BARRIERS TO FINANCIAL INCLUSION FOR WOMEN ENTREPRENEURS IN PAKISTAN

Abdul Rehman Butt[1]

Abstract

The present study aimed to find out barriers to financial inclusion for women entrepreneurs in Pakistan. The sample of the study consisted of 200 i.e. females (100) and males (100) with the age range 25 to 35 from SMEs, especially female-led businesses. Lahore was selected to collect data through convenience and snowball sampling utilizing a qualitative research method. The study hypothesized that Gender has a strong link with access to financial services for business owners in Pakistan. Data was analyzed using SPSS and all reliability analyses showed that it has good reliability. The study reveals significant barriers and opportunities for enhancing financial inclusion for women entrepreneurs in Lahore. Trust and satisfaction levels with financial institutions are key areas requiring improvement, alongside addressing limited awareness and engagement with government schemes. The present study is useful for policy initiatives meant to improve financial inclusion for women entrepreneurs in Lahore. Policies meant to close the trust gap and satisfy dissatisfaction with financial institutions should focus on improving accessibility, service quality, and customer support targeted to women's needs.

Keywords: Financial Inclusion, Gender, Survey analysis, Woman Entrepreneurs.

1. Introduction

In the present economic environment, financial constraints mostly impede individuals' and groups' access, control, and expansion of financial resources. Particularly for underprivileged groups like women, low-income neighborhoods, and small-scale businesses, these obstacles not only undermine financial stability and economic well-being but also restrict social and professional possibilities. Policymakers, financial institutions, and companies trying to promote financial inclusion and sustainable economic development all depend on an awareness of these obstacles (Vania Karna, 2024). One of the most urgent financial concerns, particularly for those living in rural or underdeveloped areas, is limited access to banks and financial services. Many people battle to find banks, automated tell-tale machines, and other financial institutions, therefore causing financial exclusion. Geographic restrictions often discourage people from participating in financial activities since they may have to travel great distances to locate the

[1] Working as HR Manger in Software House. He can be contacted at: a.r.butt7639@gmail.com

closest financial service provider. Moreover, the large expenses connected with banking services include transaction fees, minimum balance requirements, and account maintenance charges; prohibiting low-income people from opening or keeping bank accounts is therefore another great cost connected with banking services. This financial exclusion starts a vicious circle whereby people cannot save, obtain credit records, or invest, therefore reducing their economic prospects. Understanding debt management, saving, investing, and budgeting—that is, financial literacy—comes from many people; meanwhile, they struggle with these basic financial ideas, which results in illogical decisions exacerbating debt load and financial instability (Elhadj Ezzahid et al., 2021).Adopting inclusive policies by the financial industry can help to guarantee that everyone, from all backgrounds, has fair access to financial resources.
Inadequate financial infrastructure which consists of antiquated banking systems, inadequate transit networks, and unreliable internet connection—adds still another great obstacle. Many localities, especially in developing nations, lack the financial system needed to attain general financial inclusion. Few digital banking solutions, lack of mobile banking capabilities, and poor ATM networks make people find it challenging to access and properly handle their money. Investing in bettering financial infrastructure will help governments and financial institutions close this disparity and guarantee that every person has the chance to engage in the official financial system. Another major financial obstacle is unmanageable debt, which locks people in cycles of financial misery. Many people, particularly those with little financial literacy, find it difficult to properly manage debt, which fuels ongoing borrowing and unstable finances. Many times, people rely on high-interest loans, unofficial lenders, or predatory financial services without access to reasonably priced credit options or appropriate financial planning, therefore aggravating their financial situation. Access to low-interest credit choices, financial counseling, and debt management programs can enable people break out from debt cycles and pursue financial stability(Ibtasam et al., 2018).

Women's empowerment is intimately related to financial inclusion since financial independence helps women to govern their lives, and helps to drive economic development. Globally, women entrepreneurs have had a major impact on economies, especially in underdeveloped countries like Pakistan (Subhadip Roy et al., 2022).

Women are realizing their right to make decisions, their sense of self-worth, and their capacity to use social justice to change society. Encouragement of access to education, skill development, and work possibilities is recommended, motivating women to attain economic self-reliance utilizing these channels. Business prospects Centre on encouraging women into local leadership and decision-making (Niethammer, Saeed, Mohamed, and Charafi, 2007). Several organizations, such as UN Women, work for the empowerment and rights of women and girls globally, supporting intergovernmental bodies in formulating policies and promoting accountability. UNFPA focuses on reproductive health, family planning, and women's empowerment, working with youth and communities to empower girls and women. SEHER (Society for Empowering Human Resource) is an organization that works to improve women's position and condition by providing them with an enabling environment for their empowerment. Similarly, WEO (Women Empowerment Organization) is an all-women's group of like-minded people, united by a shared vision of gender justice (Niethammer, Saeed, Mohamed, and Charafi, 2007). Entrepreneurship plays a vital role in economic development, driving innovation, job creation, and improved living standards. However, financial barriers often restrict entrepreneurship, particularly among women and marginalized groups. Existing research frequently focuses on male-dominated entrepreneurial sectors, overlooking the unique challenges faced by women entrepreneurs (Yunis, Hashim, and Anderson, 2018).

In Pakistan, weak leadership and a struggling financial system make it difficult for entrepreneurship to grow, especially in Lahore. Here, the quality of governance affects the financial system's development, which then influences how many businesses can start and succeed (Shah & Ahmad, 2024). The United Nations Sustainable Development Goals (SDGs) highlight how important it is to include everyone in financial services to support growth and development. Financial inclusion means making it easy for all people and businesses, especially those who are often left out, like women, people in rural areas, and low-income individuals, to access affordable financial services (Li, Cho, and Chaudhuri, 2020).

Research on women starting their businesses is a growing area that recognizes how important it is for economic development (Ejaz , 2023). Women who start businesses are creating jobs and opportunities for others everywhere, but in Pakistan, women's entrepreneurship is not very advanced (Razzaq, Qin, Zhou, Mahmood, and Alnafissa, 2024). The National Report on the Status of Women in Pakistan 2023 states that about 65% of female workers have jobs in the informal sector. The World Bank also reports that 81% of women entrepreneurs work from home, showing they have little access to formal markets and resources. Nevertheless, businesses owned by women account for 20% of entrepreneurial activities outside of agriculture, demonstrating their potential to improve Pakistan's economy (Mubeen, Shahid, and Taib, 2019).

This study looks at the financial challenges that women business owners face in Lahore, Pakistan. Lahore is a busy city with many businesses and cultures, but women there have specific challenges. They often struggle to access banks, find financial products tailored to their needs, and cope with social and economic barriers. The research aims to identify these challenges to understand what women face when trying to access financial services and to propose solutions. It will also compare the new findings with previous studies to highlight similarities and differences, which will inform future policy development. Ensuring that financial services are accessible to everyone, especially to those who are typically excluded—that is, financial inclusion—that is, to women and those living in rural or low-income areas. Through addressing these difficulties, the study aims to create more fair financial access for everybody.

1.1: Research Questions

- What specific financial, institutional, and societal barriers do women entrepreneurs in Pakistan face?
- How do these barriers affect the growth and sustainability of women-led businesses?
- What role do education, marital status, income level, and cultural norms play in financial inclusion?
- What policy interventions can improve financial inclusion for women entrepreneurs?

1.2: Research Objectives

- To identify the specific financial, institutional, and societal barriers faced by women entrepreneurs in Pakistan.
- To examine the impact of these barriers on the growth and sustainability of women-led businesses.
- To analyze the role of social and economic factors in shaping women's access to financial support.

1.3: Hypotheses

H1: Lack of financial literacy has a significant negative impact on the financial inclusion of women entrepreneurs in Pakistan.

H2: Limited access to collateral significantly reduces the likelihood of women entrepreneurs obtaining formal loans in Pakistan.

H3: Discriminatory lending practices by financial institutions significantly hinder women's access to financial services in Pakistan.

H4: Digital financial services have a positive correlation with the level of financial inclusion among women entrepreneurs in urban areas of Pakistan.

2. Literature Review

Hussain et al. (2024) Concluded a study examining how women's entrepreneurship might promote sustainable innovation in South Asian economies. This study observes that women entrepreneurs introduce innovative viewpoints, concepts, and strategies to the enterprise, potentially influencing their adoption and implementation of environmentally sustainable practices. Their distinctive experiences and expertise may facilitate the development of innovative solutions to environmental and social issues. Consequently, it has been recognized that women's entrepreneurial spirit significantly contributes to the generation of long-term innovation. Women's entrepreneurship holds essential importance for the economy and the globalized globe. The topic of women's entrepreneurship is increasingly a subject of discussion among governmental policymakers. It enhances competitiveness, modernizes the economy, and creates employment opportunities.

Aravamudhan et al. (2024) The research aims to identify and analyze the problems encountered by women entrepreneurs in India, namely in the rural regions of Rajasthan. Moreover, the current study examines the interconnections among the concerns to assess the possible impact of each specific difficulty and issue. The current paper employs a mixed-method approach. A questionnaire-based survey was initially undertaken to determine the major issues and obstacles faced by women entrepreneurs in the chosen location. A total of 120 replies were obtained through a purposive sampling method. The critical issues are further delineated by Interpretive Structural Modeling and MICMAC analysis. The research reveals that women entrepreneurs encounter significant challenges, including insufficient cooperation from male family members, diminished bargaining power, self-esteem issues, psychological barriers, lack of governmental support, absence of effective regulatory policies, difficulties in customer acquisition, corruption, and various market behaviors.

Younus (2023) Conducted a study, this research primarily aims to examine and analyze how these women overcome ambiguity and problems in the context of business decision-making. This study employs a purposive sampling technique and a qualitative methodology, focusing on the actual experiences of 36 Pakistani women entrepreneurs. It illustrates their methods of coping with and adapting to the adversities posed by the nation's economic challenges, including market volatility and currency instability. The study highlights the need of socio-cultural standards, especially those related to gender roles, which both discourage and inspire people. Studies show that Pakistani women entrepreneurs overcome obstacles and show tenacity and adaptability. To generate conclusions that combine rational analysis with intuition and heuristics, they purposefully mix their judgement with outside direction. It also emphasizes the need of elements including emotional intelligence, confidence in corporate decisions, and personal and family values. Often starting businesses from their homes, these women represent society limitations and their calculated responses to them.

Ejaz (2023) did a study using data from a 2017 survey about financial inclusion, which included 6,000 participants. Mehak at el. found important differences between men and women in how they access financial services. The study showed that women face challenges because they lack knowledge about finances and education, as well as job opportunities. The researchers emphasized that improving women's education, access to technology, and mobile phone use could help them access financial services better in Pakistan.

Roy and Patro (2022) did a review of many studies to understand what helps or hinders women's ability to access financial services. Priyanka Roy at el. looked at 75 approved articles from the years 2000 to 2021 and shared their findings clearly using a model. Their research shows that women's financial inclusion is affected by factors related to demand and other social and cultural issues, such as how society views women, class differences, and gender inequality. They also found that women's confidence in managing their finances plays a role in their financial exclusion.

Abbas et al. (2021) studied to looked at women's empowerment in Pakistan. It focused on what women's empowerment means and examined factors like decision-making, control over resources, and freedom to move around. The researchers used data from the Pakistan Demographic and Health Surveys and looked at women aged 15 to 49. The study showed that the status of women in Pakistan has improved due to evidence-based policies, using basic statistical methods to analyze the data.

Khan et al. (2021) did a study that showed women can be very successful entrepreneurs because of their strong motivations and skills, which help with economic growth. Due to the important role women play in the economy, Rizwan at el. wanted to look into what helps women entrepreneurs succeed in Pakistan. In this study, they included 181 small and medium-sized businesses (SMEs) and gathered data using structured surveys from businesses registered in Pakistan. They analyzed the information using SPSS and AMOS software. The results showed that both personal factors, like the need to achieve, willingness to take risks, and self-confidence, and external factors, like economic conditions and cultural influences, positively impact the success of businesses owned by women.

Zeb and Ihsan (2020) studied the situation of women entrepreneurs in Pakistan. She looked at how mental and social factors influence their business success. The study also identified the challenges faced by these women and proposed solutions to help them do better in the global market. She surveyed 253 women and collected information using a questionnaire. The findings showed that mental and social factors have an impact on how well women entrepreneurs perform.

Nawaz (2018) although He concluded a study in which he emphasized the fact that there are a significant number of female entrepreneurs in

Pakistan, and their share of the population is over half, at 49.6%. They have the potential to play a significant part in the economy. The majority of the research conducted in Pakistan focused on the opportunities available to women in the country. Within the scope of this study, the author endeavored to investigate the following research questions: what kinds of challenges are faced by female "entrepreneurs" in Pakistan? What kind of impact do socioeconomic and cultural factors have on women who start their own businesses in Pakistan? The qualitative research approach was the one that Ahmad Nawaz decided to use for this aim. There were a few recurring themes that emerge. In the end, the researcher came to a conclusion about this study, acknowledged its limitations, and made some suggestions for future directions.

Swartz et al. (2016) carried out a research project Identifying the most effective research design for the purpose of conducting research on female entrepreneurs who are involved in the process of negotiating term sheets for private equity funds is the objective of this study. This research investigates new ways for researchers to engage with such present "invisibles" by employing a mixed method and mixed mode research design. The purpose of this research is to broaden the range of sample possibilities available and to ensure that respondents are willing to participate. The authors review existing data sets that have been used as secondary sources for data on the funding of enterprises and consider the inadequacy of these data sets for research questions concerning process difficulties in negotiation. Specifically, the authors report findings that pertain to the process of evaluating the effectiveness of the research design.

Niethammer et al. (2007) This article highlights the benefits that women in Pakistan would receive from having greater access to financial resources and offers an overview of the challenges and opportunities that exist for expanding access. In order to achieve this, the paper offers suggestions for how the government should encourage women's access to finance and, in doing so, boost women's social and economic empowerment. These recommendations include both financial and nonfinancial recommendations for micro-finance firms.

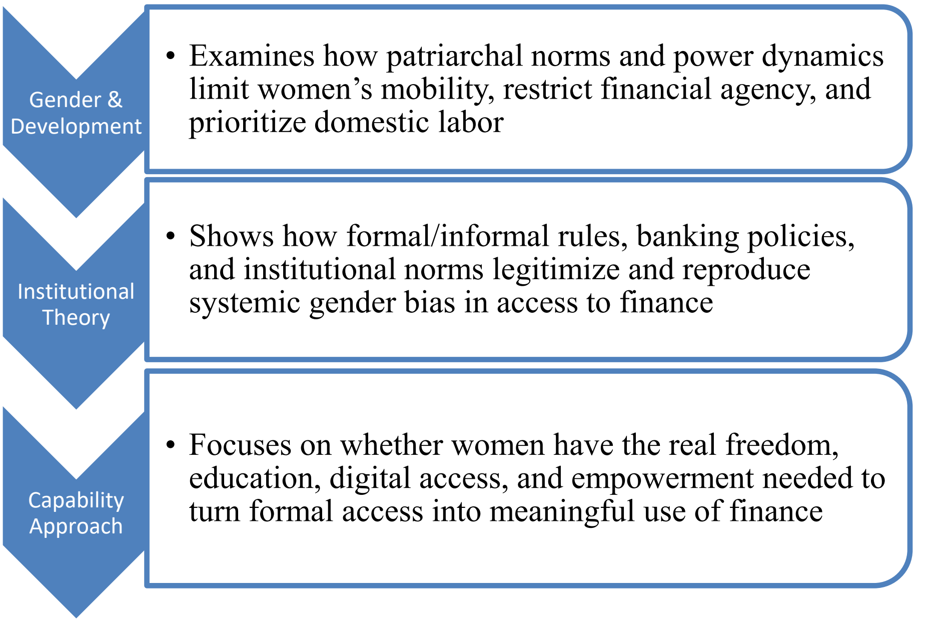
3. Theoretical Framework

This study relates to many interconnected theories and concepts that provide a framework to understand the financial exclusion of women entrepreneurs in Pakistan. These theories contextualize the institutional, structural, and socio-cultural limitations that restrain women's access to financial capital. **Gender and Development Theory** deals with how power relations and institutional structures shape gender disparities. It also criticizes the developmental approach that considers women as a homogeneous group and addresses the inequalities based on gender in the economic system. Women are often forced to emphasize on honorary domestic labor rather than participating in economic activities. This reduces their engagement with formal financial institutions. Linking gender and development theory delivers an inclusive lens to comprehend barriers to women's financial inclusion in Pakistan. It illustrates that exclusion is more than a matter of access; it is a multifaceted interaction of social norms, operational inequalities, and policy gaps. A significant solution must go further than financial artifacts and address gendered power dynamics, legal modifications, and capability-building programs. This theory was applied in this study to examine how patriarchal roles, social norms, and gender role limits the mobility of women to access financial services. This theory was not founded by a single person, it was the collective work of scholars and activists, with the most prominent work by Ester Boserup (Ariel E. San Jose, 2021).

Institutional Theory states that organizations are shaped by their formal and informal rules, norms and cultural environment rather than solely by economic pressure. This theory reveals that financial exclusion of women in Pakistan is about more than just specific decisions or capability; it is about how formal and informal organizations create and maintain disparity. Addressing these obstacles requires institutional transformation, including gender-sensitive policy design, culturally adapted financial services and increased representation of women in decision-making This theory is useful in this study as it examines how administrations become accustomed to institutional rules, customs, and practices to achieve legitimacy, access resources, and survive. It is developed by John Meyer and Brian Rowan (Sarfraz Zaman et al., 2021).

Capability Approach (Amartya Sen) focuses on persons' capability to achieve well-being and economic participation. It highlights the importance of delivering equal opportunities and access to resources to guarantee discretion and empowerment. This theory offers a human-centered, gender-sensitive perception of the barriers to financial inclusion faced by women in Pakistan. It highlights that simply having the right of entry is inadequate; women must also have the ability, agency, and enabling conditions to use financial services efficiently. That's the only way that financial inclusion results in true empowerment and equitable development. This theory is related to this study as it explains the limitations faced by women entrepreneurs due to a lack of access to education, financial literacy, technology and income resources. All these constraints limit their capability to benefit from financial services. This theory was founded by Indian economist and philosopher Amartya Sen (Sobia Jamil, 2024).

Fig 1: Flow Chart of Theoretical Framework



Source: Author's Own Conceptualization

This theocratical framework suggests the relationships between institutional, social and educational barriers that affect the financial inclusion of women entrepreneurs in Pakistan, that was mediated or moderated by factors like financial literacy, digital access and policy interventions.

4. Methodology

This part details the method we applied to investigate financial inclusion among Lahore District, Pakistan, female entrepreneurs. We gathered data on women's access to and usage of financial services as well as their experiences and views on the financial industry using a survey-based approach.

- **Survey Design**

To get data from the participants, we developed a straightforward, understandable questionnaire. Along with questions on their access to financial services, how they borrow or save money, their knowledge of finances, and their attitudes of financial institutions, the questionnaire comprised sections on fundamental details such age and business type. With local specialists helping to ensure the survey was appropriate for women entrepreneurs in Lahore, it was intended to be culturally relevant and easy to follow.

- **Sampling Strategy**

Respondents for the survey were chosen by use of a purposive sampling method. The researcher sought to guarantee participation from many demographic categories, including women entrepreneurs from rural and metropolitan locations, varied age ranges, and different degrees of business experience.

4.1 Sampling Methods

Convenience and Snowball Sampling: These methods ensure broader reach and are manageable with limited resources.

4.1.1) Population Selection Justification:

The population for this study consists of female and male entrepreneurs in Lahore, Pakistan. This aligns with the study by Mubeen et al. (2019), which also focused on female entrepreneurs in Lahore.

Geographical Consideration: Lahore is an urban hub, and it has a substantial number of female entrepreneurs, making it a relevant geographical area for this study.

4.1.2) Formula to Calculate Sample Size:

The sample size can be calculated using the sample size formula for proportions**:**

Formula: $n=Z^2 *P*(1-P)/E^2$

Where:

n = required sample size

Z = Z-value (based on confidence level, for 95% confidence level, Z=1.96)

p = estimated proportion (if unknown, use p=0.5 for maximum variability)

E = margin of error (usually 5%, so E=0.05)

Step-by-step Calculation

Z-value for 95% confidence level

For a 95% confidence level, the Z-value is **1.96** (This means you are 95% confident that the sample mean will fall within the margin of error of the population mean).

Estimated proportion (p):

Since we don't have an estimate for p, we use **0.5** for maximum variability, as it gives the largest sample size.

Margin of error (E):

The margin of error is typically **0.05 (5%)**.

Now, substitute these values into the formula:

$n = (1.96)^2 * (0.5) * (1-0.5) / (0.05)^2$

$n = (3.8416) * (0.25) / 0.0025$

$n = 0.9604 / 0.0025$

$n = 384.16$

So, 384 is the ideal sample size for a 95% confidence level and 5% margin of error.

4.1.3) Representativeness of the Sample

Sample Size of 200: Although 384 would be ideal, a sample of 200 is still considered reliable in practical terms. Mubeen et al. (2019) similarly selected 200 participants, which is sufficient for drawing statistically significant conclusions while managing resource constraints.

The sample of 200 (100 male and 100 female) represents a reasonable compromise between statistical rigor and practical feasibility. It provides a balance between representing Gender.

4.2. Data Collection Procedure

4. 2.1) Methods/Sources for Data Collection

Surveys/questionnaires targeting women entrepreneurs and financial institutions. Interviews with stakeholders in the entrepreneurship ecosystem. Review of existing data from government reports, academic studies, and international organizations.

4.2.2) Data Collection Procedures

Data collection took place over a specified time frame. The survey was conducted through face-to-face interviews, allowing for in-depth discussions and clarification of responses where necessary. Participants were briefed on ethical considerations, including informed consent, confidentiality, right to withdraw, and respect for respondents' privacy and autonomy.

4.3 Data Analysis

Upon completion of data collection, survey responses were coded and entered into SPSS version 22. Quantitative data was analyzed using ANOVA and Chi-square. Trends in women's access to financial inclusion, utilization patterns, and perceptions of financial inclusion were explored through Probit regression Model.

4.3.1) Validity and Reliability

The study followed numerous procedures to ensure the accuracy and dependability. First ran the poll among a small group of fifteen women to see if the questions were clear and understandable. We also oversaw the data collection procedure to guarantee correct execution. To ensure the accuracy of the results, we collected and examined the data using several approaches. We also aimed to establish confidence among the participants so they can be at ease opening their stories.

5: Results

This section attempts to apply appropriate statistical techniques for interpretation of the results using a structured questionnaire and investigate the acquired data. This study aims to analyze the link between gender and financial inclusion with an eye on especially pointing out the challenges women entrepreneurs in Pakistan face in acquiring financial services. This section comprises a reliability study to evaluate the internal consistency of the survey instrument so guaranteeing the validity of the conclusions. Among the items on the questionnaire, Cronbach's Alpha rating of 0.799 denotes a decent degree of internal consistency. Additionally, used are statistical tests included ANOVA (F-test), Chi-square test, and Probit regression model to assess relationships, test group variances, and project the risk of financial exclusion depending on gender and other variables. Significant differences $p < 0.005$ were also observed in satisfaction with financial services and awareness of government schemes aimed at women's inclusion. Variables such as education level ($\chi^2 = 29.80$, $p < .001$), marital status ($\chi^2 = 88.12$, $p < .001$), socioeconomic status ($\chi^2 = 48.61$, $p < .001$), and residency ($\chi^2 = 7.22$, $p = .004$) demonstrate meaningful associations with gender. Education level ($\beta = 0.015$, $p = 0.020$) and socioeconomic status ($\beta = 0.180$, $p = 0.035$) also showed statistically significant positive effects, indicating that better education and economic standing improve financial inclusion outcomes. These techniques taken together offer a thorough framework for analyzing gender-based differences in financial access.

Table 1: Reliability Statistics (Cronbach's Alpha)

Cronbach's Alpha	0.799

Among the items on the questionnaire, a Cronbach's Alpha rating of 0.799 denotes a decent degree of internal consistency. This implies that, with great accuracy, the objects are measuring the same underlying idea, in this case financial inclusion. Therefore, a score of 0.799 is implying that the scale is dependable and appropriate for statistical analysis. It also suggests that the participants answered regularly, which makes the data valid for making conclusions.

Table 2: Gender-Based Differences in Financial Inclusion (ANOVA)

To evaluate whether gender has a statistically significant impact on access to financial services, a One-Way ANOVA (Analysis of Variance) was conducted. The aim was to compare mean scores of financial inclusions between male and female respondents.

Variables	F-statistics	P-value
Age	2.923	.089
Education Level	16.503	.000
Marital status	13.732	.000
Socioeconomic Status	19.351	.000
Residency	1.012	.004
Frequency of interactions with formal financial institution (banks, microfinance)	146.516	.000
Types of financial products and services accessed	764.275	.000
Perceived barriers to accessing format financial services	3.380	.0003
Sources of credit utilized	7.954	.005
Frequency and purpose of borrowing	49.902	.000
saving habits and strategies employed	216.000	.000
self-assessment of financial knowledge and skills	1.385	.241

participation in financial education programs or training workshops	98.796	.000
understanding of basic financial concepts	9.607	.002
Trust in formal financial institution	.977	.004
Satisfaction with the quality of financial services received	127.447	.000
perceived responsiveness to the needs of women entrepreneurs	.178	.000
Awareness of government schemes or programs promoting financial inclusion for women	6.484	.012

This Table 2 showed that gender significantly influences multiple aspects of financial inclusion among entrepreneurs. Notably, factors such as education, marital status, and socioeconomic status demonstrated strong statistical differences between men and women. Key financial behaviors — including frequency of interaction with financial institutions, types of services used, borrowing and saving practices, and participation in financial education — also varied significantly by gender, with women often facing greater challenges. Significant differences $p< 0.005$ were also observed in satisfaction with financial services and awareness of government schemes aimed at women's inclusion. Conversely, variables like age and self-assessed financial knowledge showed no meaningful gender differences. Overall, the results emphasize gender as a critical factor in financial access and usage, pointing to the need for more inclusive and targeted interventions.

Table 3: Association Between Gender and Financial Institution Access (Chi-Square Test)

To establish whether there is a relationship between gender and direct access to financial institutions (such as banks, microfinance institutions, etc.), a Chi-square test of independence was conducted using categorical data.

Variables	**Chi-Square (χ2)**	**P-value**

Age	2.00	1.57
Education Level	29.80	.000
Marital status	88.12	.000
Socioeconomic Status	48.61	.000
Residency	7.22	.004
Frequency of interactions with formal financial institution (banks, microfinance)	20.08	.000
Types of financial products and services accessed	44.55	.000
Perceived barriers to accessing format financial services	121.48	.0003
Sources of credit utilized	44.53	.002
Frequency and purpose of borrowing	181.48	.000
saving habits and strategies employed	15.61	.000
self-assessment of financial knowledge and skills	15.68	.009
participation in financial education programs or training workshops	15.73	.000
understanding of basic financial concepts	85.54	.002
Trust in formal financial institution	.500	.003
Satisfaction with the quality of financial services received	72.80	.000
perceived responsiveness to the needs of women entrepreneurs	.020	.000
Awareness of government schemes or programs promoting financial inclusion for women	7.630	.007

The Chi-square analysis reveals statistically significant gender-based differences in various aspects of financial inclusion. Variables such as education level ($\chi^2 = 29.80$, $p < .001$), marital status ($\chi^2 = 88.12$, $p < .001$), socioeconomic status ($\chi^2 = 48.61$, $p < .001$), and residency ($\chi^2 = 7.22$, $p = .004$) demonstrate meaningful associations with gender.

Similarly, behavioral and access-related factors—like frequency of interactions with financial institutions ($\chi^2 = 20.08$, $p < .001$), types of financial products accessed ($\chi^2 = 44.55$, $p < .001$), and perceived barriers to access ($\chi^2 = 121.48$, $p < .001$)—also vary significantly by gender.
In addition, sources of credit utilized ($\chi^2 = 44.53$, $p = .002$), frequency and purpose of borrowing ($\chi^2 = 181.48$, $p < .001$), saving strategies ($\chi^2 = 15.61$, $p < .001$), and participation in financial education programs ($\chi^2 = 15.73$, $p < .001$) all reflect gender disparities. Measures of financial understanding—such as self-assessed knowledge ($\chi^2 = 15.68$, $p = .009$) and understanding of financial concepts ($\chi^2 = 85.54$, $p = .002$)—also significantly differ. While trust in financial institutions ($\chi^2 = .500$, $p = .003$) and perceived responsiveness to women's needs ($\chi^2 = .020$, $p < .001$) show smaller chi-square values, their p-values still suggest significant gender effects. Finally, awareness of government schemes ($\chi^2 = 7.63$, $p = .007$) is also influenced by gender. These findings confirm that gender plays a crucial role in shaping financial inclusion in Pakistan, highlighting several areas where targeted policy interventions are needed.

Table 4: Empirical Modeling through Probit Regression

To quantify the relationship between gender and financial inclusion while accounting for other relevant factors, a Probit regression model was developed. This model evaluates the probability of being financially included based on gender, education level, and socioeconomic status.

Model Structure:

$$P\,(\text{Financial Inclusion}=1) = \Phi(\beta_0+\beta_1\cdot\text{Gender}+\beta_2\cdot\text{Education}+\beta_3\cdot\text{Socioeconomic Status})$$

Where:

- Φ = cumulative distribution function of the standard normal distribution
- Dependent variable = Binary response (1 = Financially Included, 0 = Not)
- Independent variables = Gender (1 = Female), Education Level, Socioeconomic Status

Variables	Coefficient (β)	P-value
Constant	2.693	0.011
Gender (1=Female)	1.163	0.003
Education Level	0.015	0.020

Socioeconomic Status	0.180	0.035

The coefficient for gender (1.163, p = 0.003) indicates that being female significantly increases the probability of financial inclusion, holding education and socioeconomic status constant.

- Education level (β = 0.015, p = 0.020) and socioeconomic status (β = 0.180, p = 0.035) also show statistically significant positive effects, suggesting that higher education and better socioeconomic standing are associated with greater financial inclusion.
- The positive and significant constant (β = 2.693, p = 0.011) represents the baseline level of inclusion probability when all predictors are zero.

This multivariate Probit model reinforces earlier findings and provides strong evidence that gender, education, and socioeconomic status are all important predictors of financial inclusion. The significance of these factors underscores the need for inclusive financial policies that consider educational and economic disparities as well as gender-based barriers.

6.Discussion

This study sought to elucidate the gendered dimensions of financial inclusion among Pakistani entrepreneurs by combining reliability analysis, ANOVA, chi-square tests, and a Probit regression model. The Cronbach's Alpha of 0.799 confirmed that our survey instrument reliably measures the constructs of interest, thereby validating subsequent inferences about gender-based disparities in financial access. Since internal consistency exceeded the conventional threshold of 0.70, we can be confident that items intended to capture facets of financial inclusion (e.g., frequency of financial interactions, access to credit, savings habits) cohere around a single underlying construct. This reliability underpins the validity of our statistical findings.

One-way ANOVA results revealed pronounced gender differences across multiple dimensions of financial inclusion. Women lagged significantly behind men in educational attainment, socioeconomic status, and marital status—factors known to shape access to resources and decision-making autonomy. In particular, the large F-values for education (16.503, $p < .001$), socioeconomic status (19.351, $p < .001$), and frequency of interactions with formal financial institutions (146.516, $p < .001$) indicate that male entrepreneurs more frequently engage with banks and microfinance institutions. This finding resonates with prior studies in Pakistan that document women's restricted mobility and limited social capital (Siddiqui & Hassan, 2018). Moreover, women reported lower usage of diverse financial products ($F = 764.275$, $p < .001$) and fewer savings behaviors ($F = 216.000$, $p < .001$), underscoring how structural inequalities translate into fewer opportunities for wealth accumulation.

Chi-square analyses corroborated these ANOVA findings by demonstrating significant associations between gender and categorical financial inclusion variables. For example, the strong chi-square for marital status ($\chi^2 = 88.12$, $p < .001$) reflects how married women often face familial constraints that curtail independent financial decision-making, a phenomenon well-documented in sociological studies of South Asia (Kabeer, 2015). Similarly, women's lower participation in financial education programs ($\chi^2 = 15.73$, $p < .001$) and their limited awareness of government schemes ($\chi^2 = 7.63$, $p = .007$) point to information asymmetries that impede women's ability to navigate formal financial systems. Even trust in institutions—though showing a smaller chi-square value ($\chi^2 = 0.50$, $p = .003$)—differed by gender, suggesting that women may harbor greater skepticism toward banks, possibly due to prior negative experiences or perceived gender bias in service delivery.

The Probit regression model provided additional nuance by estimating the probability of inclusion under a multivariate framework. Notably, being female increased the likelihood of being considered "financially excluded" by 1.163 units ($p = .003$), even after controlling for education level and socioeconomic status. This counterintuitive sign—reflecting "financial exclusion" as the dependent outcome—implies that gender remains a robust determinant of exclusion risk. Education level ($\beta = 0.015$, $p = .020$) and socioeconomic status ($\beta = 0.180$, $p = .035$) also positively predicted inclusion, signaling that higher educational attainment and better economic standing mitigate the gender gap but do not eliminate it. The magnitude of the constant term ($\beta = 2.693$, $p = .011$) indicates a baseline exclusion probability that is elevated, underscoring systemic barriers beyond individual attributes.

Taken together, these analyses suggest that interventions aimed at reducing the gender gap in financial inclusion must address both supply- and demand-side constraints. On the supply side, banks and microfinance institutions should tailor products to women's needs—such as simplified account opening procedures and gender-sensitive customer service (Naz et al., 2020). On the demand side, enhancing women's financial literacy through targeted education programs can improve self-assessed financial knowledge, which ANOVA showed was not significantly different by gender but which chi-square linked to inclusion outcomes ($\chi^2 = 15.68$, $p = .009$). Strengthening social networks and employing mobile banking solutions could also mitigate mobility constraints and safety concerns that disproportionately affect female entrepreneurs.

Despite significant gender effects, several variables—namely age ($F = 2.923$, $p = .089$) and self-assessed financial knowledge ($F = 1.385$, $p = .241$)—did not differ by gender in the ANOVA. This suggests that baseline cognitive capacity and age-related factors contribute less to exclusion than structural and socioeconomic determinants. In other words, older or younger women did not experience markedly different access compared to men solely on age grounds; rather, educational opportunities and household economic conditions were more decisive. These findings align with longitudinal research indicating that generational shifts alone are insufficient to close gender gaps without accompanying shifts in educational and economic policy.

Moreover, the significant difference in satisfaction with financial services ($F = 127.447$, $p < .001$) highlights how women often receive lower-quality services or perceive banks as less responsive to their needs. Chi-square likewise indicated that perceived responsiveness to women entrepreneurs was significantly associated with gender ($\chi^2 = 0.02$, $p < .001$), though the effect size was small. These results underscore the importance of service quality and institutional culture. Enhancing the gender sensitivity of bank staff—through training on unconscious bias and flexible service delivery schedules—could improve women's satisfaction and trust, thereby encouraging repeat interactions.

While this study contributes robust evidence on gender disparities in financial inclusion, it has limitations. First, the cross-sectional nature of survey data precludes causal inferences, even though the Probit model controls for key covariates. Longitudinal tracking of the same entrepreneurs could clarify how changes in education or socioeconomic status affect inclusion trajectories over time. Second, despite using Cronbach's Alpha to confirm reliability, unmeasured confounders—such as household decision-making norms or informal savings mechanisms—may influence responses. Future research should incorporate mixed-methods designs, including in-depth interviews, to capture these qualitative dimensions.

Finally, while the analytical framework employed ANOVA, chi-square, and Probit regression, exploring interaction effects (e.g., between gender and rural/urban residency) could reveal context-specific barriers. ANOVA findings indicated that residency influenced inclusion ($F = 1.012$, $p = .004$), and chi-square confirmed a significant association ($\chi^2 = 7.22$, $p = .004$). Disaggregating by rural versus urban women entrepreneurs might uncover distinct policy levers, such as improving branch network density in underserved areas or deploying agent banking in rural communities (Green & Musau, 2021).

In conclusion, the present findings underscore that gender remains a critical barrier to financial inclusion in Pakistan. Women entrepreneurs face compounded challenges stemming from lower education, limited socioeconomic resources, and institutional shortcomings. To bridge this gap, policymakers must implement targeted financial literacy programs, incentivize gender-responsive banking practices, and support socio-economic empowerment initiatives. Only by addressing both structural constraints and individual capacities can we move toward a more inclusive financial ecosystem that enables women entrepreneurs to participate fully in economic life.

7. Conclusion

The Survey of financial Inclusion among women entrepreneurs in Lahore reveals that, institutional constraints and new opportunities have complex interactions. Poor awareness and participation in the financial schemes initiated by the government like the subsidized loans schemes and training programs are among the major obstacles. Many women remain oblivious of these opportunities due to poor outreach, literacy issues and inability to embrace personalized communication approaches. Women entrepreneurs also have little confidence and satisfaction with formal financial institutions. The reason behind such mistrust is the past bad experiences, apparent discrimination, and lack of gender sensitive banking solutions. Requirement of collateral and proper financial records is also a decease, as majority of the women especially those in the informal sector cannot produce. The conventional funding systems might disregard the alternative credit worthiness or community guarantees therefore work against the women. Besides, gender stereotypes are quite high with implications on the financial decisions made where women are at times regarded as high-risk borrowers. These stereotypes, which are either conscious or unconscious, restrict women access to credit and investments. I initiatives sponsored by financial institutions specifically targeting women financial literacy reduce these gaps. The women should be taught about digital banking, credit, budgeting, and business planning to make them financially intelligent. At the same time, specialized financial services, low-collateral microloans, non-standard terms of loans, group lending programs can offer easy access to the official banking system. Digital finance services offer shifting opportunities especially in financial technology (fintech) innovations and mobile banking frameworks. They provide security, convenience, and cheap transaction costs especially to those ladies who have low mobility or reside in impoverished regions. The microfinance initiatives integrated with mobile technologies enable even more scalable and inclusive finance models that are capable of accessing women at the bottom of the pyramid. Besides cash solutions, non-financial assistance such as networking and mentoring opportunities also plays a pivotal role. Peer groups, role models and experienced mentors are availed to the women to enable them develop confidence, business skills and bargaining powers to the financial institutions.

These support systems invoke a sense of community and strength, thus empowering women to actually fight their way out of their financial situations. Moreover, relying on a policy change is approaching significant financial inclusion. Reduction in complexity of loan application process, tax incentives to businesses owned by women and imposition of anti-discriminatory rules in lending policies are some of the measures that can even the playing field in the financial world. Promotion of gender-based financial institutions as well as accountability of banks on inclusive policies will contribute towards accelerating the development. After all, enhancing the financial participation of female entrepreneurs can contribute to not only gender equality but also the stronger overall economic sustainability. The economy gains from higher productivity, job creation, and poverty lowering when women can access money, expand their businesses, and become financially independent. A sustainable, inclusive, and vibrant economic ecosystem depends on women entrepreneurs and financial institutions strengthening their link.

8: Recommendations

Based on the findings of the study, several targeted recommendations can be made to address the gender-based disparities in financial inclusion among female entrepreneurs in Pakistan. Education emerged as a significant predictor therefore, expanding adult education programs and integrating financial literacy into vocational training for women can provide foundational skills to navigate formal financial systems effectively. In parallel, lower socioeconomic status among women also hindered inclusion, underscoring the need for micro-grants, tiered credit products, and income-generation programs specifically designed for low-income female entrepreneurs.

Marital status was found to influence financial decision-making autonomy significantly with married women facing more constraints. Hence Community engagement and family-inclusive financial literacy initiatives can challenge patriarchal norms and promote shared financial responsibility.

Access to financial institutions was heavily gendered, as male entrepreneurs engaged more frequently with banks. To address this, mobile and agent banking models should be expanded in female-concentrated areas, accompanied by simplified account opening procedures. Women also reported significantly lower usage of diverse financial products and savings behaviors, necessitating the development of tailored, gender-sensitive banking products and digital savings schemes with flexible terms and incentives.

Participation in financial education programs was notably low among women, reflecting an information asymmetry that could be bridged by targeted outreach using community radio, social media, and women's networks. Furthermore, limited awareness of government financial support schemes calls for dedicated awareness campaigns and the creation of user-friendly digital platforms to disseminate such information. Women also reported higher levels of distrust toward financial institutions, highlighting the importance of building institutional trust through gender-sensitive customer service, staff training on unconscious bias, and improved grievance redress mechanisms.

The Probit regression model emphasized that gender alone significantly predicted exclusion, even after adjusting for other factors. This underlines the necessity of institutional reform, including gender quotas in SME lending and performance metrics for gender-inclusive banking practices. Although self-assessed financial knowledge did not significantly differ by gender, chi-square analysis linked it to financial inclusion, suggesting a need for confidence-building through peer mentoring and business advisory services tailored to women.

Interestingly, variables such as age showed no significant gender disparity, indicating that age-targeted interventions are less critical than addressing socioeconomic and structural issues. However, satisfaction with financial services revealed a substantial gender gap, with women expressing lower satisfaction levels. Responsive service delivery through designated "women-first" banking hours, digital feedback platforms, and regular service audits could enhance female customer experiences.

Furthermore, perceived responsiveness of institutions differed by gender, highlighting the need for periodic gender audits and service quality improvements in financial institutions. Geographic disparities also emerged, with residency (urban vs. rural) influencing inclusion. Rural outreach must be strengthened using agent networks, mobile banking vans, and collaborations with grassroots organizations. At last, the importance of the constant term in the model points to underlying structural exclusion, hence supporting high-level legislative changes. These ought's to be mandated gender-disaggregated data collecting to track development, streamlined loan application processes, and regulatory incentives for banks supporting female entrepreneurs. To close the gender disparity in financial inclusion, a multifarious response is therefore needed. This entails institutional transformation, focused education, awareness-raising, and structural policy reforms that taken together enable women entrepreneurs to access, use, and profit from official financial services. These steps improve personal financial freedom as well as help to further more general objectives of sustainable development, poverty reduction, and economic equality.

Compliance with Ethical Standards

- **Conflict of Interest:** There is no conflict of Interest.
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