

**DOES FINANCIAL LITERACY IMPROVE FINANCIAL  
INCLUSION AN EMPIRICAL ANALYSIS IN THE CASE  
OF NEPAL**

**A Thesis**

**Submitted to the Central Department of Economics,  
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In Partial Fulfillment of the Requirements  
for the Degree of**

**MASTER OF ARTS**

**in**

**ECONOMICS**

**By**

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**April, 2024**

## DECLARATION

I, MAHENDRA BAHADUR CHAND, declare that this thesis entitled **Does financial literacy improve financial inclusion? An empirical analysis in the case of Nepal** submitted to the Central Department of Economics is my original work unless otherwise indicated or acknowledged in the thesis. The thesis doesnot contain materials which have been accepted or submitted for any other degree at the University or other institution. All sources of information have been specifically acknowledged by reference to the author(s) or institution(s).

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## LETTER OF RECOMMENDATION

This thesis entitled **Does financial literacy improve financial inclusion? An empirical analysis in the case of Nepal** has been prepared by Mr. MAHENDRA BAHADUR CHAND under my guidance and supervision. I, hereby, recommend it in partial fulfilment of the requirements for the Degree of MASTER OF ARTS in ECONOMICS for final examination.

.....

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Date: April 28, 2024

## **APPROVAL SHEET**

We certify that this thesis entitled **Does financial literacy improve financial inclusion? An empirical analysis in the case of Nepal** submitted by MAHENDRA BAHADUR CHAND to the Central Department of Economics, Faculty of Humanities and Social Sciences, Tribhuvan University, in partial fulfilment of the requirements for the Degree of MASTER OF ARTS in ECONOMICS has been found satisfactory in scope and quality. Therefore, we accept this thesis as a part of the said degree.

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## ABSTRACT

This study investigates the relationship between financial literacy and inclusion in Nepal through quantitative methods, based on the survey involving 3,355 observations. The analysis encompasses three main components: financial knowledge, financial attitude, and financial behavior, each assessed through specific indicators. The study employs various approach, involving a review of reports, descriptive analysis, and multiple regression analysis. Secondary survey data from Nepal Rastra Bank is utilized, with financial literacy as the independent variable and financial inclusion as the dependent variable, controlling for demographic factors. Ordinary Least Squares (OLS) regression model is used to examine this relationship, revealing that a one-unit increase in financial literacy score corresponds to a 0.215-unit increase in financial inclusion without control variables, decreasing to 0.161 units with control variables. Participation in the formal employment sector significantly boosts the financial inclusion score by 0.527 units, while higher education is positively linked to increased financial inclusion. The study underscores the importance of targeted interventions to enhance financial literacy and promote inclusive financial ecosystems for economic growth and prosperity in Nepal.

*Keywords: Financial literacy, financial inclusion, OLS regression, financial behavior, financial attitude, financial knowledge.*

## ACRONYMS AND ABBREVIATIONS

ANOVA	Analysis of variance
CIT	Citizen Investment Trust
CP	Credit Product
FA	Financial Attitude
FB	Financial Behavior
FI	financial Inclusion
FII	Financial Inclusion Insight
FK	Financial Knowledge
FL	Financial Literacy
INFE	International Network on Financial Education
INS	Insurance
MSMEs	Micro, Small and Medium Enterprises
NCFE	National Centre for Financial Education
NRB	Nepal Rastra Bank
OECD	Organization for Economic Co-operation and Development
OLS	Ordinary Least Square
PCA	principal component analysis
PLS	Partial least squares
PLS-SEM	Partial Least Squares Structural Equation Modeling
SIRP	Saving Investment Retire Products
SME	Structural Equation Modeling

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# CHAPTER I

## INTRODUCTION

### 1.1 Background

In recent years, the concept of financial inclusion has gained significant attention as a crucial aspect of economic development and poverty alleviation. Financial inclusion refers to the accessibility and availability of financial services to all segments of society, particularly those who are economically vulnerable or marginalized. However, research suggests that economically vulnerable individuals are often excluded from formal financial systems, perpetuating cycles of poverty and inequality (Lyons et al. 2019). One potential avenue to address this issue is through enhancing financial literacy.

Nepal Rastra Bank's monetary policy for fiscal year 2076/77 introduced significant measures to promote financial inclusion across Nepal. A key component was allowing branchless banking services in all 6,743 local wards that did not have existing bank branches, streamlining the process by removing the need for central bank approval. Furthermore, microfinance institutions were encouraged to set up branches in municipalities and rural municipalities before expanding into metropolitan areas or district headquarters. The policy also focused on modernizing the payment system to further enhance financial inclusion. By the end of Asar 2080, 752 out of 753 local governments had commercial bank branches, indicating substantial progress. At that time, there were 155 licensed banks and financial institutions, including 20 commercial banks, 17 development banks, 17 finance companies, 57 microfinance institutions, and one infrastructure development bank, with a total of 6,140 branches (commercial, financial and development banks) across Nepal. These initiatives demonstrate Nepal Rastra Bank's commitment to extending financial services to even the most remote areas of the country.

Financial literacy, defined as the knowledge and skills necessary to make informed financial decisions, has been identified as a key determinant of financial behavior and outcomes. Studies have shown that individuals with higher levels of financial literacy are more likely to engage in positive savings behaviors and are less reliant on borrowing from informal sources (Lyons et al. 2019). Moreover, financial literacy empowers individuals to evaluate and navigate various financial products and services effectively.

Financial literacy means knowing how to manage money wisely. It involves being able to make smart choices about how you use your money now and how you plan for your financial future. Fitri (2020) found that when people earn more money from their businesses, they tend to become more financially literate. Also, the way people handle their money affects how financially literate they are. If someone knows a lot about managing money, they're likely to make better financial decisions. But if someone doesn't know much about handling money, they might make poorer choices about their finances.

Understanding the relationship between financial literacy and financial inclusion is essential for designing effective strategies to promote economic empowerment and inclusion. Research by Hasan & Hoque (2021) highlights the significant impact of understanding financial services on access to financial opportunities, particularly in expanding the usage of formal financial services. However, despite the potential benefits of financial literacy, disparities in access to financial education persist, particularly among rural populations. Rural communities often have limited awareness of the range of financial services available to them, leading to underutilization of formal financial institutions. Many individuals in rural areas perceive banks solely as places for deposits and withdrawals, unaware of the broader array of financial products and services they offer (Lyons & Kass-Hanna, 2019). Consequently, there is a pressing need for targeted financial education initiatives to bridge this gap and promote greater financial inclusion among rural populations. Financial institutions have a critical role to play in promoting financial inclusion by developing and implementing training programs to enhance financial literacy among underserved communities. However, existing efforts in this regard have been limited, highlighting the need for concerted action to address this issue. This thesis aims to investigate the relationship between financial literacy and financial inclusion, with a focus on understanding how improving financial literacy can contribute to greater access to financial services and opportunities, particularly among economically vulnerable In Nepal.

Financial literacy encompasses the education and comprehension of diverse financial domains, encompassing aspects related to the effective management of personal finance, money, and investment. This field is centered on the proficiency to handle personal financial matters judiciously, involving the knowledge necessary for making well-informed decisions concerning personal finance, spanning areas like investing, insurance, real estate, college funding, budgeting, retirement planning, and tax

management. The overarching goal of financial literacy is to empower individuals to be self-sufficient, thereby achieving financial stability. A comprehensive understanding of this subject equips individuals to address pivotal questions about their financial choices, such as the necessity of a purchase, its affordability, and whether it represents an asset or a liability, (OECD 2005)

Studies suggest that financial inclusion boosts economic growth and development by increasing consumer access to the formal financial system. This leads to higher savings, creating more resources for investment and spurring long-term growth. With more savings, financial institutions can extend credit to a wider range of borrowers, diversifying their loan portfolios and reducing credit risk. As a result, the efficient recycling of funds drives an increase in overall economic activity.

Thirdly, heightened levels of financial inclusion promote increased participation from various economic segments in the formal financial system. As the formal financial sector's share expands, it strengthens the argument for utilizing interest rates as a primary policy tool, with implications for economic growth.

Financial literacy refers to the knowledge and skills needed to manage money effectively, including budgeting, saving, understanding credit, and diversifying investments. Financial education is the process of teaching these skills to individuals and communities, empowering them to make informed financial decisions. Financial capability focuses on the role of financial institutions in offering suitable products and services to meet the needs of diverse customers. When financial literacy, education, and capability are aligned, it fosters comprehensive financial inclusion, ensuring that everyone has access to essential financial services like bank accounts, credit, insurance, and digital payments.

By promoting financial literacy through education and ensuring financial institutions provide accessible services, financial inclusion can be achieved. This, in turn, can reduce poverty, drive economic growth, and create a more equitable financial system where all individuals have the opportunity to participate.

Financial literacy and financial inclusion are connected in interesting ways. On one hand, if people understand financial concepts, they are more likely to use financial services effectively. For example, someone who knows how to budget will probably open a bank account to manage their money. On the other hand, when people have access to financial services, they can learn more about them, which can increase their

financial literacy. For example, having a credit card might help someone understand how credit works.

When people are financially literate and have access to financial services, it's good for everyone. It means more people can save money, invest, get loans to start businesses, and manage their risks with insurance. This leads to more economic growth, less poverty, and a stronger economy overall.

But there's a flip side too. If people don't understand financial concepts, they might avoid financial services, leading to financial exclusion. This can make it harder for them to save money, get credit, or protect against risks, potentially trapping them in a cycle of poverty.

So, in short, financial literacy and financial inclusion are both crucial for helping individuals and economies thrive. If people understand how to manage their money and have access to the financial services they need, everyone benefits.

## **1.2 Statement of the problems**

Financial inclusion is a critical component of economic development, contributing to poverty reduction, social inclusion, and broader economic participation. However, achieving financial inclusion remains challenging, especially in regions with limited access to formal financial services and low levels of financial literacy. Nepal, like many developing nations, faces these challenges due to a range of factors, including geographic barriers, limited infrastructure, and socio-economic disparities. Financial literacy and financial inclusion pose significant challenges globally, particularly in rural and developing regions where access to financial services is limited (Grohmann & Menkhoff, 2021). Despite efforts to promote financial literacy, there persists a substantial gap in understanding and accessing financial resources, exacerbating barriers to inclusion (Miswanto et al., 2024).

The core issue is whether improving financial literacy can lead to greater financial inclusion in Nepal. If people have a better understanding of financial concepts, such as savings, credit, insurance, and electronic payment systems, they might be more likely to use these services. This could have a transformative effect on financial inclusion, leading to greater economic stability and growth. Therefore, the problem this thesis seeks to address is the gap between financial literacy and financial inclusion in Nepal.

Specifically, it will examine whether increasing financial literacy can improve the adoption and utilization of financial services, leading to broader financial inclusion. Addressing these challenges requires collaborative efforts to develop targeted interventions and policies that enhance financial literacy, reduce barriers to access, and promote inclusive financial ecosystems conducive to economic growth and prosperity.

In this context/background, this study has answered the following research questions.

1. What is the nature and extent of financial literacy and financial inclusion in Nepal?
2. Does financial literacy have a significant impact on the improvement of financial inclusion in Nepal?

### **1.3 Objective of the study**

The general objective of the study is to examine the relationship between financial literacy and financial inclusion in Nepal. The specific objectives, however, are:

1. To study the nature and extent of financial literacy and financial inclusion in Nepal
2. To examine the relation between financial literacy and financial inclusion in Nepal.

### **1.4 Significance of the study**

This study is really important because it seeks to make a big difference in Nepal's financial system by looking into key issues around financial literacy and inclusion. By gathering insights through this research, it can provide a solid foundation for policymakers to make choices. The study examines the specific needs and challenges faced by different groups, which can lead to the development of initiatives that are focused and effective. This approach helps ensure that everyone has the opportunity to learn about and benefit from financial services.

Moreover, the study's findings can be instrumental in refining strategies for financial inclusion. By identifying existing barriers, these strategies can be adjusted to ensure that more people can access and use financial services effectively. The long-term effects of financial literacy programs help to understand what works over the long run and can lead to sustainable approaches that encourage positive financial behavior for years to come.

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

This study aims to understand how people in Nepal manage money and use financial services. Author want to look at this across the entire country, considering differences between cities and rural areas, various age groups, incomes, and education levels. By doing this, author hope to learn what helps or hinders people in Nepal when it comes to handling finances. Also, in this study a causal relation is tried to be established between financial literacy and financial inclusion. In course of this study, the author adopted the data from NRB baseline survey and the available data and variable are utilized fully, but due to the unavailability of various control variable, this study was unable to incorporate the behavioral factors. Very few other control variables are only available and all those are utilized. The issue of endogeneity may not be identified and hence, multiple linear regression is done.

## **1.6 Organization of the Study**

The thesis consists of preliminary parts, major body, references and annex. The preliminary part consists of cover page, letter of declaration, letter of recommendation, and letter of acceptance, acknowledgment, abstract, and list of content, list of abbreviation, list of tables and list of figures. Chapter I: Introduction sets the stage for the entire thesis. It includes the general background, an introduction to the topic, and the focus of the study. It also outlines the statement of the problem, objectives, and the importance of the study. Additionally, this chapter discusses the limitations of the study and provides an outline of the thesis structure. Chapter II: Review of Literature survey the existing literature on the topic and is thoroughly examined to establish a theoretical framework. It contains a review of empirical and theoretical studies and identifies the research gap that the current thesis aims to fill. Chapter III: Research Methodology, describes the research design and explains the methods used to gather and analyze data. It outlines the population and sample, sources of data, and data analysis tools. Chapter IV: Data Presentation and Analysis, focuses on the presentation and analysis of the collected data. It provides a detailed examination of the findings and uses analytical tools to interpret the results. The goal is to draw meaningful conclusions from the data. Chapter V: Summary, Conclusion, and Recommendations summarizes the key findings of the research. It presents the conclusions drawn from the analysis and offers

recommendations based on the results. This chapter aims to provide practical suggestions and implications for future studies or policy development.

References at the end of the thesis is included with a comprehensive bibliography lists of all the sources and references used throughout the research. Finally, Appendix are included to provide supplementary material that supports the main content, such as additional survey tools and codes.

## CHAPTER II

### REVIEW OF LITERATURE

#### 2.1 Introduction

This chapter critically examines existing literature on does financial literacy improve financial inclusion in Nepal. The analysis is structured into three sections: theoretical review, empirical review, and identification of research gaps. The theoretical review explores key theories shaping the understanding of this relationship. In the empirical review, methodological approaches and findings from previous studies are assessed, with a focus on cross-sectional multistage survey data. The chapter concludes by identifying research gaps, informing subsequent empirical investigations.

Financial literacy refers to the amalgamation of financial awareness, expertise, skills, mindset, and conduct essential for making prudent financial decisions and ultimately attaining personal financial well-being (Atkinson and Messy, 2012, p.14). It encompasses understanding, attitude, and behavior related to various contexts, including but not limited to managing finances, strategizing for both short and long-term financial objectives, and being informed about and selecting appropriate financial products.

Financial knowledge encompasses a fundamental understanding of key financial concepts and the capacity to apply numerical skills in financial scenarios. Assessing an individual's financial knowledge involves testing their grasp of concepts such as simple interest, compound interest, time value of money, inflation, diversification, division, risk-return, and the comprehension of interest paid on loans (NCFE, 2019, p.10). This implies the ability to not only comprehend these concepts but also to apply them in practical financial situations.

Financial behavior encompasses the examination of everyday money management, financial planning, spending habits, savings practices, investment decisions, reliance on credit for daily needs, and the establishment of a safety net for future well-being (NCFE, 2019, p.10). Essentially, it involves observing and understanding how individuals handle their finances on a day-to-day basis, considering both short-term needs and long-term financial security.

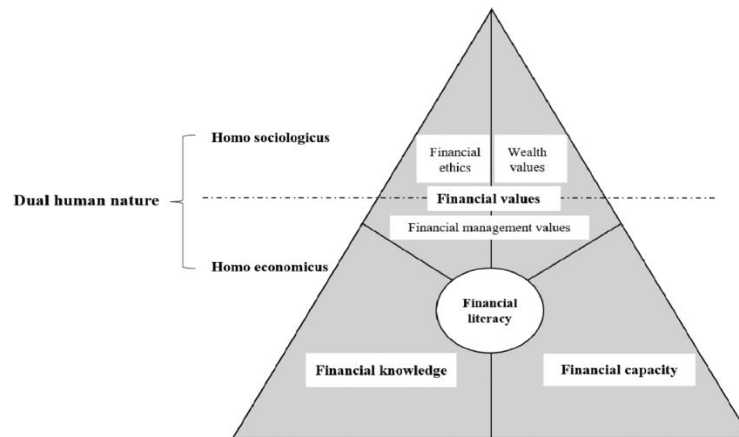
It involves the examination of people's responses regarding savings, prioritization of short-term desires over long-term security, inclinations towards risk, and other factors that contribute to future well-being (NCFE, 2019, p10). It focuses on understanding individuals' attitudes, beliefs, and inclinations related to financial aspects, which can significantly influence their financial decision-making and overall financial health in the long run.

Financial inclusion is characterized as the progression of facilitating affordable, timely, and sufficient access to regulated financial products and services and expanding their utilization across all segments of society. This is achieved through the implementation of customized, existing, and innovative approaches, which may include financial awareness and education initiatives. The overarching goal is to promote not only financial well-being but also economic and social inclusion (Atkinson and Messy, 2013, p.11). In essence, it aims to ensure that a diverse range of individuals in society has access to and can benefit from a variety of financial services in a way that supports their overall economic and social integration.

## **2.2 Theoretical Review**

The theoretical review component of this chapter delves into foundational theories that elucidate the intricate relationship between financial literacy and financial inclusion in the context of Nepal. Understanding the theoretical underpinnings is essential for contextualizing the subsequent empirical analyses. Key theories, ranging from behavioral economics perspectives to socio-cultural frameworks, are explored. These theories serve as conceptual frameworks, guiding the interpretation of empirical findings and enriching the understanding of how financial literacy influences inclusion within the unique socio-economic landscape of Nepal.

**2.2.1 Triarchic theory of financial literacy:** The triarchic theory of financial literacy originates from the idea of human nature having two aspects: one focused on self-interest, *homo economicus*, and the other on social norms, *homo sociologicus*. In this theory, financial literacy is seen as comprising three elements: financial knowledge, financial ability, and financial values. These components are then broken down into categories such as financial management values, wealth values, and financial ethics (Xiao, H., & Xin, Z. 2022).



Source: Xiao, H., & Xin, Z. 2022

Figure 2. 1 Theory of financial literacy

### 2.2.2 Theory of Financial Inclusion:

In P. K. Ozili (2020) examined various theories that explain financial inclusion, such as neoclassical, institutional, behavioral, development, and social capital theories. He discusses how these frameworks address barriers to financial access and highlights the role of institutions, economic development, and social networks in enhancing financial inclusion. This chapter offers valuable insights for improving access to financial services for marginalized groups.

**Public Good Theory of Financial Inclusion:** This theory suggests that formal financial services, like bank accounts and loans, should be available to everyone, just like public goods. These services should be free and accessible to all, benefiting society as a whole. Access for one person doesn't reduce access for others, so everyone can be included in the financial system.

For instance, individuals and small businesses with bank accounts could get free debit cards and use ATMs without fees. Banks would cover these costs as part of their operations, with the government potentially providing subsidies to help manage these expenses.

**The dissatisfaction theory of financial inclusion:** It suggests that financial programs should prioritize individuals who previously used formal financial services but left due to dissatisfaction. It argues that addressing the reasons for their dissatisfaction can facilitate their return to the formal financial sector through persuasion. This theory implies that efforts should focus on reintegrating

dissatisfied individuals before targeting those who have never used formal financial services. Reasons for dissatisfaction include experiences such as fraud, long wait times, high fees, and other negative encounters with financial institutions.

**Vulnerable group theory of financial inclusion:** The vulnerable group theory of financial inclusion suggests that financial inclusion initiatives should focus on marginalized individuals like the poor, youth, women, and elderly, who are most impacted by economic difficulties. By channeling government-to-person (G2P) social cash transfers into the formal bank accounts of these groups, it aims to integrate them into the formal financial system. This approach not only encourages more vulnerable individuals to join but also provides a sense of compensation for income inequality, offering them opportunities to improve their financial status. Therefore, the theory emphasizes targeting financial inclusion efforts towards vulnerable segments of society.

Ghosh & Vinod (2017) studied a paper exploring the evolving research on the role and significance of gender in financial inclusion, focusing on within-country studies in India. Using disaggregated household-level data, the study examines the relationship between gender and finance, investigating whether gender influences financial inclusion and identifying factors affecting this relationship. The findings reveal notable disparities in both access to and use of finance based on gender. Female-headed households are 8% less likely to access formal finance and 6% more likely to resort to informal finance compared to male-headed households. Moreover, female-headed households use 20% less cash loans than their male-headed counterparts. The study further explores factors hindering financial inclusion for female-headed households, highlighting the relevance of education and wages in explaining access to finance, while political and social factors play a more significant role in explaining the use of finance.

Mouna & Anis (2017) studied into the intricacies of financial literacy and its influence on investment behavior among Tunisian households. By employing a questionnaire-based approach, the researchers gather data on demographic variables, financial behavior, and financial literacy, enabling them to analyze the determinants of financial literacy and its impact on investment decisions. Their findings reveal that individuals with lower levels of financial literacy are less likely to engage in stock market

investments, underscoring the pivotal role of financial literacy in shaping investment behavior. Additionally, the study identifies demographic factors such as age, education level, and annual income as significant determinants of financial literacy, highlighting the need for targeted financial education initiatives tailored to different demographic groups. Overall, Mouna and Anis's research contributes valuable insights into the dynamics of financial literacy and investment behavior in Tunisia, offering important implications for policymakers and educators striving to enhance financial literacy levels and promote investment participation in the country.

Kodongo (2018) studied the financial literacy plays a crucial role in enhancing the effectiveness of financial markets by enabling individuals to make better-informed financial decisions. Informed consumers are more likely to utilize financial services effectively, demand more sophisticated products, and contribute to the overall efficiency of the financial system. Moreover, financially literate individuals are more likely to advocate for and demand financial inclusion, recognizing its importance in improving their financial well-being.

Ozili P. K. (2020) developed "Theories of Financial Inclusion," in "Uncertainty and Challenges in Contemporary Economic Behavior" addresses the lack of comprehensive theories on financial inclusion, which involves providing accessible and affordable financial services to all. Published during a time of growing global focus on financial inclusion for economic development, the chapter categorizes various practices into distinct theories to explain differences across countries. Using conceptual discussions, He develops these theories, offering a structured framework for understanding financial inclusion. The findings highlight that these theories can explain observed practices and provide a basis for further research and policy-making. This pioneering effort fills a significant gap in the literature, providing valuable insights for researchers, academics, and practitioners in advancing the global financial inclusion agenda.

Khan at al. (2022) studied the financial inclusion has become a global policy priority, achievable through a population that is financially literate, enabling individuals to make sound financial decisions and enhancing their quality of life. Although financial literacy and financial inclusion have been explored in academic literature, there is a lack of comprehensive research examining the relationship between these two areas. This

thesis aims to fill that gap by conducting a scientometric and content analysis, mapping out the trends and insights from 10,091 studies over the past 45 years involving more than 850,000 participants worldwide. Our findings show a growing interest in this field, with the majority of studies originating from developed countries, particularly the United States, and dominated by the Finance and Economics disciplines. The analysis reveals that research is transitioning from non-functional to functional measures, suggesting a shift in how financial literacy's impact on inclusion is assessed. This work contributes to a conceptual framework that highlights the significance of financial literacy in achieving financial inclusion, providing valuable guidance for policymakers, regulators, and scholars. It also identifies key areas for future research, emphasizing the importance of understanding the dynamics between financial literacy and inclusion to develop effective strategies for broader economic inclusion.

### **2.3 Empirical Review**

Within the empirical review section, a rigorous assessment is conducted on the methodological approaches employed in previous studies related to financial literacy and financial inclusion in Nepal. Various research designs, including cross-sectional multistage survey data methodologies, are scrutinized for their strengths and limitations. The findings derived from these diverse methodologies are critically evaluated, providing insights into the nuances of financial inclusion practices and the effectiveness of financial literacy programs in the Nepalese context. This section aims to synthesize the existing empirical evidence, offering a comprehensive view of the current state of knowledge.

The review provides an insightful overview of diverse studies focusing on financial literacy and inclusion from various geographical contexts and perspectives. (Grohmann et al. 2018) contribute a cross-country analysis, using IV-regressions to establish the impact of financial literacy on financial inclusion. They find that higher financial literacy positively influences financial inclusion, acting as a complement to financial infrastructure. (Goyal & Kumar 2021) present a systematic review and bibliometric analysis, offering a comprehensive understanding of financial literacy based on articles published between 2000 and 2019. Their study identifies major themes and emerging topics, providing a valuable resource for policymakers and researchers.

Ozili (2021) explores global studies on financial inclusion, emphasizing the multifaceted influences on financial inclusion, such as financial innovation, poverty, and regulatory frameworks.

Thapa & Nepal (2015) conducted a comprehensive study on financial literacy in Nepal, specifically focusing on college students. Surveying 436 college students, the research aimed to assess their level of financial literacy and investigate the impact of various demographic, educational, and personality characteristics on their financial knowledge. The analysis, employing mean, ANOVA, and logistic regression, revealed that while most students exhibited a basic level of financial knowledge, there were notable gaps in understanding credit, taxes, share markets, financial statements, and insurance. The study highlighted the significant influence of parents on students' financial attitudes, particularly in fostering a positive inclination toward savings. Determinants of financial knowledge were identified, including income, age, stream of education, types of college, and student attitude, while factors such as gender, university affiliation, financial behavior, and influence were found to have no substantial impact on financial knowledge. The overall conclusion suggested that although college students possess a basic level of financial knowledge, their understanding is influenced by specific demographic, educational, and personality characteristics. These findings provide valuable insights for designing targeted financial education programs and interventions to address the identified gaps and enhance financial literacy among college students in Nepal.

Pant (2016) studied underscores the growing importance of financial inclusion in addressing poverty and reducing income inequality. Policymakers and regulators globally are increasingly prioritizing this issue, with numerous countries adopting comprehensive measures to enhance access to and utilization of tailored financial services. The overarching objective of achieving greater financial inclusion is to ensure that all segments of society can easily access financial services at minimal cost. Despite consistent emphasis on financial inclusion within Nepal's policy framework, a significant portion of the population still lacks access to the formal financial system. This study reviews pertinent data on financial inclusion in Nepal and assesses the effectiveness of implemented policy measures. Many of these measures have encountered challenges in execution, including issues such as low financial literacy,

insufficient infrastructure, and a lack of technology-based facilities. Given these challenges, the study provides recommendations to enhance financial inclusion in the country. These priorities encompass initiatives such as promoting financial literacy programs, introducing digital financial services, formulating a National Financial Inclusion Strategy, implementing a Financial Inclusion Roadmap, and assigning a special role to microfinance institutions.

Karpowicz (2016) studied Financial inclusion has long been a cornerstone of Colombia's development agenda. Policies have focused on directing microcredit to the impoverished, expanding the use of formal banking services, encouraging electronic payments, and enhancing the affordability of financial services. By simulating scenarios with a general equilibrium model, it becomes feasible to pinpoint the primary obstacles within the financial sector that hinder enterprise inclusion. Additionally, the study investigates the repercussions of addressing these obstacles on growth and inequality. Results indicate that easing constraints on collateral leads to increased growth, while measures reducing the cost of financial participation are more effective in addressing inequality.

Grohmann et al. (2018) investigated the influence of financial literacy on financial inclusion at the cross-country level. Published in *World Development* in 2018, the research aims to answer the question of whether financial literacy contributes to improved financial inclusion. Employing a cross-country approach, the study utilizes IV-regressions to establish a causal interpretation of the results and address potential endogeneity issues. The findings reveal that, contrary to the conventional focus on enhancing financial infrastructure, higher financial literacy has a distinct and positive impact on financial inclusion. The study distinguishes between "access to finance" and the "use of financial services," noting that financial infrastructure and financial literacy act as substitutes for the former but complement each other for the latter. The positive correlation between financial literacy and financial inclusion persists across income levels and various subgroups within countries. In conclusion, the research underscores the importance of financial literacy alongside financial infrastructure improvements in promoting broader financial inclusion.

Chaulagain, et al. (2018) studied the methodology employed was a desk review to investigate the role of financial literacy in empowering marginalized individuals in

Nepal. The study aimed to understand the multifaceted nature of empowerment and its various implementation methods. By providing financial knowledge and skills to individuals, the study sought to explore how empowerment could lead to societal transformation. Drawing on previous research, the study highlighted that financial literacy positively influences people's financial attitudes, behaviors, and overall well-being. The theoretical framework also emphasized the impact of knowledge, skill, and attitude on individual behavior, reinforcing the importance of financial literacy in the empowerment process. The findings concluded that empowerment is a paramount concern for marginalized individuals excluded from mainstream societies, and the study asserted that financial literacy is a crucial tool for national development by empowering such marginalized populations. The methodology of desk review facilitated a comprehensive examination of existing literature, contributing valuable insights to the understanding of financial literacy as a catalyst for empowerment in the context of marginalized communities in Nepal.

Kodongo (2018) studied the correlation between financial regulation and financial inclusion in Kenya. By utilizing Probit regression on household survey data and fixed effect regression on banks' panel data, the study reveals that (i) regulations pertaining to agency banking and increased financial literacy may enhance formal financial access, while (ii) regulations such as know-your-customers rules and macro-prudential regulations related to capital and liquidity could impede financial inclusion. The results remain consistent across alternative specifications. In light of these findings, it is suggested that Kenya intensify efforts in promoting financial literacy, consider easing customer identification requirements in specific situations to avoid hindering financial inclusion, and maintain a stable macroeconomic environment to mitigate unintended negative effects of macro-prudential regulations.

Bire et al. (2019) conducted a study with the primary objective of understanding the intricate relationships among financial literacy, financial training, and financial inclusion, particularly within the realm of Micro, Small, and Medium Enterprises (MSMEs) in Kupang city, Indonesia. Their research, involving 54 respondents selected from a pool of 119 MSMEs, employed path analysis through SPSS Version 20 to dissect both direct and indirect connections. The outcomes revealed a significant direct impact of financial literacy on financial inclusion, contributing 32%, along with a substantial

contribution of 33% to financial training. Notably, financial training emerged as a mediator in the relationship between financial literacy and financial inclusion, making an 11% contribution. These findings underscore the potential for targeted financial training interventions to augment the comprehension of financial products among MSMEs in Kupang city, thereby fostering enhanced financial inclusion. However, the study's limited scope emphasized the necessity for future research to explore broader dimensions such as transparency, accountability, and the quality of financial statements, providing a more comprehensive understanding of the multifaceted factors influencing the financial landscape for MSMEs.

Adetunji et al. (2019) conducted a thorough investigation into financial inclusion in Nigeria, utilizing survey data from a substantial cohort of more than 22,000 respondents. The central focus of their study was to unravel the intricate dynamics of financial behavior by examining the impact of two crucial determinants—financial literacy and income levels. The research illuminated a nuanced relationship between financial literacy and savings patterns, revealing that individuals with a higher level of financial literacy demonstrated more informed and varied savings behaviors, particularly concerning both formal and informal financial institutions. On the other hand, income levels emerged as a primary driver influencing the frequency of informal savings. The study also provided valuable insights into specific demographic groups that would benefit significantly from targeted interventions aimed at enhancing financial access. This nuanced understanding has practical implications for financial service providers, offering them a refined approach to market segmentation. Additionally, the study's findings hold substantial relevance for policymakers, providing a roadmap for formulating effective strategies to deepen and improve financial access across diverse segments of the population in Nigeria. In essence, Adetunji et al.'s research contributes not only to the academic understanding of financial inclusion but also offers actionable insights for industry stakeholders and policymakers striving to create a more inclusive and accessible financial landscape in Nigeria.

Qamruzzaman et al. (2019) conducted a comprehensive investigation into the pivotal role of financial inclusion and stock market development in attracting foreign capital flows to developing countries. Spanning a panel of 58 developing nations from 1993 to

2017, their study employed Dynamic Panel System-GMM estimation to analyze the magnitude and dynamics of these relationships. They uncovered an asymmetric relationship between financial inclusion, stock market development, and cross-border capital flows, with positive shocks in both financial inclusion and stock market development positively linked to increased capital flows. Specifically, they found that the development of financial inclusion fosters Foreign Direct Investment (FDI), while a well-developed stock market encourages foreign portfolio investment. Furthermore, the study revealed the predictive power of past capital flow behaviors, suggesting their utility as future predictors. These findings offer valuable insights into the complex interplay between financial inclusion, stock market development, and foreign capital flows, informing policymakers and stakeholders on strategies to enhance capital inflows in developing economies.

Morgan et al. (2020) conducted a study focusing on the impact of financial literacy on financial inclusion and savings behavior in Laos. In contrast to earlier research, this study adopts a more comprehensive definition of financial literacy, encompassing not only financial knowledge but also including financial behavior and attitudes. Additionally, the researchers redefine financial inclusion to incorporate the consumer's perspective rather than solely relying on the supply-side viewpoint. The survey instrument utilized in the study was developed by the Organization for Economic Cooperation and Development International Network on Financial Education. Furthermore, more reliable instrumental variables were employed to analyze the influence of financial literacy on financial inclusion and savings behavior. The findings reveal statistically significant positive effects of financial literacy on both financial inclusion and savings. Notably, the impact of financial literacy on various indicators of financial inclusion varies. The results also indicate that individuals with higher financial literacy scores are more inclined to have savings in both formal and informal channels, even after controlling for income and education levels.

Khan et al. (2020) examined the global policy focus on financial inclusion and its attainment through individuals possessing financial literacy, enabling them to make informed financial decisions and enhance personal well-being. While the literature extensively discusses both financial literacy and financial inclusion, there is a notable gap in understanding how these two areas intersect in research. This study conducts

mapping, scientometric, and content analyses by synthesizing studies at the nexus of financial literacy and financial inclusion, drawing from a dataset comprising 10,091 studies spanning 45 years and involving over 850,000 individuals worldwide. The findings indicate a growing number of studies, with finance and economics dominating the literature. Developed countries, particularly the US, contribute the most studies, and citations are unevenly distributed among authors. Furthermore, there is a shift from non-functional to functional measures in the research. The paper underscores the importance of financial literacy in promoting financial inclusion and offers a conceptual framework to guide future research, facilitating policymakers, regulators, and scholars in distinguishing between financial literacy and financial inclusion and identifying potential research avenues.

Okello et al. (2020) The studied employed a cross-sectional research design to explore the mediating influence of social networks in the connection between financial literacy and financial inclusion among impoverished individuals accessing services from microfinance banks in developing nations, with a specific focus on rural areas in Uganda. Data collection relied on a semi-structured questionnaire administered to rural Ugandan households benefiting from microfinance bank services. Structural equation modeling (SEM) facilitated data analysis, complemented by the Bootstrap approach using 5,000 samples to establish the mediating effect of social networks. By integrating social network theory, the study aimed to illuminate the mechanisms through which financial knowledge spreads within existing social circles, ultimately bolstering financial inclusion efforts. Results indicated a significant positive mediation effect of social networks on the relationship between financial literacy and financial inclusion. Furthermore, financial literacy demonstrated a direct positive impact on financial inclusion. Notably, social networks fully mediated the influence of financial literacy on financial inclusion, highlighting the pivotal role of leveraging local social structures for effective financial inclusion strategies. The findings underscore the importance of utilizing community-based organizations, such as village associations, as conduits for delivering financial literacy programs and fostering financial inclusion among marginalized populations served by microfinance banks.

Hasan et al. (2021) focus on the rural population in Bangladesh, employing regression models to analyze the impact of financial knowledge on access to banking, microfinance, and fintech services. They emphasize the need for targeted educational

initiatives for rural communities to improve financial literacy and promote financial inclusion.

Goyal & Kumar (2021) represented a significant contribution to the field of financial literacy. Through a systematic review and bibliometric analysis covering articles published between 2000 and 2019, the study endeavors to provide a thorough understanding of this evolving subject. Analyzing 502 articles using various methodologies, including citation network, page-rank analysis, co-citation analysis, content analysis, and assessment of publication trends, the researchers aim to identify influential works, map the intellectual structure of the field, and uncover any existing research gaps. The study highlights three major themes: the varying levels of financial literacy across different cohorts, the influence of financial literacy on financial planning and behavior, and the impact of financial education. Additionally, the research identifies emerging themes such as financial capability, financial inclusion, gender gap, tax & insurance literacy, and digital financial education. By presenting a conceptual framework and suggesting potential areas for further research, the study serves as a valuable resource for policymakers, regulators, and academic researchers seeking a comprehensive understanding of financial literacy.

Cicchello et al. (2021) analyzed the relationship between financial inclusion and development variables in least developed countries in Asia and Africa, emphasizing the positive association between economic growth and financial inclusion.

Ozili's (2021) study presents a thorough examination of recent global studies on financial inclusion, encompassing diverse regions. The paper sheds light on emerging themes in financial inclusion literature and addresses controversies within policy circles regarding this topic. Notable issues discussed include optimal and extreme financial inclusion, the potential transmission of systemic risks to the formal financial sector, and the pro-cyclical nature of financial inclusion and exclusion concerning changes in the economic cycle. The key findings underscore the multifaceted influences on financial inclusion, including the levels of financial innovation, poverty, financial sector stability, economic conditions, financial literacy, and regulatory frameworks that vary across countries. In conclusion, the paper suggests several avenues for future research,

thereby contributing to the ongoing discourse on the complex dynamics of financial inclusion.

Hasan & Hoque (2021) studied the crucial interplay between financial literacy and inclusive finance. Focused on the rural population of Bangladesh, the study employs logistic regression, probit regression, and complementary log–log regression models to scrutinize the impact of financial knowledge on breaking down barriers to accessing banking, microfinance, and fintech services. The empirical findings underscore the significance of factors such as profession, income level, and specific financial knowledge, like depositing, withdrawing money, and understanding interest rates, in influencing overall financial access. The study's outcomes advocate for the implementation of comprehensive and sustained educational initiatives tailored to the rural populace, emphasizing the pivotal role of improved financial literacy as a catalyst for financial inclusion. The results not only contribute valuable insights to the understanding of inclusive finance dynamics but also offer actionable recommendations for policymakers in developing countries seeking to foster poverty reduction and prosperity through enhanced financial inclusion efforts.

Cicchello et al. (2021) investigated the interplay between financial inclusion and development variables in the least developed countries of Asia and Africa. Conducting a comprehensive analysis using annual data from 42 countries spanning 2000 to 2019, the study employs pooled panel regression and panel data analysis techniques. The findings reveal a positive association between economic growth and financial inclusion. Unemployment and literacy rates emerged as significant contributors to financial inclusion, with women shown to be more susceptible to financial exclusion. Notably, rural areas in less developed countries, primarily reliant on agriculture, exhibited lower financial inclusion. The study also underscores the adverse impact of pay inequality on both financial inclusion rates and overall development. Ultimately, the research suggests that addressing these factors, along with promoting literacy and gender equality, can contribute to the development and empowerment of vulnerable groups in the studied nations, emphasizing the importance of targeted policy interventions.

Hasan et al. (2021) studied the Inclusive finance is a fundamental aspect of the financial sector that aims to make a range of financial products and services easily available and

affordable to everyone, including individuals and businesses who are typically excluded from the formal financial system. The ability of people in rural areas to access financial services is significantly influenced by their level of financial literacy. This research focused on examining how knowledge about finance impacts access to banking, microfinance, and fintech services in rural Bangladesh. To explore this, three econometric models—logistic regression, probit regression, and complementary log–log regression—were utilized to assess whether financial literacy plays a crucial role in overcoming obstacles that hinder individuals from engaging with and utilizing financial services to enhance their well-being. The empirical results indicated that understanding various aspects of financial services had a noteworthy influence on gaining access to financial resources. Variables such as occupation, income level, familiarity with deposit and withdrawal procedures, and awareness of interest rates were found to have a substantial impact on overall financial access. The outcomes of the study offer valuable insights for policymakers, suggesting that in the context of developing countries, a comprehensive and sustained educational program should be implemented widely in rural areas to significantly enhance financial inclusion—a pivotal factor in reducing poverty and promoting prosperity.

Rostogi et al. (2021) investigated the utilization of the Unified Payment Interface (UPI) platform in India, particularly since its inception in 2016. The study aimed to examine the effects of UPI on financial literacy, financial inclusion, and economic advancement among impoverished communities in India. Employing structured equation modeling, the research conducted path analysis to delineate the relationships between these constructs. Data was gathered through a structured questionnaire employing interval scales. Results indicate that UPI positively influences financial literacy, which in turn significantly impacts financial inclusion, consequently fostering economic development. Furthermore, the association between financial literacy and financial inclusion is partly mediated by financial stability, while the connection between financial inclusion and economic development is partially mediated by trust. The study suggests that UPI contributes multifariously, not only enhancing financial literacy but also facilitating financial inclusion and subsequently advancing the economic well-being of the impoverished, albeit indirectly. These findings offer valuable insights for policymakers to formulate more effective UPI policies in the future. This study is noteworthy as it fills a gap in existing literature by examining the interplay between

UPI, financial literacy, financial inclusion, and the economic development of marginalized populations.

Polloni-Silva et al. (2021) investigated the persistence of high levels of poverty and inequality in Latin America despite substantial developmental efforts in recent years compared to developed nations. They delve into the potential of financial inclusion, which involves ensuring access and utilization of financial services for all individuals, as a means to alleviate these issues. This study specifically examines whether financial inclusion and technology adoption contribute to reducing both the poverty headcount ratio and the Gini index (a measure of inequality) across 13 Latin American countries (Argentina, Bolivia, Brazil, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Panama, Paraguay, Peru, and Uruguay). Employing an unbalanced panel dataset, the researchers utilized Feasible Generalized Least Squares (FGLS) and Limited Information Maximum Likelihood (LIML) techniques for analysis. Their findings align with prior research, indicating that financial inclusion indeed serves as a potent tool in addressing poverty and inequality. Furthermore, they note that the combined impact of financial inclusion and technological advancements, particularly mobile technology usage, contributes to reducing poverty and inequality levels. The paper concludes with a discussion on the policy implications of these findings and proposes avenues for future research.

Grohmann & Menkhoff (2021) studied the approximately two billion individuals globally lack access to a financial account, with many others using financial services sporadically. Historically, efforts to address issues of financial exclusion primarily concentrated on expanding the supply side of financial markets, particularly by increasing bank branch networks and offering affordable banking products. Although this approach yielded positive results, recent findings suggest that enhancing the demand side of financial markets is also beneficial. Various initiatives and public policies aim to boost financial education and enhance financial literacy. Micro econometric studies, often utilizing randomized controlled trials, indicate that financial literacy has a causal impact on financial inclusion. Educated individuals not only grasp the benefits of financial services more comprehensively but also exhibit increased confidence in engaging with service providers. Cross-country evidence suggests that in less affluent nations, improvements in financial supply and demand operate

independently of each other, acting as substitutes. Conversely, in higher-income economies, these measures are complementary, highlighting the utility of enhancing financial literacy to optimize the utilization of available financial services.

Fauziah et al. (2021) studied address the global concern of enhancing financial literacy and inclusion, which is thought to impact economic growth. Despite efforts in several provinces of Indonesia to improve financial literacy and inclusion, the anticipated economic growth has not materialized. This study aims to investigate the influence of financial literacy and inclusion on economic growth in Indonesia. The research involved analyzing data from 34 provinces during two survey periods, 2016 and 2019, utilizing panel data regression with e-views 10 software. Additionally, Chow test and Hausman test were conducted to identify the most suitable model. The findings from the hypothesis test indicate that neither financial literacy nor financial inclusion has a significant impact on economic growth in Indonesia, either individually or collectively. This suggests a need for heightened efforts to improve financial literacy and inclusion in Indonesia to achieve the overarching goal of inclusive growth.

Ezzahid et al. (2021) conducted a study with a dual purpose: to construct a financial inclusion index for Morocco and to examine the impact of macroeconomic and sectoral reforms on financial inclusion at both macro and micro levels. Through principal component analysis and probit modeling on a dataset of 5,110 Moroccan adults, they found that financial inclusion in Morocco followed different trends over the last two decades, with significant increases observed from 2004 to 2012. The study revealed that determinants of formal finance, mobile banking, and informal finance vary, with factors such as education level and labor market participation promoting financial inclusion, and mobile banking playing a crucial role in overcoming barriers like remoteness and high costs. The research highlights the need for more data on quality and welfare dimensions of financial inclusion and provides practical insights for policymakers aiming to design effective financial inclusion policies in Morocco. Additionally, the study sheds light on segments of the population experiencing financial exclusion and the reasons behind it, offering valuable implications for promoting financial inclusion in society.

A study conducted by Akpene et al. (2021) investigated the relationship between financial literacy, financial inclusion, and stock market participation in Ghana. The research utilized a sample of 1,966 respondents from all 10 regions of Ghana in 2018. The study employed biprobit models to analyze how financial literacy impacts financial inclusion, while robust probit models were utilized to independently examine the effects of financial literacy and financial inclusion on stock market participation, as well as their combined effect. The findings are as follows: Firstly, financial literacy has a positive effect on financial inclusion. Secondly, contrary to previous research, this study found that financial literacy does play a role in determining stock market participation in Ghana. Thirdly, having access to financial services, such as saving through an account, significantly influences stock market participation. Lastly, the interaction between financial literacy and financial inclusion on stock market participation did not yield a significant effect.

Omojolaibi et al. (2021) investigated the importance of fostering deeper financial integration, particularly crucial for developing economies such as those in Africa, where market capitalization represents less than 2% of the global total. Enhanced financial integration enables risk sharing, encourages the formation of larger markets beneficial to businesses, and facilitates more seamless consumption across different time periods. Achieving this integration necessitates a well-developed, inclusive financial sector that provides economic agents with affordable and convenient access to financial services. The extent of access to funds within an integrated market is contingent upon the financial literacy of economic agents, encompassing basic numeracy, comprehension of interest compounding, inflation dynamics, and risk management. This study specifically examines the impact of improved access to financial services and financial literacy on the financial integration of the West African Monetary Zone, utilizing various metrics such as the ratio of total capital flows to GDP and interest rates on public debt, as well as indicators of financial inclusion such as the number of commercial bank branches, ATMs, savings, account holders, and private sector credit. The findings suggest that increasing bank branches, account holders, savings, private sector credit, and enhancing financial literacy contribute to deepening financial integration within the West African Monetary Zone. The study emphasizes the policy imperative for monetary authorities and financial service providers to promote and institutionalize programs aimed at expanding access to and understanding of financial services, thus advancing financial integration in the region.

Hasan et al. (2021) studied Inclusive finance stands as a cornerstone in ensuring that a wide array of financial products and services is accessible and affordable to individuals and businesses, particularly those who are marginalized or excluded from the formal financial system. Within rural areas, financial literacy emerges as a pivotal factor shaping individuals' ability to access financial services. This study investigates the impact of financial knowledge on financial access, focusing on banking, microfinance, and fintech services among Bangladesh's rural population. Employing three econometric models—logistic regression, probit regression, and complementary log–log regression—the research scrutinizes whether financial literacy significantly contributes to overcoming barriers hindering individuals from utilizing financial services to enhance their livelihoods. Empirical findings underscore the significant influence of various financial knowledge factors on financial access. Notably, variables such as profession, income level, familiarity with depositing and withdrawing money, and understanding of interest rates emerge as critical determinants affecting overall financial access. These results underscore the pivotal role of financial literacy in fostering financial inclusion among rural populations. The study's insights offer valuable recommendations for policymakers, highlighting the necessity of implementing comprehensive and sustained education programs tailored to rural communities. By equipping individuals with the requisite knowledge and skills to comprehend and leverage financial services effectively, such initiatives hold promise for advancing financial inclusion—a vital catalyst for poverty reduction and economic advancement in developing countries like Bangladesh.

Kass-Hanna et al. (2022) studied the crucial linkages between financial and digital literacy and the development of financial resilience in South Asia and Sub-Saharan Africa. With a global context of 1.7 billion adults lacking access to formal financial services, the research utilizes data from the Inter Media Financial Inclusion Insights (FII) surveys across seven countries to examine how these literacy dimensions influence resilience-building financial behaviors. The findings underscore the significance of both financial and digital literacy in fostering inclusiveness and financial resilience, with variations identified among regions and specific household demographics. Notably, the study advocates for a paradigm shift in understanding financial literacy to encompass digital literacy, emphasizing the dual importance of these dimensions for enhancing households' long-term financial resilience. The

methodology involves robust data analysis and a comprehensive approach to measure literacy dimensions and their impact on various financial behaviors, contributing valuable insights to the ongoing discourse on global financial inclusion strategies.

Jin (2022) investigated the concept of financial inclusion, defined as the accessibility and utilization of formal financial services, which has garnered increasing attention from regulators, governments, and researchers. Various studies have emphasized its importance for financial stability and economic growth, though definitions and measurements vary across literature. Particularly, rural China, where financial deprivation is prominent, has received limited focus. The study utilized the China Household Finance Survey (CHFS) data across 29 provinces, employing the probit model and ordinary least squares method to construct a comprehensive financial inclusion index and assess its extent in rural areas. Results revealed minimal usage of formal financial services among rural households, with significant regional disparities, notably higher in the eastern provinces. Household characteristics such as family size, education level of the household head, income, employment status, and financial literacy significantly influenced financial inclusion. However, factors like age, gender, and political affiliation were insignificant. Furthermore, the study found a positive association between financial inclusion and household welfare, as measured by consumption expenditure, with various financial service indicators contributing to increased expenditure. These findings underscore the potential economic benefits of inclusive financial systems at the household level.

Pandey et al. (2022) studied the critical examination of financial inclusion (FI) drivers and their impact on sustainable growth in North India. By focusing on digitalization, technology, and usage as the key drivers of FI, the research explores the intricate dynamics of these factors in fostering sustainable development. One distinctive feature of the study is its investigation into the mediating role of financial literacy in enhancing the influence of FI drivers on sustainable growth. The primary objective is to discern whether financial literacy serves as a catalyst in augmenting the impact of FI drivers. The measurement of sustainable growth is intricately linked to customers' perceptions of FI success, particularly concerning the achievement of Sustainable Development Goals (SDGs) such as poverty alleviation, gender equality, and industrial growth. The study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to

analyze the relationships between FI drivers, financial literacy, financial initiatives, and sustainable growth. The findings underscore the significant roles of usage, digitalization, and FinTech as drivers of FI, emphasizing their direct impact on sustainable growth. Additionally, the study highlights the crucial indirect effect of FI drivers on sustainable growth mediated by financial literacy. This underscores the pivotal role of financial literacy in optimizing the positive impact of FI drivers. Notably, the research also acknowledges the positive influence of financial initiatives on sustainable growth in the northern region of India. Overall, the study contributes valuable insights into the intricate interplay of FI components and their collective influence on sustainable growth, providing relevant implications for policymakers and stakeholders in the financial inclusion landscape.

Kass-Hanna et al. (2022) explored the link between financial and digital literacy and the development of financial resilience, advocating for a paradigm shift to encompass both dimensions for long-term household resilience. It provides a comprehensive understanding of financial literacy and inclusion, incorporating insights from different regions and shedding light on critical issues and potential avenues for future research. Financial inclusion, characterized by the accessibility and affordability of financial products and services to all members of society, is increasingly recognized as a pivotal driver of economic development and poverty reduction worldwide. As financial systems evolve, the quest for inclusive finance becomes more pronounced, aiming to ensure that individuals and businesses, particularly those marginalized or excluded from traditional banking channels, have the means to participate actively in economic activities. Achieving financial inclusion necessitates addressing various factors, including but not limited to, financial literacy, access to banking services, regulatory frameworks, technological advancements, and socio-economic dynamics.

Ranabhat et al. (2023) conducted a study in which the effects of financial literacy on financial inclusion were investigated in Nepal's Gandaki Province. Recognizing financial inclusion as pivotal for socioeconomic development, the study addressed the challenges faced by many in developing nations who remain economically excluded. With a focus on the Gandaki Province, a sample of one thousand respondents was selected for data collection. The researchers employed the Partial Least Squares Structural Equation Modeling method to analyze the relationship between financial

literacy and financial inclusion. The findings revealed a significant positive impact, indicating that enhanced financial literacy considerably improves financial inclusion in the study region. The study concludes by highlighting the potential for policymakers to bolster financial inclusion through targeted financial literacy programs, emphasizing the importance of educating individuals about financial products and services. These insights offer valuable guidance for implementing strategies to enhance financial inclusion in the specific context of Nepal's Gandaki Province.

Hasan et al. (2023) studied focuses on the global agenda of women's financial inclusion, addressing the varied determinants influencing women entrepreneurs' financial inclusion worldwide. While past studies offer conflicting insights, the role of digital financial literacy in women's financial inclusion has been largely overlooked. Employing a cross-sectional analysis of 144 countries through the World Bank Global Findex Database, the study reveals through probabilistic regression results that women entrepreneurs with enhanced digital financial literacy are more inclined to participate in formal banking channels. The practical implications of these findings underscore the importance of effective policies by regulators and banks to attract women customers. Failure to implement such interventions may lead to potential risks, as women, lacking involvement with formal banking, might resort to financial crimes like money laundering. The study's originality lies in shedding light on the rare aspect of digital financial literacy's impact on women's financial inclusion, providing valuable insights for shaping inclusive financial strategies.

Desai et al. (2023) study acknowledged the crucial role of financial literacy in promoting financial inclusion, particularly in emerging economies like India. This study adds to the expanding field of research by investigating how financial literacy influences inclusion. Given the substantial growth in the finance industry concerning both products/services and operations, restricting financial inclusion solely to bank-based services is challenging. Hence, this article takes a comprehensive approach, evaluating financial inclusion by encompassing banking services, investment products, and government schemes. Furthermore, a financial literacy score is computed using objective-based questions covering diverse financial aspects. Alongside financial literacy, this study explores the moderating impact of gender on the relationship between financial literacy and inclusion. According to regression analysis, the results

indicate a significant positive influence of financial literacy on all inclusion measures. However, the moderation effect of gender does not reach statistical significance. These research findings hold significant implications for policymakers and industries. For instance, service providers can leverage financial literacy development strategies to expand their market share with a long-term perspective.

Abbas et al. (2023) studied aim to explore the earnings growth and marketability of Islamic banks in Indonesia and investigate the nuanced relationships between Islamic financial inclusion, literacy, marketability, and earnings growth. Utilizing a sample of Islamic commercial banks in Indonesia listed by the Financial Services Authority and Bank Indonesia, the study employs time-series data from 2014 to 2021 and adopts a moderated mediation model. The findings reveal positive average earnings growth among Islamic banks, with corresponding positive marketability. Significance tests indicate that marketability has a positive impact on earnings growth, suggesting that higher marketability is associated with increased earnings for Islamic banks. The study further demonstrates the positive influence of a moderated mediation model, indicating that the relationship between Islamic financial inclusion, literacy, marketability, and earnings growth is strengthened when moderated by literacy. The practical implications underscore the importance of literacy in reinforcing market power, providing valuable insights for the Indonesian government and corporate entities in the banking industry seeking to enhance growth and competitiveness. Additionally, the research advocates for the continuous promotion of Islamic financial literacy and inclusion globally to bolster market power and stimulate growth in Islamic banking. The novelty of the study lies in its unique design, extending the market power theory framework and employing a moderated mediation model to test the relationships between variables in the context of Islamic banking.

Christiani et al. (2023) conducted a study with the primary goal of presenting an alternative strategy to surpass the 2019 benchmarks for literacy rates and financial inclusion. Using a normative research design, the study relied on secondary data as its main source and employed qualitative data analysis methods. The findings underscore the critical role of public trust in financial institutions for achieving both public literacy and financial inclusion. The study identified weaknesses in the regulatory framework of the Financial Services Authorities (FSA), particularly in its limited jurisdiction over unlicensed financial institutions and the community's diminished influence in selecting

trustworthy financial entities. The research limitations suggest potential implications for redefining the concept of FSA authority. On a practical level, the study proposes enhancing the FSA's oversight capabilities over financial institutions to foster public welfare through improved literacy and financial inclusion. The social impact of the research extends to the community by shedding light on deficiencies in financial literacy and inclusion policies, offering insights into problem causes and potential solutions. Policymakers can leverage these research findings as a foundational basis for regulatory solutions, contributing to the advancement of knowledge in business economic law, particularly economic law.

Karki et al. (2023) studied the impact of financial literacy training on rural households in Nepal. Recognizing the significance of financial education in poverty reduction and sustainable economic growth, the researchers focused on 399 randomly selected rural households in Bhojpur District. The methodology employed multiple linear and logit regression models to analyze the data, revealing that financial literacy training significantly elevated the financial literacy levels of participants compared to non-participants. Education, family migration history, and plans for future migration were identified as significant predictors influencing financial literacy levels. Moreover, the study illuminated the broader influence of financial literacy on respondents' financial and economic behavior, with variables such as sex, age, education, family size, living arrangements, and the presence of migrated family members playing pivotal roles. The findings underscore the need for well-organized and inclusive financial literacy training programs as targeted interventions to enhance financial decision-making among rural individuals in Nepal, thereby contributing to broader economic development initiatives.

Yang et al. (2023) investigated the impact of financial literacy on the utilization of digital finance among Chinese households. Employing data from the 2015 and 2017 China Household Finance Survey, the researchers find that financial literacy significantly enhances the adoption of digital finance, specifically in the realms of mobile payments, online borrowing, and online financial products. Notably, the influence of financial literacy is more pronounced in the more intricate domains of online borrowing and online financial products compared to mobile payments, suggesting that the complexity of digital finance amplifies the role of financial literacy. Moreover, the study reveals that financial literacy plays a crucial role in promoting the use of digital financial services, particularly among disadvantaged groups such as low-

income families, the elderly, and rural residents. These findings contribute valuable insights into the nuanced relationship between financial literacy, different facets of digital finance, and the socio-economic dynamics within the Chinese household landscape.

Khongwir et al. (2023) conducted a bibliometric analysis focusing on financial inclusion (FI) and financial literacy (FL), aiming to provide a roadmap for research and enhance understanding of existing knowledge in these domains. Utilizing Biblioshiny via R studio, they analyzed 2,836 documents extracted from the WOS and Scopus databases spanning 1984 to 2022. Their analysis identified significant authors, highly cited publications, prevalent themes and keywords, and co-citation networks. Notably, the study utilized data from Scopus and Web of Science (WOS), enhancing its comprehensiveness. The findings hold practical implications for scholars, researchers, and policymakers involved in FI and FL, offering valuable insights into current and future research trends and pathways for scientific exploration.

Majid et al. (2023) conducted research aimed at promoting Islamic financial inclusion in Aceh Province, Indonesia. The study investigates the impact of Islamic financial literacy, socialization, and commitment to adopting the Qanun on Islamic financial institutions in the region. Participants included residents of Aceh Province who had utilized services from Islamic financial institutions. Through multi-stage random sampling, 100 clients from various institutions in Aceh Province, aged at least 17, were selected, and their responses to questionnaires were collected. Data analysis was performed using the partial least squares (PLS) model. The results reveal that enhancing financial literacy among Acehnese residents positively influences financial inclusion by equipping them with better knowledge of Islamic financial products and services, thereby increasing adoption and utilization. Effective socialization initiatives are essential for raising awareness and familiarity with Islamic finance, facilitating accessibility, and overcoming obstacles. Additionally, a commitment to implementing the Qanun provides a legal framework for Islamic financial institutions, fostering the development of diverse products and services and expanding financial inclusion. Strengthening financial literacy, socialization efforts, and regulatory commitment supports the growth of the Islamic finance sector, contributing to overall welfare improvement. It is imperative for stakeholders to collaborate in promoting financial

literacy, enhancing socialization, and ensuring robust regulations, thereby fostering greater Islamic financial inclusion and economic growth in Aceh Province, Indonesia.

However, achieving comprehensive financial inclusion requires more than just increasing access to traditional banking services. Studies by Hasan et al. (2023), Desai et al. (2023), and Abbas et al. (2023) shed light on the importance of digital financial literacy and Islamic financial inclusion, highlighting the need for tailored strategies to address specific demographic groups and leverage technological innovations in financial services.

In the context of small and medium enterprises (SMEs), which form the backbone of many economies, studies such as those by Marini et al. (2024) and Miswanto et al. (2024) underscore the nuanced relationships between financial literacy, financial technology, and business performance. These findings highlight the potential of targeted interventions to enhance the financial capabilities of SMEs and foster sustainable economic growth.

While considerable research has been conducted on financial inclusion across various regions and contexts, there remains a need for a comprehensive understanding of the mechanisms driving inclusive finance and its impact on economic development. Studies such as those by Ghosh (2024) and Suprapti et al. (2024) emphasize the importance of synthesizing existing knowledge and identifying emerging trends to guide future research and policy initiatives in the field of financial inclusion. The emphasis on financial inclusion is growing as a primary strategy for addressing economic challenges. A fresh perspective on financial inclusion necessitates community involvement in effectively managing their finances. Hence, this study also seeks to investigate strategies for financial inclusion, particularly emphasizing literacy and community economic empowerment, Karpowicz (2016).

Marini et al. (2024) studied the impact of financial literacy, financial inclusion, and financial technology on the performance of Micro, Small, and Medium Enterprises (MSMEs) in Bengkulu City. Conducted as associative research, it encompasses all MSMEs across nine sub-districts in the city. Utilizing instrument testing, the study directly draws data from the population for analysis. Employing simple linear

regression and multiple linear regression techniques, the research examines the relationships between the aforementioned factors and MSME performance. The findings indicate that financial literacy does not significantly affect MSME performance, as evidenced by a calculated t value of -1.369 with a significance level of 0.174, leading to the rejection of the first hypothesis. Similarly, financial inclusion is found to have no significant impact on MSME performance, with a calculated t value of -0.921 and a significance level of 0.359, leading to the rejection of the second hypothesis. Conversely, financial technology is shown to significantly influence MSME performance, with a calculated t value of 23.021 and a significance level of 0.000, leading to the acceptance of the third hypothesis.

Furthermore, gender disparities in financial access persist, with women often facing greater challenges in accessing formal banking channels due to a lack of digital financial literacy and systemic biases Fauziah et al. (2021). Although financial literacy programs are recognized as potential solutions, their effectiveness remains unclear, especially in regions like Nepal and Indonesia, where financial literacy levels are low Pant, (2016) Karki et al. (2023). Additionally, the impact of financial regulations on inclusion is not well understood, highlighting the need for further research into the relationship between regulations, literacy, and inclusion (Kodongo, 2018).

Takmaz et al. (2024) studied explores the variation in financial inclusion (FI) across different regions of Turkey from 2004 to 2020 and identifies the factors driving these disparities. Using principal component analysis, an FI index is developed to gauge the level of inclusion. Through the club convergence method, the research investigates whether there is a tendency for regions to converge or diverge in terms of FI. Additionally, ordered logit models are employed to analyze the key determinants of regional differences. The results indicate a persistent lack of full-panel convergence, suggesting enduring regional inequalities in FI within Turkey. Furthermore, the study finds that FI is positively influenced by factors such as population density, income levels, and income inequality, while unemployment impedes inclusion. Based on these findings, the study recommends policy measures focused on expanding digital financial services, promoting financial literacy, and addressing unemployment to mitigate regional disparities and enhance overall FI.

Dris et al. (2024) this studied utilized a mixed-method approach to examine the relationship between financial literacy and financial inclusion among indigenous households in Barangay Paitan, Naujan, and Oriental Mindoro, Philippines. Employing a simple random sampling technique, data were collected from 206 respondents through survey questionnaires. The questionnaires assessed various dimensions of financial literacy, including knowledge, skills, attitudes, and numeracy. Two statistical treatments, mean analysis and correlation analysis, were employed to analyze the data. The results of the mean analysis revealed generally low levels of financial literacy across all dimensions among the indigenous households. However, correlation analysis demonstrated a significant positive relationship between higher levels of financial literacy and increased access to financial services within the community. These findings underscore the importance of enhancing financial literacy to promote financial inclusion among indigenous populations. Targeted interventions, including comprehensive financial literacy programs and community-based savings associations, could play a crucial role in addressing the financial needs of indigenous households in Barangay Paitan.

Suprapti et al. (2024) conducted a study with the objective of investigating approaches to enhance financial inclusion through a systematic review of existing literature. Employing targeted keywords in academic databases, the researchers identified, refined, and scrutinized pertinent articles. The findings and subsequent discussions underscore crucial themes such as financial technology, financial literacy, financial infrastructure, policies and regulations, consumer protection, gender parity, collaborative efforts across sectors, and adaptation to local circumstances. The study concludes that a comprehensive strategy that encompasses these aspects is essential for achieving successful and impactful financial inclusion.

Ghosh (2024) studied conducts a comprehensive evaluation of existing research in the field of financial inclusion, laying the groundwork for prospective studies that can explore new dimensions within this domain. The study employs a scientific approach, employing a bibliometric method, specifically co-word analysis, to analyze and assess the current literature on financial inclusion. Through the use of VOS Viewer, the research establishes an intellectual and logical structure by applying co-word analysis to 206 papers published between 2013 and 2022 from the Scopus database. This

analysis identifies key themes from previous studies, providing insights into the diffusion and impact of financial inclusion on stakeholders. The ensuing discussion not only categorizes the types of work undertaken in financial inclusion since its inception but also offers recommendations and directions based on prior research. These findings aim to guide future studies in financial inclusion, aligning them with overall development goals while addressing potential challenges.

Miswanto et al. (2024) studied aim to investigate the connections between financial literacy, financial performance, and sustainability of SMEs, along with examining the impact of supply chain management on these variables. Using a quantitative survey method, the researchers collected data through online questionnaires distributed to 740 SME owners in Indonesia. Structural equation modeling (SEM) with Smart PLS 3.0 was employed for analysis, encompassing validity, reliability, and significance tests. The sampling technique involved non-probability sampling, and the data collection utilized Google Forms. The questionnaire, utilizing a 5-point Likert scale, gauged the independent variables of financial literacy and supply chain management, and the dependent variables of sustainability and financial performance. The study uncovered noteworthy results, indicating a positive and significant influence of financial literacy on both financial performance and sustainability. Similarly, supply chain management demonstrated positive and significant effects on both financial performance and sustainability. Furthermore, the research highlighted that financial performance positively and significantly contributed to the sustainability of SMEs. Notably, the study contributed a unique correlation model, shedding light on the intricate relationships among financial literacy, supply chain management, financial performance, and sustainability within SMEs, offering a fresh perspective in the research landscape.

This statement highlights the increasing importance of financial inclusion as a key approach to tackling economic difficulties. It suggests that to better understand and implement financial inclusion, it's crucial to involve communities in managing their finances more effectively. Furthermore, the research aims to explore specific strategies for achieving financial inclusion, with a particular focus on improving financial literacy and empowering communities economically. In essence, the goal is to find ways to

ensure that everyone has access to and can benefit from financial services, ultimately contributing to economic growth and stability.

In light of these considerations, this study aims to contribute to the existing literature by examining the multifaceted dimensions of financial inclusion and its implications for economic growth. Specifically, we seek to investigate the effectiveness of financial literacy programs, the role of regulatory frameworks, the impact of technological innovations, and the socio-economic determinants of financial inclusion in promoting inclusive economic development. By analyzing empirical evidence from diverse regions and employing rigorous methodological approaches, we aim to provide insights that inform policymakers, financial institutions, and other stakeholders in designing strategies to foster inclusive finance and achieve sustainable economic growth

## **2.4 Research Gap**

While the literature review provides valuable insights into financial literacy and inclusion, there are notable research gaps. These include insufficient exploration of gender disparities, limited analysis of cultural influences, a need for a more in-depth understanding of the effectiveness of different financial literacy programs, and a brief examination of behavioral aspects in digital finance. Additionally, there is a lack of research on the micro-level impact of financial literacy on households, inadequate scrutiny of the direct and indirect impact of policies on financial inclusion dynamics, and a call for deeper analysis of emerging themes. Furthermore, there is a need for research focusing on the impact of financial literacy on vulnerable populations. Addressing these gaps is crucial for advancing our understanding and developing targeted interventions and policies.

The issue of financial inclusion remains a significant challenge globally, with a substantial portion of the adult population still lacking access to basic financial services world (Demirguc-Kunt, 2013). Efforts to address this problem have been recognized as crucial for economic development, poverty alleviation, and the achievement of Sustainable Development Goals (SDGs) (Klapper, El-Zoghbi, & Hess, 2016). Research indicates that while the positive impact of financial depth on economic growth and inequality reduction is well-established, the link between financial inclusion and these

outcomes is less studied but emerging evidence suggests a positive relationship (Fauziah et al., 2021). Improved financial inclusion has been associated with various socio-economic benefits such as reduced poverty, increased employment, expenditures, and savings. Traditionally, research on financial inclusion has primarily focused on the supply side factors such as financial infrastructure, legal frameworks, and institutional characteristics. However, there is a growing recognition of the importance of considering the demand side factors, particularly the role of financial literacy among consumers.

Financial literacy plays a crucial role in enhancing the effectiveness of financial markets by enabling individuals to make better-informed financial decisions. Informed consumers are more likely to utilize financial services effectively, demand more sophisticated products, and contribute to the overall efficiency of the financial system. Moreover, financially literate individuals are more likely to advocate for and demand financial inclusion, recognizing its importance in improving their financial well-being (Kodongo, 2018).

Therefore, addressing financial literacy gaps should be considered a key component of any comprehensive strategy to promote financial inclusion. Policymakers should prioritize initiatives aimed at improving financial education and literacy among consumers, as this not only empowers individuals to make better financial choices but also stimulates demand for inclusive financial services. By integrating both supply and demand-side considerations, policymakers can create a more conducive environment for fostering financial inclusion and driving broader economic development.

# **CHAPTER III**

## **RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter describes in detail how the research work has been conducted to achieve the above objectives. This chapter includes research design, a conceptual framework, sources of data collection, and tools of analysis/empirical model.

### **3.2 Research design**

This study employs the quantitative research design with the help of the secondary survey data collected by Nepal Rastra Bank. The study has set two objectives as mentioned earlier. To meet the first objective the method employed here is the review of the reports along with the descriptive analysis. To meet the second objective, the multiple regression method is employed since the variables of interest in the study are more in number. The causal inference is done with the help of the multiple regression technique. The variables used in the study are constructed based on the guidelines provided by the Nepal Rastra Bank in the report.

### **3.3 Data**

The data used for the study is from the secondary financial literacy survey data collected by the Nepal Rastra Bank. The study gathers data through a cross-sectional multistage survey in Nepal Rastra Bank. The survey covers financial literacy, inclusion, and demographics, with a carefully determined 9361 sample size (NRB, Baseline survey). The questionnaire used in the study can be accessed in the report. In our study after the selection of the variables and cleaning for the missing data, the sample size chosen for this study is 3355 individuals.

### **3.4 Conceptual Framework**

The main objective of the study is to examine the relationship between financial literacy and financial inclusion in Nepal. OLS regression is a statistical technique used to

estimate the linear relationship between a dependent variable and one or more independent variables. In our model, financial inclusion serves as the dependent variable, representing various dimensions such as access to banking services, credit availability, and participation in the formal financial sector. Financial literacy, along with control variables such as education, income, age, and male, were included as independent variables. The OLS regression analysis allowed us to assess the impact of financial literacy on financial inclusion while controlling for the influence of demographic characteristics.

$$FI = f(\text{FL, Age, Gender, Education, Income, Formal})$$

Where;

FI= Financial Inclusion

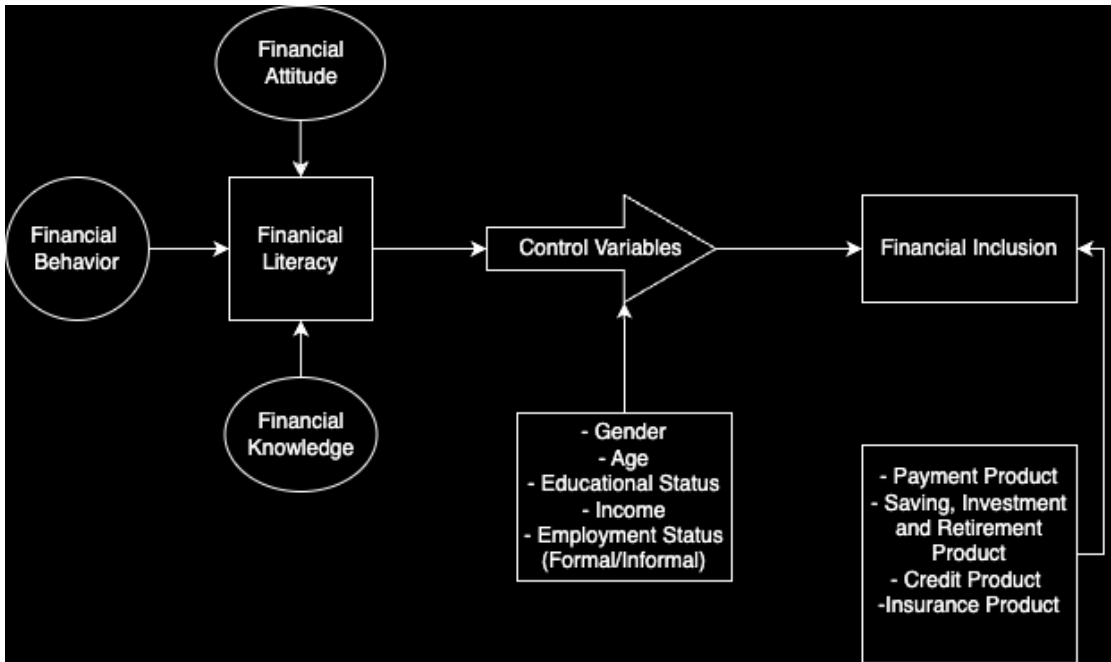
FL= Financial Literacy (measure on financial knowledge, financial attitude and financial behavior)

Control variables= Age, Gender, Education, Income

Formal= Employment sector (Formal/Informal)

The conceptual framework developed as in the figure 3.2 shows how the financial knowledge, financial attitude and financial behavior determine the financial literacy. Then, it also illustrates the relationship between the financial literacy and financial inclusion including the control variables such as age, gender, Education status, Income and Employment (formal and informal sector). Also, financial inclusion measure in the different component's payment product, saving investment retirement product, Insurance product and Credit product dependently.

Figure 3.2: Conceptual Framework



Source: Author drawing

In the figure the channel is discussed briefly. The financial literacy depends on three components: Financial Attitude, Financial Behavior, and Financial Knowledge and in the channel between financial literacy and financial inclusion there are certain Control Variables. This can be depicted in the figure above.

### 3.5 Empirical Model

The empirical model in this study quantitatively examined the connection between financial literacy and financial inclusion in Nepal. Financial literacy, representing knowledge, attitude, and behaviors, was the main independent variable, while demographic factors served as controls. Financial inclusion, encompassing access to banking services and credit, was the dependent variable. Using OLS regression, the model estimated coefficients to reveal the strength and direction of these relationships

The model used in the study is:

$$FI_{scores} = \alpha + \beta_1 FL_{scores} + \beta_2 X_i + \epsilon$$

Here, the dependent variable,  $FI_{score}$  is the financial inclusion score which constituent financial Inclusion scores from:

1. Payment Products

2. Saving, Investment and Retirement Products
3. Insurance Products
4. Credit Products

Similarly, the independent variable,  $FL_{scores}$  is the financial literacy score, which constituent the financial literacy score attributed from:

1. Financial Knowledge
2. Financial Attitude
3. Financial Behavior

Here,  $\alpha$  is the constant;  $\beta_1$  and  $\beta_2$  are the coefficient of financial literacy score and control variables respectively.

$X_i$  Denote the set of control variable which constituents the following individual characteristics:

1. Gender - 1 if male and 0 either
2. Age - continuous variable
3. Education Status - 1 if educated and 0 either (From the questionnaire if the respondents are illiterate or have not taken any formal education then is classified as 0 and 1 for other response.
4. Income - continuous variable
5. Employment Sector (Formal/Informal) – 1 if involved in formal sector 0 otherwise.

### **3.6 Operational Definition of Variables**

The computation of financial indicators involves assessing an individual's financial literacy through three key components: Financial Knowledge Score, Financial Behavior Score, and Financial Attitude Score. The assessment of financial inclusion involves evaluating six indicators, in accordance with the OECD/INFE 2022 guidelines, as outlined in Table 2.1. A score of 1 is assigned when the specified conditions are fulfilled, while a score of 0 is assigned if the conditions are not met.

**Financial Literacy:** The Financial Literacy Score is determined by adding up the scores obtained in the financial knowledge, financial attitude, and financial behavior components. This score can fall within the range of 1 to 20. The minimum target score is considered achieved when the respondent attains the required minimum score in all three components.

**Financial Knowledge Score:** The Financial Knowledge Score is calculated by assessing the accuracy of responses to seven financial knowledge questions. These questions pertain to fundamental financial concepts including the effects of inflation on purchasing power, interest principles, the correlation between risk and return, and the concept of diversification (Q21-Q27). The score can vary from 0 to 7, and achieving a minimum target score of 5 or more indicates a satisfactory level of financial knowledge.

**Financial Behavior Score:** The Financial Behavior Score is derived by totaling the scores acquired in eight financial behavior questions. These questions encompass areas such as budgeting (Q17, Q18.1, Q18.2, Q18.3, and Q18.4), active saving (Q19), refraining from borrowing(Q41), selecting financial products (Q38 and Q39), seeking expert advice, overseeing financial matters (Q33), working towards goals (Q34), making thoughtful purchases (Q28) and paying bills on time (Q31). Each behavior is assigned a score of 1, except for choosing financial products, where a score of 2 is allotted if done with an independent financial adviser. The overall score can range from 0 to 9, with a minimum target score for satisfactory financial behavior set at 6 or more.

**Financial Attitude Score:** The Financial Attitude Score is determined by calculating the average scale of responses to three attitude questions, which are rated on a 5-point Like it scale. These questions explore attitudes concerning money, saving, and long-term saving (Q29, Q30, and Q35). The resulting score is then rescaled to fall within a range of 1 to 4. A minimum target score of 2.4 or higher is set to indicate a satisfactory level of financial attitude.

**Financial Inclusion:** The financial inclusion score is calculated based on the indicator as below. The indicators are included in the questionnaire and it is quantified as below in table.

Table 3.1: Financial Inclusion Indicator

Indicator	Financial Products
Payment products	Mobile banking, internet banking, credit card/debit card, saving and current account and digital wallets. (1 if have at least one)
Saving Investment and Retirement Products	Bank saving, current account, fixed deposit, micro saving, saving in cooperatives and

	informal group saving, Provident fund, Citizen Investment Trust (CIT), Shares and bonds. (1 if have at least one)
Insurance	Life insurance and non-life insurance. (1 if have at least one)
Credit product	Bank loan, microfinance loan, and unsecured loan, credit from cooperatives, informal group loan, Government grants and loans. (1 if have at least one)
Aware of at least 5 products	Aware of 5 products from list of 24 products in the questionnaire.
Relying on family and friends	Either rely on family and friends to save or rely on family and friends to meet end needs.

*Source: NRB Baseline Survey, 2022*

Then the score of each indicator is added and the financial inclusion score is calculated. The minimum value of the financial inclusion is 0 and the maximum value of the financial inclusion is 6.

## CHAPTER IV

### RESULTS AND DISCUSSIONS

This chapter presents the finding of the study and also discuss how financial literacy influences financial inclusion in Nepal using cross-sectional statistics followed by descriptive statistics. The variables are financial knowledge, financial attitude and financial behavior. Finally, the result and discussion of OLS regression analysis is presented.

#### 4.1 Descriptive Statistics

In this section the descriptive statistics of the variable is presented in the table below. The descriptive statistics will help to present the scenario of the variable used. In table below, it is arranged in such a way that, first the statistics of the financial literacy is presented then a correlation result is presented which will further assist the study.

As mentioned earlier, the total number of observations used in the study is 3355 individuals. The financial literacy among the respondents ranges between 2.847–9, which indicates that the minimum financial literacy score of respondents is 2.847 and the highest financial literacy score is 9. According to the NRB report, the financial literacy score between 0-20. The financial Literacy is attributed by financial knowledge (FK), financial behavior (FB) and financial attitude (FA) score and the questions related to this attribute are presented in the questionnaire which is asked to the respondents and the score based on the correct answer by the respondents are used. And in this we see that, the financial knowledge score ranges between 0 and 7. The mean FK score of the individuals is 4.189. According to the NRB report, the minimum target score of the financial knowledge is 5 or more but the mean value of the financial knowledge here is 4.189 which is below the targeted value. Here, the individual whose financial knowledge is equal to and greater than the targeted variable is 1,688. The proportion of the individual above the target value is 50.31%.

Similarly, in the financial attitude score, it ranges between 0.8 and 4. The mean FA score is 2.6 and the targeted minimum score for financial attitude is 2.4 and the mean

of FA is above the targeted minimum score. Among the 3355 respondent, 2222 individual are above or equal to the minimum targeted score, in proportion it is 66.23%. Financial behavior scores range between 0.016 to 9. The mean value of the FB is 5.426, but the targeted minimum value is 6, the mean is below the targeted minimum value. Among the 3355 respondent, 1322 respondent are able to manage the score above targeted score, in proportion it is 39.4%.

The financial inclusion score ranges between 0 to 6, and the mean of financial inclusion is 3.403. The financial inclusion score is attributed by different indicators. The score of Payment Product used ranges from 0 to 4 and the mean score is 0.966. Similarly, the score of saving, investment and retirement product used ranges between 0 to 9 and the mean value is 3.343. The score of Insurance Product used ranges between 0 to 2 and the mean value is 0.520. The score of credit product used is between 0 to 6 whose mean is 1.08.

Table 4.1: Descriptive Statistics

<i>Variable</i>	<i>Obs.</i>	<i>Means</i>	<i>Std. dev</i>	<i>Min</i>	<i>Max</i>
<i>Financial Literacy</i>	3355	5.95	3.448	2.847	20
<i>FK</i>	3355	4.189	2.409	0	7
<i>FA</i>	3355	2.6	0.8114	0.8	4
<i>FB</i>	3355	5.426	1.609	0.016	9
<i>Financial Inclusion</i>	3355	3.403	1.43	0	6
<i>FI_PayPro</i>	3355	0.966	1.373	0	4
<i>FI_SIRP</i>	3355	3.343	1.98	0	9

<i>FI_Ins</i>	3355	0.520	0.654	0	2
<i>FI_CP</i>	3355	1.08	1.346	0	6
<i>Control Variables</i>					
<i>Male</i>	3355	0.701	0.453	0	1
<i>Age</i>	3355	41.45	12.7	18	89
<i>Edu</i>	3355	0.766	0.423	0	1
<i>Income</i>	3355	34560.8	54647.13	200	1500000
<i>Formal</i>	3355	0.470	0.5	0	1

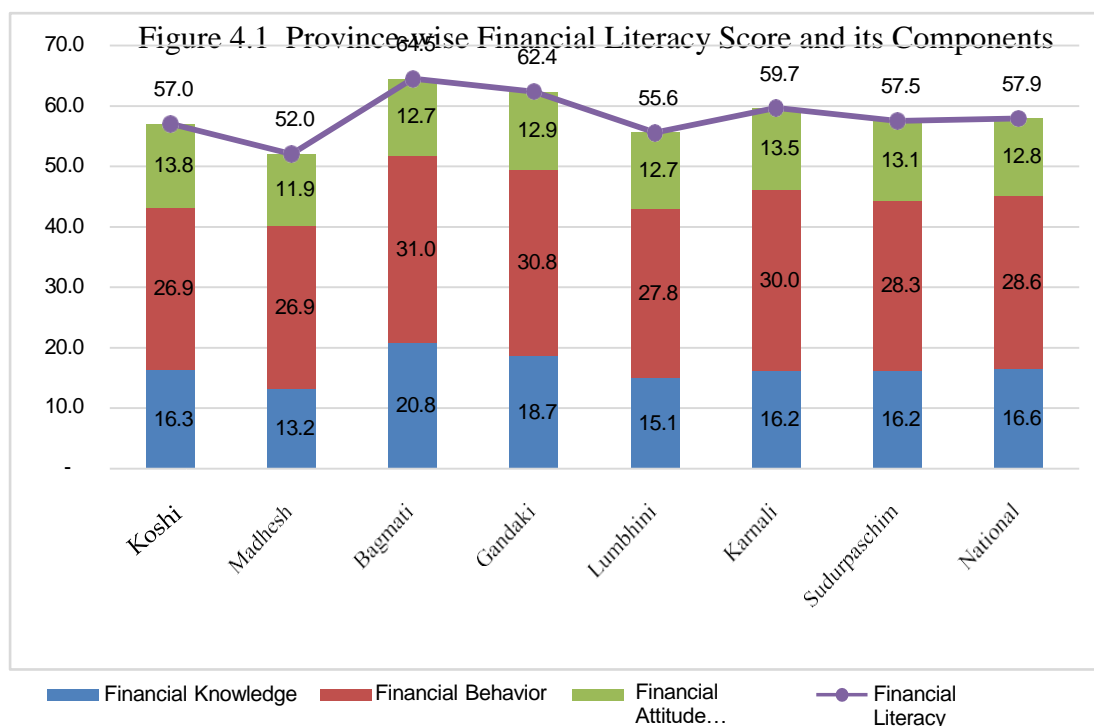
*Author's calculation*

Similarly, the male population used in this study was 2382 and the female population was 973. The average age of the respondents was 41.45 and range of the age was between 18 and 89. The monthly income of respondent range between 200 and 15,00,000.

#### **4.2.1 Province Wise Financial Literacy Score**

Nepal's financial landscape reveals notable disparities in financial literacy, as indicated by an overall national score of 57.9 percent, slightly trailing the average of 61 percent from OECD's 2020 survey of 26 countries. Provinces exhibit varying degrees of financial awareness, with Bagmati Province leading at 64.5 percent and Madhesh Province trailing at the bottom with a score of 52.0 percent. Moreover, provinces like Koshi, Madhesh, Lumbini, and Sudurpaschim fall below the national average. Karnali Province stands out with a financial literacy score surpassing the national level, attributed to higher scores in financial behavior and attitude. These variations

underscore the importance of region-specific interventions to enhance financial literacy and bridge.

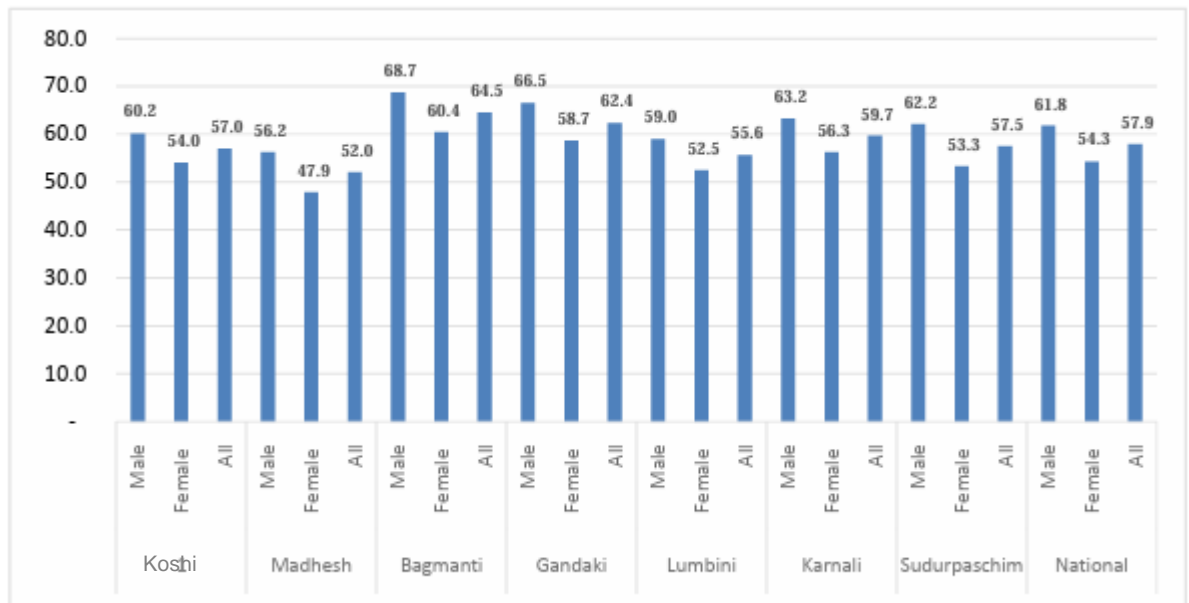


Source: NRB Baseline Survey, 2022

The gaps among provinces, addressing factors such as education, economic conditions, and access to financial resources. A nuanced approach that considers regional nuances is crucial for fostering comprehensive financial literacy across the diverse landscape of Nepal.

In the figure (4.1) there is a significant gender gap in financial literacy, with males outperforming females across all provinces. The overall financial literacy score for males stands at 61.8 percent, whereas females scored 54.8 percent. This gender disparity persists consistently across regions, with Madhesh and Sudurpaschim provinces showing a particularly wider gap. Notably, metropolitan cities exhibit higher overall financial literacy scores at 65.4 percent compared to other local bodies. However, the gender gap remains, with metropolitan areas experiencing a slightly more pronounced difference between male and female financial literacy scores. These findings emphasize the need for targeted efforts to address the gender gap in financial literacy, with a focus on specific regions such as Madhesh and Sudurpaschim, and urban areas where the divide is more pronounced. Initiatives tailored to diverse demographics can contribute to a more inclusive and equitable financial literacy landscape.

Figure 4.2 Financial Literacy Score (Gender and Province wise)



Source: NRB Baseline Survey, 2022

### 4.3 Correlation Matrix

In this section, we present the correlation between the main variables under study. The correlation matrix is used to illustrate the strength and direction of the relationships between these variables. Specifically, the table reveals that the correlation coefficient between financial inclusion and financial literacy is 0.5164. This coefficient indicates a moderate positive correlation, meaning that as financial literacy increases, financial inclusion tends to increase as well, and vice versa. Although this correlation is not particularly strong, it is statistically significant and highlights an important link between the two variables. This moderate correlation suggests that individuals with higher financial literacy are somewhat more likely to be financially included, supporting the relevance of both factors in the context of our study.

Table 4.2 Correlation Matrix

	<b>FI</b>	<b>FL</b>
<b>FI</b>	1	
<b>FL</b>	0.5164	1

*Author's Calculation*

Similarly, decomposing the components of the financial literacy, the correlation between the financial inclusion and the attributes are calculated. The correlation between the financial knowledge and the financial behavior is still there but the financial attitude seems to have very low correlation.

Table 4.3 Correlation Matrix (Financial Inclusion and Components of Financial Literacy)

	<i>FI</i>	<i>FK</i>	<i>FA</i>	<i>FB</i>
<i>FI</i>	1			
<i>FK</i>	0.4013	1		
<i>FA</i>	0.0730	-0.0054	1	
<i>FB</i>	0.4689	0.3566	0.0360	1

*Author's Calculation*

Again, the financial inclusion is decomposed and the correlation is calculated against the financial literacy. This shows that the correlation between the financial literacy and the component of the financial inclusion.

Table 4.4: Correlation Matrix (Financial Literacy and Components of Financial Inclusion)

	<i>PayProd</i>	<i>SIRP</i>	<i>Ins</i>	<i>Credit</i>	<i>FL</i>
<i>PayProd</i>	1				
<i>SIRP</i>	0.4828	1			
<i>Ins</i>	0.4596	0.5188	1		
<i>Credit</i>	0.1735	0.4710	0.2370	1	
<i>FL</i>	0.4758	0.4951	0.3709	0.2135	1

*Author's Calculation*

The correlation coefficients indicate that as financial literacy increases, individuals are more likely to utilize various financial products 0.4758, Such as payment products, savings and investment products, insurance products, and credit products. This positive relationship suggests that higher levels of financial literacy are associated with greater engagement in financial activities, which aligns with the concept of financial inclusion. Therefore, it can be inferred that improving financial literacy tends to enhance financial inclusion by encouraging individuals to access and utilize a wider range of financial services and products, ultimately contributing to their economic well-being.

## **4.4 Relation Between Financial Literacy and Financial Inclusion**

### **4.4.1 Components of Financial Inclusion**

In this study, the indicators of Financial Inclusion used are the Payment Product, Saving, Investment and retirement product, Insurance, and Credit Product. First of all, simple regression is run between the different indicators of financial inclusion and the Financial Literacy.

The result of the regression is reported in the Table 4.6. From the table below we can see that, all the coefficient of interest i.e., FL is highly significant with 1% significance level.

In model (1) the increase in the financial literacy by 1 point will likely increase the access to the payment products by 0.189 units. This indicates that the improvement in financial literacy tends to increase the use of payment products. Similarly, in model (2) we can see that, increase in financial literacy by 1 unit is likely to increase the use of saving, investment, and retirement products by 0.284 units.

In model (3), an increase in financial literacy by 1 unit is likely to increase the use of insurance by 0.0703 units and in model (4), the credit product use is likely to increase by 0.0834 units with an increase in 1 unit of financial literacy. Among the indicators of financial inclusion, it is observed that the increase in financial literacy is highly effective in increasing the saving, investment and retirement product then other. And it is seen that, increase in financial literacy affect in very small amount to the use of the Insurance products and the credit products. Though some literature finds that, literacy doesn't significantly perform the inclusion (Marini et.al, 2022), and literature such as Abbas et.al (2023) confirmed the role of financial literacy to the inclusion.

Table 4.5 : Regression result of financial inclusion indicator and Financial Literacy

	(1)	(2)	(3)	(4)
VARIABLES	FI_PayPro_Used	FI_SIRP_Used	FI_Ins_Used	FI_CP_Used
FL	0.189*** (0.00605)	0.284*** (0.00860)	0.0703*** (0.00304)	0.0834*** (0.00659)
Constant	-1.348*** (0.0768)	-0.122 (0.109)	-0.339*** (0.0386)	0.0629 (0.0836)
Observations	3,355	3,355	3,355	3,355

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Author's Calculation*

The regression result here suffers from the omitted variable bias as it studies the relation between the indicators of financial inclusion and financial literacy. There could be other variables that are individual characteristics that could affect the financial inclusion of the individual. Hence, to cope with the omitted variable bias, the regression result is again run with the introduction of the control variables.

In Table (4.7) the regression result is reported along with the introduction of the control variable to the previous regression result in Table (4.6). After the introduction of the control variable also we can see the variable of interest i.e. FL is significant at the 1% significance level.

After the control variable also, the relation depicted in the above regression result is echoed. The increase in financial literacy is likely to increase use of the payment products, savings, investment and retirement products, insurance increases, and credit products. As the result of previous regression, here also we can trace the impact of financial literacy is high in the use of saving, investment, and retirement products. Education emerges as a strong determinant, as higher educational attainment is associated with an increased likelihood of using Payment Product, Saving Investment and Retirement Products, and insurance services. Similarly, income demonstrates a positive relation with the usage of Payment Products, Saving Investment and Retirement Products, and insurance services, emphasizing the role of financial capacity in service adoption. Some interesting patterns can be seen in this result, the payment production used and insurance used significantly decrease with increase in age whereas the saving investment and retirement product use and credit product used remained positive which can be related.

Table 4.6: Regression Result with Control Variable

	(1)	(2)	(3)	(4)
VARIABLES	FI_PayPro_Used	FI_SIRP_Used	FI_Ins_Used	FI_CP_Used
FL	0.120*** (0.00652)	0.219*** (0.00961)	0.0507*** (0.00346)	0.0777*** (0.00764)
Male	0.188*** (0.0436)	-0.255*** (0.0643)	0.0280 (0.0231)	-0.152*** (0.0511)

Age	-0.0133*** (0.00167)	0.0105*** (0.00247)	-6.99e-05 (0.000887)	0.00486** (0.00196)
Edu	0.138** (0.0548)	0.369*** (0.0807)	0.0709** (0.0290)	0.143** (0.0642)
Income	2.97e-06*** (3.64e-07)	2.10e-06*** (5.36e-07)	9.44e-07*** (1.93e-07)	3.75e-07 (4.26e-07)
Formal	0.722*** (0.0445)	0.826*** (0.0656)	0.223*** (0.0236)	0.0343 (0.0521)
Constant	-0.633*** (0.114)	-0.330* (0.169)	-0.308*** (0.0607)	-0.0991 (0.134)
Observations	3,355	3,355	3,355	3,355

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Author's Calculation*

#### 4.4.2 Components of Financial Literacy

Financial literacy is also constructed after the sum of three different indicators: Financial Knowledge, Financial Attitude and Financial Behavior. In order to trace the impact of the different components of financial literacy on financial inclusion, regression is run between the indicators of the financial literacy and the financial inclusion score which is shown in the Table 4.8.

The table presents the results of regression models exploring the relationship between different factors financial knowledge (FK), financial access (FA), and financial behavior (FB) and financial inclusion (FI). There is significant relation between the financial inclusion and the financial knowledge as seen in the model (1). One unit increase in the financial knowledge will increase the financial inclusion score by 0.239 unit keeping other thing remaining the same, significantly at 1% significance level. Similarly, in model (2) we can see that, the increase of financial attitude score by one unit is likely to increase the financial inclusion score by 0.129 significantly remaining other thing constant. In model (3) the increase of financial behavior by one unit is likely to increase the financial inclusion by 0.418 unit. Hence, this shows that the impact of the financial behavior is high to the financial inclusion.

Table 4.7 Regression Result of Component of Financial Literacy and Financial Inclusion

VARIABLES	(1) FI	(2) FI	(3) FI
FK	0.239*** (0.00941)		
FA		0.129*** (0.0304)	
FB			0.418*** (0.0136)
Constant	2.403*** (0.0455)	3.068*** (0.0828)	1.137*** (0.0769)
Observations	3,355	3,355	3,355

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Author's Calculation*

After the introduction of the control variable in the regression analysis we can get. The regression results provide valuable insights into the factors influencing financial inclusion (FI) based on a sample of 3,355 observations. Notably, variables representing financial knowledge (FK), financial attitude (FA), and financial behavior (FB) exhibit positive relationships with financial inclusion, with FB showing the strongest association in 0.323. Demographic factors such as age, gender, and education play crucial roles. While being male and age negatively impact financial inclusion, higher education and income are positively associated with it. Additionally, participation in the formal sector positively influences financial inclusion with 0.864 highest.

Table 4.8: Regression Result with Control Variable

VARIABLES	(1) FI	(2) FI	(3) FI
FK	0.140*** (0.0103)		
FA		0.0887*** (0.0272)	
FB			0.323*** (0.0133)
Male	0.0393 (0.0485)	0.0934* (0.0496)	0.107** (0.0459)
Age	-0.00471** (0.00186)	-0.00676*** (0.00190)	-0.00621*** (0.00176)
Edu	0.417*** (0.0609)	0.628*** (0.0603)	0.467*** (0.0561)
Income	1.80e-06*** (4.04e-07)	2.21e-06*** (4.13e-07)	1.61e-06*** (3.83e-07)
Formal	0.679*** (0.0490)	0.864*** (0.0482)	0.642*** (0.0455)
Constant	2.281*** (0.108)	2.422*** (0.128)	1.116*** (0.118)
Observations	3,355	3,355	3,355

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Author's Calculation*

#### 4.4.3 Financial Inclusion and Financial Literacy

The regression analysis sheds light on the intricate factors influencing financial inclusion. Financial literacy, education, income, and formal employment status emerge as significant positive predictors, underlining the importance of both knowledge and access to financial services. Younger individuals are more likely to be included, emphasizing the need for tailored strategies for different age groups. Surprisingly,

gender does not show a statistically significant impact. In model 1 regression between financial literacy and financial inclusion is shown and in model (2) the control variable is introduced. This result is similar with the result of Grohmann & Menkhoff (2021). When there are no control variables, the result shows that the one unit increase in the financial literacy score will increase the financial inclusion by 0.215 unit significantly other things remaining the same. And in introduction of the control variables, the increase in one unit of the financial literacy score will increase the financial inclusion by 0.161 unit. Another interesting fact derived from the result is that, if the individuals are in the formal sector of the employment, then the financial inclusion score of the individual increase by 0.527 unit. Also, being educated the individuals will increase their financial inclusion score.

Hence, from the result we can say that, the financial literacy seems to contribute significantly to the financial inclusion of the individuals.

Table 4.9: Regression between Financial Inclusion and Financial Literacy

VARIABLES	(1) FI	(2) FI
FL	0.215*** (0.00615)	0.161*** (0.00690)
Male		0.0461 (0.0461)
Age		-0.00426** (0.00177)
Edu		0.287*** (0.0579)
Income		1.54e-06*** (3.85e-07)
Formal		0.527*** (0.0471)
Constant	0.782*** (0.0780)	1.060*** (0.121)
Observations	3,355	3,355

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Author's Calculation*

## CHAPTER V

### SUMMARY AND CONCLUSIONS

Financial literacy and inclusion are critical components in assessing and enhancing the economic well-being of individuals and communities. In the context of Nepal, a thorough investigation based on 3,355 observations provides valuable insights into the nuanced landscape of financial literacy and its correlation with financial inclusion.

The study begins by highlighting the diversity in financial literacy scores, ranging from 2.847 to 19.67 among respondents. This wide range suggests variations in individuals' understanding and awareness of financial concepts. The financial literacy scores are derived from financial knowledge (mean score: 4.189), financial attitude (mean score: 2.6), and financial behavior (mean score: 5.426). Notably, the mean financial knowledge score falls below the targeted value of 5, as indicated by the National Reserve Bank (NRB) report. However, a closer look reveals that 50.31% of respondents meet or exceed the targeted financial knowledge score, showcasing a significant portion of the population with satisfactory financial knowledge.

Financial attitude scores, with a mean of 2.6, exceed the targeted minimum score of 2.4. This positive trend is encouraging, with 66.23% of respondents meeting or surpassing the targeted score. On the other hand, financial behavior scores, with a mean of 5.426, fall below the targeted minimum value of 6. Only 39.4% of respondents manage to achieve scores above the targeted threshold, indicating potential areas for improvement in financial behavior among the surveyed individuals.

Moving beyond individual components, the study explores the overall financial inclusion score, which ranges from 0 to 6, with a mean of 3.403. This score is influenced by various indicators, including payment product usage (mean score: 0.966), saving, investment, and retirement product usage (mean score: 3.343), insurance product usage (mean score: 0.520), and credit product usage (mean score: 1.08). These indicators offer a comprehensive view of the diverse financial behaviors and choices made by respondents. Correlation analysis between financial inclusion and financial literacy yields a moderate correlation coefficient of 0.5164. While not indicating a strong

correlation, it signifies a notable relationship between these two critical aspects. To delve deeper into this relationship, the study further dissects the correlation between financial inclusion and its components—financial knowledge, financial attitude, and financial behavior.

Regression analyses shed light on the significant impact of financial literacy on various indicators of financial inclusion. The study reveals that an increase in financial literacy positively influences the use of payment products, saving, investment, and retirement products, insurance products, and credit products. The coefficients of these variables indicate the extent to which a one-unit increase in financial literacy corresponds to an increase in the usage of each financial product. These findings underscore the importance of financial literacy in fostering a more inclusive financial landscape. However, the study acknowledges the presence of omitted variable bias in its regression results, recognizing that individual characteristics not considered in the analysis could affect financial inclusion. To address this, the study introduces control variables in the regression models, including demographic factors such as age, gender, education, and income.

The regression results with control variables affirm the significance of financial literacy in influencing financial inclusion. The relationship between financial literacy and the use of payment products, saving, investment, and retirement products, insurance products, and credit products remains robust even after accounting for demographic variables. Education emerges as a strong determinant, with higher educational attainment positively associated with increased usage of financial products. Similarly, income demonstrates a positive relationship with the usage of financial products, emphasizing the role of financial capacity in shaping financial behavior.

As the study progresses, it introduces a holistic perspective by constructing financial literacy as the sum of three indicators: financial knowledge, financial attitude, and financial behavior. Regression analysis is then conducted between these components and the financial inclusion score. The results indicate a significant positive relationship between financial knowledge and financial inclusion, financial attitude and financial inclusion, and, most notably, financial behavior and financial inclusion. These findings highlight the multifaceted impact of financial literacy on different dimensions of financial inclusion. The regression analysis provides further insights into the factors

influencing financial inclusion. Beyond financial literacy, education, income, and formal employment status emerge as significant positive predictors. Younger individuals are more likely to be included, underscoring the need for tailored strategies for different age groups. Surprisingly, gender does not show a statistically significant impact in this analysis.

In conclusion, this in-depth study serves as a significant contribution to unraveling the intricate dynamics of financial literacy and inclusion within the context of Nepal. The nuanced exploration of financial literacy scores ranging from 2.847 to 19.67 among respondents provides a comprehensive understanding of the varied levels of financial awareness and comprehension in the population. This diversity in scores highlights the necessity of tailored strategies to address the specific needs and challenges faced by individuals with varying degrees of financial literacy. Furthermore, the examination of the correlation between financial literacy and inclusion sheds light on the interconnectedness of these two pivotal aspects of economic well-being.

While the correlation coefficient of 0.5164 indicates a moderate relationship, the findings underscore the importance of enhancing financial literacy to promote a more inclusive financial landscape. It becomes evident that as individuals become more financially literate, they are more likely to engage in diverse financial behaviors, as reflected in their usage of payment products, savings, investments, insurance, and credit products. The identified gaps in financial literacy scores, particularly in areas where scores fall below targeted values, accentuate the urgency for targeted interventions. Tailoring financial education programs to address specific deficiencies and challenges identified in different regions or demographic groups is imperative. Such targeted interventions can be designed to bolster financial knowledge, enhance positive financial attitudes, and improve financial behaviors.

This approach is crucial for achieving a more equitable distribution of financial literacy, ensuring that no segment of the population is left behind in the journey toward economic empowerment. Additionally, the study underscores the pivotal role of demographic factors in shaping financial behaviors and outcomes. The impact of variables such as age, gender, education, and income on financial inclusion highlights the need for policies and programs that consider the diverse demographics of the population. For instance, recognizing that higher educational attainment positively

influences financial behavior suggests the importance of integrating financial literacy education into formal education systems. As Nepal continues on its path of economic development, these insights become increasingly relevant. The findings of this study not only contribute to the existing body of knowledge but also provide actionable recommendations for policymakers, financial institutions, and educators. By prioritizing targeted interventions and considering demographic factors in the design of inclusive financial policies and programs, Nepal can foster a financially resilient and inclusive society.

The implications of this study extend beyond the immediate economic landscape. A financially literate and inclusive society contributes to overall social well-being, empowering individuals to make informed financial decisions and participate more actively in economic activities. This, in turn, can contribute to poverty reduction, economic stability, and improved overall quality of life. Therefore, the findings of this study have far-reaching implications for Nepal's socio-economic development, positioning financial literacy and inclusion as integral components in the nation's pursuit of sustainable growth and prosperity.

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# APPENDIX

## APPENDIX A: Survey tools

### Appendix 23: Questionnaire used in the survey

नेपाल राष्ट्र बैंक  
आर्थिक अनुसन्धान विभाग  
Baseline Survey on Financial Literacy (०. स्थान कोड .....)

यस प्रश्नानुसन्धानमा सोझिएका विवरण तम्पाइ पिन, २०१५ अनुसार गोप्य रहनेछन् । संकलित विवरणहरू सामुहिक रूपमा तम्पाइय प्रयोगकर्ताको लागि मात्र प्रयोग गरिने छ ।

#### क. उत्तरदाताको वैयक्तिक विवरण

१. नाम : .....
२. मोबाइल नम्बर : .....
३. लिंग : ..... (१.पुरुष २.महिला ३.अन्य)
४. उमेर : .....
५. जात/जातीयताको कोड : .....(नसोध्ने, नाम थरबाट कोड त्नेरी राख्ने)
६. वैवाहिक स्थिति : .....(१.विवाहित २.अविवाहित ३.जलग ४.एकल)
७. परिवार सदस्य संख्या (आफू समेत जोडेर हुने संख्या राख्ने)
- ७.१. १६ वर्ष मुनिका : .....
- ७.२. १६ वर्ष वा सोभन्दा बढी उमेरका : .....
८. उच्चतम शैक्षिक योग्यता : ..... (तन दिइएका शैक्षिक योग्यता वा सो सरहनाई पनि जनाउछ)
- (१. निरक्षर २. औपचारिक शिक्षा नलिएको ३. प्राथमिक शिक्षा ४. माध्यमिक शिक्षा ५. उच्च माध्यमिक शिक्षा ६. स्नातक ७. स्नाकोत्तर वा माथि)

#### ख. रोजगारी सम्बन्धित विवरण

९. वर्तमान रोजगारीको स्थिति : .....
- (१. स्वरोजगार २. ज्याला वा तलबमा काम गर्ने ३. कामको खोजीमा ४. गृहिणी ५. विद्यार्थी ६. काम गर्दिन र कामको खोजीमा छैन)
१०. तपाईंले काम गर्ने संस्था आधिकारीक निकायमा वर्ता छ/छैन ? ..... (१. छ ०. छैन)
११. पेशाको वर्गीकरण : .....
- (०. सुरक्षा सम्बन्धी १. व्यवस्थापक २. पेशाविद् ३. प्राविधिक तथा सहायक पेशाविद् ४. कार्यालय सहायक ५. सेवा तथा वस्तु बिक्री गर्ने कामदार ६. कृषि, वन र माछापालन कार्यका दक्ष कामदार ७. शिल्पकला तथा कारिगरी र यस सम्बन्धी व्यापार गर्ने कामदार ८. कारखाना तथा यन्त्र प्रचालक र जडान गर्ने कामदारहरू ९. सामान्य वा प्राथमिक पेशाका कामदारहरू)
१२. पेशाको क्षेत्र : .....
- (१. कृषि २. खानी तथा उत्खनन् ३. विद्युत/पानी ४. उद्योग ५. निर्माण ६. व्यापार ७. यातायात ८. शिक्षा ९. स्वास्थ्य १०. होटल तथा रेस्टुरेन्ट ११. वित्तीय सेवा १२. सुचना १३. सार्वजनिक प्रशासन १४. अन्य सेवा)
१३. तपाईंले पछिन्ने हप्ता कति घण्टा काम गर्नुभयो ? ..... (स्वरोजगार वा जागिरे भए मात्र सोध्ने)
१४. तपाईंको एक वर्ष यताको आम्दानी हेर्दा यहाँको सरदर मासिक आम्दानीको जवस्था फस्तो रहयो ? .....
- (१. प्रत्येक महिना उस्तै उस्तै रहयो २. न्यूनतम यति र कुनै महिना राम्रो भन्न सकिने ३. कुनै महिना शून्य त कुनै राम्रो रहयो)
१५. प्रत्येक महिना तपाईंको घरमा आउने आयका सबै स्रोतलाई ध्यानमा राख्दा, तपाईंको औषत मासिक आय कति होला ? .....
१६. प्रत्येक महिना तपाईंको घर हुने नगद खर्चलाई ध्यानमा राख्दा, निम्न शिर्षकमा तपाईंको औषत मासिक खर्च कति होला ?
- १६.१. खाद्यान्न .....
- १६.२. शिक्षा .....
- १६.३. स्वास्थ्य .....
- १६.४. घरभाडा .....

#### ग. नगद व्यवस्थापन र वित्तीय योजना सम्बन्धी जानकारी

१७. तपाईंको घरमा हरेक दिन नगद व्यवस्थापन सम्बन्धी निर्णय कसले लिनुहुन्छ ? .....
- (१. स्वयं आफू २. तपाईं र तपाईंको जीवनसाथी ३. तपाईंको जीवनसाथी ४. तपाईं र परिवारको अर्को सदस्य/सदस्यहरू ५. परिवारको अर्को सदस्य/सदस्यहरू ६. अरु कोही )
१८. आय-व्यय योजना सम्बन्धमा
- १८.१. के तपाईंको घरमा आय-व्यय योजना तयार गरिन्छ ? ..... (१. गरिन्छ ०. गरिदिन)

- १८.२. यस महिना कति खर्च भयो भनी टिपोट गरिन्छ ? ..... (1. गरिन्छ 0. गरिदैन)
- १८.३. यस महिनाको बीच तिर्न भनेर रकम छुट्याएर राख्ने गरिन्छ ? ..... (1. गरिन्छ 0. गरिदैन)
- १८.४. आउदा दिनमा कतैबाट पैसा भएन वा नहुँदालाई बीच तीर्न सैपरी रकम छुट्याएर राख्ने गरिन्छ ? ..... (1. गरिन्छ 0. गरिदैन)
- १८.५. (पचास वर्ष माथीका व्यक्तिलाई मान सोध्ने) कामबाट अवकाश पछि अठ्ठमा भर नपरी आफ्नो जीवनयापन आफै गर्न सक्ने गरि बचत गर्नु भएको वा योजना बिनु भएको छ ? .....  
(1. राम्रैसंग पुग्ने गरी 2. जसोतसो पुग्छ होला 3. पुग्ने वा नपुग्ने यकीनै भन्न सकिन्छ 4. अलि जपुग होला 5. केही पनि छैन )

तलका मध्ये कुन कुन योजना बिनु भएको छ

- १८.५.१. सरकारी पेन्सन/उपदान .....(1. छ 0. छैन)
- १८.५.२. संस्थागत पेन्सन/उपदान .....(1. छ 0. छैन)
- १८.५.३. अन्य प्राइभेट पेन्सन योजना .....(1. छ 0. छैन)
- १८.५.४. बचतबाट चलाउदै जाने .....(1. छ 0. छैन)
- १८.५.५. व्यवसायबाट आम्दानी भइरहन्छ । .....(1. छ 0. छैन)
- १८.५.६. शेयर तथा बोनडबाट आम्दानी वा बेच्दै जाने .....(1. छ 0. छैन)
- १८.५.७. गोठेको भौतिक सम्पत्ति बेच्दै जाने .....(1. छ 0. छैन)
- १८.५.८. श्रीमान/श्रीमतिको कामाईबाट चलाउने .....(1. छ 0. छैन)
- १८.५.९. परिवारको अन्य सदस्यले रेखदेख गर्छन् .....(1. छ 0. छैन)
- १८.५.१०. अरु कुनै योजना छ .....(1. छ 0. छैन)
- १८.५.११. छ भने बताउनुहोस.....

१९. प्रस्तुत गरिएका नगद बचत गर्ने विधिहरूमाई प्रयोगको आधारमा १ देखि १० श्रेणीकरण गर्नुहोला वा प्रयोग नगरेको भए ० ।

(धेरै रकम जुन विधिबाट बचत गर्नुहुन्छ १, त्यस पछिको धेरै २, अलि कममा ३, ४ गरी १० सम्म अंक नदोहोरिने गरि भनेर र प्रयोग नगरेको भए ०)

- |  |                                       |
|--|---------------------------------------|
| १९.१. .... घरमै राख्ने                         | १९.६. .... सरकारी बोनड फिन्ने         |
| १९.२. .... परिवारका सदस्यलाई राख्न दिने/पठाउने | १९.७. .... अन्य संस्थाको बोनड फिन्ने  |
| १९.३. .... समूह वा सामूहिक कोषमा जम्मा गर्ने   | १९.८. .... विमा पोलिसी खरिद गर्ने     |
| १९.४. .... सहकारी तथा बहुवित्तमा जम्मा गर्ने   | १९.९. .... सेयरमा लगानी गर्ने         |
| १९.५. .... बैकमा जम्मा गर्ने                   | १९.१०. .... भौतिक सम्पत्ति खरिद गर्ने |

### घ. वित्तीय ज्ञानको परिक्षण

प्रश्न सोध्ने र उत्तर ठीक भएमा 1 र बेठीक भएमा 0

२०. रु. १,००,०००/- लाई ५ भाईमा बराबर बाँड्नुपरे प्रत्येक भाईले कति रकम प्राप्त गर्नेछन् ? ..... (1/0)
२१. मानौं सत्र वर्ष उमेरको भाईको लिस्सालाई वार्षिक ६ प्रतिशत आउने बैक खातामा जम्मा गरियो र अठार वर्षमा (अर्को वर्ष) सावा र ब्याज गरी एकमुष्ट निकाल्न मिल्ने गरि राखियो । यस वर्ष मुद्रास्फीति ५ प्रतिशत रहयो । अन्य भाइले प्राप्त गरेको रकम पाउना साथ खर्च गरेका थिए । यस भाइले अहिले प्राप्त हुने रकमले अन्य भाईको तुलनामा तिनै वस्तुहरू बढी वा समान वा कम परिमाणमा फिन्न सक्छ ? ..... (1/0)
२२. यदि आज तपाईंले आफ्नो साथीलाई रु. २५,०००/- दिनुभयो र वर्षौंले तपाईंलाई उक्त रकम जतिको त्पति अर्को दिन नै फिर्ता गर्नुभयो भने तपाईंको साथीले तपाईंलाई कति ब्याज तिर्नु भयो ? ..... (1/0)
२३. मानौं तपाईंले शुल्क तथा फर नलाग्ने बचत खातामा प्रति वर्ष २ प्रतिशत म्यारेन्टी ब्याज दरमा रु. १००/-जम्मा गर्नुभयो । यदि तपाईंले उक्त खाताबाट कुनै भुक्तानी गर्नुभएन र कुनै पैसा फिक्नु पनि भएन भने पहिलो वर्षको अन्तमा, ब्याज भुक्तानी भए पश्चात्, तपाईंको खातामा कति रकम जम्मा भएको हुनेछ ? ..... (1/0)
२४. वार्षिक ब्याज भुक्तानी हुने सोहि खातामा, पाँच वर्षको अन्त सम्ममा रु. ११०/- वा बढी वा कम रकम जम्मा भएको हुनेछ ? ..... (1/0)
२५. उच्च प्रतिफल हुने लगानीमा जोखिम पनि कम वा उच्च हुन्छ ? ..... (1/0)
२६. मुद्रास्फीति उच्च हुँदा जीवनयापनको लागत के हुन्छ ? ..... (1/0)

२७. जोखिम भन्नाले घाटा हुन सक्ने संभावनालाई जनाउछ। सामान्यतया, शेयर बजारमा लगानीमा गर्दा कुनै एक उद्योगको शेयरमात्र लगानी गर्नुको साटो विविध प्रकारको उद्योगको शेयरमा लगानी गरेर जोखिम कम गर्न सकिन्छ वा सकिदैन ? ..... ( 1/0)

(उत्तरहरू २०. २०,००० २१. बढी २२. शून्य २३. १०२ २४. बढी २५. उच्च २६. नदछ २७. सकिन्छ)

**ड वित्तीय निर्णय सम्बन्धी व्यवहार: (१, २, ३, ४ जवना ५ अंक लेख्ने )**

तालको भनाई कति सही लाग्छ ? १ देखि ५ को अंक प्रदान गर्ने, (कुनै पनि व्यवहार गनत होइन भने)  
 (१. म सधैं लागू गर्ने गर्छु २. म प्राय जसो गर्छु ३. म कहिले गर्छु कहिले गर्दिन ४. म प्राय जसो गर्दिन ५. म कहिल्यै गर्दिन)

- २८. कुनै सामान किन्नु भन्दा पहिले आफ्नो किन्ने क्षमताबारे विचार गरेर मात्र किन्ने गर्छु। .....
- २९. पैसा हुँदा खर्च नगरी नगरी भोलीको लागि साध्य मलाई ठिक लाग्दैन। .....
- ३०. मलाई धेरै पछिको लागि पहिले देखि बचत गर्नुभन्दा खर्च गर्दा बढी संतोष लाग्छ। .....
- ३१. म समयमै बत्ती, पानी, टेलिफोन, मालपोत आदिको बीज तिर्छु। .....
- ३२. म बचत, लगानी लगायत मेरो आफ्नै पैसासँग सम्बन्धित जोखिम लिनको लागि तयार छु। .....
- ३३. म मेरो वित्तीय फारोबारलाई नियमित ध्यान दिन्छु। .....
- ३४. म दीर्घकालीन वित्तीय लक्ष्यहरू निर्धारण गर्छु र ती लक्ष्यहरू प्राप्त गर्नको लागि योजना बनाएर प्रयास गर्छु। .....
- ३५. पैसा खर्च गर्नको लागि हो। .....

**च. वित्तीय उपकरणको जानकारी, प्रयोग र छनौट प्रकृया सम्बन्धी विवरण**

वित्तीय उपकरणहरू	जानकारी भए 1 नभए 0	प्रयोग गरेको 1 नगरेको 0	छनौट प्रकृया *1-5	*छनौट प्रकृयाको विवरणहरू :
बैंक बचत खाता	३६.१.	३७.१.	३८.१.	1. मैले कुनै पनि वित्तीय उपकरणहरूको बारेमा विचार गरिनै । 2. मैले वित्तीय उपकरण प्रयोग गर्न शुरु गर्दा यो मात्रै उपलब्ध थियो । 3. मैले यताउती मुमन प्रयास गर्दा कुनै पनि वित्तीय उपकरणको विवरण पढेना पारिन् त्यसैले जगदी ने थियो त्यो प्रयोग गरे । 4. एउटा संस्थामा उपलब्ध वित्तीय उपकरणहरू मध्य मेरो आवश्यकता अनुसारको उच्चतम नाम दिने उपकरण छनौट गरेको हो । 5. विभिन्न संस्थाहरू मध्येबाट मलाई राम्रो लागेको मैले छनौट गरेको हो ।  //बैंक भन्नाले वाणिज्य बैंक, विकास बैंक र वित्त कम्पनीलाई जनाउछ ।//
चलती खाता	३६.२.	३७.२.	३८.२.	
मुद्रा खाता	३६.३.	३७.३.	३८.३.	
बैंक ऋण	३६.४.	३७.४.	३८.४.	
मोबाइल बैंकिंग	३६.५.	३७.५.	३८.५.	
इन्टरनेट बैंकिंग	३६.६.	३७.६.	३८.६.	
क्रेडिट कार्ड/डेबिट कार्ड	३६.७.	३७.७.	३८.७.	
अधुवित्त बचत खाता	३६.८.	३७.८.	३८.८.	
अधुवित्त ऋण	३६.९.	३७.९.	३८.९.	
बिना थितो ऋण	३६.१०.	३७.१०.	३८.१०.	
सहकारी बचत खाता	३६.११.	३७.११.	३८.११.	
सहकारी ऋण	३६.१२.	३७.१२.	३८.१२.	
पिएसपिको सेवा (इलेवा, छली जस्ता)	३६.१३.	३७.१३.	३८.१३.	
समूह बचत	३६.१४.	३७.१४.	३८.१४.	
समूह ऋण	३६.१५.	३७.१५.	३८.१५.	
जीवन विमा	३६.१६.	३७.१६.	३८.१६.	
गैर-जीवन विमा	३६.१७.	३७.१७.	३८.१७.	
संचयकोष खाता	३६.१८.	३७.१८.	३८.१८.	
नागरिक लगानी कोष	३६.१९.	३७.१९.	३८.१९.	
शेयर	३६.२०.	३७.२०.	३८.२०.	
ऋणपत्र अर्थात बोन्ड	३६.२१.	३७.२१.	३८.२१.	
विदेशबाट विप्रेषण प्राप्त गर्ने	३६.२२.	३७.२२.	३८.२२.	
स्वदेशबाट विप्रेषण प्राप्त/पठाउने	३६.२३.	३७.२३.	३८.२३.	
सरकारी अनुदानको ऋण	३६.२४.	३७.२४.	३८.२४.	



## APPENDIX B: Raw data

Raw data used in this study is publicly available in the Nepal Rastra Bank website which is retrieved from the: <https://www.nrb.org.np/database-on-nepalese-economy/survey-data/>

## Appendix C Code

```
////Financial_Inclusion_data
```

```
-----  
gen PayPro_Know = 1 if q365==1 | q366==1 | q367==1 | q3613==1
```

```
replace PayPro_Know= 0 if PayPro_Know==.
```

```
gen PayPro_Used = 1 if q375==1 | q376==1 | q377==1 | q3713==1
```

```
replace PayPro_Used= 0 if PayPro_Used==.
```

```
gen SIRP_Know = 1 if q361==1 | q362==1 | q363==1 | q368==1 | q3611==1 | q3614==1 |  
q3618==1 | q3619==1 | q3620==1
```

```
replace SIRP_Know = 0 if SIRP_Know==.
```

```
gen SIRP_Used = 1 if q371==1 | q372==1 | q373==1 | q378==1 | q3711==1 | q3714==1 |  
q3718==1 | q3719==1 | q3720==1
```

```
replace SIRP_Used = 0 if SIRP_Used==.
```

```
gen Ins_Know = 1 if q3616==1 | q3617 ==1
```

```
replace Ins_Know = 0 if Ins_Know==.
```

```
gen Ins_Used = 1 if q3716==1 | q3717 ==1
```

```
replace Ins_Used = 0 if Ins_Used==.
```

```
gen CP_Know = 1 if q364==1 | q369==1 | q3610==1 | q3612==1 | q3615==1 | q3624==1
```

```
replace CP_Know = 0 if CP_Know==.
```

```
gen CP_Used = 1 if q374==1 | q379==1 | q3710==1 | q3712==1 | q3715==1 | q3724==1
```

```
replace CP_Used = 0 if CP_Used==.
```

```
gen sum_know = q361 + q362 + q363 + q364 + q365 + q366 + q367 + q368 + q369 + q3610  
+ q3611 + q3612 + q3613 + q3614 + q3615 + q3616 + q3617 + q3618 + q3619 + q3620 +  
q3621 + q3622 + q3623 + q3624
```

```
replace sum_know = 0 if sum_know==.
```

```
gen Aware = 1 if sum_know >= 5
```

replace Aware = 0 if Aware ==.

gen Rely = 1 if q415==1

replace Rely = 0 if Rely ==.

gen FI = PayPro\_Used + SIRP\_Used + Ins\_Used + CP\_Used + Aware + Rely

gen FI\_PayPro\_Used = q375 + q376 + q377 + q3713

gen FI\_SIRP\_Used = q371 + q372 + q373 + q378 + q3711 + q3714 + q3718 + q3719 + q3720

gen FI\_Ins\_Used = q3716 + q3717

gen FI\_CP\_Used = q374 + q379 + q3710 + q3712 + q3715 + q3724

-----  
//Financial\_Literacy\_Data  
-----

// Financial\_Knowledge\_Score

gen FK = q21 + q22 + q23 + q24 + q25 + q26 + q27

// Financial\_Attitude\_Score

gen FA = (((q29 + q30 + q35)/3)/5)\*4

// Fiancial\_Behaviour\_Score

gen Budgeting = (q181+q182+q183+q184+(q17==1))/5

gen AS = (q191+q192+q193+q194+q195+q196+q197+q198+q199+q1910)/63

gen Bow = q41

gen CFP =2 if q396 ==1

replace CFP = 0 if CFP ==.

gen Watch= 0 if q33 == 5 | q33 ==4

replace Watch = 1 if Watch==.

gen Goal = 0 if q34 == 5 | q34 ==4

replace Goal = 1 if Goal ==.

gen ConsPur = 0 if q28 == 5 | q28 ==4

replace ConsPur = 1 if ConsPur ==.

gen BillTime = 0 if q31 ==5 | q31 == 4

replace BillTime = 1 if BillTime ==.

gen FB = Budgeting + AS + Bow + CFP + Watch + Goal + ConsPur + BillTime

```
////Financial_Literacy
```

```
gen FL = FK + FA + FB
```

```
-----
```

```
////Individual Characters
```

```
-----
```

```
gen Edu = 0 if q8 == 1 | q8 == 2
```

```
replace Edu = 1 if q8 == 3 | q8 == 4 | q8 == 5 | q8 == 6 | q8 == 7
```

```
gen Employed = 0 if q9 == 6
```

```
replace Employed = 1 if Employed == .
```

```
gen Income = q15
```

```
gen Formal = 1 if q10 == 1
```

```
replace Formal = 0 if q10 == 0
```

```
-----
```

```
regress FI_PayPro_Used FL
```

```
outreg2 using result1.doc
```

```
regress FI_SIRP_Used FL
```

```
outreg2 using result1.doc, append
```

```
regress FI_Ins_Used FL
```

```
outreg2 using result1.doc, append
```

```
regress FI_CP_Used FL
```

```
outreg2 using result1.doc, append
```

```
regress FI_PayPro_Used FL Male Age Edu Income Formal
```

```
outreg2 using result2.doc
```

```
regress FI_SIRP_Used FL Male Age Edu Income Formal
```

```
outreg2 using result2.doc, append
```

```
regress FI_Ins_Used FL Male Age Edu Income Formal
```

```
outreg2 using result2.doc, append
```

```
regress FI_CP_Used FL Male Age Edu Income Formal
```

```
outreg2 using result2.doc, append
```

```
regress FI FL
```

```
outreg2 using result3.doc
```

```
regress FI FL Male Age Edu Income Formal
outreg2 using result3.doc, append
regress FI FK
outreg2 using result4.doc
regress FI FA
outreg2 using result4.doc, append
regress FI FB
outreg2 using result4.doc, append
```

```
regress FI FK Male Age Edu Income Formal
outreg2 using result5.doc
regress FI FA Male Age Edu Income Formal
outreg2 using result5.doc, append
regress FI FB Male Age Edu Income Formal
outreg2 using result5.doc, append
```