks will now be studied based on policies related to FI and their growth rate by banks.

Figure 4.13 Policies under Government Plan



Source: Bulletins 2014 to 2021 (Department of financial services)

4.8.1 Pradhan Mantri Jan Dhan Yojana (PMJDY)

The idea behind monetary incorporation is not new. Since the mid-2000s, several policy initiatives and institutional approaches have been introduced to strengthen the financial support framework for unbanked and underbanked populations. These efforts gained unprecedented momentum with the launch of the Pradhan Mantri Jan Dhan Yojana (PMJDY), which received an overwhelming response nationwide and significantly expanded access to formal banking services across India. The PMJDY was announced by the Hon'ble Prime Minister of India, Shri

Narendra Modi, in his first Independence Day address on August 15, 2014, as a flagship initiative aimed at achieving comprehensive financial inclusion. The scheme was formally launched on August 28, 2014, with the objective of ensuring universal access to banking facilities. Its key features included the provision of Basic Savings Bank Deposit Accounts, an overdraft facility of up to ₹5,000 after six months of satisfactory operation, and the issuance of a RuPay debit card with an inbuilt accident insurance cover of ₹1 lakh. In subsequent phases, the scheme envisaged the integration of additional financial services such as micro-insurance, pension products, and RuPay Kisan Cards.

In preparation for the large-scale implementation of PMJDY, the Prime Minister directly communicated with the Chief Executive Officers of all banks, urging them to gear up for the extensive task of enrolling more than 7.5 crore households and opening their bank accounts within a limited timeframe. This coordinated and mission-mode approach underscored the government's commitment to rapidly expanding financial access. The dataset presented below illustrates the bank-wise distribution of PMJDY beneficiaries, reflecting the scale and institutional participation in the implementation of the scheme.

Table 4.9 Pradhan Mantri Jan Dhan Yojana

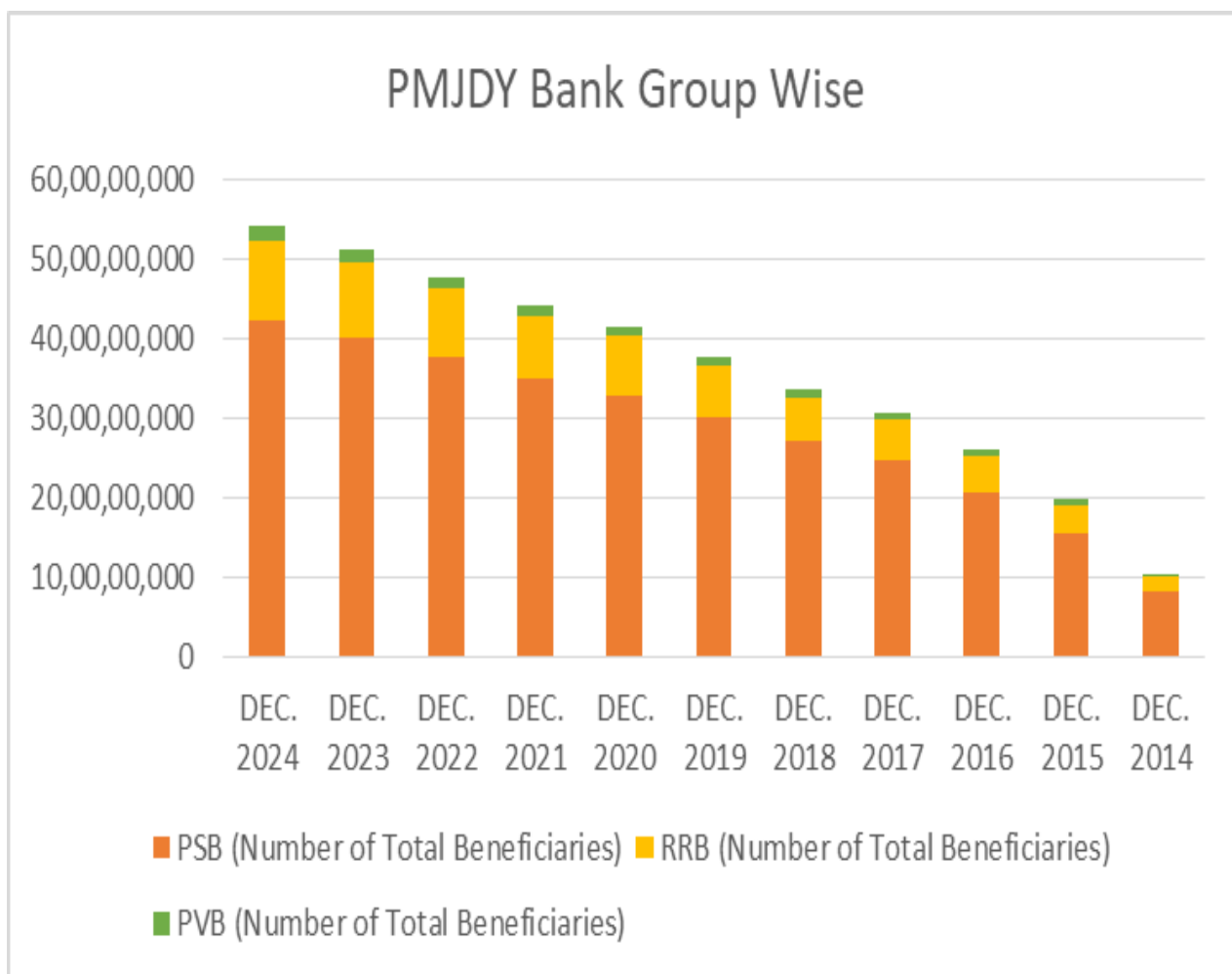
MONTH (YEAR)	PSB (Number of Total Beneficiaries)	RRB (Number of Total Beneficiaries)	PVB (Number of Total Beneficiaries)
DEC. 2024	42,30,66,695	10,14,22,719	1,68,15,724
DEC. 2023	40,06,40,380	9,58,96,322	1,48,28,613
DEC. 2022	37,68,74,834	8,81,83,836	1,33,37,962
DEC. 2021	34,90,24,108	8,04,68,989	1,28,41,970
DEC. 2020	32,90,58,897	7,40,37,744	1,27,30,335
DEC. 2019	30,07,97,849	6,43,26,580	1,25,26,240
DEC. 2018	27,05,43,940	5,55,34,160	1,04,90,227

DEC. 2017	24,85,02,508	4,95,73,287	98,75,467
DEC. 2016	20,73,25,458	4,43,60,158	86,36,483
DEC. 2015	15,53,74,164	3,56,54,295	73,56,074
DEC. 2014	8,30,91,063	1,85,09,871	28,81,535

Source: <https://www.pmjdy.gov.in>

Table 4.9 shows the PMJDY accounts opened under the financial inclusion plan by different bank groups, i.e., PSB, RRB, and PVB, from 2014 to 2024. The primary objective of PMJDY is to provide basic banking account facilities to the weaker sections of society. The basic amount is optional when opening this bank account. In 2014, public sector banks opened nearly 8,30,91,063 accounts, followed by RRB 1,85,09,871 and 28,81,535, respectively, by private sector banks (Department of Financial Services Reports). In India, most of the accounts are opened in rural areas of the country. The PMJDY program has seen a significant increase in the number of savings accounts opened. By 2024, 42,30,66,695 accounts were established by Public Sector Banks (PSB), 10,14,22,719 by Regional Rural Banks (RRBs), and 1,68,15,724 by Private Sector Banks (PVB), aiming to provide crucial banking services to households without access. Over time, the growing number of accounts at PSBs suggests that customers are increasingly utilizing financial services offered by these banks compared to others. As of March 2020, around 84 percent of accounts were opened at PSBs, with RRBs contributing 12 percent and PVBs only 4 percent (as indicated by the Trend Report on Financial Inclusion Report 2020-2021). The State Bank of India leads in the number of PMJDY accounts opened, followed by the Bank of Baroda and Punjab National Bank.

Figure 4.14: Pradhan Mantri Jan Dhan Yojana



Source: <https://www.pmjdy.gov.in>

In order to enhance financial inclusion efforts in the country, since August 2018, the PMJDY initiative has transitioned its goal from providing accounts for “every household” to “every unbanked adult.” To facilitate the direct transfer of government benefits like subsidies, pensions, scholarships, and insurance into the beneficiary's bank account in a secure, targeted, and cashless way, the concept of JAM, or Jan-Dhan Aadhaar Mobile, was introduced. The JAM framework has allowed India to make significant strides in financial inclusion. Programs like Pratyaksh Hanstantrit Labh (PAHAL, the Direct Benefit Transfer scheme for cooking gas subsidies) and wages under the Mahatma Gandhi National Employment Guarantee Act (MGNREGA) have supported the financial inclusion of the most disadvantaged populations. The outcomes of these initiatives demonstrate that banks are vital to promoting financial inclusion (Mala et al., 2016; Chakraborty, K.C., 2009).

Figure 4.15 Benefits of PMJDY

Benefits of Pradhan Mantri Jan Dhan Yojana



Source: www.pmjdy.gov.in

4.8.2 Atal Pension Yojana (APY)

The Atal Pension Yojana (APY) was unveiled by the Hon'ble Prime Minister on May 9, 2015, and it has been effectively operational since June 1, 2015. This initiative aims to provide monthly retirement pensions to eligible individuals who do not participate in any organized pension program. APY is available to all bank and post office account holders between the ages of 18 and 40. Subscribers can choose a guaranteed monthly pension of either Rs. 1,000, Rs. 2,000, Rs. 3,000, Rs. 4,000, or Rs. 5,000, which will be paid upon reaching the age of 60. The contribution amounts differ depending on the selected pension sum and the subscriber's age at the time of enrollment. The PFRDA manages the APY within the broader administrative and institutional framework of the NPS. The performance of various banks in the Atal Pension Yojana (APY) from 2016 to 2023 is detailed below.

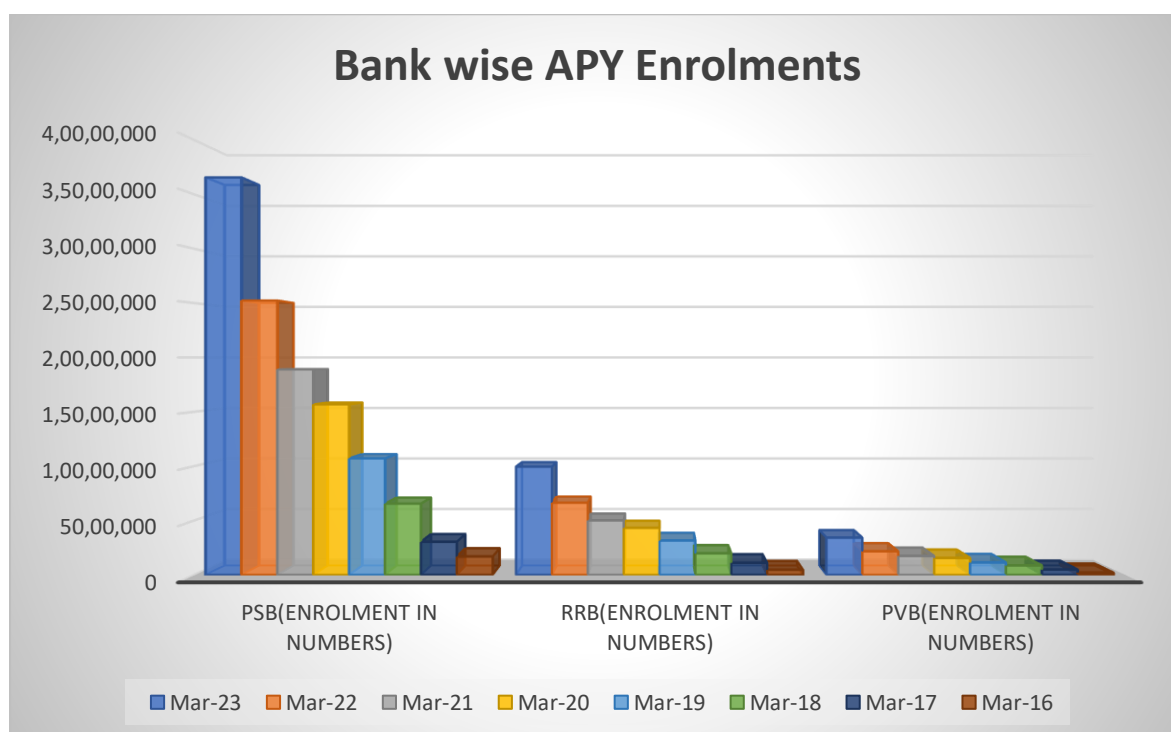
Table 4.10 Performance under APY

MONTH (YEAR)	PSB(ENROLMENT IN NUMBERS)	RRB(ENROLMENT IN NUMBERS)	PVB(ENROLMENT IN NUMBERS)
MARCH 2023	3,65,52,095	99,54,810	34,34,711
MARCH 2022	2,52,32,793	66,45,999	21,77,337

MARCH 2021	1,88,93,269	50,17,360	17,49,875
MARCH 2020	1,56,75,442	43,30,190	15,62,997
MARCH 2019	1,07,19,758	31,71,152	11,45,289
MARCH 2018	65,53,397	19,87,176	8,73,901
MARCH 2017	30,47,273	11,15,257	4,97,323
MARCH 2016	16,93,190	4,76,373	2,18,086

Source: <https://pib.gov.in>

Figure 4.16: Atal Pension Yojana (APY)



Source: <https://pib.gov.in>

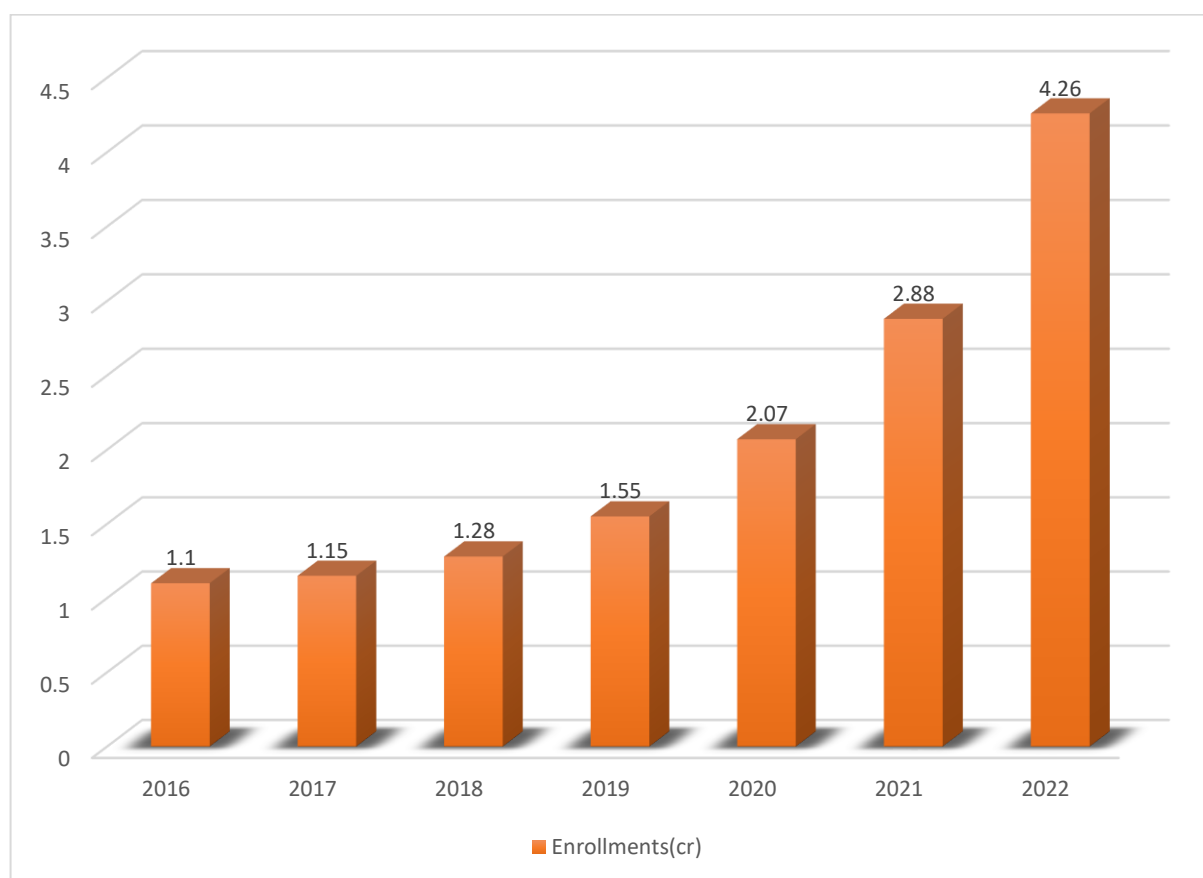
The Atal Pension Yojana falls under social security schemes, which are specifically designed for the weaker sections of society. Every bank group has made its best effort in advancing the APY from 2016 to the present. However, PSB made a remarkable contribution to this goal followed

by RRBs and PVB. The figure underscores the pivotal role of PSBs in the APY policy, as they cover a substantial portion of the population through their beneficiaries. RRBs are also significant players, projected to cover 17% of total enrolments in 2023. In contrast, private sector banks have a minor role in this policy due to their limited coverage in rural areas and the high basic amount required for account opening. This data underscores the predominant role of PSBs in shaping the financial inclusion policy (Ambarkhane D.,2016; Bhattacharyya A., 1997)

4.8.3 Pradhan Mantri Jeevan Jyoti Bima Yojana(PMJJB)

To ensure the uninsured and a universal social security system for all Indians, especially the poor and the underprivileged, the PMJJBY was launched by the Hon'ble Prime Minister to provide cover for death due to any reason. It was launched on 9th May 2015. It offers a renewable one-year term life cover of Rupees Two Lakh to all subscribing bank account holders in the age group of 18 to 50 years, covering death due to any reason. The annual premium of Rs.436/- per annum per subscriber. The scheme is offered and administered through LIC and other life insurance companies that are willing to provide the product on similar terms.

Figure 4.17: Pradhan Mantri Jeevan Jyoti Bima Yojana



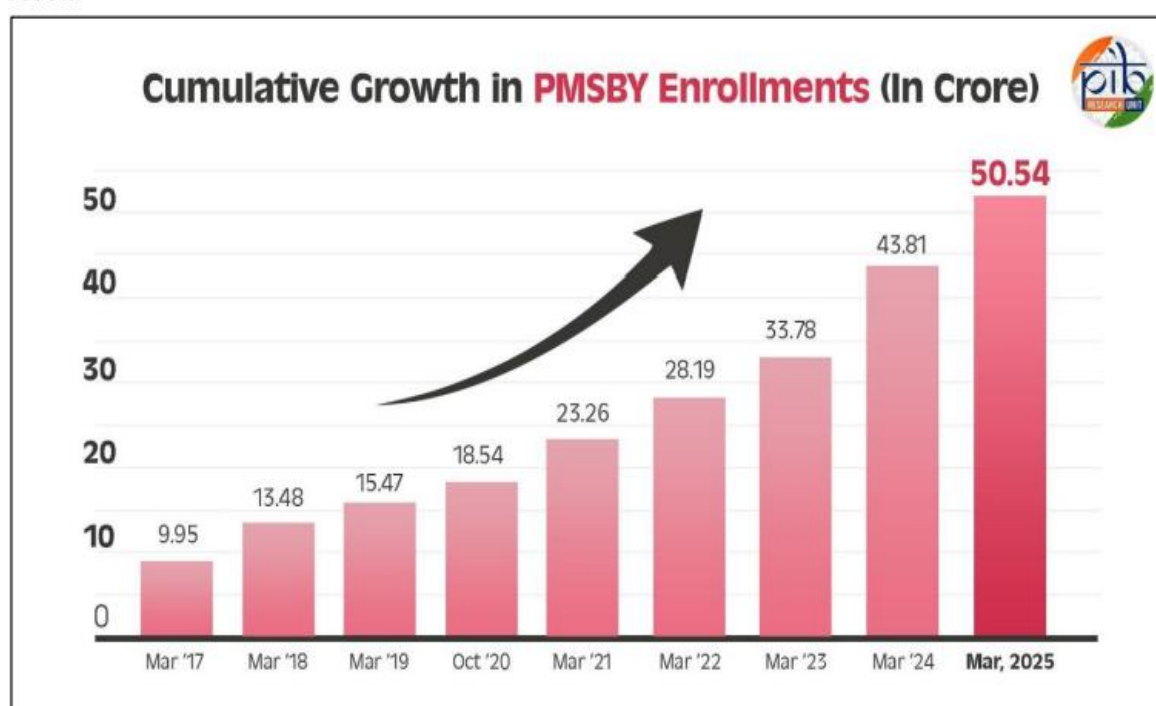
Source: Cumulative Enrolment Data as uploaded by banks on the Jansuraksha portal

The above data indicate the cumulative enrolments in PMJJBY from 2016 to 2022. The above data show that in 2016, there were only 1.1 crore enrolments in PMJJBY, but this number reached 4.26 crore by 2022. Out of 6.49 crore (71%), beneficiaries are from rural areas, which indicates improvement in rural areas. Using such policies makes rural customers feel secure because they provide coverage for death from any cause. Each year, there is an improvement in the number of PMJJY beneficiaries and their deposit by Public sector banks. The results of these data indicate that PSBs contribute significantly to the growth of financial inclusion.

4.8.4 Pradhan Mantri Suraksha Bima Yojana(PMSBY)

To ensure a universal social security system for all Indians, especially the poor and the underprivileged, the Hon'ble Prime Minister launched the PMSBY to provide cover for death/disability due to accidents. Below are certain features of PMSBY and their current achievements. It was launched on 9th May 2015 and offers a renewable one-year accidental death-cum- disability cover of Rupees Two Lakh to all subscribing bank account holders in the age group of 18 to 70 years The annual premium of Rs. 20/- per annum per subscriber. A claim of Rs. Two lakh in case of death or complete disability (Total and irrecoverable loss of both eyes or loss of use of both hands and feet or loss of sight of one eye and loss of use of hand or foot) A claim of Rs. One lakh in case of partial disability (Total and irrecoverable loss of sight of one eye or loss of use of one hand or foot)

Figure 4.18: Pradhan Mantri Suraksha Bima Yojana



Source: Cumulative Enrolment Data as uploaded by banks on the Jansuraksha portal.

The above data indicate the cumulative enrolments in PMSBY from 2017 to 2025. The above data shows that in 2017, there were only 9.95 crore enrolments in PMSBY. Therefore, from 2017 to 2025, there was an increase in enrollments, which reached 50.54 crores, indicating a positive sign of improvement. According to the data on PMSBY in 2025, there were 50.54 crore enrolments, comprising 17.86 crore (71%) from the rural sector. Compared to other banks, PSB banks cover the maximum area in rural areas (RBI Annual Reports) through their bank branches. This suggests that they are playing a more significant role in driving the growth of financial inclusion through financial inclusion policies.

4.8.5 Pradhan Mantri MUDRA Yojana (PMMY)

The Micro Units Development and Refinance Agency Ltd. (MUDRA) was established, and the Pradhan Mantri Mudra Yojana (PMMY) was launched in April 2015 with the objective of ensuring an adequate flow of institutional credit to the small and micro enterprise sector. Under this scheme, collateral-free loans are extended through multiple channels, including scheduled commercial banks, non-banking financial companies (NBFCs), and microfinance institutions (MFIs). With coordinated efforts from various stakeholders, the financial target set under PMMY for 2015–16 was surpassed by the end of the fiscal year. Against a target of ₹1,22,188 crore, notified banks and MFIs collectively disbursed ₹1,32,954.73 crore, achieving 109 percent of the annual target. Public Sector Banks (PSBs) played a pivotal role in this achievement, reflecting robust credit expansion within the micro and small enterprise (MSE) segment. Data from PSBs indicate a 70 percent growth in credit to MSEs during 2015–16. Other lending institutions also recorded substantial growth, largely attributable to PMMY. Under PMMY, the State Bank of India (SBI) emerged as the largest lender, disbursing ₹12,281.18 crore, followed by Canara Bank with ₹7,506.64 crore and Punjab National Bank (PNB) with ₹3,593.42 crore.

Among private sector scheduled commercial banks, HDFC Bank led with disbursements of ₹5,356.89 crore, followed by ICICI Bank (₹3,921.51 crore) and IndusInd Bank (₹3,594.64 crore). In the Regional Rural Bank (RRB) category, Uttar Bihar Gramin Bank recorded the highest lending at ₹1,350.90 crore, followed by Karnataka Vikas Gramin Bank (₹1,070.05 crore) and Pragathi Krishna Gramin Bank (₹1,051.88 crore). Furthermore, data submitted by 39 NBFC–MFIs and 33 non–NBFC–MFIs for FY 2015–16 indicate cumulative Mudra loan disbursements of ₹45,904 crore.

Overall, credit delivery to micro borrowers under PMMY has been predominantly led by public sector banks, followed by private sector banks. During 2019–20, the share of total sanctioned credit was distributed as follows: PSBs accounted for 36 percent, private sector banks for 26 percent, NBFCs for 17 percent, and small finance banks (SFBs) for 8 percent (PMMY Annual Report, 2021–22). By March 2020, approximately 12.30 crore enterprises across the country had been financed under the scheme. The performance of both public and private sector banks continued to strengthen in subsequent years. During 2021–22, SBI remained the leading public sector bank, sanctioning ₹28,511.62 crore to 9.86 lakh loan accounts, followed by PNB with sanctions of ₹14,754.21 crore and Canara Bank with ₹13,521.49 crore. Private sector banks recorded significant improvement, sanctioning a total of ₹1,17,679.31 crore during the year, representing a growth of 26 percent over the previous year. Major contributors among private banks included IndusInd Bank and Bandhan Bank, with sanctioned amounts of ₹41,944.51 crore and ₹41,338.61 crore, respectively. Microfinance institutions sanctioned loans amounting to ₹49,101.18 crore to 139.73 lakh loan accounts, with Samasta Microfinance Limited emerging as the leading MFI by sanctioning ₹6,480.05 crore across more than 19.68 lakh loan accounts. NBFCs also made notable contributions, collectively sanctioning ₹18,697.14 crore, led by Shri Ram Transport Finance Company Limited with sanctions totaling ₹10,050 crore. Small Finance Banks exceeded expectations by achieving 146 percent of their targets, with nine SFBs together sanctioning ₹29,207.4 crore to 62.11 lakh loan accounts. Among them, Ujjivan Small Finance Bank ranked highest, sanctioning ₹7,809.57 crore to 14.82 lakh loan accounts (MUDRA Annual Report, 2021–22).

Over time, India has recorded substantial progress across various dimensions of financial inclusion. The Pradhan Mantri Jan Dhan Yojana (PMJDY) has played a critical role in extending basic banking services to unbanked households, significantly improving access to formal financial accounts and narrowing gender disparities in financial inclusion. In the area of microinsurance, social security schemes such as the Pradhan Mantri Suraksha Bima Yojana (PMSBY) and the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) have reached a broad segment of the population. Improvements in both geographical and demographic penetration of bank branches, as well as inclusive banking policies, have been more pronounced in public sector banks compared to other banking groups.

4.9 Review of Financial Inclusion Reports

Financial inclusion reports primarily examine the growth and operational performance of the Indian banking sector, with particular emphasis on policy initiatives and their outcomes. These reports highlight the multifaceted role of public sector banks in advancing financial inclusion and underscore their importance in achieving inclusive growth.

4.9.1 Financial Inclusion Plans of the Reserve Bank of India

An analysis of Financial Inclusion Plan (FIP) data submitted by public sector banks, private sector banks, and regional rural banks for the period 2016–2020 indicates the continued dominance of PSBs in the financial inclusion landscape. While PSBs have maintained a strong presence, the growth in access-related indicators has been relatively modest compared to private sector banks, which have exhibited higher growth in both access and usage indicators. The Business Correspondent (BC) model has emerged as the predominant delivery mechanism for financial inclusion, outperforming alternative models. Banks have remained at the forefront of India's financial inclusion efforts, supported by the Reserve Bank of India's objective of fostering a competitive, efficient, and diversified banking system. Financial Inclusion Plans, introduced in 2010, serve as a key instrument for measuring progress in this area by encouraging banks to adopt a structured and strategic approach. Each bank group is expected to leverage its comparative advantages—PSBs through their extensive branch networks and public trust, private sector banks through technological innovation, and RRBs through their strong local and regional presence.

A review of FIP data over the five-year period reveals that PSBs continued to dominate, accounting for approximately 56 percent of rural branches and 60 percent of BC outlets in villages by 2020. Their contribution to Basic Savings Bank Deposit Accounts (BSBDAs) remained above 70 percent throughout the review period. Similarly, PSBs accounted for 58 percent of the total Kisan Credit Cards (KCCs) issued in 2020. At the same time, private sector banks demonstrated significant improvements in access and usage indicators. The expansion of BC outlets in villages was particularly strong in the northeastern, eastern, and central regions, surpassing the growth rates observed for PSBs and RRBs. Private sector banks also strengthened their urban outreach, with their share of urban BC outlets increasing from 77 percent in 2016 to 97 percent in 2020. Correspondingly, their share of total BC agents rose sharply from 37 percent to 80 percent during the same period.

The BC model has thus emerged as the principal channel for delivering formal financial services, especially in underserved areas. While branch expansion in rural areas remained limited, the rapid growth of BC outlets in both rural and urban regions facilitated doorstep banking services for previously excluded populations. By 2020, approximately 56 percent of BSBDA's and 65 percent of General Credit Cards (GCCs) were routed through BCs. Although PSB-led BCs dominated deposit mobilization, private sector banks accounted for a substantial share of GCCs through BC channels. The volume and value of transactions conducted through BC outlets increased significantly during the review period.

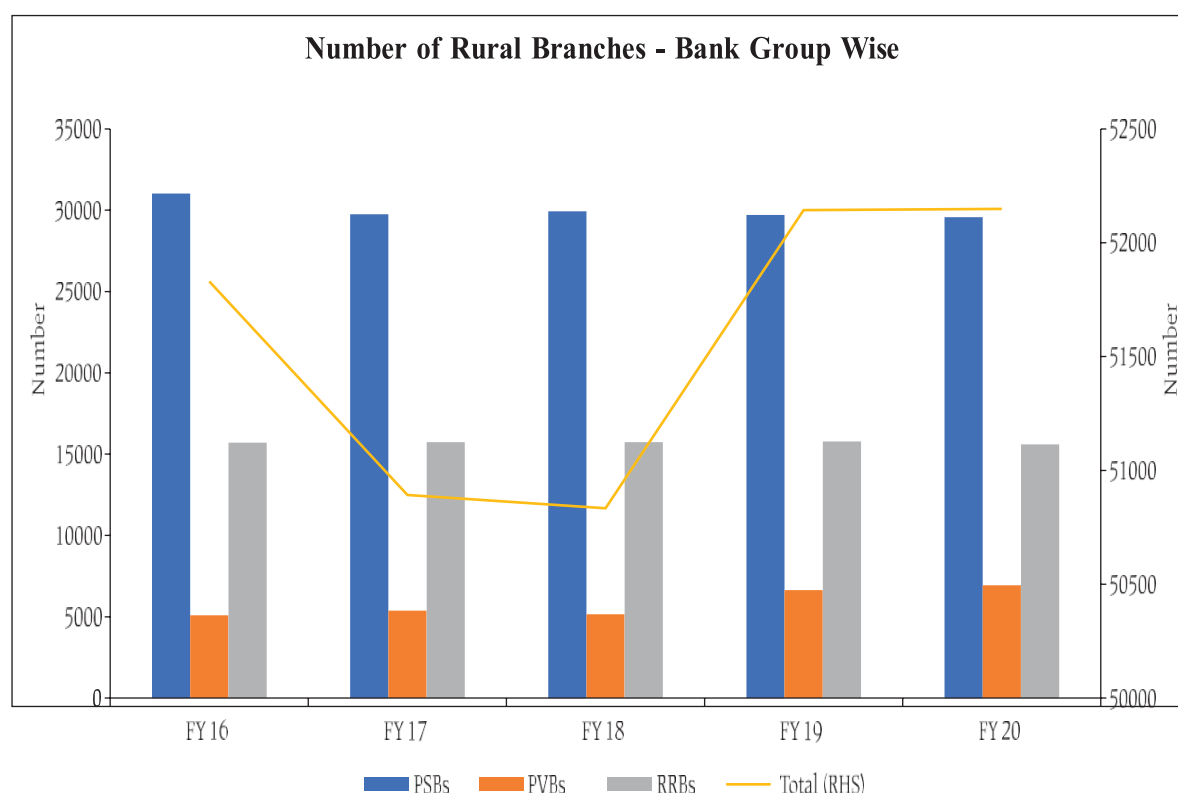
Overall, the progress achieved under the access and usage dimensions of financial inclusion, as reflected in FIP returns submitted to the Reserve Bank of India, underscores India's advancing position in the global financial inclusion landscape. Given India's demographic and geographic scale, these developments hold considerable significance not only domestically but also in the broader international context.

4.9.2 Annual Report of the Department of Financial Services

4.9.2.1 Growth in Rural Branches

Throughout the review period, the expansion of access in rural areas through conventional brick-and-mortar banking channels remained limited, recording a compounded annual growth rate (CAGR) of only 0.15 percent. Public sector banks (PSBs) and regional rural banks (RRBs) demonstrated a consolidation trend, which led to a contraction in the number of rural branches over this period. In contrast, private sector banks (PVBs) reported a notable expansion, with their rural branch network increasing by 8.10 percent during the same timeframe.

Figure 4.19 Number of Rural Branches Bank group wise

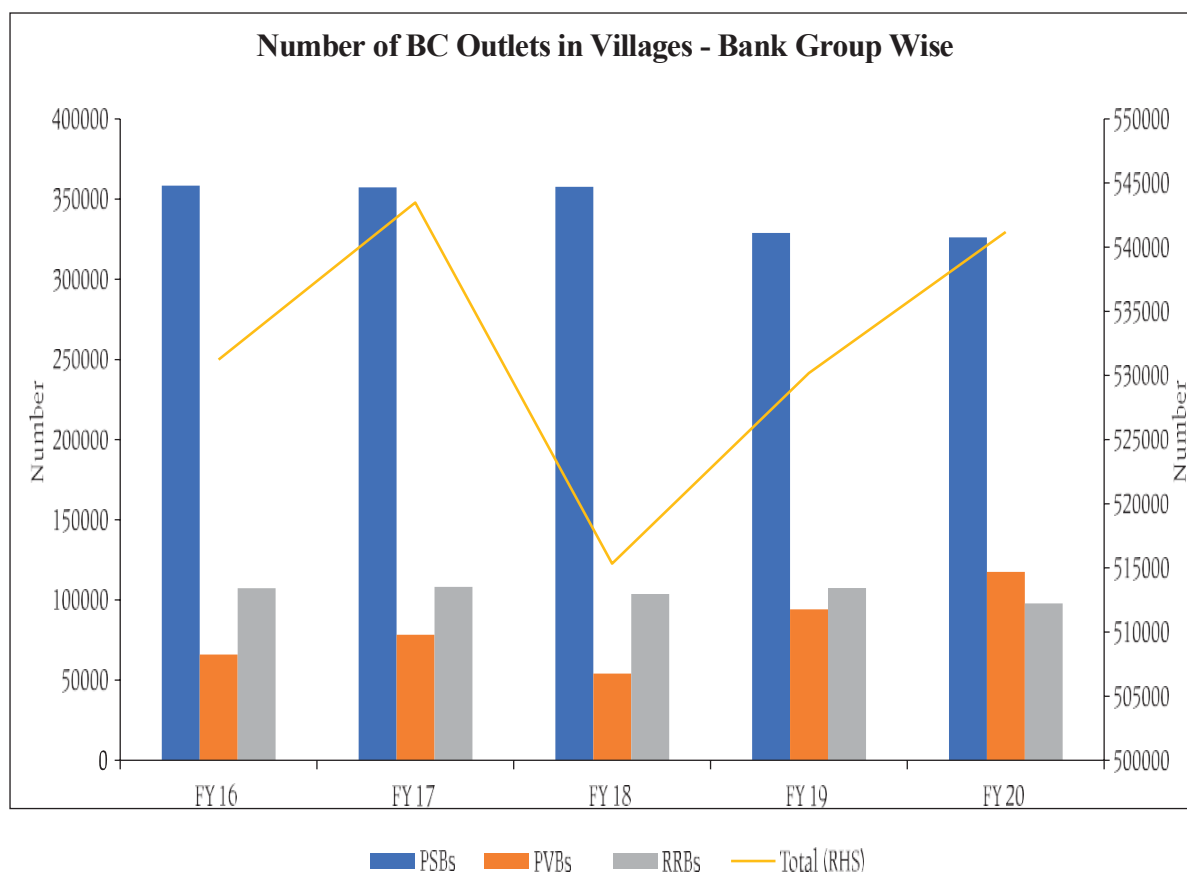


Source: BIRD reports 2016-2020

4.9.2.2 Growth in BC Outlets in Villages:

To promote enhanced financial inclusion, banks could leverage the services of intermediaries to deliver economic and banking solutions through the Business Correspondent (BC) Model. Over time, the BC model has gained more importance compared to traditional brick-and-mortar bank branches. Increasingly, banking services in rural areas, especially in unserved or underserved locations, are being made available through bank branches (BPOs). Public Sector Banks (PSBs) have played a leading role in the establishment of BC outlets in villages. Nonetheless, the proportion of PSBs in BC outlets within rural areas has consistently remained above 60% over the years, making it the highest among various bank categories. A significant development in the arena of financial inclusion is the growth in BC outlets in villages for Private Sector Banks (PVBs), particularly with substantial increases seen in the northeastern, eastern, and central regions, which outpace the growth of PSBs and Regional Rural Banks (RRBs).

Figure 4.20: Number of BC Outlets in Rural area Bank group wise

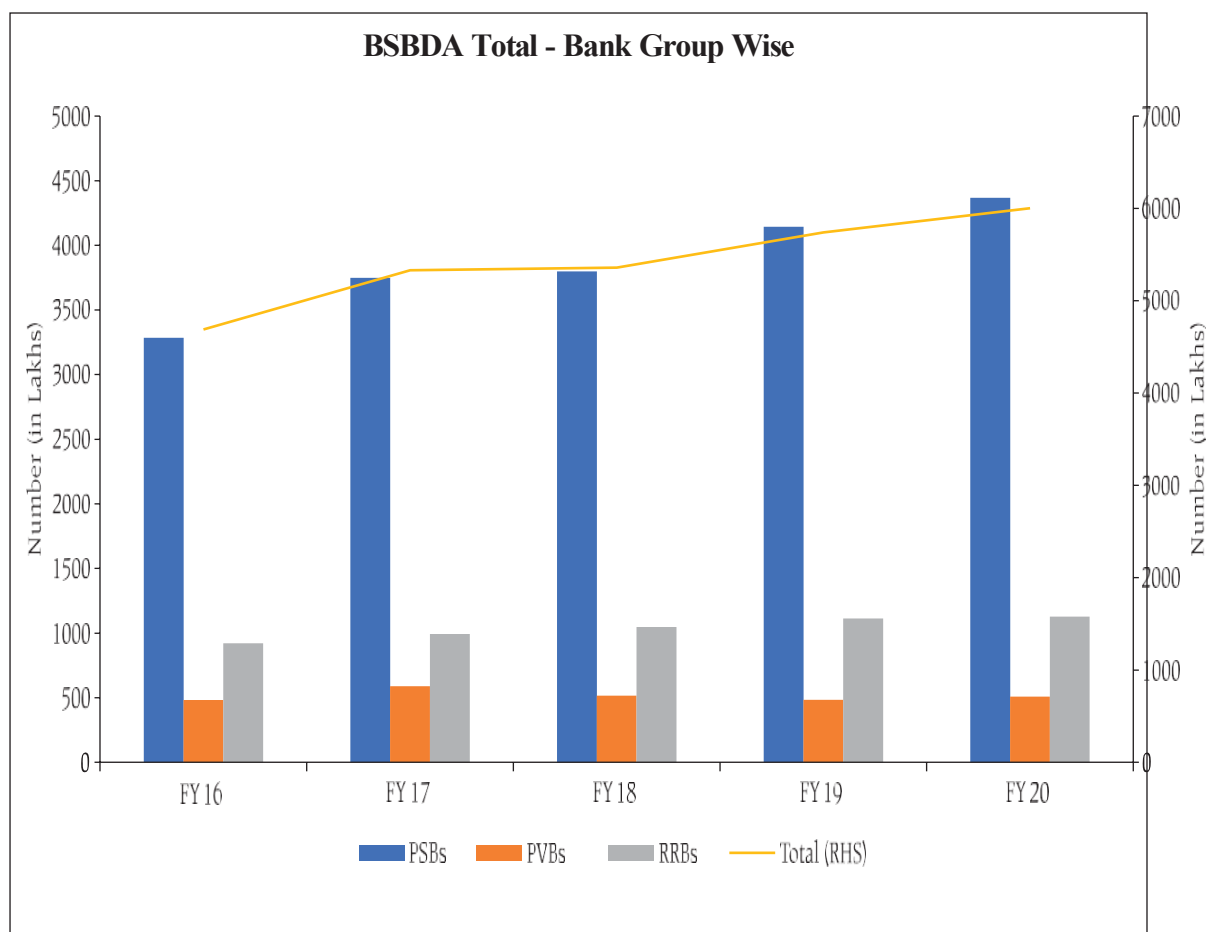


Source: BIRD reports 2016-2020

4.9.2.3 Deposit - Basic Savings Bank Deposit Accounts (BSBDAs)

Financial inclusion seeks to make formal financial services accessible and affordable to groups that have traditionally been excluded, addressing various barriers such as the expense associated with banking products and services. The Basic Savings Bank Deposit (BSBD) Account is crafted as a savings account that provides specific minimum facilities at no cost to account holders, offering a budget-friendly alternative for those who are unbanked or underbanked. As of March 2020, there were a total of 60.04 million BSBD Accounts, an increase from 46.90 million in March 2016, reflecting a compound annual growth rate (CAGR) of 6.37 percent. Public sector banks experienced a notable rise in both the quantity and the total outstanding balance of Basic Savings Bank Deposit Accounts (BSBDAs), highlighting an important aspect of financial inclusion. In contrast, private sector banks and regional rural banks saw a decrease in their participation in these areas, suggesting that additional strategies may be necessary to enhance financial inclusion at these institutions.

Figure 4.21: Basic Savings Bank Deposit Bank wise

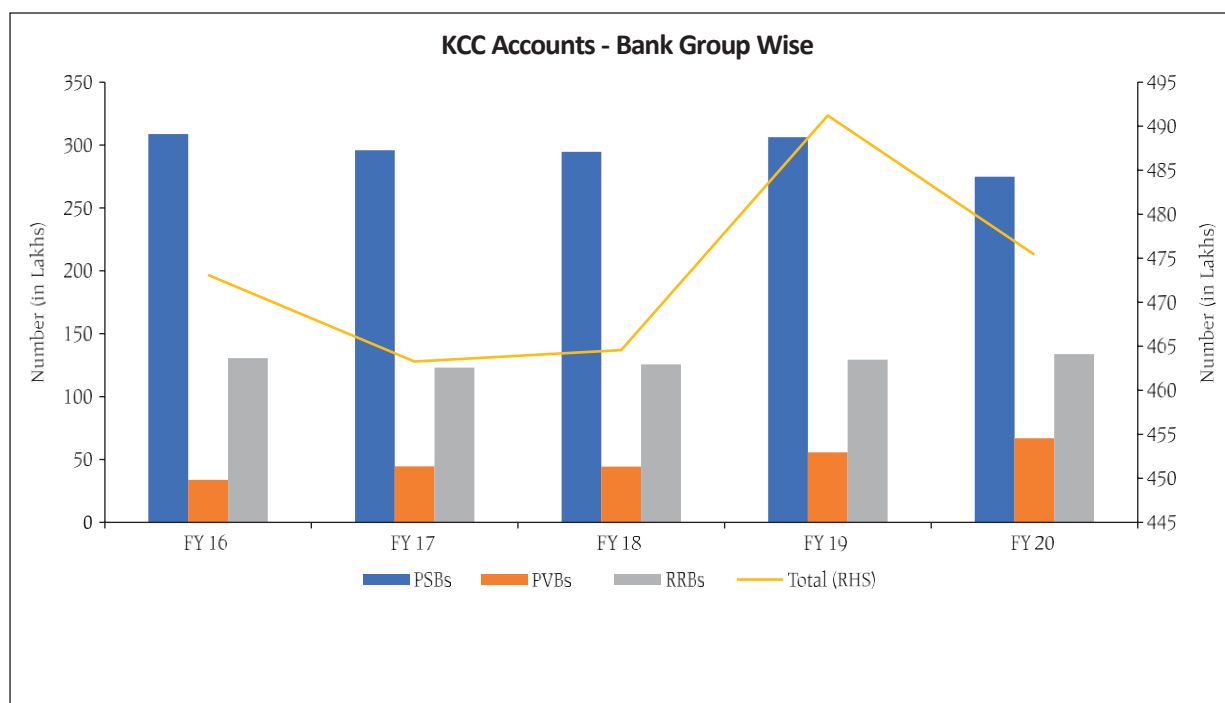


Source: BIRD reports 2016-2020

4.9.2.4 Kisan Credit Cards (KCCs) Bank group wise

Kisan Credit Cards (KCCs) play a vital role in promoting financial inclusion in India. These cards are tailored for farmers and provide them with access to credit for agricultural and related activities, thereby enhancing financial inclusion in rural communities. By the conclusion of March 2020, the total number of KCCs had reached 4.75 crore, with a total outstanding amount of ₹6,39,069 crore. This signifies a slight increase of 0.12 percent in the number of KCCs and a noteworthy rise of 5.64 percent in the outstanding amount, reflecting a favorable trend in financial inclusion. There was an observable increase in the number of KCCs among Private Sector Banks (PVBs) and Regional Rural Banks (RRBs), with PVBs leading the way. While the share of Public Sector Banks (PSBs) in the overall number of KCCs fell from 65 percent to 58 percent during the review period, they still maintained the largest share among all categories of banks.

Figure 4.22 KCC Accounts Bank group wise



Source: BIRD reports 2016-2020

4.9.2.5 General Credit Cards (GCCs) through BCs

General Credit Cards (GCCs) are credit instruments delivered through Business Correspondents (BCs), who function as intermediaries between banks and customers, particularly in underserved areas. As of March 2020, the total number of GCCs issued through BCs stood at 132.61 lakh, with private sector banks (PVBs) accounting for nearly 98 percent of the total. The proportion of GCCs routed through the BC channel increased steadily from 34.60 percent in 2016 to 65.58 percent in 2020, indicating a growing reliance on this model. This expansion is largely attributable to the strategic engagement of PVBs with Non-Banking Financial Companies and Microfinance Institutions (NBFCs–MFIs) as BCs, leveraging their extensive networks for sourcing and financing Joint Liability Groups (JLGs). Such collaborations have emerged as an effective mechanism for extending formal credit to rural and semi-urban populations.

An examination of Financial Inclusion Plan (FIP) data for public sector banks (PSBs), private sector banks (PVBs), and regional rural banks (RRBs) over the period 2016–2020 reveals the continued dominance of PSBs in advancing financial inclusion. By 2020, PSBs accounted for approximately 56 percent of rural bank branches and nearly 60 percent of BC outlets operating in villages. Their contribution to Basic Savings Bank Deposit Accounts (BSBDAs) consistently exceeded 70 percent, underscoring their pivotal role in account

penetration. Furthermore, PSBs were the primary issuers of Kisan Credit Cards (KCCs), contributing about 58 percent of the total outstanding KCCs in 2020. While PSBs retained a leading position, PVBs demonstrated comparatively higher growth rates in access and usage indicators during the review period. The expansion of BC outlets in villages was particularly pronounced for PVBs in the northeastern, eastern, and central regions, where their growth outpaced that of PSBs and RRBs. Additionally, PVBs significantly strengthened their presence in urban areas, with their share of urban BC outlets rising sharply from 77 percent in 2016 to 97 percent in 2020. A similar trend was observed in the deployment of BC agents, with PVBs' share increasing from 37 percent to 80 percent over the same period, reflecting an aggressive outreach strategy centered on technology-enabled delivery channels.

4.9.3 RBI Initiatives to Promote Financial Inclusion

4.9.3.1 Promotion of Mobile Banking:

Mobile banking, which enables customers to conduct financial transactions via mobile phones, has been actively promoted to enhance usage of formal banking services. To encourage adoption, the transaction limit without end-to-end encryption was increased from ₹1,000 to ₹5,000, while the earlier cap of ₹50,000 per transaction was removed, allowing banks to set limits based on their internal risk assessments. The inclusion of mobile network operators (MNOs) as eligible Business Correspondents marked a significant policy innovation. This bank–MNO partnership model is expected to accelerate mobile payments and deepen financial inclusion by leveraging the extensive customer reach of telecom networks.

4.9.3.2 Structured and Planned Financial Inclusion Framework:

The Reserve Bank of India (RBI) adopted a structured, bank-led approach to financial inclusion, emphasizing the use of technology. Banks were advised to formulate board-approved Financial Inclusion Plans (FIPs) aligned with their business strategies and institutional strengths, initially for a three-year period. This approach ensured a systematic and accountable expansion of inclusive banking services across regions.

4.9.3.3 Branch Expansion in Unbanked Rural Areas:

To support the Direct Benefit Transfer (DBT) and Electronic Benefit Transfer (EBT) schemes, banks were instructed in May 2013 to accelerate branch expansion in unbanked rural areas. Public sector banks, in particular, took the lead in opening rural branches, thereby

enhancing physical access to banking services and facilitating the efficient implementation of government welfare programs.

4.9.3.4 Simplification of Know Your Customer (KYC) Norms:

To reduce procedural barriers and improve customer convenience, KYC norms were simplified. The RBI undertook measures to address operational inconveniences associated with account opening and portability, which contributed to an increase in the number of formal bank accounts during the period.

4.9.3.5 Expansion of ATM Infrastructure:

The geographic outreach of Automated Teller Machines (ATMs) continued to expand, with the total number of ATMs installed by scheduled commercial banks reaching approximately 0.2 million by March 2021, reflecting an annual growth of 9.7 percent. Public sector banks maintained a dominant share of over 70 percent in the total ATM network, underscoring their commitment to enhancing reminder access to cash-based services.

4.9.3.6 Correspondent Banking Model:

The RBI permitted banks to deliver financial services through intermediaries such as Business Facilitators and Business Correspondents. This model has enabled banks to offer basic banking services, including cash-in and cash-out transactions, closer to customers' locations, particularly in rural areas. The extensive deployment of BCs by PSBs has significantly improved access, availability, and usage of banking services at the grassroots level.

4.9.3.7 Financial Literacy Kiosk Project:

To promote financial awareness, pilot kiosk projects comprising interactive and non-interactive units were established in public locations across select states. These initiatives aimed to disseminate information on banking products and services, further strengthening the outreach of financial inclusion efforts.

4.9.3.8 Interest Subvention Scheme for MSMEs:

Introduced in 2018, the interest subvention scheme for Micro, Small, and Medium Enterprises (MSMEs) in manufacturing and services sought to enhance productivity and

encourage formalization through GST registration. Eligible MSMEs received a 2 percent interest subsidy for two years beginning in 2018–19, thereby reducing the cost of credit and supporting business growth.

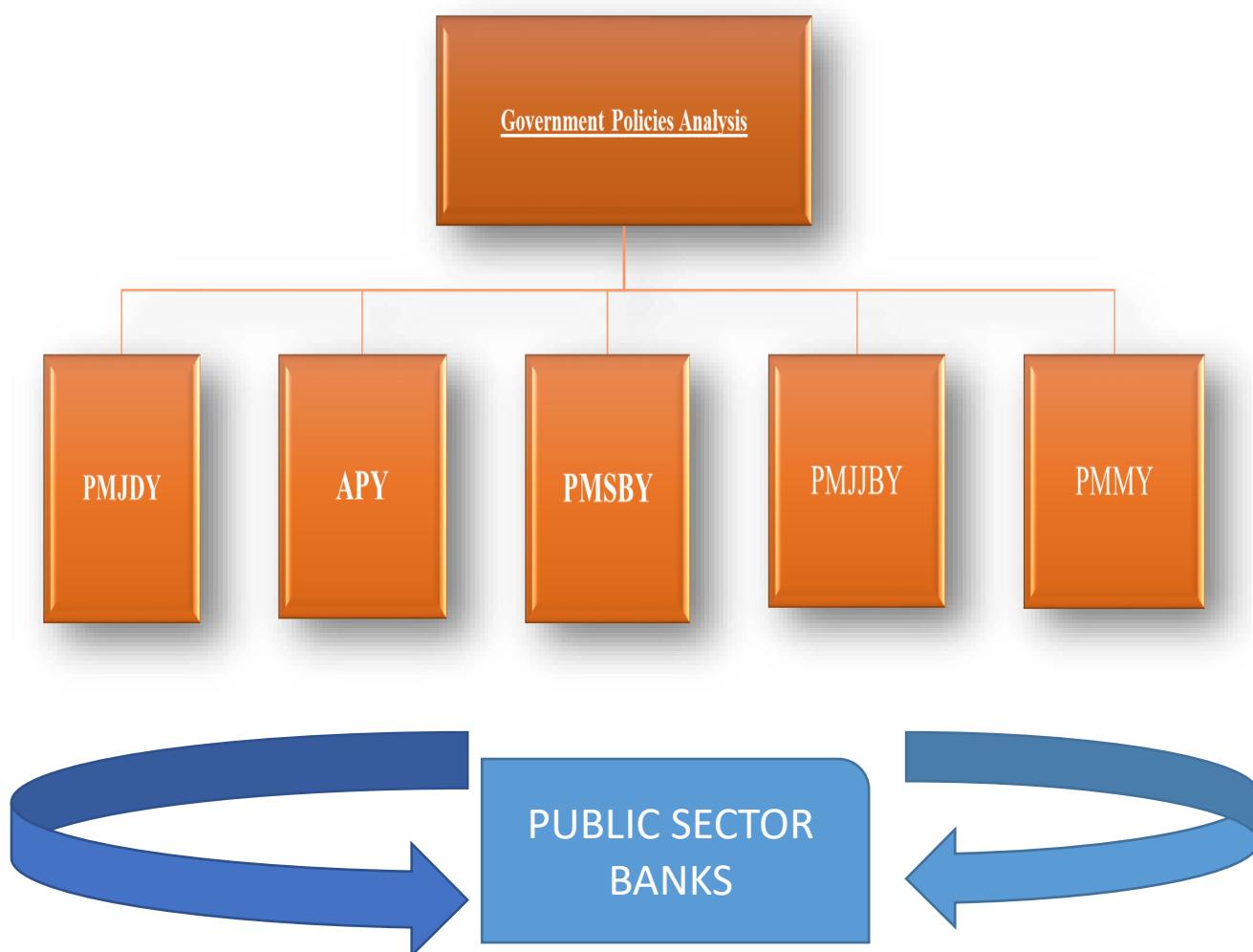
4.9.3.9 Kisan Credit Card (KCC) Scheme:

The KCC scheme provides farmers with timely and adequate credit through a simplified, single-window mechanism. The Union Budget 2018–19 extended this facility, along with interest subvention benefits, to farmers engaged in animal husbandry and fisheries for loans up to ₹2 lakh, thereby broadening the scope of agricultural credit inclusion.

4.9.3.10 Streamlining QR Code Infrastructure:

In October 2020, the RBI reinforced the interoperability of UPI QR and Bharat QR codes to promote digital payments. Amid the economic disruptions caused by the COVID-19 pandemic, regulatory priorities shifted toward economic stimulus and financial stability. During this period, deposits with PSBs grew at an accelerated pace, reflecting public confidence in their stability. Beyond digital payments, the RBI emphasized two key pillars of financial inclusion: advancements in financial technology (FinTech) and enhanced participation of women in the formal financial system. An analysis of government policies and regulatory initiatives clearly indicates the central role played by public sector banks in advancing financial inclusion in India. As of March 2022, approximately 79 percent of Pradhan Mantri Jan Dhan Yojana (PMJDY) accounts were opened by PSBs, followed by RRBs with 18 percent and private banks with 3 percent. PSBs also lead in the deployment of ATM infrastructure nationwide. In addition to banking outreach, complementary policy measures—such as social security schemes and RBI guidelines—have collectively contributed to the sustained growth of financial inclusion in the country.

Figure 4.23: Bank Group–Wise Performance of Policies under the Financial Inclusion Plan



Source: Researcher's own depiction

4.10 Conclusion

A country's monetary improvement relies on a sound financial framework, which can allocate monetary assets and channel them towards productive purposes, resulting in sound capital allocation. Bank nationalization was the first step towards monetary reform in a long time. Territorial provincial banks are established to provide banking and financial services to rural individuals. Financial inclusion is a significant policy concern for the RBI and the GOI. It is a prerequisite for inclusive growth and the nation's sustainable development. In this regard, the RBI and the GOI have made numerous efforts, including the relaxation of KCC norms, the

New BC, and the PMJDY, among others. Banks play a crucial role in promoting financial inclusion, as they are the foundation of financial inclusion, starting with the opening of a bank savings account. As a mixed economy, India has 12 public-sector banks that provide services more efficiently and effectively than private-sector ones. In the financial inclusion sector, the performance of PSBs is improved daily compared to PSBs and RRBs (Mala M.,2016; Muralidharan R.,2020; Yesu P., 2016; Thushara T.,2020). In this context, the role of PSBs is more significant because they cover more areas through their rural branches (Basic Statistical Return Report from 2012 to 2022).

The present analysis reaffirms that PSBs remain the principal drivers of financial inclusion in India and in Punjab. Data from the RBI and SLBC Punjab demonstrate that PSBs account for more than 70% of Basic Savings Bank Deposit Accounts (BSBDAs) and operate the widest network of rural and semi-urban branches, reinforcing their position as the primary institutions responsible for integrating unbanked and underbanked households into the formal financial ecosystem (RBI, 2023; SLBC Punjab, 2022). These findings align with previous scholarly work, which emphasizes the centrality of PSBs in expanding banking penetration and supporting inclusive economic development, particularly in geographically and socially disadvantaged regions (Mukherjee et al., 2012; Balasubramanian et al., 2020; Sarma, 2021). Beyond ensuring access, PSBs also demonstrate leadership in promoting the actual usage of financial services. They contribute the highest share in deposits, credit distribution, and digital transaction volumes in rural Punjab, especially in priority sectors such as smallholder agriculture, MSMEs, and low-income households. This validates the broader conceptual argument that access alone is insufficient; financial inclusion becomes meaningful only when individuals actively use financial services for productive activities and risk mitigation—an outcome that PSBs continue to facilitate effectively (Shruti et al., 2015; Demirgüç-Kunt et al., 2022).

Additionally, PSBs manage more than 60% of Business Correspondent (BC) service points, ensuring last-mile delivery of essential banking services. Their extensive physical presence, complemented by human-assisted digital channels, remains crucial for addressing geographical barriers and bridging persistent digital divides (Arora et al., 2019). Moreover, PSBs serve as the primary implementing agencies for government-led financial inclusion programmes, including PMJDY, APY, PMSBY, PMJJBY, and the Pradhan Mantri MUDRA Yojana (PMMY). Their leadership in account activations, beneficiary enrolments, and credit

disbursements—particularly to rural and vulnerable populations—reflects their central role in operationalizing India’s welfare-linked financial architecture (Chandrasekhar et al., 2019; Nandakumar, 2022).

Overall, the findings of the chapter indicate that public sector banks continue to play the most significant role in promoting financial inclusion in India and Punjab. At the same time, private sector banks and RRBs are increasingly contributing through digital innovation and localized rural outreach. Therefore, financial inclusion in India represents a collaborative framework in which different banking institutions contribute through complementary approaches toward socio-economic development. Furthermore, both empirical evidence and existing literature converge to underscore the enduring importance of PSBs in achieving India’s inclusive growth objectives. Strengthening PSBs, enhancing their technological capabilities, and developing performance metrics that prioritize inclusion outcomes over mere financial expansion will be critical for sustaining long-term socio-economic progress. As the financial landscape evolves, the strategic role of PSBs in bridging disparities and fostering equitable development will remain indispensable

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Chapter 5: Financial Inclusion and Socio-economic Development

5.1 Overview

Financial inclusion, with its transformative power, ensures access to financial services and timely and adequate credit for vulnerable and low-income groups at an affordable cost. It significantly boosts overall economic output, reduces poverty and income inequality (Rostagi, 2018), and fosters gender equality and women's empowerment (Mishra et al., 2024). These benefits are not just theoretical but have real-world implications. For instance, access to microfinance through self-help groups (SHGs) has improved and transformed the lives of women in rural areas, shifting them from the margins to the mainstream (Maity, 2016). This is just one of the many ways financial inclusions improve the lives of individuals and communities in tangible ways, inspiring hope and a brighter future.

The World Bank's recognition of FI as a global economic development (ED) tool (Beck & Demirguc-Kunt, 2008) significantly validates its importance. A significant step has been taken toward financial inclusion, and the number of adults without access to an account has steadily declined from 2.5 billion in 2011 to 1.7 billion in 2017 and 1.4 billion in 2021 (Global Findex database, 2021). In India, FI is not a novel concept. However, over time, the initiatives made for FI have evolved, inspiring a wave of change. The Reserve Bank of India (RBI) recently released the National Strategy for Financial Inclusion 2019-2024 on January 10, 2020. As of the fiscal year 2023, India's financial inclusion index was 60.1, according to the Reserve Bank of India. It rose from 43.4 in 2017 to its current state, indicating improved financial inclusion. The Financial Inclusion Index measures the extent of access to and usage of formal financial services, including banking, insurance, investments, pensions, and postal services.

Mishra et al. (2024) highlight the multifaceted nature of financial inclusion and its socioeconomic implications for sustainable development. It is essential to recognize that financial inclusion is not a straightforward concept, but rather a complex one with a profound impact on socioeconomic development. It influences various aspects, such as poverty reduction, gender equality, social stability, and innovation in financial services. Anarfo et al. (2019) stress the importance of considering these dimensions for effective policy-making, ensuring the audience knows the complexities involved. Some studies have even developed a multidimensional index to quantify financial inclusion (Anarfo et al., 2019; Gupte et al., 2012; Park & Mercado, 2018). The most commonly used indicators for financial inclusion include

branch penetration, access, and usage (Chavriya S., 2024; Rahma A., 2022) of financial services. Other researchers (Chattopadhyay, 2011; Yorulmaz, 2013; Gupta et al., 2014) have defined financial inclusion by considering three multi-dimensional elements of an inclusive financial strategy: the penetration of banks, the availability of banking amenities, and the use of banking services. Similarly, Maity (2016) found that participation in financial inclusion through microfinance, primarily via self-help groups (SHGs), has a significant impact on women's transition from the margins to the mainstream. Access to SHG loans has a positive impact on the socio-economic lives of rural women, empowering them to take control of their financial futures.

Existing research focuses on the direct benefits of financial inclusion, including enhanced economic security and poverty reduction (Demirguc-Kunt et al., 2018). Furthermore, the literature indicates that FI not only helps reduce poverty but also supports economic development, growth, and prosperity (Bhave, 2014; Bongomin et al., 2016). However, only a few studies have focused on the impact of financial inclusion on individuals' socio-economic growth. This paper seeks to address this gap by posing the following research question: Is the socio-economic development of customers affected by financial inclusion?

Furthermore, numerous studies have utilized banking institutions as indicators of financial inclusion (Ozili et al., 2023; Srinivasan et al., 2024; Maity et al., 2022). Several studies have shown that banks are India's most significant drivers of financial inclusion (Mishra et al., 2024; Shahid et al., 2022). As a result, this study used the banking sector as a supply-side criterion to assess financial inclusion. The present study examines three dimensions of financial inclusion: access, availability, and usage (Sarma, 2008). Mandira Sarma Index helps understand how well financial services reach marginalised and underserved communities, thus contributing to more inclusive development outcomes. This index has been utilized by various government agencies and the Central Bank to form reports and indices, such as the HDI and HPI. This research covers Punjab State's three largest public-sector banks (SLBC Reports), i.e., the STATE BANK OF INDIA, PUNJAB NATIONAL BANK, and PUNJAB & SIND BANK. These banks serve a more significant proportion of the rural population and cover the most incredible region of Punjab through their bank branches (SLBC Reports). To collect the data, a structured questionnaire was used in this study (Salathia, 2014). A set of questions was formulated within a questionnaire to assess the impact of financial inclusion on the socio-economic development of customers through the banking sector. In the current study, convenience sampling was used because respondents who met the conditions of age, area, and

bank account had to be identified. Before analysing the actual data, the negative response score was reserved. Then, Outliers were identified and removed from the sample, resulting in an adequate sample size of 436 respondents.

The present study contributes to the literature on financial inclusion in several ways, including the dimension of financial inclusion, the perception of customers towards access, availability, and usage, and the direct and indirect relationships among these constructs. There have been many studies on a few of the relationships among the constructs listed above (Naili et al., I. (2023); Amidzic et al., 2014; Swamy, 2013; Beck et al., 2009; Prabhakar et al., 2017; Kandpal, V. et al., 2023), but there is a shortage of studies concentrating comprehensively on the direct and indirect relationships among the constructs in a single model and a single study. Many empirical studies (Srinivasan et al., 2024; Maity et al., 2022; Shahid et al., 2022; Shah et al., 2022) have employed multiple regression to examine the relationship between the FI and socioeconomic determinants. This research employed PLS-SEM to test the hypothesized relationship and understand the impact of FI on customers' socio-economic development. This study helps the government and other policy-making agencies make inclusive and sustainable customer policies.

The sample of 436 customers was taken from the 15 districts of Punjab state. Before the finalization of 15 districts, the total number of districts in Punjab was divided into three categories: high population, low population, and medium population. Then, four districts from each category were shortlisted based on the high rural population. Furthermore, the selection of villages and branches was done through convenience sampling. Data was collected using a well-structured questionnaire survey. The financial inclusion dimension shall be assessed based on these criteria. i.e. Access to Banking Services (Srinivasan K. et al., 2024; Maity S. et al., 2022; Gupte et al., (2012), Arora (2012); Amidzic et al., (2014), Availability of Banking Services (Chakravarty et. al., 2010; Camara et.al., 2014; Kuri et.al., 2011; Gupta et al., 2014; Nandru et al., 2015), and Usage of the Banking Services (Sarma et.al., 2008; Kumar, 2011; Gupte et al., 2012) as independent variables and socio-economic indicators as the dependent variable.

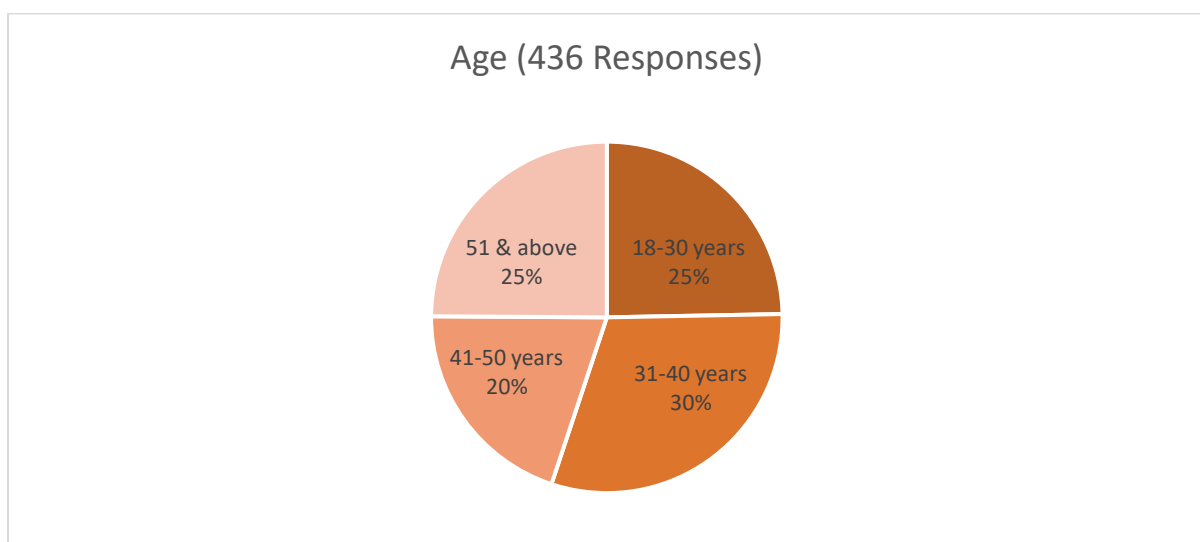
Under each dimension, questions were formulated to assess the accessibility, availability, and usage of banking services for financial inclusion. The items in the research instrument were based on a five-point Likert scale, ranging from strongly agree (1) to strongly disagree (2), and respondents were asked to record their responses. This study focuses on only those financial services that fall under the category of financial inclusion. A pilot study with

50 respondents was conducted after minor revisions to ensure the accuracy and functionality of the responses. As a result, this study had a sufficient sample size to conduct a statistical analysis. After that, EFA was performed using principal axis factoring analysis as the extraction technique, followed by a varimax rotation method. Furthermore, CFA was used to assess the goodness-of-fit statistics for measurement models, along with reliability and validity tests. The PLS-SEM method has been employed to explore and estimate the role of the research constructs in the present study's framework of financial inclusion (Cheah et al.; Hair et al., 2019). Hair et al. (2019) suggested that a two-step approach to data analysis has been adopted. The measurement model was assessed in the first step, and the structural model was evaluated in the second step. Another reason for using PLS-SEM is that it can effectively handle non-normal data (Hair et al., 2019).

5.2 Demographic Profile of Respondents

5.2.1 Age-wise description of Customers: The results indicate that the largest share of respondents belongs to the 31–40 age bracket, accounting for 30.4% of the overall sample. Those aged 18–30 make up 24.7%, while 20% of the participants fall into the 41–50 age range. Furthermore, 24.9% of respondents are over 50 years old. Overall, these findings imply that middle-aged individuals show a stronger interest in opening bank accounts and utilizing government-linked financial programs. These results clearly demonstrate that middle-aged individuals have a comparatively higher tendency to open bank accounts and take advantage of various government financial initiatives.

Figure 5.1: Age-wise description of Customers

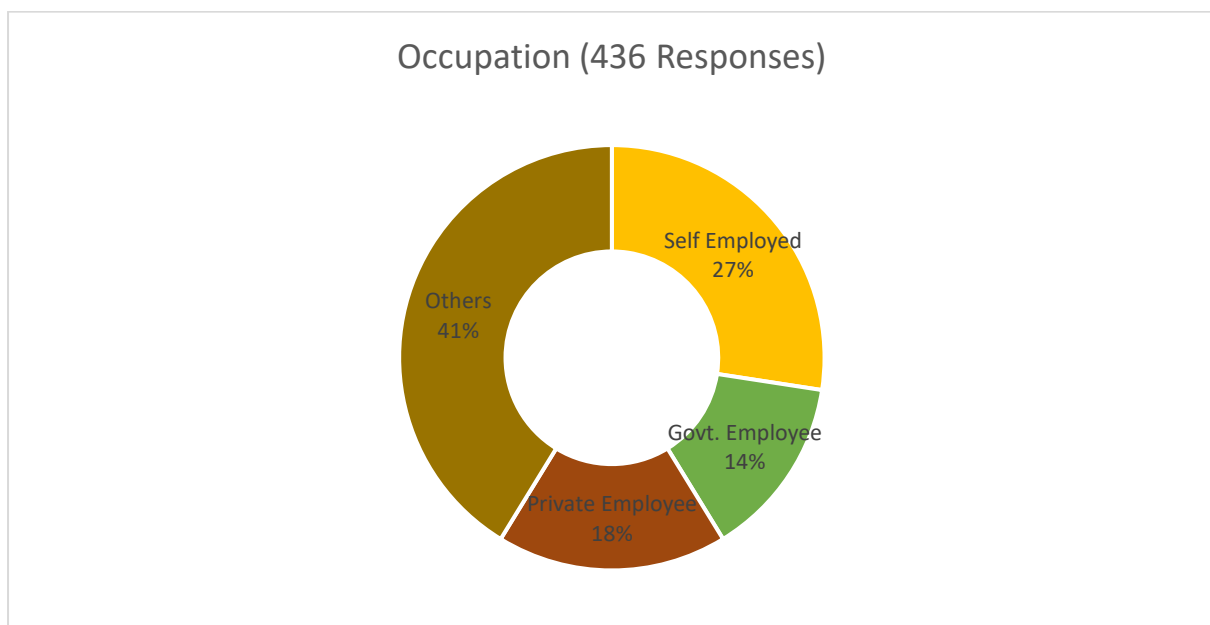


Source: Survey

5.2.2 Occupation-wise Details of the Customer

In terms of the occupational backgrounds of the respondents, the largest share (41.2%) falls into the ‘other’ category, which mainly encompasses freelance and informal workers. Following this, 27.4% of the respondents identify as self-employed, highlighting a notable number of individuals involved in independent income-generating ventures. Employees in the private sector represent 17.5% of the sample, while those working for the government make up 13.8%. These results indicate that the outreach of financial inclusion efforts extends beyond a single professional category. Rather, the initiative has effectively engaged a wide array of workforce segments, including salaried professionals from both government and private sectors, alongside freelancers and the self-employed. This illustrates that banking services and government-supported financial programs are increasingly becoming accessible and relevant to individuals from various occupational sectors.

Figure 5.2: Occupation-wise Details of the Customer



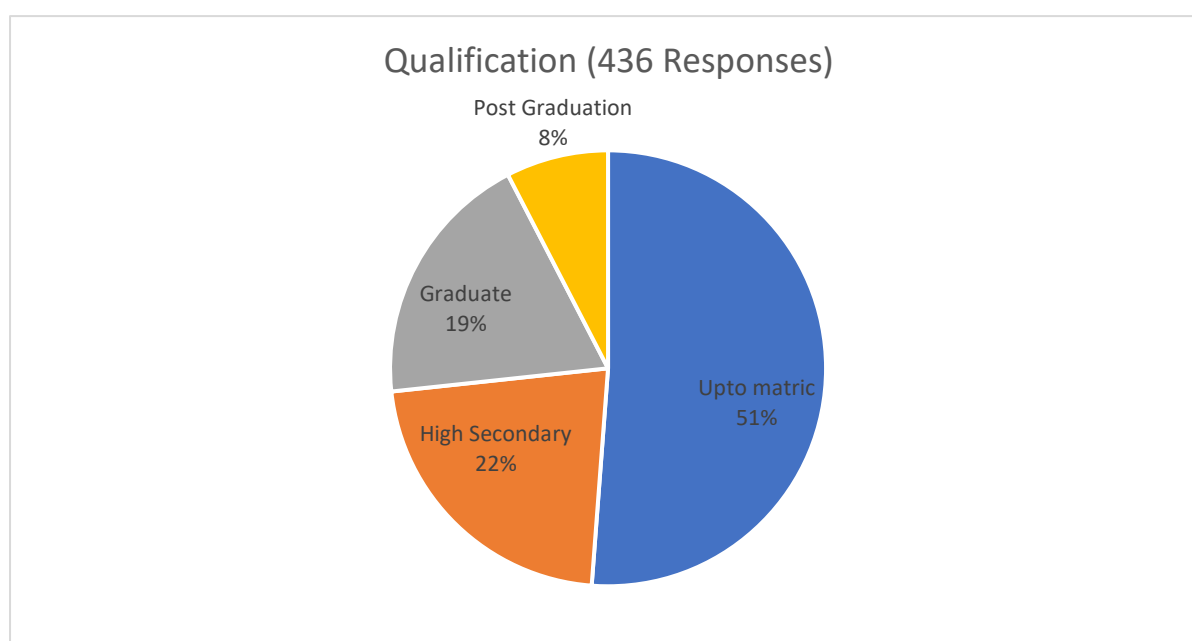
Source: Survey

5.2.3 Qualification-wise Details of Customers

The educational background of the participants indicates that a considerable percentage, 51.2%, have only completed their matriculation, which means that over half of the sample consists of individuals with basic education. Moreover, 22.1% of the respondents hold higher secondary qualifications, suggesting that there is a presence of moderately educated individuals within the financial system. Additionally, 19.1% of the surveyed customers are

degree holders, while 7.6% have achieved postgraduate degrees. Overall, these figures illustrate that involvement in the financial inclusion initiative is not confined to any specific educational group. Instead, people from a range of educational experiences—from those with basic education to those who are highly educated—are utilizing banking services and engaging with government financial programs. This supports the idea that financial inclusion efforts have been effective in reaching all societal segments, regardless of their educational background.

Figure 5.3: Qualification-wise Details of Customers



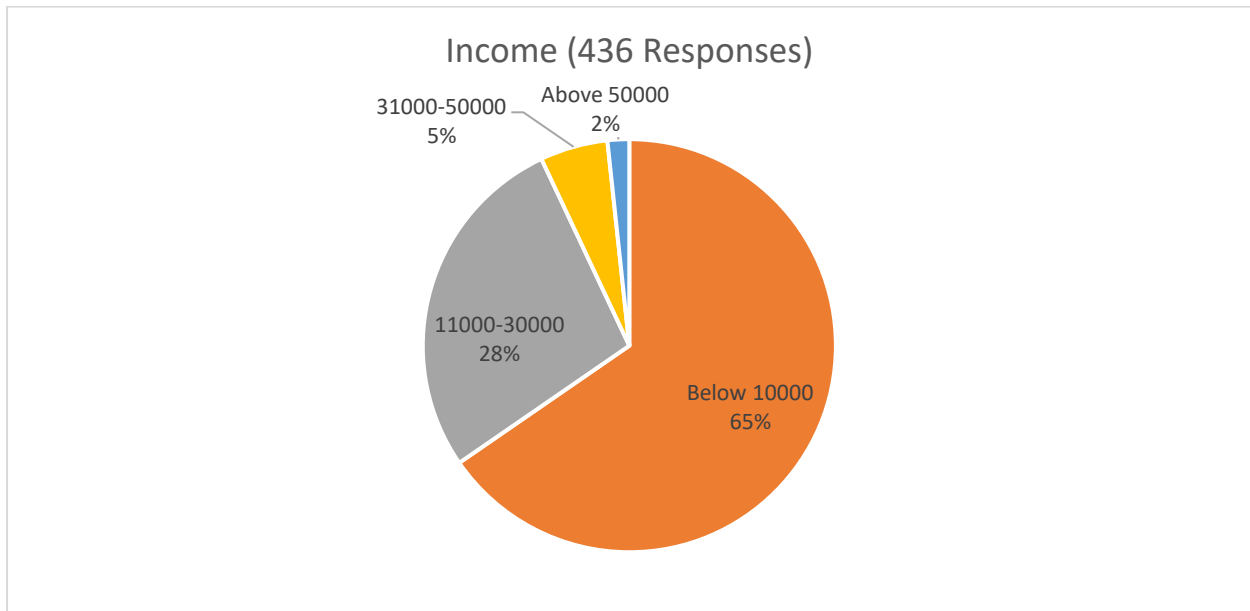
Source: Survey

5.2.4 Income-wise Details of Customers

The analysis of income among the respondents indicates that a significant majority, 65.4%, make less than ₹10,000 each month, showing that a large segment of customers belongs to the low-income group. Additionally, 27.6% of respondents are situated within the income bracket of ₹11,000–₹30,000, indicating a reasonable representation of lower–middle-income families. In comparison, only a minimal portion of respondents report monthly incomes in the range of ₹31,000–₹50,000, while an even smaller fraction earns over ₹50,000.

This uneven distribution toward lower-income levels underscores the magnitude of the financial inclusion issue, particularly in reaching those who are economically vulnerable and underserved in terms of financial services.

Figure 5.4: Income-wise Details of Customers

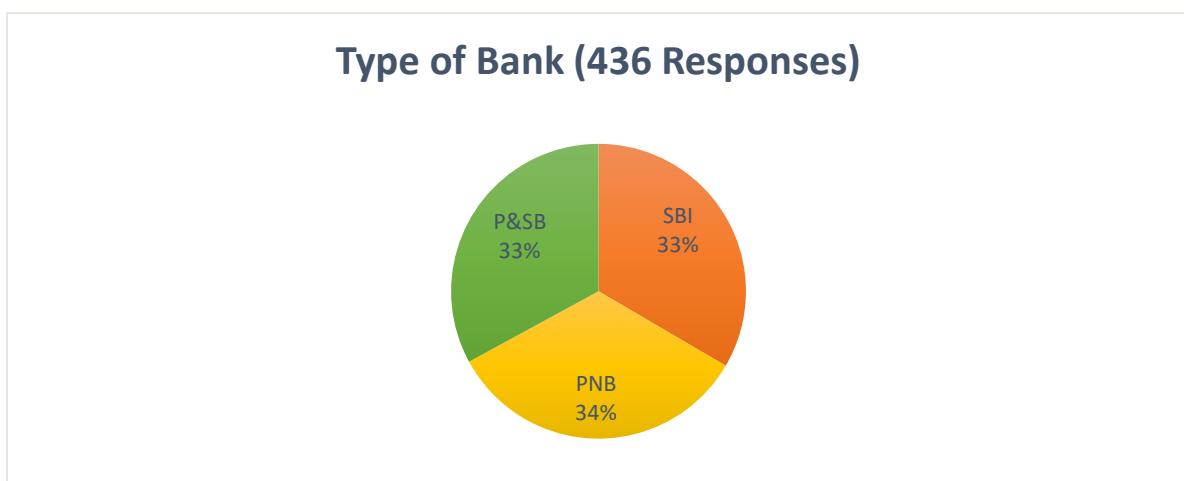


Source: Survey

5.2.4 Figure 5.5: Bank-wise Details of Customers

The respondents are distributed fairly evenly among the three chosen banks, reflecting a good representation in the sample. Specifically, 33.6% of participants are patrons of Punjab National Bank (PNB), 33.4% are clients of the State Bank of India (SBI), and 32.9% are linked to Punjab & Sind Bank (P&SB). This nearly equal distribution indicates that the data collection process successfully achieved a balanced representation across all three banks. These banks were intentionally selected due to their status as the leading public sector banks operating in Punjab, which together serve the majority of the population.

Figure 5.5: Bank-wise Details of Customers



Source: Survey

5.3 Data Analysis

This research investigates the relationship between financial inclusion and socio-economic development, offering evidence-based perspectives that are beneficial for policy development and practical application. The connection between financial inclusion and socio-economic development is examined through the following sub-headings.

5.3.1 Normality

5.3.2 Scale Purification & Exploratory Factor Analysis (EFA)

5.3.3 Partial Least Squares Structural Equation Modelling (PLS-SEM)

5.3.3.1 Evaluation of the measurement model

5.3.3.2 Evaluation of the Structural Model

5.3.1 Normality

Normality can be described as follows: “It is the shape of the data distribution or an individual metric variable and its correspondence to the normal distribution, which is the benchmark for statistical methods” (Hair et al., 2013). Furthermore, normality can be assessed visually or by using graphical analytical tools, such as histograms. Besides observing the distribution curve shape, checking the normality using two multivariate indices (skewness and kurtosis) is valid. In this research, the maximum tolerable observation limit values of up to +1 for testing skewness and up to +2 for testing kurtosis were considered appropriate (Byrne, 2010). When skewness and kurtosis are close to zero, the pattern of responses is regarded as a normal distribution (Hair et al., 2022).

5.3.2 Scale Purification & Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis (EFA) was employed to examine the underlying factor structure of the data by identifying the number of latent factors based on the observed relationships among variables. In accordance with the guidelines proposed by Hair et al. (2013), three criteria were applied during factor extraction. First, only factors with eigenvalues greater than one were retained. Second, items exhibiting factor loadings below 0.50 were excluded from further analysis. Finally, only items with factor loadings equal to or exceeding 0.50 were considered for inclusion in the final factor structure.

5.3.2.1 Access

The appropriateness of the dataset obtained from bank customers for factor analysis was assessed using the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett’s Test of Sphericity. The results revealed a KMO value within acceptable limits and a

statistically significant Bartlett's test ($p = 0.000$), confirming the presence of sufficient inter-correlations among variables and indicating the suitability of the data for factor analysis (Dess et al., 1997). Using R-mode principal axis factoring with varimax rotation, the access dimension was reduced from the initial ten statements to eight retained items. Both the KMO measure and Bartlett's test supported the adequacy of the factor solution. The communalities for the retained items ranged between 0.755 and 0.922, reflecting a strong degree of shared variance among the variables. Two items were eliminated from the construct due to inadequate factor loadings, as they failed to meet the minimum acceptable threshold of 0.50. The resulting factors and their characteristics are discussed below.

Factor 1 Access to Services

This factor Consists of four items, namely, "Account opening formalities are easy" (ACS1), "The bank is conveniently located" (ACS2), The banking alternate or its employee is easily approachable" (ACS3), and "ATM/Mobile ATM service is nearby from your place" (ACS4), are taken into consideration with a significant value. The factor loading lies between 0.755 and 0.892; these elements strongly highlight the significance of both physical and procedural access in promoting financial inclusion.

Factor 2 Employee Accessibility

This factor consists of four items: "The bank has sufficient staff to meet its banking operations" (ACE1), "Employees of the bank are cooperative, friendly, and respond well" (ACE2), "Employees possess sufficient banking information to deliver" (ACE3), and "Overall, you are satisfied with your access to banking services" (ACE4). All items significantly contribute to this factor, with loading values ranging from 0.875 to 0.922. This factor connotes that the accessibility of employees, behavior, and information is essential for the success of financial inclusion.

Reliability and Validity

The internal consistency of these factors is verified by Cronbach's alpha values that range from 0.851 to 0.915. The Average Variance Extracted (AVE) scores of 0.69 and 0.798 further validate convergent validity, confirming that the items effectively represent their respective factors (Hair et al., 1995).

5.3.2.2 Usage:

This factor includes four statements: regular deposit and withdrawal activities (USA1), overall satisfaction with banking services (USA2), reliance on banks for affordable loans (USA3), and frequent use of credit services (USA4). The KMO value, along with the Bartlett test of

sphericity, reveals acceptable and significant figures. The commonality for the four items ranges from 0.735 to 0.87, indicating a strong linear relationship among the variables. The EFA factor loading suggests that one factor was excluded from the analysis due to low factor loading (below the expected range of 0.50). A concise description of the resultant factors is provided below:

Factor 1 Service usage

This factor envisages four items focussing upon “You depose/withdraw the money frequently in the bank” (USA1), “Overall, you are satisfied with the usage of banking services” (USA2), and “You are using loan facilities of banks because the interest charged by the bank on loan is economical than charged by the money lenders” (USA3), “You frequently use the loan facilities of the bank”(USA4). The factor loading and commonalities exhibited significant results. Beneficiaries recognise that frequent visits are necessary to implement financial inclusion schemes effectively.

Reliability & Validity

One factor emerged after conducting scale purification within the Usage dimension. This factor exhibits strong reliability, as indicated by a Cronbach’s alpha of 0.818. The AVE value of 0.647 surpasses the recommended standard, confirming the validity of the construct and the consistency of its items.

5.3.2.3 Availability

The appropriateness of the dataset collected from bank customers for factor analysis was assessed using the Kaiser-Meyer-Olkin (KMO) index and Bartlett’s Test of Sphericity. The KMO value, accompanied by a highly significant p-value ($p = 0.000$), demonstrated the existence of adequate common variance and a suitable correlation matrix, as per the criteria set forth by Dess et al. (1997). Factor extraction was carried out using R-mode principal axis factoring with varimax rotation, which initially indicated an eight-item construct within the “Availability” dimension. The results of the KMO and Bartlett’s tests confirmed the suitability of the data for this analytical approach. Communalities values for the items spanned from 0.741 to 0.847, indicating robust linear relationships among the variables. Nevertheless, one item was eliminated from the analysis because its factor loading fell below the acceptable minimum of 0.50. Below is a summary of the remaining significant factors.

Factor 1 Service Availability

This Factor comprised of four items, “The loan is easily available” (AVLS1), “The Procedure involved in getting a loan is easy” (AVLS2), “Bank provides suitable insurance services”

(AVLS3), “Debit/Credit card facility easily accessible to you” (AVLS4),”. This factor leads to the availability of banking products, which reveals that the variable significantly and positively contributes to the factor. Further, one factor was deleted for the study due to low loading value.

Factor 2 Process Availability

It comprises four items mainly: “A zero balance account service is available in your bank”(AVLP1), “Information regarding new interest rates is provided and updated in time”(AVLP2),” Help desk/assisting staff are available for filling the withdrawal/ deposit form”(AVLP3), and “Overall, you are satisfied with banking services”(AVLP4). The factor depicts that banks should not only focus on making various products and services available but also give due consideration to lending a helping hand to the customers.

Reliability and Validity

Cronbach’s alpha values range from 0.818 to 0.853, confirming internal consistency across these measures. The AVE scores, which fall between 0.629 and 0.692, suggest an adequate level of validity for both subdimensions.

5.3.2.4 Economic Development

To evaluate the suitability of the data collected from bank customers for factor analysis, both the Kaiser-Meyer-Olkin (KMO) statistic and Bartlett’s Test of Sphericity were utilized. The KMO measure indicated adequate sampling, while Bartlett’s test yielded a highly significant p-value (0.000), confirming sufficient correlations among the variables, as indicated by Dess et al. (1997). Through principal axis factoring with varimax rotation, the analysis uncovered nine statements that adequately represented the construct of economic development. One item was excluded because its factor loading was below the acceptable threshold of 0.50. The communalities of the retained statements ranged from 0.894 to 0.932, indicating strong correlations among the variables and a high level of shared variance. These findings confirm the internal consistency of the construct and affirm its reliability as a crucial element in the overall evaluation of financial inclusion.

Factor 1 Income Growth

It comprises three items: “FI has reduced your need to borrow money or goods” (EDI1),” FI has raised your living standard” (EDI2), and “FI has increased the per capita income of your family” (EDI3). Under Economic Development, this factor indicates that raising standards improves per capita income, strengthening customers' economic strength.

Factor 2 Growth in Savings

This factor includes three items: “FI enables you and your family to enjoy better economic status” (EDS1), “FI created new employment opportunities” (EDS2), and “FI directly positively affects capital formation & investment” (EDS3). This factor reflects the perception that the creation of new job opportunities and the rise in technological investments contribute to making individuals more financially stable and empowered.

Factor 3 Growth in Wealth

FI has prepared you for financial emergencies” (EDW1), “You are assisted while deciding where savings are to be used” (EDW2), and “Overall, FI has led to economic development” (EDW3). This factor highlights that the ability to handle emergencies, increased purchasing capacity, and improved standards of living are key elements of economic empowerment.

Reliability and Validity

The reliability coefficients range from 0.877 to 0.914, ensuring the strength of the measures. The AVE values, ranging from 0.796 to 0.853, affirm excellent construct validity and reflect the economic contributions resulting from financial inclusion.

5.3.2.5 Social Development

The suitability of the raw data obtained from bank customers for factor analysis was assessed through the Kaiser-Meyer-Olkin (KMO) measure and Bartlett’s test of sphericity. The KMO value, together with a statistically significant result from Bartlett’s test ($p = 0.000$), confirmed adequate sampling adequacy and indicated that there were sufficient intercorrelations among the variables (Dess et al., 1997). By using R-mode principal axis factoring with varimax rotation, we were able to identify a construct made up of eight items linked to social development. The communalities for these items ranged from 0.734 to 0.758, indicating a robust linear relationship among the variables. Two items were removed from the analysis because their factor loadings fell below the acceptable limit of 0.50, ensuring that the remaining items were meaningful to the construct. A comprehensive interpretation of the extracted factors follows below.

Factor 1 Self-Determination

This factor encompasses five items: “FI has changed your personality and lifestyle” (SDT1), “You feel good about participating in any community activity” (SDT2), “FI has made you independent in decision-making” (SDT3), “FI has improved your technical skills” (SDT4), and “I improved your health and household hygiene” (SDT5). These factors summarize how

financial inclusion leads to personal development, manifested through personality changes, community involvement, autonomy in decision-making, skill enhancement, and improved hygiene practices.

Factor 2 Subjective Well-being

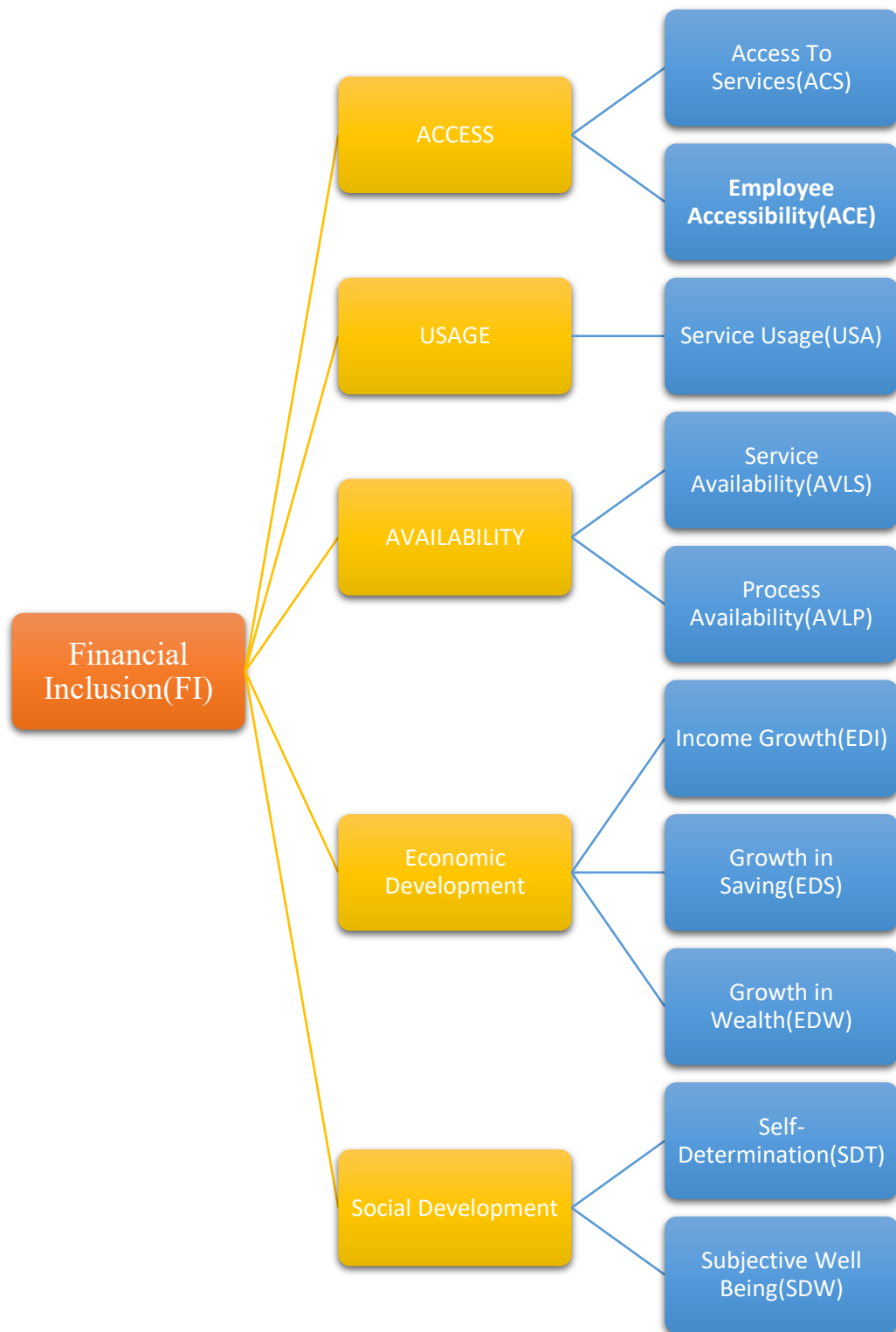
Three items included in this factor are “FI has empowered you to move to all public places freely” (SDW1), “Your response and feedback are always appreciated regarding any financial issue” (SDW2), and “You are socially more developed after being covered under FI drive” (SDW3). These factors all illustrate increased freedom, recognition of customer feedback, and overall enhancement in social engagement because of being integrated into the formal financial system.

Reliability and Validity

Following the purification of the scale, two factors were identified within the Social Development construct. The internal consistency of these factors was evaluated using Cronbach’s alpha, with reliability coefficients for the eight associated items ranging from 0.82 to 0.92. These values substantially exceed the minimum acceptable threshold of 0.50 recommended by Brown et al. (2001), indicating a high level of internal consistency and measurement reliability. Overall, the reliability of the factors is deemed robust, supporting the soundness of the underlying construct.

Figure 5.6 Dimension of Financial inclusion and socio-economic development along with their indicators

Figure 5.6: EFA Structure



Source: Researcher's own depiction

5.3.3 Partial Least Squares Structural Equation Modelling (PLS-SEM)

The SEM method is a vital component of applied multivariate statistical analysis. A variety of researchers have applied this technique across different domains, including biology, economics, education, marketing, medicine, and the social and behavioral sciences (Anderson

et al, 1988). In essence, SEM can be viewed as a statistical method that uses a confirmatory strategy (i.e., hypothesis testing) to assess a theoretical framework related to a specific phenomenon (Byrne, 2013a). Generally, SEM is seen as a theoretical model that reveals "causal" methods, presenting insights about several variables (Gefen et al., 2000; Hair et al., 2011). This approach consists of two primary concepts: a) that a collection of structural (i.e., regression) equations, which take into account measurement errors, represent the causal processes being examined, and b) that these structural relationships can be visually depicted to improve understanding and aid in elucidating the theory and hypotheses being investigated (Roldán et al., 2012; Wong, 2013). All analyses were conducted using R and R Studio (Robert et al., 1993).

5.3.3.1 Evaluation of the Measurement Model

- **Assessment of Reflective Measurement Model**

To evaluate the measurement model, the analysis was conducted in several steps. First, the indicator loadings were tested, followed by examining internal consistency reliability and validity, in line with the recommendations of Hair et al. (2017). According to Hair et al. (2018), a standardized loading of 0.708 or higher is considered satisfactory. The outer loadings obtained for the measurement model are shown in Table 5.1. These results cover the constructs: Access to Services (ACS), Employee Accessibility (ACE), Service Usage (USA), Availability of Services (AVLS), Process Availability (AVLP), Income Growth (EDI), Growth in Savings (EDS), Growth in Wealth (EDW), Self-Determination (SDT), and Subjective Well-being (SDW).

Table 5.1: Summary of Outer loading

Construct (Dimension)	Measurement Items	Factor Loading Range
Access to Service (ACS)	ACS1–ACS4	0.76 – 0.89
Employee Accessibility (ACE)	ACE1–ACE4	0.88 – 0.92
Service Usage (USA)	USA1–USA4	0.74 – 0.87
Services Availability (AVLS)	AVLS1–AVLS4	0.74 – 0.89
Process Availability (AVLP)	AVLP1–AVLP4	0.75 – 0.87
Economic Development – Income Growth (EDI)	EDI1–EDI3	0.88 – 0.91
Economic Development – Growth in Savings (EDS)	EDS1–EDS3	0.85 – 0.91
Economic Development –Growth in Wealth (EDW)	EDW1–EDW3	0.91 – 0.93
Social Development – Self Determination (SDT)	SDT1–SDT5	0.82 – 0.90

Social Development – Subjective well-being (SDW)	SDW1–SDW3	0.77 – 0.91
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Source: Author's calculation

Cronbach's Alpha was employed to assess internal consistency, with a threshold of 0.70. Composite Reliability (CR) values greater than 0.70 and Average Variance Extracted (AVE) values above 0.50 indicated convergent validity (Hair et al., 2017). Table 5.2 summarizes the reliability and validity statistics, all of which exceed the required benchmarks, thereby confirming that the constructs possess acceptable levels of reliability and validity.

Table 5.2: Summary of Reliability and Validity

Construct / Dimension	Cronbach's Alpha	Composite Reliability	AVE
Access to Service (ACS)	0.85	0.90	0.69
Employee Accessibility (ACE)	0.92	0.94	0.80
Service Usage (USA)	0.82	0.88	0.65
Services Availability (AVLS)	0.82	0.87	0.63
Process Availability (AVLP)	0.85	0.90	0.69
Economic Development – Income Growth (EDI)	0.88	0.92	0.80
Economic Development Growth in Savings (EDS)	0.87	0.92	0.80
Economic Development – Growth in Wealth (EDW)	0.91	0.95	0.85
Social Development – Self-Determination (SDT)	0.92	0.94	0.76
Social Development – Subjective Well-being (SDW)	0.82	0.89	0.73

Source: Author's calculation

Discriminant validity was assessed using the heterotrait-monotrait ratio (HTMT), following Henseler et al. (2015). All HTMT values fell below 0.90, confirming that the constructs are distinct from one another. Fornell and Larcker's (1981) criterion was also applied by comparing the square root of AVE values with inter-construct correlations. As shown in the tables, all results are within acceptable limits, supporting discriminant validity.

Table 5.3: Summary of Discriminant Validity

	ACS	ACE	USA	AVLS	AVLP	EDI	EDS	EDW	SDT
ACE	0.35								

USA	0.349	0.43							
AVLS	0.152	0.213	0.253	.					
AVLP	0.366	0.414	0.443	0.248					
EDI	0.532	0.631	0.655	0.499	0.701				
EDS	0.457	0.634	0.528	0.404	0.646	0.812			
EDW	0.466	0.665	0.596	0.429	0.559	0.842	0.809		
SDT	0.485	0.659	0.636	0.458	0.547	0.826	0.801	0.843	
SDW	0.498	0.647	0.609	0.429	0.641	0.846	0.843	0.829	0.817

Source: Author's Calculations

Fornell and Larcker (1981) proposed a conventional metric that suggests the Average Variance Extracted (AVE) for each construct should be evaluated in relation to the squared correlations between constructs, reflecting the concept of shared variance. According to Hair et al. (2018), no construct's value should be greater than its AVE. The FL Criteria table presents the square root of the AVE along the diagonal, with the correlations between constructs located in the lower triangle, indicating that these figures do not exceed their respective AVEs (Table IV). All values fall within the acceptable limits.

Table 5.4: Summary of Fornell and Larcker

	ACS	ACE	USA	AVLS	AVLP	EDI	EDS	EDW	SDT	SDW
ACS	0.831									
ACE	0.329	0.893								
USA	0.311	0.385	0.804							
AVLS	0.17	0.253	0.255	0.793						
AVLP	0.331	0.383	0.395	0.251	0.832					
EDI	0.471	0.567	0.567	0.478	0.62	0.896				
EDS	0.416	0.576	0.468	0.396	0.572	0.716	0.892			
EDW	0.429	0.609	0.528	0.431	0.508	0.756	0.728	0.924		
SDT	0.448	0.608	0.565	0.458	0.502	0.743	0.723	0.775	0.871	
SDW	0.44	0.576	0.522	0.409	0.561	0.73	0.72	0.728	0.72	0.857

Source: Author's Calculations

5.3.3.2 Assessment of the Structural Model

After validating the measurement model, an analysis of the structural model was performed to evaluate the proposed relationships among the latent constructs, following the guidelines set forth by Hair et al. (2017). The assessment concentrated on the significance of the path coefficients, the explanatory power indicated through the R^2 values, and the model's predictive relevance, with the outcomes detailed in Table 5.5. The structural model includes

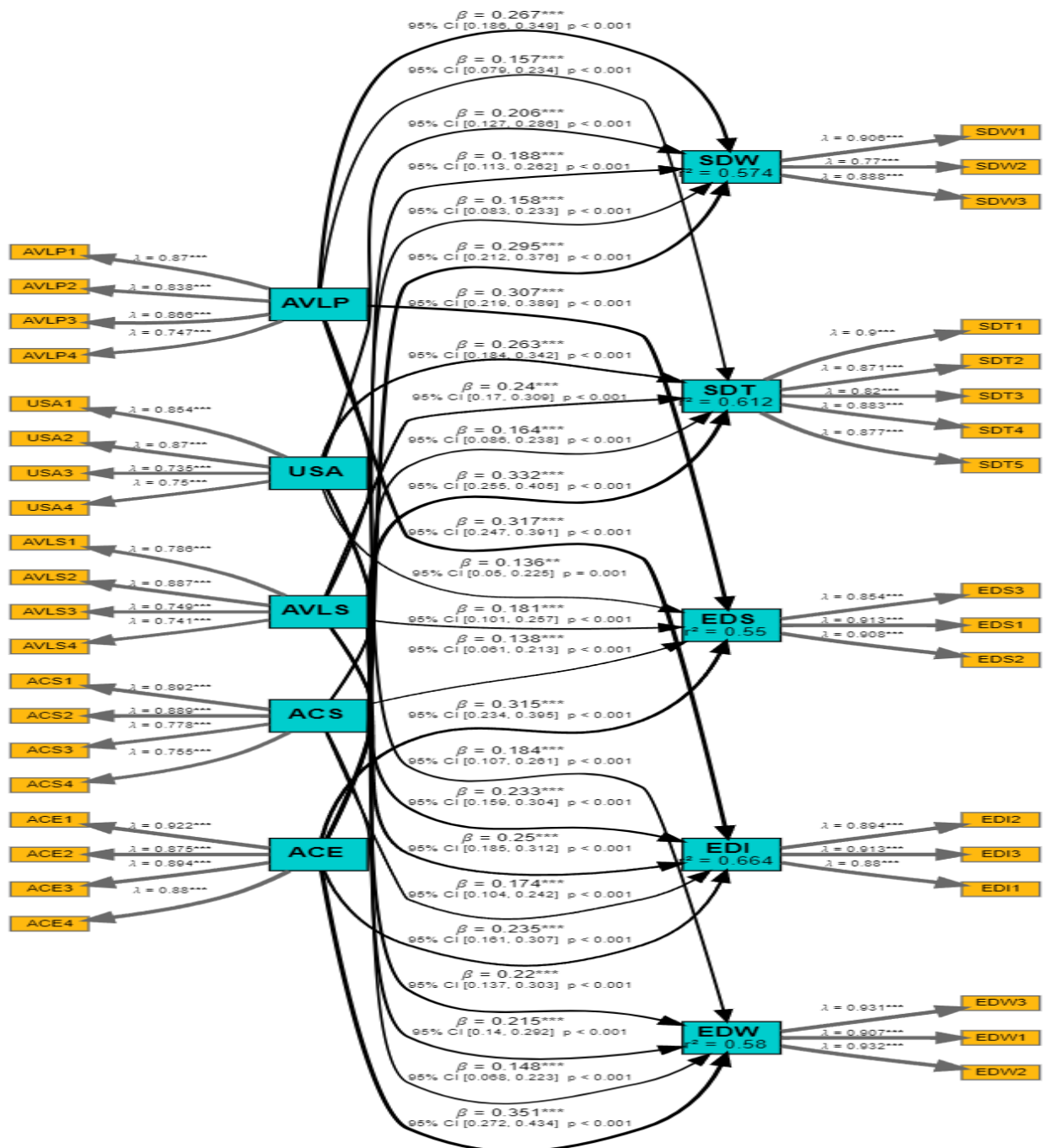
directional (single-headed) paths as outlined in the hypotheses, connecting exogenous constructs to endogenous outcomes. Specifically, the model features paths from Access to Services (ACS) to EDI, EDS, EDW, SDT, and SDW; from AVLS (Service Availability) to EDI, EDS, EDW, SDT, and SDW; from Usage of Services (USA) to EDI, EDS, EDW, SDT, and SDW; and from Service Availability (AVLS) and Process Availability (AVLP) to EDI, EDS, EDW, SDT, and SDW. These structural connections cumulatively capture the direct effects proposed in the conceptual framework and provide the foundation for interpreting the model's overall explanatory and predictive abilities.

Table 5.5: Summary of Structural model

Financial Inclusion Dimension	Socio-Economic Factor	Beta (β)	t-Statistic	p-value	Remarks
Access to Services (ACS)	EDI	0.174	4.928	0.000	Supported
	EDS	0.138	3.505	0.000	Supported
	EDW	0.148	3.732	0.000	Supported
	SDT	0.164	4.262	0.000	Supported
	SDW	0.158	4.100	0.000	Supported
Employee Accessibility (ACE)	EDI	0.235	6.280	0.000	Supported
	EDS	0.315	7.646	0.000	Supported
	EDW	0.351	8.564	0.000	Supported
	SDT	0.332	8.556	0.000	Supported
	SDW	0.295	7.014	0.000	Supported
Usage (USA)	EDI	0.233	6.378	0.000	Supported
	EDS	0.136	3.051	0.000	Supported
	EDW	0.220	5.167	0.000	Supported
	SDT	0.263	6.532	0.000	Supported
	SDW	0.206	5.125	0.000	Supported
Availability–Services (AVLS)	EDI	0.250	7.765	0.000	Supported
	EDS	0.181	4.590	0.000	Supported
	EDW	0.215	5.672	0.000	Supported
	SDT	0.240	6.719	0.000	Supported
	SDW	0.188	4.992	0.000	Supported
Availability–Process (AVLP)	EDI	0.317	8.638	0.000	Supported
	EDS	0.307	7.004	0.000	Supported
	EDW	0.184	4.652	0.000	Supported
	SDT	0.157	3.927	0.000	Supported
	SDW	0.267	6.373	0.000	Supported

Source: Author's Calculations

Figure 5.7: Summary of Structural model



Source: Author's Calculations

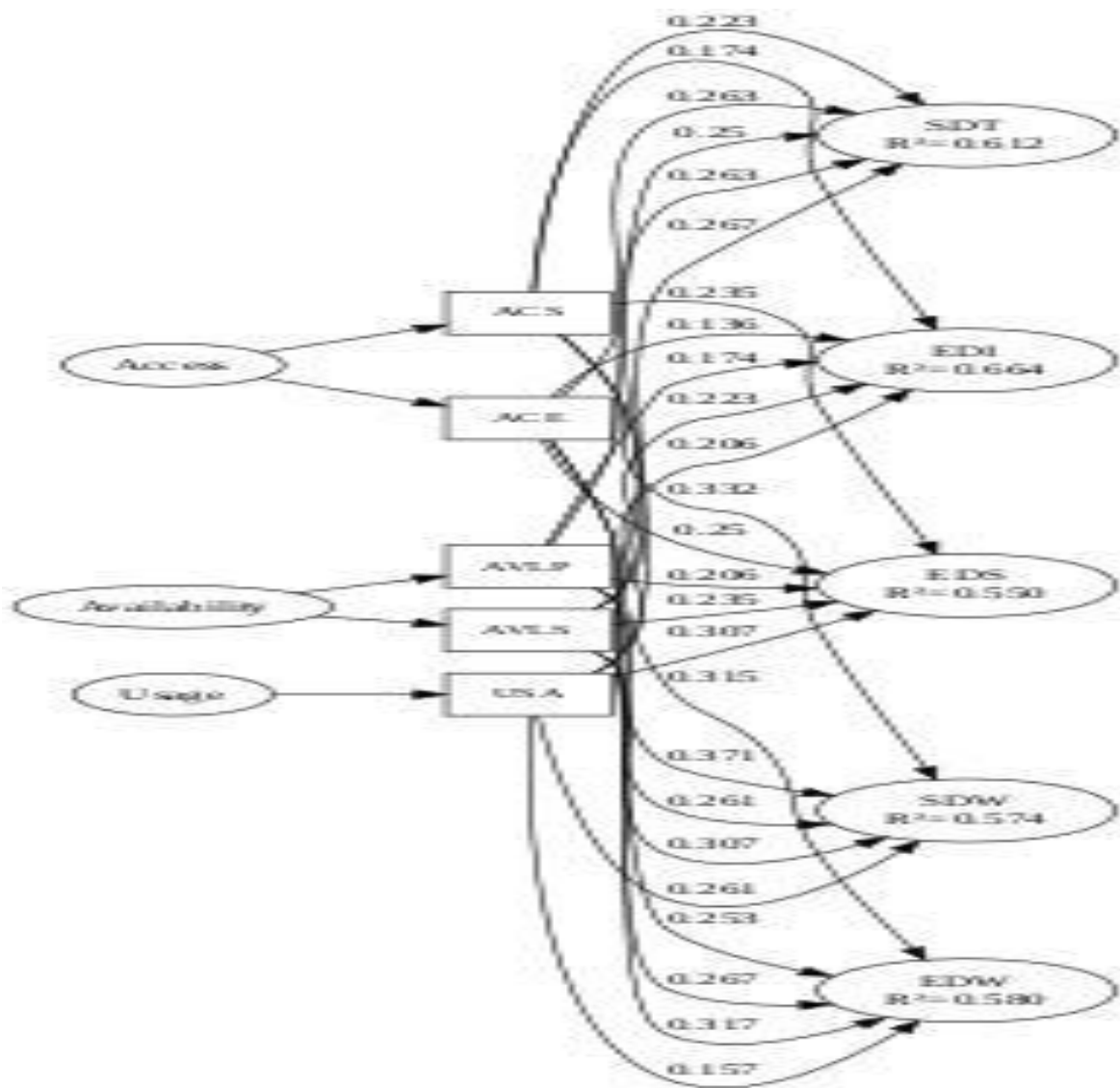
The proposed model was developed to evaluate the effect of financial inclusion on socio-economic growth. The examination indicates that Access to Services (ACS) significantly affects Economic Development, particularly as evidenced by economic metrics such as EDI ($B = 0.174$, $t = 4.928$, $P < 0.00$), EDS ($B = 0.138$, $t = 3.505$, $P < 0.00$), and EDW ($B = 0.148$, $t = 3.732$, $P < 0.00$). Likewise, ACS shows a constructive influence on dimensions of Social Development, encompassing SDT ($B = 0.164$, $t = 4.262$, $P < 0.00$) and SDW ($B = 0.158$, $t = 4.1$, $P < 0.00$). Furthermore, Employee Accessibility (ACE) demonstrates a robust and

statistically relevant association with both Economic Development—EDI ($B = 0.235$, $t = 6.28$, $P < 0.00$), EDS ($B = 0.315$, $t = 7.646$, $P < 0.00$), EDW ($B = 0.351$, $t = 8.564$, $P < 0.00$)—and Social Development—SDT ($B = 0.332$, $t = 8.556$, $P < 0.00$), SDW ($B = 0.295$, $t = 7.014$, $P < 0.00$).

Additionally, the Usage dimension (USA) also has a significant effect on economic outcomes—EDI ($B = 0.233$, $t = 6.378$, $P < 0.00$), EDS ($B = 0.136$, $t = 3.051$, $P < 0.00$), EDW ($B = 0.22$, $t = 5.167$, $P < 0.00$)—as well as on social factors—SDT ($B = 0.263$, $t = 6.532$, $P < 0.00$) and SDW ($B = 0.206$, $t = 5.125$, $P < 0.00$). Similarly, the Availability of Services (AVLS) exerts significant impacts on economic variables—EDI ($B = 0.25$, $t = 7.765$, $P < 0.00$), EDS ($B = 0.181$, $t = 4.59$, $P < 0.00$), EDW ($B = 0.215$, $t = 5.672$, $P < 0.00$)—and on social metrics—SDT ($B = 0.24$, $t = 6.719$, $P < 0.00$) and SDW ($B = 0.188$, $t = 4.992$, $P < 0.00$). Finally, the Process Availability (AVLP) also plays a significant role in economic development, with EDI ($B = 0.317$, $t = 8.638$, $P < 0.00$), EDS ($B = 0.307$, $t = 7.004$, $P < 0.00$), and EDW ($B = 0.184$, $t = 4.652$, $P < 0.00$), while also extending its impact to social development, indicated by SDT ($B = 0.157$, $t = 3.927$, $P < 0.00$) and SDW ($B = 0.267$, $t = 6.373$, $P < 0.00$).

Figure 5.7 represent structural model values. The structural pathways further highlight meaningful and positive connections between financial inclusion and developmental results. In particular, Access to financial services (ACS and ACE) emerged as one of the most influential factors, significantly affecting economic development indicators like Income Growth (EDI) Growth in Savings (EDS), Growth in Wealth (EDW). This suggests that the presence of financial resources—whether through physical branches, digital platforms, or straightforward procedures—plays an essential role in improving individuals' economic opportunities and capacity for income generation. Likewise, Usage (USA) showed a strong impact on social development dimensions (SDT and SDW), indicating that when people engage actively with financial services—such as savings, credit, and digital transactions—their social empowerment, confidence, and general well-being significantly improve. Availability (AVLP and AVLS), although having a somewhat lesser impact, still exhibited meaningful effects on both social and economic development. This reflects that infrastructure support, including ATMs, efficient banking staff, and dependable service delivery, positively influences the overall process of financial inclusion.

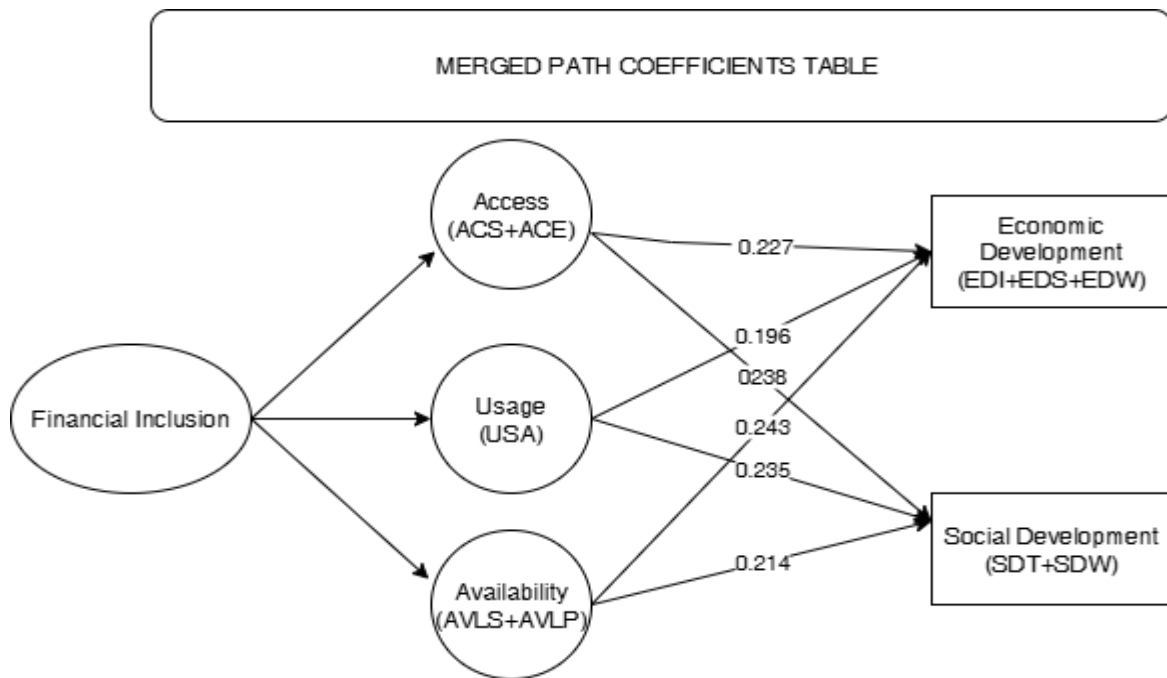
Figure 5.8 PLS-SEM Structural Model of Financial Inclusion and Socio-Economic Development



Source: Author's Calculations

Under the summary of model ACS and ACE combine represents access dimension of financial inclusion, USA represents Usage dimension and AVLS and AVL9 represents availability dimension. Figure 5.8 indicates a summarised value of structural model. These values indicate that the model possesses strong predictive capacity, underscoring the significance of financial inclusion in advancing both social change and economic growth. In conclusion, this study has been concluded that financial services those come under financial inclusion has direct impact on social and economic development of the customers. Further, these results confirm that financial inclusion extends beyond mere access; it becomes even more impactful when individuals actively utilize the services available to them. Increased access and utilization of financial products not only foster economic well-being but also enhance social development by empowering individuals and improving their quality of life.

Figure 5.9 Merged Path Coefficients



Source: Author's Calculations

The combined path coefficients reveal that all aspects of financial inclusion i.e Access, Usage, and Availability have a positive effect on socio-economic development. Access, which integrates ACS and ACE, significantly influences both economic and social development, with path coefficients of 0.227 and 0.238, respectively. This indicates that increased access to financial services not only improves economic indicators like income, savings, and wealth but also reinforces social factors such as social trust and well-being. The usage of financial services, denoted by USA, also positively impacts socio-economic development, though to a slightly lesser extent than access, with coefficients of 0.196 for economic development and 0.235 for social development. This underscores that regular use of financial services fosters both economic progress and social empowerment. The availability of financial products and services, combined from AVLS and AVLP, demonstrates the strongest influence on economic development 0.243 and a moderate effect on social development 0.214, highlighting the significance of having financial resources accessible when required. In summary, these findings indicate that all three dimensions of financial inclusion are crucial for promoting both economic and social development, with access being the most impactful for social outcomes and availability being the most crucial for economic outcomes.

Table 5.6: Coefficient of determination (R^2)

Dependent Variable	R ²	Adj. R ²	Variance Explained (%)
EDI (Economic Development – Income)	0.664	0.660	66.35%
EDS (Economic Development – Savings)	0.550	0.544	54.96%
EDW (Economic Development – Wealth)	0.580	0.575	58.00%
SDT (Social Development – Self Determination)	0.612	0.608	61.21%
SDW (Social Development -Subjective Well-being)	0.574	0.569	57.44%

Source: Author's Calculations

To evaluate the strength of the structural model, the coefficient of determination (R^2) and the adjusted coefficient of determination (Adj. R^2) were analyzed. The R^2 values represent the percentage of variance in the endogenous constructs explained by the exogenous constructs, using benchmarks of 0.75 (substantial), 0.50 (moderate), and 0.25 (weak) explanatory power (Henseler et al., 2009; Hair et al., 2011).

In this analysis, the R^2 values for the dependent variables fall between 0.55 and 0.66, indicating moderate explanatory power. Specifically, dimensions of financial inclusion account for 66.35% of the variance in EDI, 54.96% in EDS, 58.00% in EDW, 61.21% in SDT, and 57.44% in SDW. The adjusted R^2 values, which account for the complexity of the model, reinforce these findings: 0.66 for EDI, 0.54 for EDS, 0.58 for EDW, 0.61 for SDT, and 0.57 for SDW. In summary, these results indicate that the independent constructs—access, availability, and usage—explain over half of the variance in the dimensions of socio-economic development, underscoring the important role of financial inclusion in the model i.e Under Social Development, financial inclusion significantly fosters both Self-Determination (SDT) Subjective Well-being (SDW)among customers, with R^2 exceeding 57%. This indicates that when banking services are more accessible, usable, and available, they directly improve individuals' quality of life and socio-economic transformation.

Financial inclusion explains 55–66% of the variance in Income Growth, Growth in Savings, and Growth in wealth. The high effect of Usage indicates that mere access or availability is insufficient active utilization of financial services is the key to achieving socio-economic impact. These findings demonstrate that financial inclusion is not merely associated with banking access but significantly contributes toward improving customers' economic stability and social empowerment. The comparatively higher explanatory power for income development suggests that financial inclusion initiatives are more effective in enhancing

income generation opportunities and financial security. However, the moderate R^2 values also indicate that socio-economic development is influenced by additional factors beyond financial inclusion, such as education, employment opportunities, and social infrastructure.

Table 5.7: Summary of F^2 Effect size

Exogenous Variable	EDI	EDS	EDW	SDT	SDW	Interpretation
ACS (Access to Services)	0.073	0.099	0.043	0.057	0.051	Small effect
ACE (Employee Accessibility)	0.124	0.166	0.219	0.213	0.154	Medium effect
USA (Usage of Services)	0.121	0.032		0.133	0.075	Medium effect
AVLS (Service Availability)	0.166	0.061		0.130	0.070	Medium effect
AVLP (Process Availability)	0.221	0.151	0.060	0.047	0.123	Medium to large effect

Source: Author's Calculations

The effect size (F^2) evaluates the relative significance of each exogenous construct in enhancing the explanatory power of the model. It quantifies the variation in R^2 when a specific construct is removed, thereby reflecting its importance in forecasting the endogenous variables (Cohen, 1988; Hair et al., 2018). Based on predefined thresholds, effect sizes of 0.02, 0.15, and 0.35 are classified as small, medium, and large, respectively, whereas values below 0.02 imply minimal impact (Hair et al., 011).

As depicted in Table 5.7, the access to services (ACS) dimension shows small yet consistent effects across all endogenous variables, highlighting its function as a supportive factor for financial inclusion. Employee accessibility (ACE) presents medium effect sizes on EDI, EDS, EDW, SDT, and SDW, indicating its significant role in socio-economic development. Likewise, service usage (USA) reveals medium effects throughout the dependent variables, underscoring its relevance. In the availability dimension, AVLS shows medium effects, while AVLP displays relatively stronger contributions—approaching a medium effect on certain constructs.

Overall, The F^2 effect size analysis provides deeper insight into the relative contribution of each financial inclusion dimension toward socio-economic development. Access to Services (ACS) demonstrates small yet consistent effects across all endogenous constructs, indicating

that mere access acts as a foundational requirement for financial inclusion but alone may not generate substantial developmental outcomes. In contrast, Employee Accessibility (ACE) exhibits comparatively stronger effects on both economic and social development dimensions, suggesting that effective customer support, guidance, and banking interaction significantly enhance financial participation and socio-economic empowerment. Similarly, Usage of Services (USA) shows moderate effects, emphasizing that active utilization of banking services is more important than simple account ownership in achieving meaningful developmental benefits. Among the availability dimensions, AVLP demonstrates the strongest contribution toward economic development, highlighting the importance of efficient banking processes, service delivery, and product accessibility. Overall, the findings imply that financial inclusion becomes more impactful when financial services are not only available but also actively utilized and supported through effective banking mechanisms

5.4 Conclusion

The present study advances the proposition that the key dimensions of financial inclusion exert a direct and significant influence on the socio-economic advancement of customers. This relationship is empirically validated through both the measurement and structural models estimated using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings provide strong support for the proposed hypotheses and reinforce the premise that financial inclusion serves as a critical mechanism for enhancing customer-level socio-economic development. By systematically examining these linkages, the study contributes meaningfully to the existing body of knowledge and emphasizes the pivotal role of financial inclusion in promoting inclusive and sustainable economic growth. Despite its contributions, the study is not without limitations. The analysis is confined to the banking sector and does not account for the involvement of other financial intermediaries such as postal banking institutions, cooperative societies, and self-help groups, which also play an important role in advancing financial inclusion. Incorporating these institutions in future research would provide a more comprehensive perspective on the broader financial inclusion ecosystem.

Extant literature has examined financial inclusion from multiple perspectives, including its association with financial literacy, poverty alleviation, and macroeconomic performance (Bhanot et al., 2012; Cámara et al., 2015; Nandru et al., 2015; Gogia & Agrawal, 2016; Sharma, 2015; Kumar, 2015; Dupas et al., 2013; Heenkenda, 2014). However, relatively limited attention has been given to the integrated impact of access, availability, and usage as core

dimensions of financial inclusion and their direct influence on customers' socio-economic outcomes. Addressing this gap, the present study examines these dimensions within the banking sector using a hybrid PLS-SEM approach. The empirical results confirm that financial inclusion significantly influences socio-economic development, thereby fulfilling the stated research objectives.

The findings reveal that certain dimensions of financial inclusion exert stronger effects than others due to differences in the nature and intensity of customer interaction with banking services. For instance, Employee Accessibility (ACE) and Availability of Processes (AVLP) demonstrate comparatively stronger effects because effective banking support, simplified procedures, and timely service delivery directly influence customers' financial participation and economic activities. In contrast, Access to Services (ACS) shows relatively smaller effects, indicating that mere availability of banking facilities alone is insufficient unless customers actively utilize financial services. Although all relationships are statistically significant, the moderate to high R^2 and F^2 values further confirm their practical significance in improving socio-economic development. The findings further reveal that access, availability, and usage constitute fundamental pillars of financial inclusion, with each dimension contributing distinctly to the socio-economic progress of customers. These results are consistent with prior empirical evidence (Naili et al., 2023; Mishra, 2024) demonstrating positive relationships between financial inclusion indicators and socio-economic well-being. Moreover, the study corroborates earlier research (Rastogi, 2018; Ofoeda et al., 2024; Ozili & Ademiju et al., 2023) suggesting that improvements in financial inclusion parameters translate into tangible socio-economic gains. By focusing on public sector banks, the study further highlights their instrumental role in expanding financial access and supporting inclusive development. In summary, the structural model confirms that access, availability, and usage are not only central to financial inclusion but also serve as key drivers of socio-economic advancement.

5.5 Policy implication

The findings from this research model hold considerable significance for India's financial inclusion initiatives. First, the government should focus on improving accessibility by broadening the distribution of bank branches and ATMs, particularly in rural and underserved areas. This would alleviate the financial and time burdens individuals face when trying to access fundamental banking services. In addition to enhancing physical infrastructure, it is essential to bolster the availability of domestic credit facilities to foster inclusive growth.

Second, a structured approach to promoting financial literacy across various segments of society is necessary. One potential strategy could involve adopting aspects of Japan's educational framework, where retired finance and banking professionals are invited to schools and rural areas to share practical knowledge about financial products and services. Such programs would offer citizens reliable and formal education on financial matters, thus enhancing their financial awareness and decision-making skills. Third, the government could encourage the development of digital financial ecosystems by promoting online payment options and decreasing the reliance on cash transactions. For instance, the situation in Vietnam shows that an overreliance on cash has hindered the uptake of point-of-sale (POS) devices, thereby limiting the growth of digital payment methods. By advancing digital payment systems in India, a more favourable environment for e-commerce and financial technology companies can be established, ultimately benefiting consumers.

Lastly, policymakers might explore the idea of creating a centralized management system for ATMs that are not situated within commercial bank branches. A specific joint-stock company could be responsible for managing the ownership, development, operations, maintenance, and technological enhancements of these ATMs. Centralized oversight would improve efficiency, decrease redundancy, and ensure consistent standards along with more effective allocation of resources. In summary, the study's findings indicate that enhancing access to, usage of, and availability of financial services can greatly propel socio-economic progress. As such, targeted policy actions in the areas of infrastructure, financial literacy, digital payment systems, and ATM management are crucial for realizing inclusive and sustainable financial development in India.

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Chapter 6: Barriers in Public Sector Banks

Financial Inclusion, the cost-effective provision of essential financial products and services to marginalized groups, is not just a concept but a crucial aspect of economic development (Ozili et al., 2023). This paramount research delves into identifying the barriers that customers face in public sector banks, a significant and necessary step toward understanding and addressing this vital issue. The literature suggests that low earnings (Mir T. et al., 2024), gender gap, ignorance towards marginalized groups (Chinoda T. et al., 2024), low financial literacy, remote locations (Maity S. et al., 2022), and cultural barriers (Khelkhal M.D., 2024) are all critical issues behind financial inclusion. However, it is essential to note that there have been significant improvements in the extent of inclusiveness alongside various reforms and the development of the digital infrastructure, especially during the past decade, giving us hope for a more inclusive future. This progress should inspire optimism in our efforts to overcome these barriers, as we can see that change is possible and happening.

6.1 Unveiling the Obstacles: A Review of Challenges Faced by Customers in Banks

This section provides an in-depth analysis of the obstacles faced by customers in banks, which is crucial for grasping the impediments to financial inclusion in public sector banks. Throughout the years, Indian banks have undertaken numerous efforts to enhance access to affordable financial services, such as financial literacy initiatives, technology-based solutions, the creation of inclusive programs, and outreach campaigns (Chariya et al., 2024). Nevertheless, access to the formal banking sector for economically and socially disadvantaged groups continues to be limited by various demand- and supply-side challenges. On the demand side, aspects like low income and asset ownership, social marginalization, and low literacy rates significantly hinder customers' engagement with the formal financial sector (Ofoeda et al., 2024). On the supply side, challenges consist of the physical distance from bank branches, inconvenient operating hours, complicated and lengthy banking processes, stringent paperwork requirements for account establishment, poorly designed financial products, language barriers, high transaction costs, and negative attitudes of banking personnel (Maity et al., 2022). These ongoing issues highlight the pressing need for financial inclusion not only as an ideological concept but as a practical and socially significant imperative. Overcoming these obstacles is essential for ensuring equitable access to financial services and enhancing overall societal

welfare. In this regard, the study reviews the primary challenges encountered by customers in public sector banks, outlined below.

- **Expense**

Both the provision and utilization of banking services come with costs for service providers and customers alike. For service providers, opening and maintaining bank branches in rural and isolated regions often turns out to be economically unfeasible because of high operational expenses and limited customer base. From the perspective of users, the fees associated with financial services—such as minimum balance stipulations in savings accounts, fixed charges on debit and credit cards, and processing fees for loans—create a substantial burden for low-income customers, particularly those in rural areas. These costs often discourage the use of formal banking outlets, underscoring the necessity for affordable and efficient financial solutions.

- **Psychological Factors**

Psychological elements also significantly impact financial inclusion. The IDBI Gilts Report (2007) indicates that insights from behavioral economics suggest that numerous individuals feel uneasy about using formal financial services because of challenges in grasping technical language, interpreting documents, and understanding intricate terms and conditions. Furthermore, there exists a common belief among low-income individuals that formal financial products are mainly designed for wealthier segments of society. Such beliefs and misconceptions call for a fundamental change in perception to render financial services more inclusive and accessible.

- **Location-related Challenges**

Physical location barriers further obstruct access to banking services. These challenges encompass geographical remoteness, limited branch availability in specific areas, safety concerns in certain locations, restricted branch operating hours, and limited mobility due to age or physical disabilities. The insufficient availability of public or private transportation aggravates these issues, especially for rural and marginalized communities.

- **Lack of Financial Knowledge**

A lack of financial knowledge remains a significant barrier to true financial inclusion. Insufficient understanding of basic numeracy, financial principles, and business acumen limits individuals' capacity to grasp and utilize financial products. Low overall literacy rates, absence of awareness, and limited proficiency in English further restrict access to formal financial

services, highlighting the urgent need for targeted financial education and skill-development programs.

Technological Hindrances

Technological advancements, while offering opportunities for expanding financial inclusion, also create challenges for certain customer groups. Many individuals are reluctant to engage in digital banking due to fear of technology, lack of familiarity with digital platforms, or concerns about security. These challenges are particularly pronounced among elderly customers and those with restricted mobility, increasing the risk of digital exclusion. Therefore, the development of user-friendly technologies and the promotion of digital literacy are essential for bridging this gap.

Environmental and Market Factors

Environmental and market-related factors reflect broader socioeconomic and demographic changes that influence financial inclusion. These include shifts in market structures, evolving economic conditions, and political developments that transfer financial risks and responsibilities from the state and employers to individuals. Such dynamics often place additional pressure on customers, particularly those relying on public sector banks, thereby intensifying the barriers to accessing and effectively utilizing financial services. In light of these challenges, the present research systematically examines the various obstacles faced by customers in public sector banks, providing a foundation for identifying targeted strategies to enhance financial inclusion.

Table 6.1 Finding Barriers from Literature

Sr.No	Barriers	Reference
1.	Basic Amount	Preeti S.,(2014); Goel ,2023; Workineh A. M.,2023
2.	KYC forms	Maity S. et al., 2022, Chariya S. et al., 2024
3.	Service failure	Chinoda T. et al., 2024, Ofoeda I. et al., 2024
4.	Problem-solving process	Khelkhal M.D., 2024
5.	Facilities for customers	Rastogi S., et al., 2018; Mishra D., 2024
6.	Transaction time	Chariya S. et al., 2024; Maity S. et al., 2022; Ozili et al., 2023

7.	location	Khelkhal M.D., 2024, Chinoda T. et al., 2024
8.	Fear in mind	Goel, 2023, Workineh A. M., 2023
9.	ATM & SMS Service	Nazam M., 2020; Shahid S., et al., 2022
10	Employee behaviour	Ofoeda I. et al., 2024, Ozili et al., 2023, Maity S. et al., 2022,

Source: Prepared by Author's

6.2 Data Analysis

This investigation commenced with an exploratory factor analysis, in line with recommendations from Gerbing and Anderson (1998). The appropriateness of the raw data from bank customers for factor analysis is assessed using the KMO Value, Bartlett's test of sphericity, and a P-value of 0.000, which demonstrates adequate common variance and correlation matrix.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.752
Approx. Chi-Square		692.619
Bartlett's Test of Sphericity	df	36
	Sig.	.000

Source: Author's calculation

In SPSS, the Kaiser-Meyer-Olkin (KMO) measure assesses the adequacy of the sample for factor analysis. A KMO value greater than 0.5 suggests that the sample is sufficient for analysis (Byrne, 2010; Hair et al., 2013). Additionally, Bartlett's test of sphericity evaluates the null hypothesis that the original correlation matrix is an identity matrix, further confirming the data's suitability for factor analysis. The KMO value of 0.752 and the Bartlett test statistic of 692.619 indicate both acceptable adequacy and statistical significance, supporting the validity of the factor analysis.

Table 6.2: EFA Factor Loading Results

Barriers	Factor Loading
BAR1	0.847
BAR2	0.855
BAR3	0.823

BAR4	0.86
BAR5	0.90
BAR6	0.84
BAR7	0.792
BAR8	0.823
BAR9	0.823
BAR10	0.872
BAR11	0.826
BAR12	0.385*

Source: Author's calculation

Note: * factor loading does not load in further results

Further, the exploratory factor analysis(EFA) indicates the factor loading of each barrier, i.e., “Distance of bank is too far from your location (BAR1)”, “KYC norms are tough to follow(BAR2)”, “Basic amount for opening an account is high(BAR3)”, “ATM or SMS are very high(BAR4)”, “Time taken for the transaction is high(BAR5)”, “Employee behaviour is not cooperative for the customer(BAR6)”, “Problem-solving process is slow(BAR7)”, “People has less knowledge about various schemes(BAR8)”, “Fare in mind regarding Banking services(BAR9)”, “Facilities for customer under banks are less(BAR10)”, “Bank representatives discourage low-income customers from banking(BAR11)”, “

Lack of cash availability and service failure is there (BAR12). The factor loading less than 0.50 is excluded from the data. R-mode principal axis factoring with varimax rotation brought the construct to 11 statements in the barrier's domain. Then, rename the obstacles according to the characters.

Table 6.3 Rename Barriers

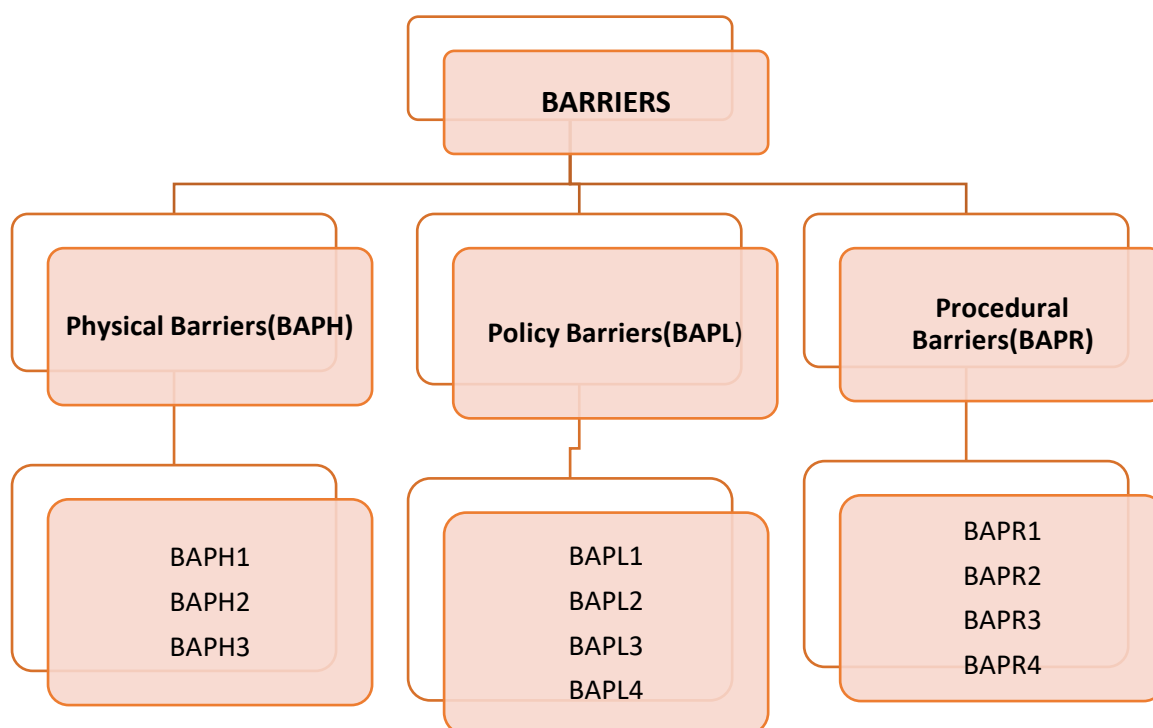
Barriers	Factor Loading	Rename Barriers
BAR1	0..847	BAPH1
BAR2	0.855	BAPH2
BAR3	0.823	BAPH3
BAR4	0.86	BAPL1
BAR5	0.90	BAPL2
BAR6	0.84	BAPL3

BAR7	0.792	BAPL4
BAR8	0.823	BAPR1
BAR9	0.823	BAPR2
BAR10	0.872	BAPR3
BAR11	0.826	BAPR4

Source: Author's calculation

After a meticulous evaluation, we have retained only those factors with a factor loading value exceeding 0.50, removing just one out of the 12 items. The findings are significant and crucial, with 11 items demonstrating a high factor loading value, such as BAR5, which has a factor loading of 0.90, indicating a robust correlation between the item and the factor. This underscores the importance of these barriers in the context of financial inclusion.

Figure 6.1 Types of Barriers



Source: Researcher's own depiction

The questionnaire data findings reveal that customers in public sector banks face three types of barriers: Physical Barriers (BAPH), Policy Barriers (BAPL), and Procedural Barriers (BAPR). This research highlights the significance of these barriers, as it identifies them and

offers various solutions to overcome them. Engaging with these barriers is crucial, as their improvement can lead to growth in financial inclusion.

6.2.1 Univariate Analysis

Based on the responses obtained from customers, it becomes possible to assess whether the barriers identified in the review of literature have been reduced or continue to persist. To carry out this assessment, univariate analysis was utilized, which serves as a straightforward and effective approach to summarize the data by reviewing each variable separately. By employing descriptive statistics such as frequencies, percentages, means, and standard deviations, the research underscores the degree to which customers encounter these barriers. The findings from this analysis are presented below, providing clear insights into the ongoing challenges and their relative significance.

6.2.1.1 Distance

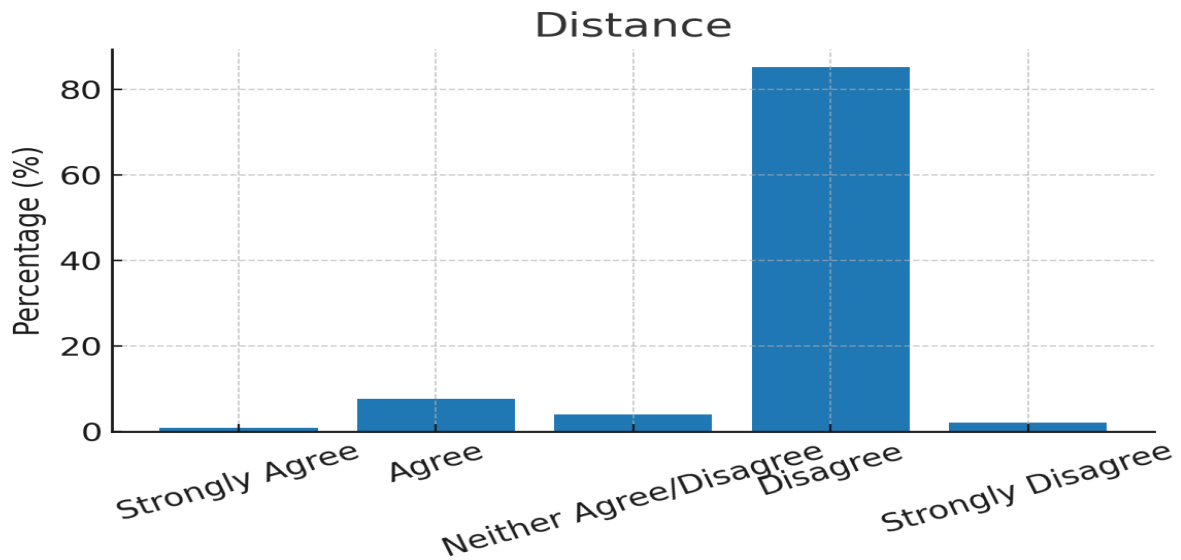
According to the questionnaire, 436 respondents provided feedback on the barriers. One of the significant barriers identified was 'Distance '. This variable is crucial, as reducing these barriers in the banking sector will lead to achieving the goal of financial inclusion. Financial inclusion means easy access to financial services. This easy access is only possible when financial institutions are readily available. If these are too far from the customer's range, it becomes a barrier for customers.

Table 6.4: Distance

Scale	Frequency	Percentage
Strongly Agree	4	.9
Agree	34	7.8
Neither agree nor disagree	18	4.1
Disagree	371	85.1
Strongly Disagree	9	2.1
Total	436	100.0

Source: Survey

Figure 6.2: Distance



Source: Survey

Responses of customers are measured on 5- a point Likert scale ranging from 1 to 5, where SA (1) Stands for strongly agree, A (2) stands for agree, N(3) stands for neither agree nor disagree, D(4) for disagree and SD(5) stands for strongly disagree. The table above indicates that, based on feedback, 85% disagree with the statement that the location of public sector banks is too far from their customers. This means that public sector banks are easily approachable. Only 9% respond to SA for the area as a barrier, 8% agree, 4% of customers say neither yes nor no, and 2% strongly disagree. Overall, the results indicate that distance is not a barrier to financial inclusion in Punjab state.

6.2.1.2 Lack of Cash availability and Service failure

Lack of service failure is one of the barriers to financial inclusion goals. This failure occurs due to an Internet problem or internal system error. Customers suffer and avoid dealing with the banking sector, resulting in inactive bank accounts and reduced usage of banking facilities. According to the questionnaire, 436 respondents provided feedback on the barriers. Reducing these barriers in the banking sector will help achieve the goal of financial inclusion.

Table 6.5: Lack of Cash availability and Service failure

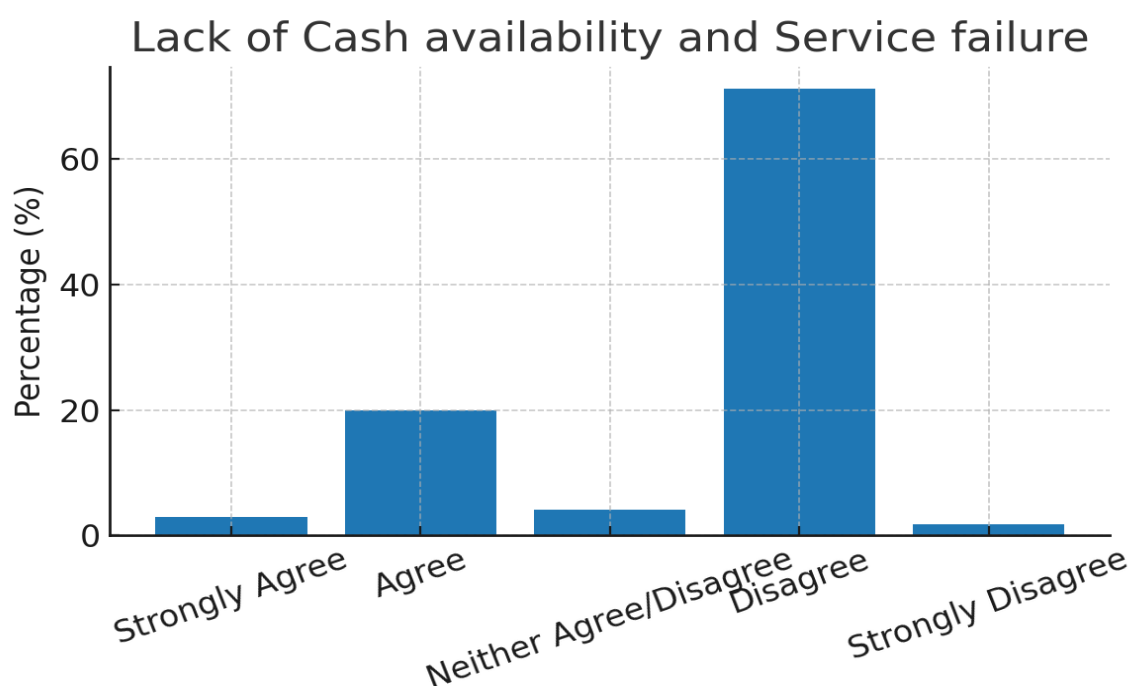
Scale	Frequency	Percentage
Strongly Agree	13	3.0
Agree	86	19.9

Neither agree nor disagree.	18	4.1
Disagree	311	71.2
Strongly Disagree	8	1.8
Total	436	100.0

Source: Survey

Responses of customers are measured on 5- a point Likert scale ranging from 1 to 5, where SA (1) Stands for strongly agree, A(2) stands for agree, N(3) stands for neither agree nor disagree, D(4) for disagree and SD(5) stands for strongly disagree. The table above indicates that, based on feedback, 70% disagree with the statement that service failure or lack of cash availability is a problem in the financial inclusion goal. Apart from this, 20% agree that sometimes, due to service failure, they suffered a lot, and the remaining 10% fall under SA, SD, or neither agree nor disagree.

Figure 6.3: Lack of cash availability and service failure



Source: Survey

6.2.1.3 KYC Norms

Nowadays, it is mandatory to complete Know Your Customer (KYC) requirements for your bank account. KYC norms require customer identification or proof of address. Sometimes,

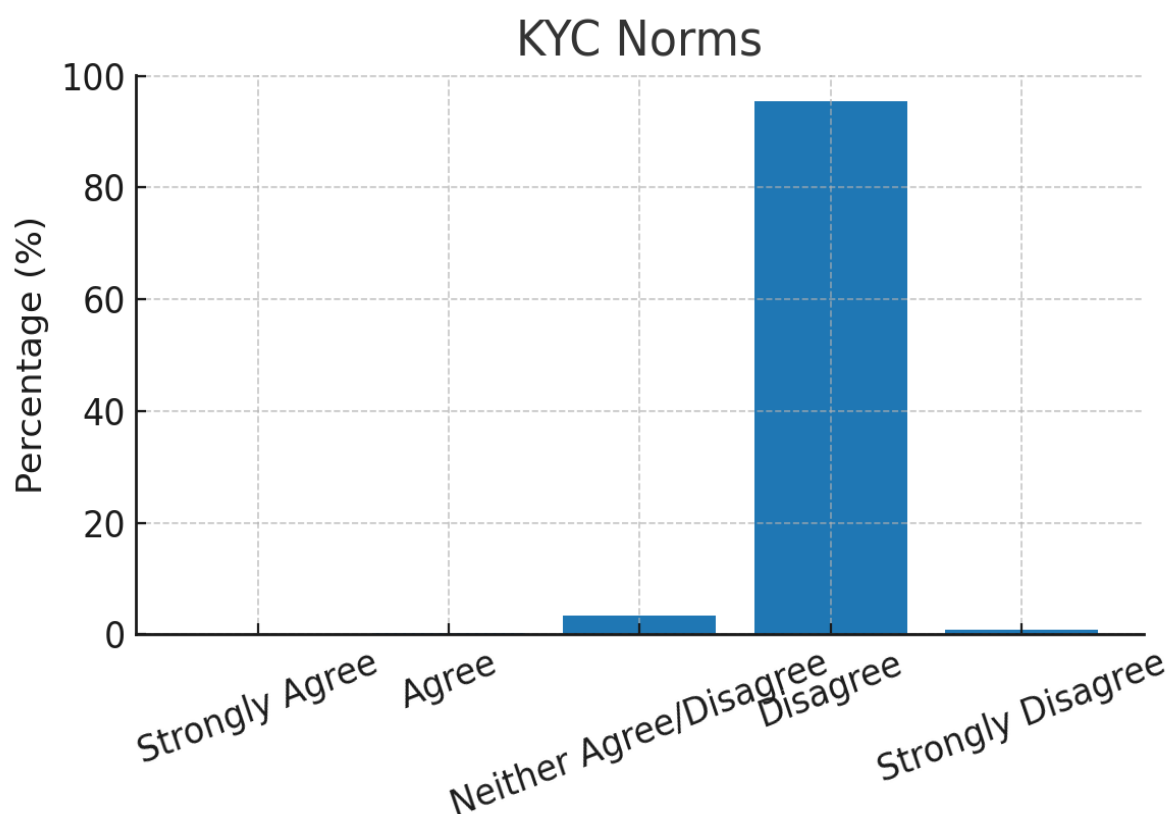
due to financial difficulties or a lack of awareness, customers may need assistance with completing Know Your Customer (KYC) requirements and avoiding account opening. However, due to the new guidelines of the RBI, it is now easier for customers to complete the KYC requirements. A brief description is below.

Table 6.6: KYC Norms

Scale	Frequency	Percentage
Strongly Agree	0	0
Agree	1	.2
Neither agree nor disagree	15	3.4
Disagree	416	95.4
Strongly Disagree	4	.9
Total	436	100.0

Source: Survey

Figure 6.4: KYC Norms



Source: Survey

The table above indicates the data collection from 436 sample sizes, which suggests that customers comply with KYC norms and regulations. Under the financial inclusion variable, easy access to policy is also one of the key indicators of the RBI's growth. Out of 436 customers of three public sector banks, the results lead in this direction, with 90% of people disagreeing with the statement that KYC norms are strict to follow. This means that KYC norms are more accessible now than in previous times. This is a good sign for the improvement of the financial inclusion goal. Only 10% of people believe the KYC requirement should still be addressed when opening a bank account.

6.2.1.4 Basic Amount

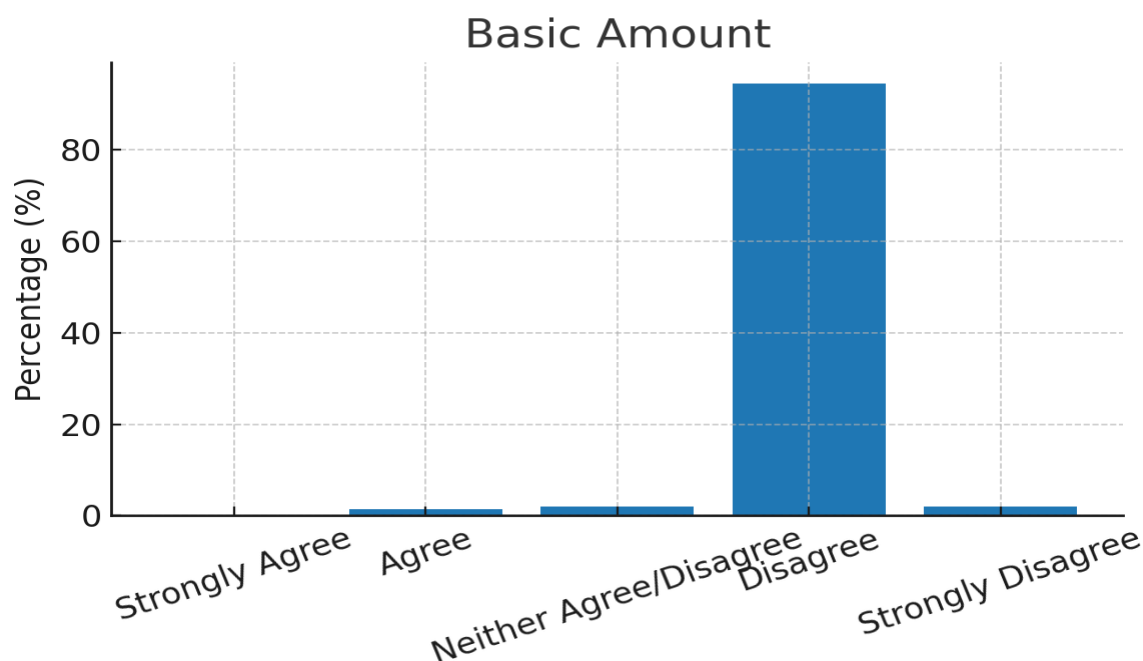
After completing the KYC requirement, the next barrier to achieving the financial inclusion goal is the basic amount for account opening. This amount varies according to the customer's area, i.e., urban or rural area. If a person easily accesses a bank but cannot open a bank account due to high essential costs, this will become a barrier to the financial inclusion goal.

Table 6.7: Basic Amount

Scale	Frequency	Percentage
Strongly Agree	0	0
Agree	6	1.4
Neither agree nor disagree	9	2.1
Disagree	412	94.5
Strongly Disagree	9	2.1
Total	436	100.0

Source: Survey

Figure 6.5: Basic Amount



Source: Survey

After introducing the non-frill account, the introductory amount of zero for a banking account is acceptable. In Punjab, 95% of people disagree with the statement that the introductory amount of account opening is not a problem nowadays. This means it is now easier to open a bank account following the new RBI regulation policy. Only 1% agree that it is a problem, and the other 2% say it is sometimes a problem or vice versa. The other 2% strongly disagreed with the statement. Overall, results indicate that it is not a barrier to the financial inclusion goal

6.2.1.5 ATM or SMS charges

Banks provide customers with various facilities to easily check their bank account balance. For this, they provide SMS or ATM facilities to the customer. In return, the bank deducts the amount from the customer's bank account. The charges are different from bank to bank. Results indicate that, compared to private sector banks, public sector banks charge fewer ATM or SMS charges. This barrier comes under the availability of the financial inclusion variable. The table below indicates people's average perception of ATM and SMS charges.

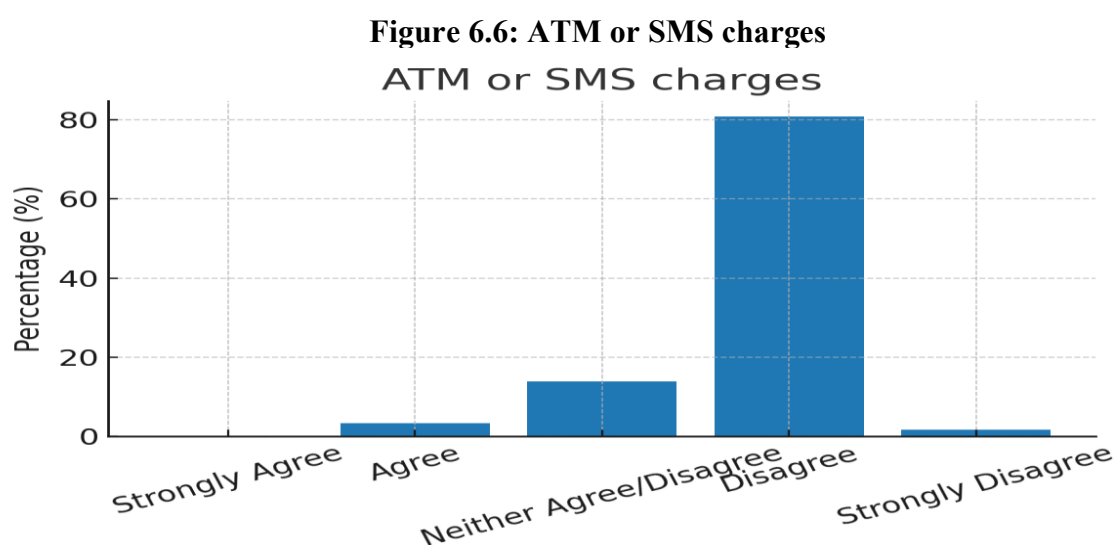
Table 6.8: ATM or SMS charges

Scale	Frequency	Percentage
Strongly Agree	0	0
Agree	15	3.4

Neither agree nor disagree	61	14.0
Disagree	352	80.8
Strongly Disagree	8	1.8
Total	436	100.0

Source: Survey

The above table indicates that 80% of people disagree with the statement that high ATM or SMS charges are a problem when opening a bank account. Additionally, only 14% of people responded with a simple yes or no to the statement. Only 3% agree that ATM or SMS charges are not deducted from the account. This will be a bank facility for its customers, and 2% strongly disagree with the statement.



Source: Survey

6.2.1.6 Transaction Time

Transaction time refers to the time taken to complete a transaction. Problems exist in the banking sector due to system problems or internet connectivity issues. The high crowd in banks also causes delays in transactions. Banks have started using paperless banking mode or various online platforms like banking apps to deal with such issues.

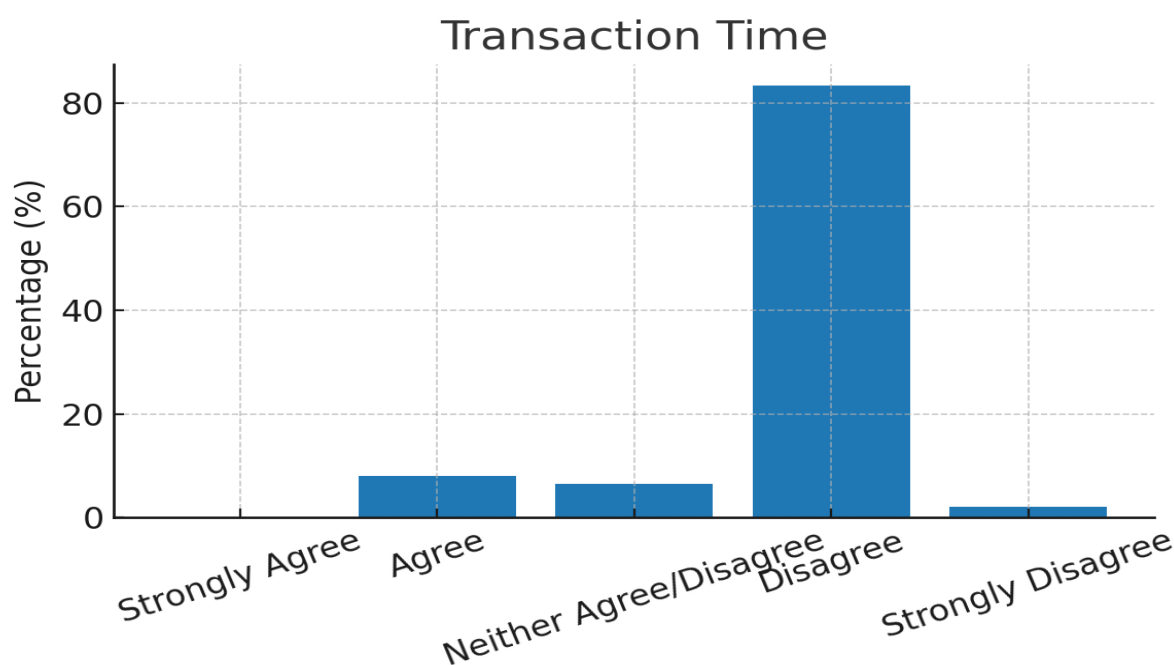
Table 6.9: Transaction Time

Scale	Frequency	Percentage
Strongly Agree	0	0
Agree	35	8.0

neither agree nor disagree	29	6.6
Disagree	363	83.3
Strongly Disagree	9	2.1
Total	436	100.0

Source: Survey

Figure 6.7: Transaction Time



Source: Survey

Transaction time also includes opening a bank account or completing a paper process for any policy. The result indicates that 83 % of customers disagree with the statement that the time taken for the transaction is high. This means most people cannot consider it a problem. Nowadays, banks offer various ways to open a bank account faster than manual work, i.e., through a banking app, video conferencing, or BC points. In addition, 8% of customers agree that banks take more time to complete transactions. It is possible due to high crowds, slow internet facilities, staff shortages, etc. The remaining 6 % either say yes or no, and 2% strongly disagree with the statement.

6.2.1.7 Employee behaviour

Employee behaviour always plays a vital role in the organization's goals. This behaviour further leads to a friendly environment in an organisation. Sometimes, bank

employees misbehave with customers due to work pressure or other reasons, creating this barrier.

Table 6.10: Employee Behaviour

Scale	Frequency	Percentage
Strongly Agree	0	0
Agree	26	5.9
neither agree nor disagree	16	3.7
Disagree	381	87.4
Strongly Disagree	13	3.0
Total	436	100.0

Source: Survey

Representative behaviour can fundamentally influence the productivity and viability of banks. Data reveals that out of 436 customers of public sector banks, 382 disagree with the statement that PSB employee behaviour is not cooperative. Most people reply that employee behaviour is friendly towards the customers. Of these, 6% agree that public sector bank employees misbehave with customers for many reasons. This 6% result can cause new issues like poor customer service, lack of accountability, inconsistent behaviour, etc. Apart from this, 4% of people are neutral on this question, and 3% strongly disagreed with the question that bank employees misbehave with customers.

Figure 6.8: Employee Behaviour



Source: Survey

6.2.1.8 Problem-solving process

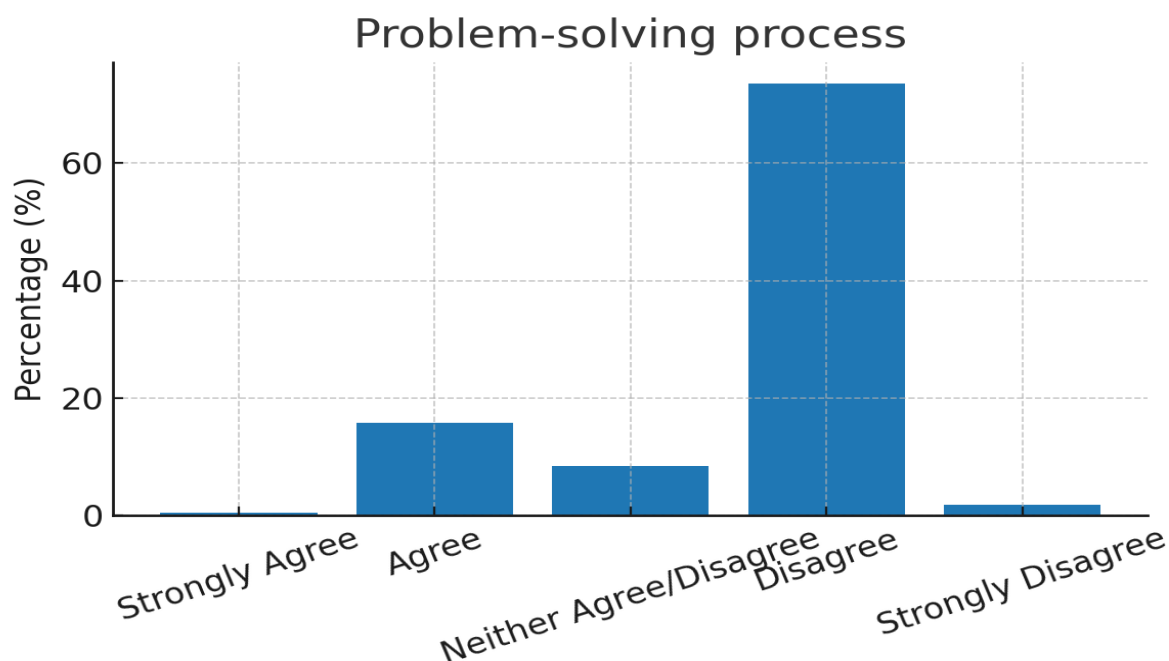
These barriers underscore the critical importance of the problem-solving process in the banking sector. They indicate that if any problem occurs at the customer's point, how long does the bank take to resolve his problem? The problem-solving process means the time taken if any misbehaving with the customers occurs and how the bank's high authority solves their problem.

Table 6.11: Problem-solving process

Scale	Frequency	Percentage
Strongly agree	2	.5
agree	69	15.8
neither agree nor disagree	37	8.5
Disagree	320	73.5
Strongly disagree	8	1.8
Total	436	100.0

Source: Survey

Figure 6.9: Problem-solving process



Source: Survey

The questionnaire results indicate that out of 436 customers, 20 % agree with the statement that the problem-solving process is slow at the public sector bank counter. Apart from this, a large section of Punjab disagrees with the statement that nowadays, the problem-solving process of the public sector has been improved. Results indicate 73 % in favour that after the introduction of the banking ombudsperson, the problem-solving process is improved. However, 20% suggests that it still needs to be solved in the growth of financial inclusion.

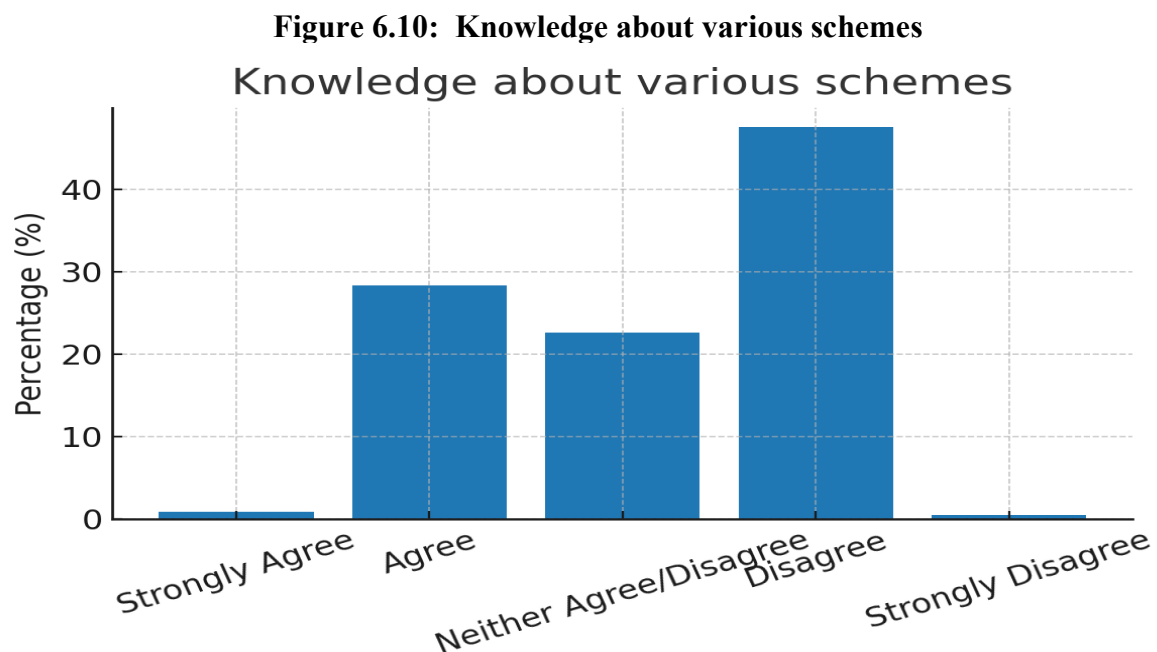
6.2.1.9 Knowledge about various schemes

Customer knowledge about various banking schemes is a critical aspect of financial inclusion. Every year, RBI introduces new policies under the financial inclusion plan, and customers need to be aware of these. The RBI has initiated several schemes under the FI plan, such as zero-balance accounts, PMJDY, PMSBY, and PMJJY policy under financial inclusion.

Table 6.12: Knowledge about various schemes

Scale	Frequency	Percentage
Strongly agree	4	.9
Agree	124	28.4
neither agree nor disagree	99	22.7
Disagree	207	47.6
Strongly disagree	2	.5
Total	436	100.0

Source: Survey



Source: Survey

The financial inclusion goal is achieved only when customers know about the new policy. In Punjab, 29 % of people agree that they do not know about various schemes. Apart from these results, 23% neither agree nor disagree with the statement that bank employees sometimes discuss new policies and sometimes do not. Only 48% disagree with the statement that they have less knowledge about various schemes.

6.2.1.10 Fear in Mind

It refers to customers' fears regarding banking services or policies. Nowadays, OTP-based fraud has increased, and apart from this form-filling, understanding banking terms is one of the customers' fears. This fear can significantly impact their decision to open a bank account or engage in banking services.

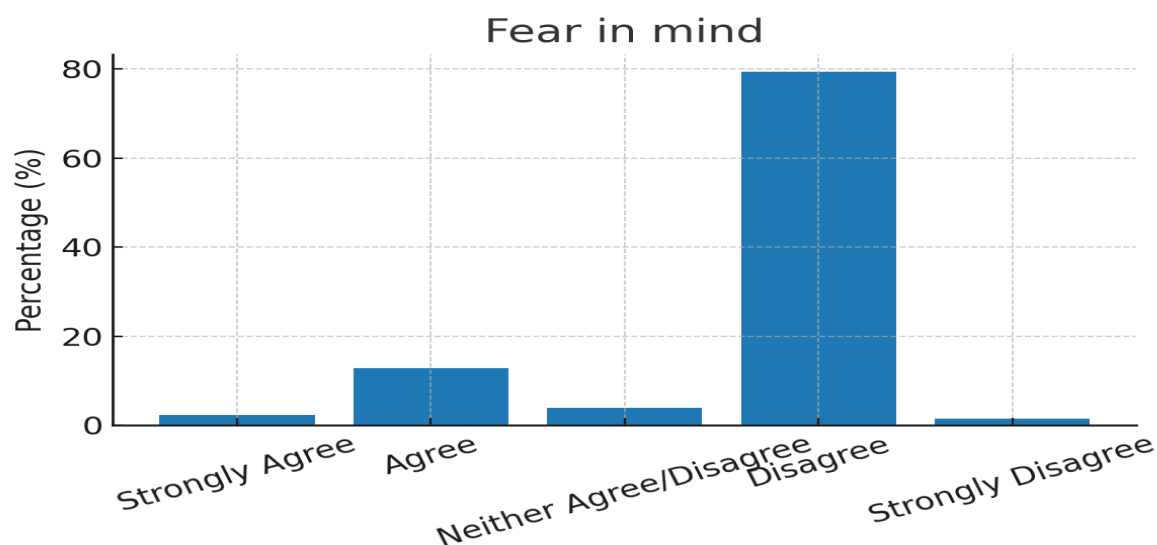
Table 6.13: Fear in mind

Scale	Frequency	Percentage
Strongly agree	10	2.3
agree	56	12.8
neither agree nor disagree	17	3.9
Disagree	346	79.4
Strongly disagree	7	1.6

Total	436	100.0
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Source: Survey

Figure 6.11: Fear in mind



Source: Survey

The above table indicates that these psychological barriers are more in the customer's mind. Data suggests that 14% of customers agree with the statement that they have fear in mind regarding banking services. Due to this, they do not open a bank account. Overall, 80% disagree with the statement that banks increase safety measures daily so they do not have fear in mind; the remaining 4% neither say yes nor no to the statement.

6.2.1.11 Facilities for Customers

Banks provide a range of facilities to their customers, which significantly influence their banking experience. These facilities, whether in the form of infrastructure or easy access to services, are crucial. Customers also desire additional facilities, such as those catering to physically disabled individuals or mobile ATMs in rural areas. They also expect opening accounts, obtaining chequebooks, or applying for loans to be more accessible. Enhancing these facilities can significantly improve the overall customer experience.

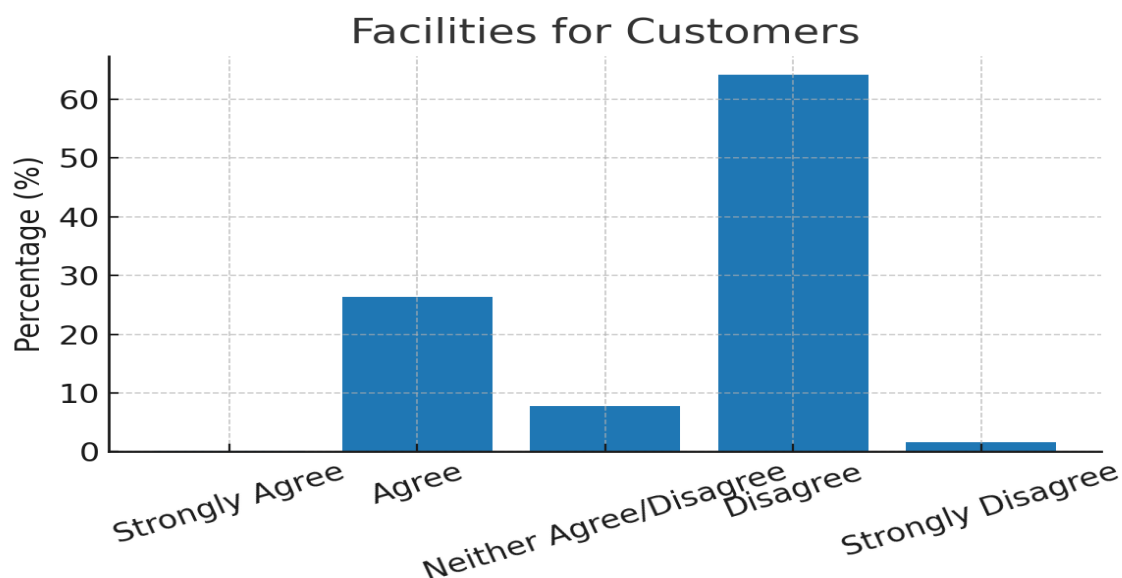
Table 6.14: Facilities for Customers

Scale	Frequency	Percentage
Strongly Agree	1	.2
Agree	114	26.3
neither agree nor disagree	34	7.8
Disagree	280	64.1

Strongly Disagree	7	1.6
Total	436	100.0

Source: Survey

Figure 6.12: Facilities for customers



Source: Survey

Facilities towards customers at ground level in public sector banks reveal that only 64% of customers disagree with the statement that facilities for customers under banks are less. Only 28 % of customers agree that banks still require many facilities for their customers. In this statement, 8% of customers never give clear feedback.

6.2.1.12 Bank representatives discourage low-income customers:

This barrier highlights that, at times, bank representatives discourage low-income customers from banking. However, the positive impact of respectful and dignified treatment of all customers, regardless of their income level, cannot be overstated. This enhances the customer's perception of the bank and contributes to a more inclusive banking environment, fostering a sense of respect and value among customers.

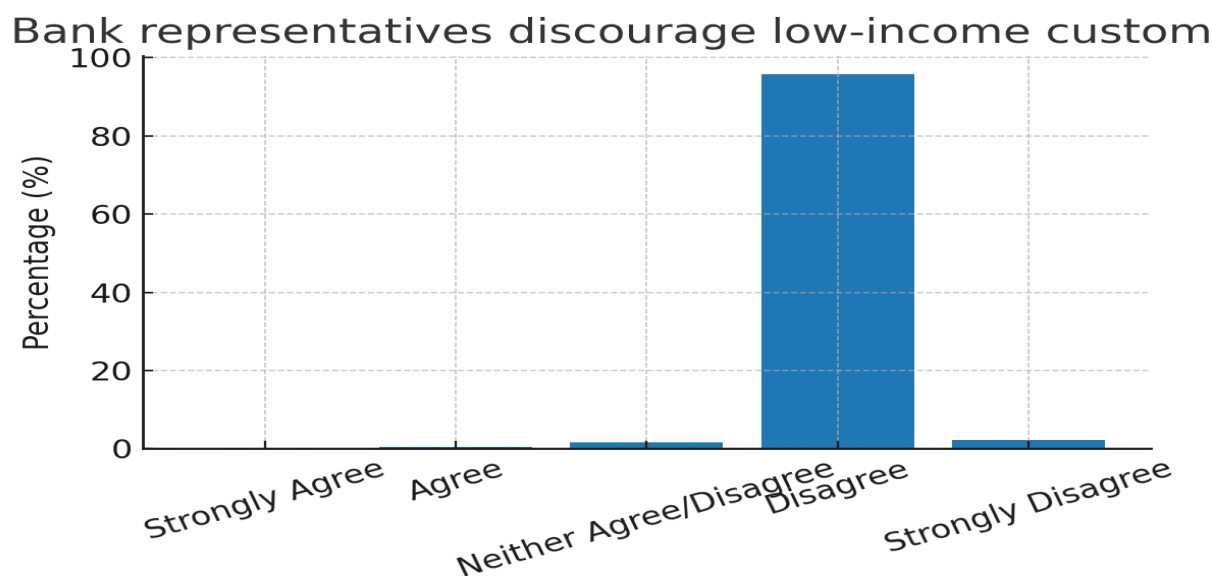
Table 6.15 Bank representatives discourage low-income customers

Scale	Frequency	Percentage
Strongly Agree	0	0
Agree	2	.5
neither agree nor disagree	7	1.6
Disagree	418	95.7

Strongly Disagree	9	2.3
Total	436	100.0

Source: Survey

Figure 6.13: Bank representatives discourage low-income customer



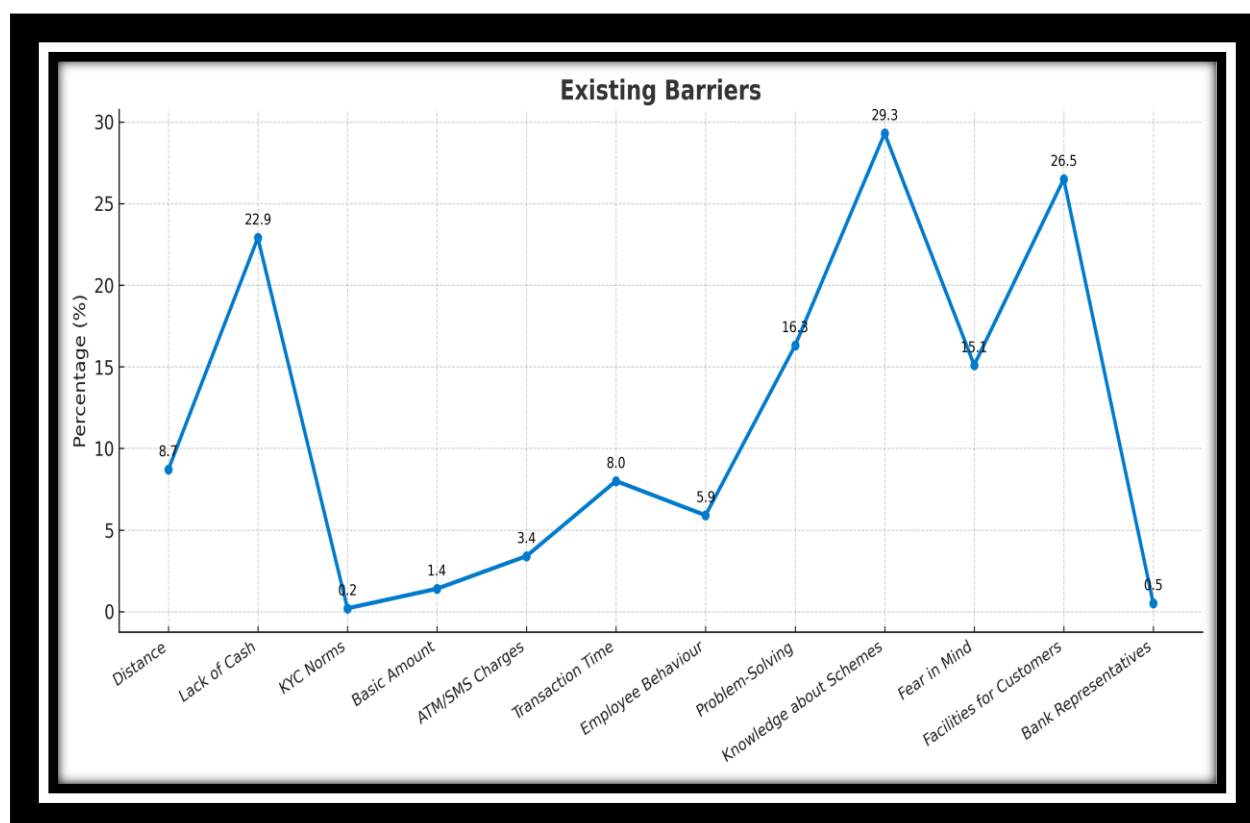
Source: Survey

The data reveals a commendable trend in employee conduct, with only 1% of employees exhibiting misbehavior in public sector banks. This reassuring statistic indicates that the vast majority, 98% of customers, do not perceive bank representatives as discouraging low-income customers, instilling a sense of trust in the integrity of these institutions.

6.3: Existing Barriers: In Punjab

As the banking data in Punjab shows, public sector banks play a crucial role in serving a large portion of the population through their bank branches (SLBC Reports Punjab). When customers face barriers in these banks, it affects the entire population of that area. The above diagram reveals that knowledge about various banking schemes and other obstacles are significant issues in the banking sector. If customers are unaware of new policies, they cannot correctly use their banking policies, leading to less development in their socio-economic goal. This underscores the vital role of public sector banks in the community.

Figure 6.14 Barriers to financial inclusion in Punjab



Source: Survey

The diagram visually categorizes the distribution of key barriers, including procedural inefficiencies, infrastructure deficits, and customer service-related issues, based on respondent feedback.

Improving customer service is not just a goal but a mission that we must all be motivated to achieve. Making customers feel valued and integral to the banking sector is crucial. Customers often think that the number of facilities under banks is smaller according to the population size group. This means facilities for senior citizens and disabled persons, sitting arrangements inside or outside banks, etc. This leads to barriers that affect the growth of financial inclusion. Service failure is also a big issue in public-sector banks, i.e., Network problems or server issues. Due to this, there is a delay in work or transactions that leads to an increase in the dissatisfaction level of customers. The impact of service failure on customer satisfaction is significant, highlighting the urgency of addressing these issues. By doing so, we can significantly improve customer service and customer satisfaction.

The problem-solving process in public sector banks is a pressing issue that demands immediate attention. The data from the state of Punjab reveals that 16% of customers are still grappling with this problem. By enhancing the problem-solving process, we can instill confidence in customers about the future of banking and foster a sense of potential for improved customer satisfaction, underscoring the urgency of this issue and the need for immediate action (Aple P. et al., 2016; Mangla S. et al., 2017)

6.4 Suggestions: To overcome Barriers

6.4.1 Physical Barriers (BAPH)

6.4.1.1 Distance

Physical distance continues to be a major constraint to financial inclusion, particularly for older individuals and economically disadvantaged populations. However, emerging digital financial technologies, including mobile banking and internet-based financial services, offer substantial potential to alleviate and significantly reduce the limitations imposed by geographical distance (Kim et al., 2016). These technology-driven solutions represent a cost-efficient and scalable approach to expanding financial access, thereby presenting a more optimistic outlook for the future of inclusive banking.

Moreover, digital financial infrastructure is considerably less costly for banks to deploy than establishing and maintaining physical branch networks (Korpela, 2017; Mulligan et al., 2018). Mobile money services, in particular, have been identified as effective instruments for minimizing both socioeconomic and geographical barriers faced by low-income populations and residents of remote areas. By reducing travel requirements for financial transactions such as payments and purchases, mobile-based platforms lower transaction costs for customers while simultaneously enhancing operational efficiency and profitability for banks. Consequently, policymakers are strongly encouraged to prioritize and accelerate the adoption of accessible, affordable, and user-friendly digital financial systems. Nonetheless, the effectiveness of such digital initiatives is heavily dependent on the availability of a reliable and robust telecommunications infrastructure, which remains a foundational requirement for digital financial inclusion. In this context, the following section outlines key measures to address distance-related barriers and discusses how these challenges can be effectively mitigated in the future.

- **Branch Extension:** Banks can expand their presence by opening branches in underserved regions, including rural and remote districts (Mir t. et al., 2024). This brings banking administrations closer to networks that might have restricted admission to monetary organisations.
- **Business correspondence banking:** Executing specialist banking permits banks to reach clients in far-off regions where establishing physical branches may not be feasible. Specialists, like nearby retailers or mail centers, act as delegates and provide essential financial administrations for the bank's benefit.

Further to deal with service failure and lack of cash problems and KYC norms following are the suggestions to improve it into the future.

- **Mobile Banking:** Creating a solid portable financial framework empowers clients to access banking administrations helpfully through their cell phones (Rahma A. et al., 2022). This incorporates creating easy-to-understand portable applications, putting resources into secure, versatile financial stages, and extending network inclusion to guarantee availability in far-off regions.
- **ATM Organization:** Introducing ATMs in essential areas, including provincial low-pay regions and regions, further develops access to cash withdrawal and other fundamental financial administrations. Banks should guarantee that ATMs are well-maintained and equipped with multilingual interaction points to accommodate different populations.
- **Unique CIF ID:** In Punjab, Customers don't think that KYC norms are very hard but still it is barrier in the growth of financial inclusion. So that can be improve by banking sector by issuing one CIF ID that linked with pan card or aadhar card on the time of opening of bank account. After this there is no need to ask to KYC documents again and again by the customers.

6.4.2 Policy Barriers (BAPL)

Under policy barriers Basic amount, ATM charges, Transaction time and employee behaviour are some barriers. These barriers can directly improve by good customer services. Improving customer service is essential for banks to enhance financial inclusion. By carrying out these following methodologies, banks can further develop client support and establish a

more comprehensive financial climate that addresses the issues, everything being equal, regardless of their experience or level of monetary education.

- **Customized Help:** Provide customised help to clients, particularly those new to banking or with restricted monetary education. This can include allotting devoted relationship administrators or client support delegates to help clients with their financial necessities and answer any inquiries.
- **Openness:** Ensure financial administrations are available to all clients, including those with disabilities or language obstructions. This might include offering multilingual client service, providing braille or large print materials, and guaranteeing that branches and computerized stages are available to people with mobility challenges.
- **Instruction and Preparing:** Offer monetary education and preparation projects to engage clients with the information and abilities they need to make informed financial choices. This can incorporate studios, online courses, and instructional materials on planning, saving, and overseeing obligations.
- **Easy-to-use Advanced Stages:** Persistently develop computerized financial stages to make them easier to use and instinctive. This includes effective money management for UI configuration, streamlining portable applications for usability, and providing complete internet-based instructional exercises and guides.
- **Speedy and Productive Administrations:** Smooth out financial cycles and decrease standby times to give clients fast and proficient administrations. This can include computerized account opening techniques, enhancing credit endorsement cycles, and offering assisted administrations for pressing exchanges.
- **Criticism Systems:** Establish input instruments to gather knowledge from clients about their financial encounters and recognize areas for development. Urge clients to give criticism through reviews, idea boxes, and online input structures and find proactive ways to address their interests.
- **Strengthening and Regard:** Engage clients by approaching them with deference and pride, no matter their financial foundation. Guarantee that staff members are prepared to offer affable and sympathetic support and deal with delicate circumstances with fantastic skill.
- **Proactive Effort:** Proactively connect with underserved networks and minimize gatherings to illuminate them about financial administrations and urge them to become

banked. This can include local area outreach programs, associations with nearby associations, and designated advertising efforts.

- **Straightforwardness and Reasonability:** Be straightforward in evaluating and charging structures and ensure that clients understand the agreements of banking items and administrations. Avoid stowed-away expenses and charges, and be forthright about any likely dangers or limits related to banking items.

6.4.3. Procedural Barriers (BAPR)

Under procedural obstacles, customers primarily encounter issues such as inadequate facilities, psychological fears, and a lack of understanding regarding various financial schemes. These challenges can be addressed through specific initiatives by the banking sector. Additionally, technologies like blockchain and social finance networks can be employed by banks to assure customers about the safety of their financial transactions and records. This approach can enhance customer trust and alleviate concerns about monetary losses.

6.4.3.1 Enhancing the Banking Systems

The Reserve Bank of India (RBI) has implemented several strategies to bolster the banking system. These strategies include the introduction of differentiated banking licenses, the simplification of Know Your Customer (KYC) regulations, and the encouragement of mobile banking. Nevertheless, further enhancements to the banking system are necessary, which can be achieved by improving credit delivery mechanisms, increasing financial literacy, and promoting the use of digital payments (Tapscott D. et al., 2017; Kosba et al., 2016). Thus, by fortifying the banking systems, both the country and individual states can address barriers and foster greater growth in financial inclusion.

6.4.3.2 Promoting microfinance institutions (MFIs)

MFIs are crucial in offering credits to low-income households and small businesses (Pilington M., 2016; Crosby M. et. al., 2016). The government should encourage the growth of MFIs by providing them with access to funding at lower costs and promoting partnerships between micro-finance institutions and banks.

6.4.3.3 Awareness programs

Banks play a vital role in promoting financial literacy through robust mindfulness programs. Here are a few methodologies banks can use to enhance their mindfulness programs.

- **Tailored Workshops and Seminars:** Banks can organize studios and workshops focusing on various segments of the populace, such as entrepreneurs, ranchers, or ladies' business visionaries. These meetings can cover subjects like fundamental monetary proficiency, grasping financial items, and the significance of saving and effective money management (Srinivasan K. et al., 2024).
- **Local area Effort Projects:** Banks can participate in local area outreach drives by joining forces with neighborhood associations, schools, and public venues. This can include setting up corners at local area occasions (Lu H. et al., 2021), giving instructive materials, and directing intelligent meetings to bring issues about financial administrations and monetary preparation to light.
- **Computerized Education Projects:** With the rising digitization of monetary administrations, banks can offer advanced proficiency projects to assist people with understanding how to use the web and versatile financial stages securely and proficiently. These projects can incorporate instructional exercises, online courses, and involved instructional meetings.
- **Collaboration with Government and NGOs:** Banks can engage with government agencies and non-governmental organizations (NGOs) already involved in financial inclusion projects. By pooling resources and expertise, they can reach a larger audience and substantially boost financial literacy and banking access.
- **Multilingual and Accessible Materials:** Banks should make their educational materials available in multiple languages and formats to accommodate varied populations. This may include written materials, multimedia resources, and web content that is accessible to people with impairments. Banks can provide incentives or discounts on their products and services to encourage people to participate in financial literacy programs and actively learn about financial management.

6.4.3.4 Blockchain Technology

The Banking sector covers many areas through its coverage. Today, the customer faces various barriers leading to less improvement in financial inclusion. By adopting blockchain technology in the banking sector, the supply side becomes a solution for financial inclusion obstacles (Cocco et al., 2017). There are various problems in the development of financial inclusion growth, but blockchain technology has the potential to solve them (Guo et al., C.,

2016; Shah et al., 2018). Below are some issues in achieving the financial goal and their solutions through blockchain technology.

1. Access: One problem in financial inclusion growth is the need for more geographical access to or distance from financial institutions (Pilkington, M., 2016; Crosby et al., 2016); Aple et al., 2016)

2. Cost: High interest rates for loans and credit and high transaction costs for low-value transactions are also problematic for financial inclusion goals.

3 Products: The existing products and services must align with the requirements of the impacted demographics. For instance, payment terms should be more adaptable or may necessitate a credit history or guarantees (Abeyratne et al., 2016).

1. Access: This issue arises due to the fact that blockchain is an advanced technology. As a result, a blockchain-based financial solution can be provided through mobile applications. While the adoption of mobile banking apps has been low across various countries, in India, the capability to utilize mobile financial applications is at 38 percent (Kim L. et al., 2016). This indicates that the access issue can be addressed through mobile banking if other challenges are also resolved.

2. Significant expense: One of the vital preferences of blockchain innovation is its capacity to eliminate the requirement for the middle person (Mougayar, 2016; Kshetri, N., 2018; Kosba, A., 2016). Since the record is circulated among members and represented using an agreement convention, outsiders are not expected to encourage exchanges (D. Tapscott et al. (2017)). This is a significant switch in lessening exchange costs generally determined by outsider charges. Interestingly, blockchain-based exchanges can be facilitated with low exchange charges.

3. Insufficient items and Administrations: Blockchain-based arrangements may offer more reasonable items to clients in three different ways: (a) by digitalizing existing practices (Korpela, H., 2017), (b) by resolving current issues (Davidson, D. F et al. 2016), (c) by opening new occasions to clients. The blockchain works fast and accurately because it excludes the middleman from the supply chain. Blockchain-based arrangements can uphold current monetary practices' casual, distributed nature in provincial India. Second, past digitizing existing practices, blockchain settles further issues. A central question for unbanked residents is how to give records and assurances to loan specialists. Because the blockchain is a permanent record, it can fill in as a dependable wellspring of record as a consumer. If blockchain-based

arrangements were embraced for casual exchanges, the historical backdrop of these exchanges could give proof of credit value. Blockchain technology can deal with problems like high cost, availability, etc. So, it is helpful to achieve growth in financial inclusion in India (C. Mulligan et al., 2018).

6.4.3.5 FinDeep-SocNet

Globally, financial institutions including banks and investment firms are increasingly adopting AI technologies. The use of AI technology enhanced and streamlined the banking processes such that credit evaluation, risk assessment, and lending decisions. This inclusion of AI in Financial processes has a great impact on developing countries as it has brought digital transformation. The role of public sector banks (PSBs) in nations like India, have an important role in promoting inclusive growth by providing banking access to underserved and marginalized populations.

With the advancement of digital technologies, these institutions are moving beyond traditional and manual systems. They are adopting intelligent, data-driven solutions that use data to optimize outreach and impact in banking processes such that in transactions and cash flows. This FinDeep-SocNet, a hybrid deep learning framework designed to analyze the socio-economic development of customers through interactions with public sector banking services. It proceeds by integrating transaction classification, cash flow prediction, and multi-modal data. The model offers a robust mechanism for profiling customers into underdeveloped, developing, and developed socio-economic categories. Importantly, this approach aids public sector banks in personalizing financial services, assessing financial inclusion, and strategizing outreach to underserved populations. This evaluation brings new insights for the policy makers, socio-economic planners to understand financial behavior as a proxy for development and to design interventions for economic upliftment. In the future, incorporating external socio-economic indicators, real-time deployment, explainable AI, and broader bank collaboration can further refine the model's applicability and impact in promoting inclusive socio-economic development.

6.5 Prioritization of Financial Inclusion Barriers in Public Sector Banks

Table 6.16: Severity, Nature, and Managerial Solutions of Barriers

Barrier Identified	Severity Level	Nature of Barrier	Immediate Managerial Reform
Lack of financial awareness	High	Customer-driven	Conduct financial literacy and awareness programs
Long distance to bank branches	High	Institutional	Expand rural outreach and mobile banking services
Employee behaviour and poor support	High	Institutional	Employee training and customer service monitoring
Complex KYC/documentation	High	Institutional	Simplify procedures and provide assistance desks
Service delays and technical issues	Medium	Institutional	Improve service efficiency and digital infrastructure
Hesitation in digital banking usage	Medium	Customer-driven	Digital literacy training and guided assistance
Low income and irregular savings	Medium	Customer-driven	Promote low-cost banking products and flexible schemes
Banking charges and hidden costs	Medium	Institutional	Increase transparency and reduce unnecessary charges

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Chapter 7: Summary, Findings and Suggestions

7.1 Summary

The concept of financial inclusion has become increasingly significant since the early 2000s. The Government of India, in ongoing collaboration with the Reserve Bank of India, is making extensive efforts to provide essential financial services to unbanked individuals. A pivotal event in the past, demonetization, resulted in the opening of 30.01 crore accounts under the Jan Dhan Yojna, with a total balance of Rs. 73,588 crore as of January 21, 2018. Undoubtedly, following demonetization, a considerable number of households, particularly in rural regions, have been integrated into the formal banking system; however, the previous trend has reemerged, with approximately 48% of the country's bank accounts remaining inactive (World Bank, Global Findex Database Report, 2018). This indicates that despite having a well-developed financial system, full inclusivity has not been achieved, shows that many Indians are still not connected to the formal banking sector, resulting in persistently low levels of financial inclusion in India, which is a matter of concern.

Based on the analysis of data and the discussion of results, this chapter is structured to present the findings and observations in a way that is easy for readers to understand. Following this, suggestions and recommendations are provided about the findings to assist policymakers, banks, and financial institutions in enhancing access, utilization, and the quality of financial products and services. This chapter summarizes the findings, concludes the study, and offers suggestions while outlining the prospects for further research in financial products and services.

7.2 Objective-wise findings

The Indian economy has experienced uneven growth when comparing socioeconomic groups and geographical areas. A significant segment of the population lacks access to financial services offered by financial institutions. The government and financial institutions are making considerable efforts to extend these opportunities to the unbanked segments of society. However, there is a shortage of access to or utilization of these institutions' diverse financial products and services. This study finds those barriers faced by the customers in banking sector of Punjab and examine the role of the Public sector banks in financial inclusion. . It also explores how this, in turn, contributes to customers' socio-economic growth. The first objective of this research is to study the role of public sector banks in financial inclusion.

To assess this, the function of banks was examined through three distinct aspects of financial inclusion: access, availability, and usage. If public sector banks show significant enhancements in these aspects, it will be concluded that they play a vital role in financial inclusion. In the mixed economy of India, there are 12 public-sector banks that deliver services more efficiently and effectively than their private counterparts. The performance of PSBs in the financial inclusion sector has consistently improved compared to PSBs and RRBs (Mala M., 2016; Muralidharan R., 2020; Yesu P., 2016; Thushara T., 2020). This study's results are consistent with these findings. In this regard, the importance of PSBs is underscored as they reach more regions through their rural branches (Basic Statistical Return Report from 2012 to 2022).

Moreover, the minimum balance requirement for opening accounts is considerably lower in PSBs compared to PVBs. PSBs have taken the lead in providing fundamental banking services. As of March 2022, approximately 79 percent of PMJDY accounts were opened by PSBs, with RRBs contributing 18 percent and private banks only 3 percent (BIRD report 2022). Additionally, public sector banks lead in the total number of ATMs installed across the nation, with about 55 percent of ATMs operated by PSBs and 31 percent by PVBs. Furthermore, various banking policies or factors contribute to the advancement of financial inclusion, such as social security initiatives and RBI directives concerning financial inclusion (Report on trend and progress of banks in India, Reports on social security schemes by Department of Financial Services, Reports by RBI on Basic statistical return of scheduled commercial banks in India).

Therefore, these advantages highlight that within the banking sector, the influence of PSBs is more pronounced in the development of financial inclusion (Nkuna et al. 1, 2018; Anjum B., 2012; Mala M., 2016; Muralidharan R., 2020; Ahmad, 2011). In terms of bank account accessibility, public sector banks are more reachable (SBLC & RBI Reports) for customers. Then, regarding the availability of bank branches, PSBs again take the lead, as public sector banks have a greater number of branches in the country, particularly in rural regions, a trend also observed at the state level (SBLC & RBI Reports). Lastly, concerning the usage of banking services, PSBs boast higher deposit and credit amounts compared to other banks (SBLC & RBI Reports). Additionally, various policies have been implemented by the RBI to promote financial inclusion, such as PMJDY, PMSBY, PMJJBY, and APY. The primary aim of these policies is to enhance basic banking services and provide insurance or pension options to the underprivileged segments of society. While all banking sectors apply these policies, public sector banks achieve the highest levels of enrollment and deposits. The

examination of the role of PSBs is based on annual reports related to FIP. The yearly assessments indicate that all financial sectors have contributed to FIP. However, the performance of public sector banks across each state is more noteworthy than that of other banks. Ultimately, a review of data from all major banks, including PSBs, PVBs, and RRBs, indicates that public sector banks are crucial to financial inclusion and have significantly aided in enhancing the country's financial inclusion growth. Thus, all alternative hypotheses have been validated.

The second objective of the present study is to examine the socio-economic development of customers facilitated through financial services provided by public sector banks. The analysis is limited to financial services offered under designated financial inclusion initiatives. The primary intent of this objective is to assess whether the utilization of financial inclusion services leads to measurable improvements in the social and economic conditions of customers. The empirical findings indicate that the dimensions of financial inclusion exert a significant and positive influence on customer development. The results further reveal that access, usage, and availability are critical components in achieving effective financial inclusion, which in turn contributes to inclusive and sustainable economic growth. The study identifies a strong association between financial inclusion dimensions and customers' socio-economic development, consistent with earlier empirical evidence (Naili et al., 2023; Mishra, 2024). Additionally, prior studies have also substantiated this relationship (Rastogi, 2018; Ofoeda et al., 2024; Ozili et al., 2023), and the findings of the present research align closely with these conclusions. Moreover, the structural model confirms that access, usage, and availability function as significant predictors of financial inclusion. Overall, the analysis demonstrates that these dimensions not only drive financial inclusion but also have a direct and meaningful impact on the socio-economic advancement of customers. Consequently, the alternative hypothesis asserting that financial inclusion significantly influences the socio-economic development of customers is accepted.

The third objective of the study is to identify the barriers/ challenges face by the customers in public sector banks. Respondents were queried about the issues they face to investigate the challenges individuals encounter when interacting with banks that impede their full financial inclusion. Additionally, interviews and discussions were held with key managers from the primary bank to identify research challenges and facilitate a more in-depth examination of the subject. The findings indicated several obstacles people encounter with

banks that hinder them from achieving financial inclusion, such as the complex and lengthy procedures for opening bank accounts or obtaining loans, geographical barriers, high fees associated with not maintaining a minimum balance, insufficient documentation requirements for setting up bank accounts, claiming social benefits, and transferring funds, as well as the unaffordability of banking products and services, delays in obtaining credit from banks, and potentially a lack of trust in Business Correspondents (BCs). Further, the barriers/challenges customers face in public sector banks must be identified. This objective is exploratory in nature. The questionnaire was formed with questions about customers' barriers and challenges in the public sector.

The survey results found various barriers to the growth of financial inclusion in Punjab. Making customers feel valued and integral to the banking sector is crucial. Customers often think the number of facilities under banks is smaller according to the population size group. This means facilities for senior citizens and disabled persons, sitting arrangements inside or outside banks, etc. This leads to barriers that affect the growth of financial inclusion. Service failure is also a big issue in public-sector banks, i.e., Network problems or server issues. Due to this, there is a delay in work or transactions that leads to an increase in the dissatisfaction level of customers. The impact of service failure on customer satisfaction is significant, highlighting the urgency of addressing these issues.

In Punjab, a significant barrier to financial inclusion is a lack of knowledge about the scheme. In 15 districts, 30% of customers agree that banks do not give proper information about various schemes. Additionally, 27% of customers agree that facilities for senior citizens and disabled persons, such as sitting arrangements inside or outside banks, are unacceptable. Further, 23% agree that slow or down internet speed is one of the most significant issues in the banking sector. The problem-solving process in public sector banks is a pressing issue that demands immediate attention. The data from the state of Punjab reveals that 16% of customers are still grappling with this problem. By enhancing the problem-solving process, this study builds customers' confidence in the future of banking. It fosters a sense of potential for improved customer satisfaction, underscoring the urgency of this issue and the need for immediate action. However, it is essential to note that there have been significant improvements in the extent of barriers alongside various reforms and the development of the digital infrastructure, especially during the past decade, giving us hope for a more inclusive future. This progress should inspire optimism in our efforts to overcome these barriers, as we can see that change is possible and happening.

7.2.1 Contribution in Addressing the Research Gap

This study investigated the role of financial inclusion in facilitating socio-economic development among rural banking customers in Punjab. The results indicate that financial inclusion is a complex construct that includes access to banking services, usage of those services, availability of banking facilities, employee accessibility, and financial literacy. The empirical analysis showed that all aspects of financial inclusion positively impact economic and social development, although the degree of their influence differs.

Among the recognized dimensions, Employee Accessibility and Service Usage surfaced as the most impactful factors influencing both economic and social development results. This suggests that the success of financial inclusion efforts relies not only on the presence of banking facilities but also on customers' ability to engage with financial services and receive sufficient assistance from bank staff. Additionally, Financial Awareness was identified as a crucial aspect in boosting customers' involvement in the formal financial sector. The results imply that achieving sustainable financial inclusion necessitates a comprehensive strategy that integrates accessibility, affordability, awareness, and the effective use of banking services. As such, financial inclusion should be regarded as a developmental tool capable of enhancing both economic prospects and social welfare in rural communities. The analysis of existing literature revealed that earlier research mainly concentrated on single aspects of financial inclusion, particular banking services, or broad indicators of financial growth. Additionally, there has been a scarcity of empirical studies exploring the connection between various dimensions of financial inclusion and socio-economic development concurrently at the customer level, especially in the rural areas of Punjab.

This current research aims to fill this void by creating and empirically validating a comprehensive framework that includes Access to Services, Service Usage, Availability of Banking Facilities, Employee Accessibility, and Financial Awareness. By employing the PLS-SEM method, the study examines the direct impacts of these dimensions on economic and social development results among rural banking clientele. The results provide region-specific evidence from Punjab and add to the existing literature on financial inclusion by highlighting the relative significance of various dimensions in fostering socio-economic development. Consequently, the research delivers both theoretical and practical insights for policymakers, banking institutions, and development practitioners aiming to enhance financial inclusion efforts.

7.3: Suggestions Objective- wise

7.3.1 Suggestions for Enhancing the Contribution of Public Sector Banks to Financial Inclusion

7.3.2 Suggestions to Enhance Socio-Economic Development of Customers through Financial Inclusion

7.3.3 Suggestion's to Overcome Barriers

7.3.3.1 Specific Suggestion's based on Present Study

7.3.3.2 General Suggestions Based on Survey

7.4 Self-service Technologies (SSTs) Based Suggestions to Promote Financial inclusion

7.5 How SST fosters financial inclusion

7.3.1 Suggestions for Enhancing the Contribution of Public Sector Banks to Financial Inclusion

Public Sector Banks can greatly enhance financial inclusion by implementing innovative and community-centred strategies that extend beyond traditional methods. By introducing a Community Relationship Banking model with local officers in villages, trust can be fostered, and a better comprehension of local financial requirements can be achieved. A hyper-local financial inclusion index at the district or block level can assist banks in identifying unbanked households, accounts with low activity, and segments that are digitally excluded for focused interventions. Specialized services such as Inclusion Priority Counters aimed at women, the elderly, and differently-abled customers can help dismantle longstanding access barriers.

To boost digital confidence, PSBs can conduct Digital Confidence Clinics where customers can practice UPI payments and biometric authentication. Establishing micro-enterprise accelerator units can aid small business owners with training, credit counseling, and market connections. The introduction of local-language AI voice assistants can help lower literacy obstacles and make banking more user-friendly. Enhanced staff behavior and accountability can be achieved through an Inclusion Behaviour Score incorporated into performance evaluations. Strengthening the BC model by transforming BC points into Smart BC Hubs equipped with digital resources would modernize rural service delivery. Additionally, PSBs can broaden access through affordable inclusion insurance packages, collaborations with local schools and cooperatives, and seasonal repayment plans that align with livelihood cycles. Lastly, a real-time monitoring dashboard for inclusion and financial education tools can assist banks in tracking progress, decreasing exclusion, and improving customer interaction.

Together, these distinctive strategies empower PSBs to foster inclusive, technology-driven, and adaptive financial ecosystems in underserved areas.

Public Sector Banks (PSBs) have the potential to greatly improve their role in financial inclusion by enhancing the overall quality of their financial services, which is a crucial factor in financial inclusion measures. Offering zero-cost doorstep banking services for senior citizens and individuals with disabilities, along with making branch facilities more accessible and user-friendly, can significantly lower the physical and procedural obstacles faced by vulnerable populations. These focused efforts not only bolster service delivery but also strengthen the inclusive mission of PSBs, leading to fairer and more comprehensive outcomes in financial inclusion. Public Sector Banks (PSBs) ought to set up a specific grievance-redressal counter to address issues relating to financial inclusion services. Furthermore, it is essential for banks to implement a written commitment to resolve issues within a specified timeframe, assuring customers that their grievances will be handled swiftly and transparently. This strategy will boost customer confidence, enhance service accountability, and improve the overall effectiveness of financial inclusion efforts.

7.3.2 Suggestions to Enhance Socio-Economic Development of Customers through Financial Inclusion

In order to boost the socio-economic progress of customers through financial inclusion, Public Sector Banks (PSBs) and policymakers should embrace a comprehensive, inclusive, and customer-focused strategy. Enhancing financial literacy initiatives empowers individuals with the knowledge and assurance needed to make sound financial choices, while credit facilities centred on livelihoods and microfinance efforts support marginalized groups in enhancing their income-generating abilities. Increasing access to affordable digital banking services ensures broader reach and promotes consistent usage among rural and low-income households. Furthermore, customized savings, insurance, and pension offerings provide financial stability and protection against unexpected economic challenges.

A particular emphasis on empowering women financially, along with community-driven awareness initiatives and the integration of skill development and entrepreneurship programs, further facilitates socio-economic advancement. By prioritizing accessibility, affordability, transparency, and efficient mechanisms for addressing grievances, financial inclusion becomes a vital tool for enhancing household welfare, encouraging equitable growth, and reinforcing the role of PSBs as catalysts for socio-economic progress. There are some

specific suggestions that directly helpful for development of customers i.e Implement doorstep banking and no-cost services for senior citizens and individuals with disabilities. Create accessible branch facilities and specialized counters for addressing grievances with guaranteed timely resolutions, Broaden the Business Correspondent networks and mobile banking kiosks in areas that lack sufficient services, connect financial services with government assistance programs and skill development initiatives to maximize their effectiveness.

7.3.3 Suggestion's to Overcome Barriers

7.3.3.1 Specific Suggestion's based on Present Study

Identified Barrier	Suggested Solution
Distance to Banks	Establish “ <i>Digital Gram Banking Hubs</i> ” one hub serving a cluster of villages equipped with micro-ATMs, offline UPI, and biometric devices, supported by mobile banking vans for weekly rotation visits. Introduce mobile banking vans, micro-ATMs, banking correspondents, and digital kiosks for doorstep banking access.
Lack of Cash	Introduce <i>AI-enabled Rural Cash Demand Predictor</i> to forecast cash requirement patterns (crop cycles, MNREGA payments, pensions) and automate cash dispatch planning. Implement real-time cash forecasting and dedicated rural cash-reserve management to prevent cash shortages.
Strict KYC Norms	Implement “ <i>Rural Assisted e-KYC Drive</i> ” led by Panchayat-approved enumerators to onboard customers at their doorstep through Aadhaar OTP-based verification. Use simplified e-KYC (Aadhaar OTP) and door-to-door onboarding to include elderly and uneducated customers.
Minimum Balance Requirement	Promote <i>Government-linked Auto-Savings Wallets</i> that convert government subsidy credits into micro-savings automatically without penalties. Promote zero-balance and small-deposit saving products to remove fear of penalties.
ATM / SMS Charges	Provide <i>Digital Passbook via WhatsApp & IVR</i> for balance and transaction updates at zero charge to reduce dependency on SMS alerts. Waive ATM & SMS charges for rural/PMJDY customers and offer free USSD-based balance update service.
Long Transaction Time	Introduce “ <i>Priority Tokens for Farmers & Senior Citizens</i> ” and deploy <i>QR-based appointment scheduling</i> for time-bound branch visits. Introduce token systems and digital queue management inside branches to reduce waiting time.

Negative Employee Behaviour	Mandatory <i>Rural Banking Etiquette Certification Programme</i> for staff and annual <i>Customer Compassion Index (CCI)</i> linked to promotions. Provide mandatory soft-skills and customer-sensitivity training and link appraisal to customer feedback.
Poor Problem-solving by Banks	Form <i>Block-Level Financial Mediation Committees</i> involving bank officials, panchayat representatives, and SHG leaders to resolve customer complaints within 14 days. Launch <i>Village-Level Financial Support Desks</i> and monthly customer grievance camps for timely resolution.
Low Knowledge of Banking Schemes	Launch <i>Financial Knowledge Rath (Awareness Vans)</i> and <i>Village Banking Champions</i> (educated youth paid honorariums to spread awareness). Organize financial literacy drives via SHGs, panchayats, rural schools, and agricultural mandis in local language.
Fear of Using Banking Services	Create <i>Women Digital Finance Clubs & Senior Citizen Digital Cells</i> offering peer-learning sessions for safe and confident banking usage. Facilitate assisted digital banking support to help first-time users until they gain confidence.
Inadequate Facilities in Banks	Develop <i>Smart Rural Branch Layout Standards</i> — shaded waiting lounge, token display, drinking water, and barrier-free access for differently-abled individuals. Upgrade rural branches with seating area, shade, washrooms, drinking water, and disability-friendly counters.
Limited Availability of Bank Representatives	Implement “ <i>One BC for Every 2 Villages</i> ” Policy with <i>Geo-tracking presence accountability</i> and <i>performance-based flexible commissions</i> . Recruit local banking correspondents with performance-based incentives and provide rural helpline support.

7.3.3.2 General Suggestions Based on Survey

1. The bank must organize an awareness program twice a month to inform customers about banking services or products.
2. The number of BC points of all banks, such as IPPBs or RRBs, should increase, and the Department of Post should also open BC points.
3. Even multi-language ATMs with audio-video services could be considered.
4. Account opening or closing facilities for senior citizens or disabled customers are provided at the doorstep.

5. A special cell or section must exist in all banking sectors, especially at the local level, to solve banking problems like fraud calls, OTP generation, passbooks, or ATM issues. A customer can easily file a complaint in the bank rather than online at a toll-free number.
6. The bank should improve its infrastructure, such as facilities for disabled customers and proper seating arrangements inside or outside for customers.
7. Customers must have exceptional staff for form filling or other formalities.
8. People fear fraud in banking services, so they need to be informed about fintech solutions. The government should educate people about digital or secure banking facilities through social media or advertisements.
9. The Department of Post and RRB are much closer to rural customers. Hence, the government and the Ministry of Communication have a combined partnership to provide more banking services to these sectors, like account opening amounts or the availability of financial services.
10. Staff must be increased to meet customers' needs, i.e., clerks or MTS directly.
11. The government of India made some plans in which people do not come to the bank for basic needs, i.e., account opening, deposit, or credit, a minimum of up to 25000; for that, they use delivery staff or BC for this work.
12. The bank's instructions must be in the local language according to the state language.
13. Digital or Aadhaar-based authentication must be used 100% of the time for account opening or the KYC process.
14. SMS banking services must be improved. There are no charges for SMS services on the bank account
15. Customers often experience internal service downtime problems. Therefore, the banking sector should improve its software network to maintain customers' trust.
16. The bank's internal space must be increased so that employees and customers can easily sit or stand, or there will be a lack of noise.
17. The banking app must be aware to young people so they can quickly transfer their money and never wait for banking services like NEFT or RTGS.
18. The rural branches are still fewer according to the rural population size in our country.
19. The study also suggests special facilities for women's accounts, like subsidies, so they can open their accounts because gender discrimination was observed while calculating the survey.

20. The study suggests that banks could offer reward points to customers to promote the use of banking services. These points can be redeemed at various points of sale.
21. Additionally, the study recommends that the government create a course focused on financial inclusion, which could be offered through the Swayam Portal. If a person completes the course, it should count as credit toward their formal degree.
22. The remuneration plans for Business Correspondents should be effectively designed, with banks providing appealing rewards and recognition for promoting products and services in rural communities.
23. The Reserve Bank of India and other commercial banks should initiate a “Visit the Bank” program for all age groups as a corporate social responsibility initiative. This would help raise awareness about banking while allowing individuals to experience their products or services firsthand.
24. It is recommended that banks create distinct financial inclusion programs tailored for rural and urban areas based on the employment characteristics of the residents. For instance, a scheme for daily wage laborers could be introduced, allowing them to make small deposits daily.

7.4 Self-service Technologies (SSTs) Based Suggestions to Promote Financial inclusion

Self-service is essential for diminishing this dependence on physical locations and overcoming obstacles for the unbanked. Banks have begun providing a genuine omnichannel experience in several developed regions through mobile applications, wallets, and self-service kiosks. These alternative methods of service delivery have drawn many more individuals to banks, and existing customers are increasingly utilizing and acquiring additional financial products and services through automated delivery channels (ADCs). Self-service technologies (SSTs) enhance financial inclusion by offering cost-effective, convenient, and accessible financial services, particularly in areas with scarce standard banking systems. These technologies enable individuals to carry out different banking activities independently without needing direct help from bank personnel. Several critical self-service technologies that aid in financial inclusion are given below.

7.4.1 ATMs (Automated Teller Machines)

ATMs allow users to withdraw cash, check their account balances, transfer money, and pay bills without needing assistance from a bank employee. ATMs are frequently found in remote or underserved locations, providing crucial banking services to populations that may not have

convenient access to physical bank branches. Some advanced ATMs offer multi-language support and the ability to accept deposits, further enhancing accessibility.

7.4.2 Mobile Banking

Mobile banking applications and SMS banking enable users to perform banking tasks through their mobile phones, including transferring funds, paying bills, checking account balances, and accessing loan options. Mobile banking presents a practical and cost-effective alternative in areas with limited banking infrastructure. This is particularly important in developing nations, where many individuals have mobile phones but lack access to conventional banking.

7.4.3 USSD Banking

USSD (Unstructured Supplementary Service Data) is a protocol that lets users access banking services on their mobile phones via straightforward text-based menus, even on essential devices without internet access. USSD banking is prevalent in areas with minimal smartphone usage but significant mobile phone adoption. It empowers individuals to utilize banking services in real-time without an internet connection, which is crucial for rural and low-income populations.

7.4.4 Digital Wallets and Payment Systems

Digital wallets like PayPal, Google Pay, and local platforms (e.g., M-Pesa) allow users to store funds and make payments or transfer money electronically. Some of these services link to physical cards as well. These platforms enable unbanked individuals to send and receive payments, buy goods and services, and save money electronically. Mobile money services like M-Pesa have played a vital role in delivering financial services to those in isolated regions.

7.4.5 Biometric Authentication

Biometric authentication technologies, such as fingerprint or facial recognition, verify user identities when accessing financial services or conducting transactions. Biometric systems can enhance access to banking for those without traditional identification documents, which is a frequent hurdle to financial inclusion. They also bolster security and mitigate the risk of fraud.

7.4.6 Smartcards and Prepaid Cards

Smartcards and prepaid cards are plastic instruments that can hold and transfer funds. These cards are usable for online and offline transactions and can be recharged through agents or bank branches. These cards are an entry point to digital transactions for individuals lacking access

to conventional banking services. They are particularly beneficial for low-income groups or those without bank accounts, offering a secure payment and savings method.

7.4.7 Agent Banking

In agent banking, retail establishments or individuals function as banking representatives, delivering key banking services like deposits, withdrawals, and account openings on behalf of a financial institution. This approach spreads financial services into remote areas where traditional banks are impractical. It enables customers to carry out banking transactions within their local communities, improving the accessibility of banking services.

7.5 How SST fosters financial inclusion

Self-service technologies (SSTs) enhance access to financial services for the underbanked or unbanked. Regarding accessibility, availability, and usage, SSTs help foster financial inclusion in many ways.

7.5.1 Accessibility and Convenience

SSTs like mobile banking applications, ATMs, online banking services, and kiosks allow individuals, especially in remote or underserved regions, to use banking services anytime and from various locations. This enhanced accessibility diminishes the challenges associated with the physical distance from banks, often affecting rural or marginalized people.

7.5.2 Cost Reduction

By automating tasks such as cash withdrawals, balance checks, money transfers, and loan requests, SSTs decrease the necessity for physical bank locations and human personnel. Consequently, financial institutions can reduce operational expenses, which may lead to more affordable services for lower-income customers. As a result, banks can provide low-fee or even free banking options to promote financial inclusion.

7.5.3 Mobile and Digital Banking

Smartphones are pivotal in promoting financial inclusion via mobile banking apps, digital wallets, and USSD (Unstructured Supplementary Service Data) technology. Although many individuals in emerging markets may not access conventional bank branches, they can still manage their finances, transfer funds, pay bills, and receive payments through their mobile devices. Initiatives like M-Pesa in Kenya highlight how mobile financial services can transform access to financial resources.

7.5.4 Paperless Transactions

SSTs support electronic transactions, lessening the dependence on cash or physical documentation. Digital platforms enable more straightforward documentation and record-keeping, which enhances transparency, minimizes fraud, and builds trust in financial services. This is particularly vital in areas where residents face challenges related to literacy or access to traditional banking systems.

7.5.5 Loan and Credit Access

Self-service platforms allow individuals to apply for loans and credit without needing in-person meetings with bank representatives. Numerous financial institutions employ data-driven technologies like machine learning to evaluate creditworthiness and provide microloans to individuals lacking traditional credit histories. Peer-to-peer lending and crowd-lending platforms also utilize SSTs to grant users access to affordable credit.

7.5.6 Financial Literacy and Education

SSTs contribute to financial education by offering engaging tools, tutorials, and resources that instruct users on managing their finances, budgeting, saving, and investing. Mobile applications and websites can present information on essential financial topics, assisting in building financial literacy for populations that may not have received formal education in these areas.

7.5.7 Digital Payment Systems

SSTs facilitate digital payment systems, simplifying individuals' participation in the formal economy. For instance, digital wallets and platforms like PayPal and Venmo allow users to send and receive money, purchase goods, and even invest through mobile devices. This shift reduces reliance on cash and enhances financial engagement, particularly for low-income or rural populations.

7.5.8 Remote Identification and Onboarding

Many SSTs incorporate biometric authentication and digital identity verification techniques (such as facial recognition, fingerprint scanning, and government ID imaging) to facilitate remote user onboarding. This approach simplifies access to banking services for individuals in rural or underserved communities who may not possess conventional documentation, lowering the barriers linked to identity verification.

7.5.9 Support from Regulatory Authorities

Governments and regulatory agencies can facilitate financial inclusion by implementing favorable policies regarding digital banking, fintech advancements, and self-service technologies. For instance, regulations like Know Your Customer (KYC) and Anti-Money Laundering (AML) tailored for digital platforms ensure that self-service technologies adhere to financial regulations, making them a safer and more reliable choice for users.

Self-service technologies (SSTs) promise to enhance financial inclusion, particularly for unbanked or underbanked individuals, by providing more accessible, affordable, and user-friendly financial services. SSTs help to bridge conventional banking services and underserved populations. The ongoing advancement and implementation of these technologies and supportive regulatory systems can lead to a more inclusive global financial landscape. Various technology-driven solutions exist that can progressively meet the needs of financial inclusion. However, a universally optimal technology solution is not suitable for this purpose. Multiple alternatives exist in various forms, but they suffer from limited standardization, issues with achieving interoperability, critical mass, and elevated costs. Developing a financial services inclusion strategy that considers citizens' needs, context, influences, and motivations is essential for long-term success. Technology can either facilitate or hinder this process. The key characteristics that an appropriate technology should possess are suitability, cost-effectiveness, security, proven effectiveness, scalability, and longevity.

7.6 Prioritized Recommendations for Enhancing Financial Inclusion

Based on the findings of the study, the recommendations are categorized into short-term, medium-term, and long-term interventions to facilitate effective implementation and policy formulation.

Time Horizon	Strategic Interventions	Responsible Stakeholders
Short-Term (1–2 Years)	Intensify financial literacy and awareness campaigns among rural populations; simplify banking procedures and documentation requirements; strengthen customer grievance redressal mechanisms; and enhance the service quality of banking personnel through regular	Commercial Banks, Regional Rural Banks, Branch Managers, Financial Literacy Centres

	capacity-building and customer relationship training programmes.	
Medium-Term (3–5 Years)	Expand digital banking infrastructure and service delivery channels; strengthen the Business Correspondent (BC) model to improve last-mile connectivity; enhance banking outreach in underserved and remote villages; and promote digital and financial literacy to encourage effective utilization of formal financial services.	Commercial Banks, Reserve Bank of India (RBI), NABARD, State Government Agencies
Long-Term / Policy-Level (Beyond 5 Years)	Integrate financial inclusion objectives with broader rural development strategies; invest in robust digital and financial infrastructure; incorporate financial education within formal educational curricula; strengthen regulatory and institutional frameworks supporting inclusive finance; and encourage multi-stakeholder collaboration for sustainable financial inclusion.	Government of India, RBI, Policymakers, Educational Institutions, Development Agencies

The phased strategic framework highlights that achieving meaningful financial inclusion requires coordinated efforts at institutional, infrastructural, and policy levels. While short-term interventions focus on improving awareness, accessibility, and service delivery, medium-term measures emphasize technological expansion and outreach. Long-term initiatives seek to create an enabling ecosystem through policy integration, educational reforms, and infrastructure development, thereby ensuring sustainable socio-economic development through enhanced financial inclusion.

7.7 Limitations and Future Scope of Study

All possible efforts have been made to enhance the reliability, validity, and thoroughness of the study. Nevertheless, certain limitations remain that should be acknowledged when considering its findings for application. These limitations are outlined below:

1. The study focuses exclusively on 15 districts within the Punjab division due to limited resources and time constraints. Future comparisons of financial inclusion may be made across districts, divisions, and states.
2. The research utilizes longitudinal data and could further be expanded to include cross-sectional data.
3. This study is restricted to the perceptions of financial inclusion beneficiaries and could be broadened to encompass the viewpoints of other stakeholders, including bank officials and business correspondents.
4. The research examined financial inclusion beneficiaries only through commercial banks and did not consider other institutions such as post offices, cooperative banks, regional rural banks, cooperative societies, and self-help groups (SHGs).
5. A comparative analysis between individuals who utilized the financial inclusion scheme and those who did not was not conducted. Such a study could yield important insights.
6. The analysis includes three public-sector banks; further research could investigate all public or private-sector banks or perform a comparative evaluation of their performance.
7. Future research will also address the role of fintech in promoting financial inclusion.
8. The study presents the supply perspective of financial inclusion, specifically from banks, while the demand perspective from customers' viewpoints could be explored in future research.
9. A comparison of business correspondents from all banks could be undertaken, as they typically engage with rural communities and can provide insight into the challenges they face.
10. This research focuses solely on the effect of financial inclusion on socio-economic development; further studies may investigate rural and sustainable development in the country.
11. The role of public sector banks was studied up to 2022 at the national level due to data variability and could be further extended in subsequent research.
12. Future research could encompass the role of regional rural banks, private sector banks, and self-help groups, along with post offices in financial inclusion, or conduct a comparative study of all financial institutions.

13. Future studies may prioritize analyzing the successes and failures of various government financial inclusion schemes, as well as the expectations and experiences associated with them.
14. Further investigations could focus on the demand-side perspective of financial inclusion and its growth dimensions through fintech technology.
15. Due to differences in publication schedules, reporting cycles, and data availability across sources, a uniform reference year for all indicators could not be maintained. While certain variables were available up to 2024, others were accessible only up to 2022. Further it can be extended in subsequent research.

7.8 Implication of the Study

This research study has added to the existing body of knowledge in the following ways:

1. This study has assessed financial inclusion through these three dimensions from a supply-side perspective. It will assist policymakers in focusing more on developing products and services to enhance these dimensions.
2. The geographical locations of residents influence their access to and use of financial products and services. Customers' financial requirements vary between regions. Banks should classify different products in each region based on the needs of the people.
3. The study revealed that providing individuals with access to financial products and services does not solve the problem. Efforts should be made to enhance people's creative capacities and autonomy to improve the usage of services by making efforts toward quality.
4. The study found various barriers from the customers' point of view that affect the financial inclusion goal. So, Banks and policymakers should consider that point when making policy.
5. The study's findings were also implemented during the financial inclusion plan. Which means suggesting or directing other banks to work like public sector banks.

7.9 Conclusion:

Customer service in the banking industry is not just a challenging but crucial task. It depends upon the attitude and perception of the customer to hold the faith for a long time. One of the most essential parts is keeping customers returning, which is challenging for bankers. The banker should respond to customers' queries and complaints in time and should interact with customers by confronting each other through meetings, phone calls, emails, and fax. The retention of customers depends upon the skills and talent of the bankers, such as good communication skills, patience towards the customers, attending to the problem of the customer with a smiling face, interpersonal relationships, and solving the problems of the

customers by giving solutions, explain about the different product issued by the bank, good leadership qualities, and teamwork which help the nationalised banks to improve their performance in the banking industry in this vastly competitive world.

Technology, a game-changer in the banking sector, has significantly enhanced banking operations. It has provided employees with benchmark information across the division and facilitated the continuous introduction of new financial products. Innovations like automated customer assistance, E-loans, and dispute resolution services have revolutionized the nationalised banking industry, leading to recent changes like mergers and acquisitions. The proactive measures taken by the RBI to enhance the redeployment of the domestic banking industry in India underscore the sector's pivotal role in financial inclusion, paving the way for a more tech-savvy and efficient future. Customer service should be viewed as part of a comprehensive approach to systematic enhancement in banking performance. The country's survival and future of nationalised banks, which play a crucial role in financial inclusion, largely depend on the customers (S. Kavitha Dev, 2020). Today, customers in public sector banks face various types of barriers, but these are gradually decreasing due to the latest changes and policy implementation by the RBI. However, these barriers must be addressed to achieve the goal of financial inclusion. It is not just the responsibility of the banks or the policymakers but a collective responsibility we must all uphold. Easy access to financial services, timely availability, and significant use of these services by customers are critical to enhancing customer satisfaction and, in turn, banking performance. This commitment to customer satisfaction will drive us towards our goal of financial inclusion.

Overall, the findings of the study raise several important considerations for both policy and practice. The results indicate that age-related thresholds influence how households engage with different dimensions of financial inclusion, suggesting that financial behaviour and service usage evolve across life stages. In addition, variations across income quintiles significantly shape decisions related to account ownership and participation in the formal financial system. These patterns highlight the need to identify distinct trajectories across income groups that lead to specific financial inclusion outcomes. The study further identifies key barriers that require targeted policy attention, namely inadequate income levels, physical distance from financial service providers, and the high cost of accessing financial services. These constraints are particularly critical in rural areas, where demand for financial services remains high but access is limited (Ambarkhane et al., 2022). Longer distances to banking

outlets pose a substantial obstacle, especially for low-income households, as travel costs and time burdens reduce the feasibility of using formal financial services. Similarly, insufficient income and service-related costs discourage reliance on formal banking channels and reinforce financial exclusion (Dunstone et al., 2017).

Based on the empirical findings of the present study, several practical suggestions have been proposed to address the challenges faced by customers of public sector banks. Implementing these measures would not only improve customer satisfaction but also advance the broader objectives of financial inclusion, thereby contributing to inclusive and sustainable national development alongside enhanced socio-economic well-being of customers. Financial inclusion defined as the accessibility and affordability of financial services for individuals and businesses represents a critical pathway for India's progression toward becoming a globally competitive economy. Inclusive growth enables broader participation in economic and social processes, empowering individuals and fostering equitable development. Banks with global aspirations must remain responsive to local needs, as expanding financial access strengthens domestic markets and attracts international investors, leading to increased employment and entrepreneurial opportunities. Technology serves as a powerful enabler in extending financial services to underserved populations; however, its adoption must be balanced with a human-centric approach. Technology alone cannot achieve inclusive banking unless it is supported by personal assistance and trust-building mechanisms. Banks must ensure that technologically driven interfaces do not alienate low-income or less digitally literate customers. This necessitates continuous training of frontline staff, branch managers, and Business Correspondents to enhance customer engagement and provide empathetic service delivery. Additionally, robust grievance redressal mechanisms should be embedded within banking models to address customer concerns effectively.

In essence, sustainable financial inclusion requires a coordinated and structured effort from all stakeholders. Empirical evidence consistently demonstrates that economic growth is closely linked to financial inclusion. Expanded financial access promotes safe savings, insurance coverage, entrepreneurial financing, and efficient payment systems, all of which contribute to higher productivity and national income growth. Ultimately, financial inclusion is not merely a policy objective but a strategic imperative for India's economic transformation. By fostering inclusive growth, financial inclusion enables individuals to participate meaningfully in the economy and positions the country more strongly within the global economic landscape

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List of Workshop/Conferences/Webinars/Seminars/Papers/Book Chapters

1. Workshops Attended

- One-day Seminar on *Business Innovation and Social Science*, Chandigarh, 7 March 2020.
- One-week Short-Term Training Programme (STTP) on *Advanced Research Methodology*, organized by REST, 11–15 May 2020.
- National Workshop on *Statistical Analysis using SPSS*, Lovely Professional University, 26–30 May 2020.
- Workshop on *Statistical Applications using SPSS Software*, G.L. Research Academy, 9–13 September 2020.
- Workshop on *Data Analysis using Bluesky Statistics, Jamovi, and JASP*, SuGyan Academy, 18 October 2020.
- Workshop on *Reference Management using Mendeley*, LPU Phagwara, 13 November 2021.
- Workshop on *Tableau and Power BI*, LPU Phagwara, June–July 2023.
- One week Workshop on "Mastering Research Methodology with Smart-PLS, National Institute of Technology (NIT) Kurukshetra, March 06-13,2025.

2. Conferences Attended / Papers Presented

- Attended the International Conference on *Rethinking Business Designing Strategies in the Age of Disruption*, LPU Jalandhar, 19 December 2020.
- Presented a paper titled "*Aatmanirbhar Bharat: A Strategy Towards Self-Reliant India*" at the 2nd National Conference on *Innovations and Best Practices in Education*, NIT Jalandhar, 17–18 December 2021.
- Attended the International Conference on *Industry 5.0: Human Touch, Innovation and Efficiency*, LPU Phagwara, 28 January 2022.
- Attended the International Conference on *Business in a Turbulent World: Keeping Connection Alive*, LPU Phagwara, 21 November 2022.
- Presented a paper on "*Emerging Role of Public Sector Banks in Financial Inclusion*", Apeejay Institute of Management & Engineering Technical Campus, Jalandhar, 6 April 2024.

3. Webinars Attended

- Attended an International Webinar on *Issues and Challenges of Business, Economics and Finance in the Global Scenario*, Raiganj University, West Bengal, 18 June 2020.
- Attended a webinar on *Communication: A Game Changer*, organized by Esteem Foundation, 10 September 2020.
- Attended a webinar on *Dynamics of Career Planning*, University of Jammu, 25 January 2021.
- Attended an expert webinar on *My Service Quality Research Stream* by Prof. A. Parasuraman, Emeritus Professor of Marketing, University of Miami, 13 October 2021.
- Attended an International Webinar on *Empowering SME Growth with a Rational Startup*, Damesh Girls College, Mukerian, 1 May 2022.

4. Seminars / Refresher Courses / FDPs

- Successfully completed a Refresher Course on *Mixed-Method Research*, LPU Phagwara, 10–31 January 2022.
- Attended a Five-Day Faculty Development Programme on *Research Methodology*, CT Group of Institutes, Jalandhar, 2–11 July 2022.

5. Papers and Book Chapters Published

Book Chapters

- Published a book chapter titled “*Navigating India's Financial Inclusion Through Self-Service Technologies*” in *Practical Applications of Self-Service Technologies Across Industries* (Scopus indexed), June 2025.
- Published a book chapter titled “*Navigating Fine Arts from Canvas to Code: Impact of NFT and Blockchain*” in *AI & Expanded Canvas*, July 2025.
- Published a book chapter titled “*Blockchain Technology: Supply Key for Financial Inclusion Obstacles through the Banking Sector in India*” in *Blockchain for Business Promise, Practice, Applications*, April 2023.

Research Papers

- Published a research article titled “*Blockchain Adoption: Key for Financial Inclusion through the Financial Sector in India*” in *Sambodhi* (UGC-listed), March 2021.
- Published a research article titled “*Financial Inclusion and Socio-Economic Development: Analysis through the Banking Sector in India*” in the *International Journal of Accounting and Economics Studies* (Scopus indexed), August 2025.
- Published a research article titled “FinSocioNet: a hybrid deep learning framework integrating transaction classification and cash flow prediction for socio-economic profiling in public sector banking” in the *International Journal of Information Technology* (Scopus Indexed), December 2025, **DOI:** 10.1007/s41870-025-03032-8.

ANNEXURE – I

SCHEDULE FOR COLLECTING INFORMATION PERTAINING TO “FINANCIAL INCLUSION, SOCIO-ECONOMIC DEVELOPMENT WITH SPECIAL REFERENCE TO PUBLIC SECTOR BANKS IN PUNJAB”

Note: You are requested to notify the right information as per your knowledge. The information so collected is for research purpose only and would kept secret.

Research Scholar: Shaveta Sharma, Ph.D. Scholar (LPU, Jalandhar)

General information

Name			
Age	18-30 years		
	31-40 years		
	41-50 years		
	51 & above		
District	Tehsil	Block	Village
Marital Status			
Occupation	Self employed		
	Govt. Employee		
	Private Employee		
	Others		
Qualification	Up to Matric		
	High Secondary		
	Graduate		
	Post-Graduation		
Income (Monthly)	Below 10000		
	11000-30000		
	31000-50000		
	Above 50000		
Name of Bank	SBI	PNB	POSB
Contact Number			

Ordinal Information Instruction: Please share correct information on 5-point Likert scale ranging from 1 to 5 on the basis of your knowledge regarding Access, Availability, Usage, Social development, Economic development, (Where, SA stands for strongly agree, A stands for agree, N stands for neither agree nor disagree, D for Disagree and SD stands for strongly Disagree.

1.	Access of Banking Services	SA	A	N	D	SD
1.1	The bank is conveniently located.					
1.2	The banking alternate or its employee is easily approachable.					
1.3	The numbers of banks are sufficient in your area.					
1.4	ATM/Mobile ATM service is nearby from your place.					
1.5	Financial services are accessible to physically disabled customers.					
1.6	Account opening formalities are easy.					
1.7	The bank has sufficient staff to meet its banking operations.					
1.8	Employees of the bank are cooperative, friendly and respond well.					
1.9	Employees possess sufficient banking information to deliver.					
1.10	Overall, you are satisfied with your access to banking services.					

2	Usage of Banking Services	SA	A	N	D	SD
2.1	You depose/withdraw the money frequently in the bank.					
2.2	You frequently use the loan facilities of the bank.					
2.3	You are using loan facilities of banks because the interest charged by the bank on loan is economical than charged by the moneylenders.					
2.4	You generally use internet banking for various payments.					
2.5	Overall, you are satisfied with the usage of banking services.					

3	Availability of Banking Services	SA	A	N	D	SD
3.1	The loan is easily available.					
3.2	The Procedure involved in getting a loan is easy.					
3.3	Bank provides suitable insurance services.					
3.4	Debit/Credit card facility easily accessible to you.					
3.5	New cheque or passbooks are issued as and when asked for.					
3.6	A zero-balance account service is available in your bank.					
3.7	Information regarding new interest rates is provided and updated in time.					
3.8	Help desk/assisting staff are available for filling the withdrawal/deposit form.					
3.10	Overall, you are satisfied with banking services.					

4	Economic Development	SA	A	N	D	SD
4.1	FI has reduced your need to borrow money or goods.					
4.2	FI has raised your living standard.					
4.3	FI has made you independent regarding the spending on your savings.					
4.4	FI has increased the per capita income of your family.					
4.5	FI enables you & your family to enjoy better economic status.					
4.6	FI created new employment opportunities.					
4.7	FI directly positively affects capital formation & investment.					
4.8	FI has prepared you for financial emergencies.					
4.9	You are assisted while deciding where savings are to be used.					
4.10	Overall, FI has led to economic development.					

5.	Social Development	SA	A	N	D	SD
5.1	FI has made you independent in decision-making.					
5.2	FI has increased your confidence level.					
5.3	FI has improved your technical skills.					
5.4	FI improved your health and household hygiene.					
5.5	FI has led to improved education.					
5.6	FI has changed your personality & life style.					
5.7	You feel good to participate in any community activity.					
5.8	FI has empowered you to move to all public places freely.					
5.9	Your response and feedback are always appreciated regarding any financial issue.					
5.10	You are socially more developed after being covered under FI drive					

6	Barriers	SA	A	N	D	SD
6.1	The distance of the bank is too far from your location.					
6.2	KYC norms are very hard to follow.					
6.3	The basic amount for opening an account is high.					
6.4	ATM or SMS charges are very high.					
6.5	Time taken for the transaction is high.					
6.6	Employee behavior is not cooperative for the customer.					
6.7	The problem-solving process is slow.					
6.8	People have less knowledge about various schemes.					
6.9	Fear in mind regarding Banking services.					
6.10	Facilities for the customer under banks are less.					
6.11	Bank representatives discourage low-income customers from banking.					
6.12	Lack of cash availability and service failure is there.					