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**EXAMINE THE RELATIONSHIP BETWEEN FINANCIAL LITERACY AND
RISK-TAKING PROPENSITY ON WOMEN ENTREPRENEURSHIP IN
PAKISTAN**



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ABSTRACT

The purpose of this research is to explore the relationship between financial literacy and risk-taking propensity on women entrepreneurship in Pakistan. Employing a quantitative research design, this study analyzes data collected from a large sample of women entrepreneurs of SMEs in Pakistan. 221 responses were collected using a questionnaire. Responses were collected from the women entrepreneurs of SMEs in Pakistan. The questionnaire was based on 5-Likert scale. The data collected was analyzed by statistical test with the help of SPSS Software. To determine whether these variables are related to one another and have associations, correlation analysis is used. This analysis helps to identify any significant correlations or patterns between the variables. Furthermore, regression analysis is also used to examine the relationship between financial literacy factors predicts the women entrepreneurship including risk-taking propensity. The results of correlation analysis have demonstrated a positive relationship between financial literacy, risk-taking propensity and women entrepreneurship. The results of regression analysis have demonstrated that financial knowledge, and financial management skills have significant impact on women entrepreneurship in Pakistan. The risk-taking propensity as a mediator between the financial literacy and women entrepreneurship was examined using the multiple regression analysis. The result demonstrated from multiple regression shows that risk-taking propensity positively mediates the relationship between financial knowledge, financial management skills and women entrepreneurship in Pakistan. These findings suggest that financial literacy not only enhance risk-taking propensity but also play a crucial role in promoting entrepreneurial engagement among women.

Key Words: Financial Literacy, Financial Knowledge, Financial Management skills, Risk-Taking propensity, Women Entrepreneurship

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Chapter 1: Introduction

Economist Richard Cantillon (1755) came up with the term "entrepreneurship" in the 17th century, but it was primarily used in reference to men. According to Kuratko (2014), entrepreneurship is an inventive process of vision, transformation, and invention that needs the use of drive and passion in the search of putting new ideas into practice. All human capital should ideally be utilized for the tremendous potential of entrepreneurship in order to promote the nation's sustainable development and economic prosperity. Only by including a gender perspective—in which men and women entrepreneurs participate and contribute equally—can this be accomplished (Baporikar, 2016). This implies that female-owned businesses must achieve the same level of success and expansion as their male counterparts. With the advent of feminism in the 19th century and the internet and technology in the 21st, women became increasingly prevalent in the business world and were widely accepted as entrepreneurs. Around the world, female entrepreneurs typically run smaller businesses than male entrepreneurs (Winn, 2005). They also possess greater rates of business termination and weaker growth prospects than men entrepreneurs (Brush, Carter, Gatewood, Greene, & Hart, 2006).

The set of abilities and information that enable someone to make prudent financial choices is referred to as financial literacy. It helps in the efficient use of financial resources by the individual, contributing to overall economic security. Since financial literacy helps people manage their personal financial affairs, such as retirement planning, tax planning, savings, and investments, and helps them comprehend how more money can be made and used in more productive and efficient ways, it has a direct impact on both societal and individual well-being. According to Criddle (2006), knowing the various options that exist for setting financial objectives is part of being financially literate. According to ASIC (2003) and Noctor, Stoney, and Stradling (1992), financial

literacy is the "ability of an individual to make informed judgments and to take effective decisions regarding the use and management of money." "A combination of awareness, knowledge, skill, attitude, and behavior needed to make sound financial decisions and ultimately achieve individual financial well-being" is how the OECD defines financial literacy. The definition of financial literacy is "having the abilities and knowledge on financial matters to confidently take effective action that best fulfills an individual's personal, family, and global community goals" by the National Financial Educators Council. Financial literacy is defined by the Government Accountability Office (GAO) as the capacity to make wise decisions and take appropriate action regarding the use and management of money both currently and in the future. It means having the ability to understand financial possibilities, plan ahead, spend prudently, and handle challenges brought on by life events such as job loss, the need to save for retirement, or the cost of a child's education.

Knowledge about basic financial goods that a person may require in their lifetime, such as insurance policies, bank accounts, and savings accounts. Comprehension of fundamental financial ideas, such as how to calculate compound interest, money's present and future value, what an annuity is, how risk and return affect investments, how to protect and diversify, and so on. Gaining knowledge and self-confidence is necessary to recognize possibilities and risks involved in the financial market. Making wise decisions about debt management, investing, saving, and spending throughout one's life. Despite their important economic contribution, women entrepreneurs often face hurdles when applying for loans from financial institutions due to inadequate financial literacy and a lack of collateral. This makes it difficult for them to expand their businesses, hire more staff, and make investments in their enterprises (Hussain et al., 2019). To grow financially and professionally, Pakistani women entrepreneurs also need to overcome extra societal and cultural

barriers (Iram et al., 2021). Gender discrimination, social norms and limited access to education and training are some of those barriers that prohibit women from entering the workforce. Therefore, it is important to examine the relationship between financial literacy and the rise of women entrepreneurs in Pakistan (Bilal et al., 2021). Because of their greater financial literacy, women entrepreneurs may be able to manage their businesses, secure funding, and make wise financial decisions (Mustafa et al., 2021). This research aims to explore the relationship between financial literacy and risk-taking behavior in women entrepreneurs in Pakistan.

1.1 Background of the Study:

The business sector in Pakistan holds tremendous prospects for prosperity and economic growth; but the full potential of female entrepreneurs remains largely unrealized. Women entrepreneurs continue to face significant challenges in expanding their businesses, despite continuing efforts to promote inclusive entrepreneurship and gender equality (Strawser et al., 2021).

First and foremost, the absence of financial resources and funding possibilities remain a major barrier for women entrepreneurs (Meyer & Hamilton, 2020). Prejudices and discrimination in the financial sector restrict access to loans, venture capital, and other forms of funding needed for company expansion. The lack of financial literacy among female entrepreneurs worsens this problem, as they may find it challenging to deal with the complex financial system and effectively communicate their financial demands to potential lenders and investors (Baporikar & Akino, 2020).

Second, societal and cultural barriers restrict the mobility of female entrepreneurs and keep them from accessing networks, mentorship, and other business support services (Baporikar & Akino, 2020). Traditional gender roles and cultural expectations sometimes allocate women to family responsibilities, which limits their ability to fully participate in business activities (Kappal &

Rastogi, 2020). Moreover, common gender stereotypes and biases could undermine their credibility and reduce their opportunities for collaboration and partnership. Women entrepreneurs face major hurdles to their business growth, one of which is their restricted access to business training and capacity building activities (Ughetto et al., 2020). Their inability to gain new skills and acquire new knowledge limits their ability to identify market opportunities, formulate strategic business plans, and apply creative solutions. This knowledge gap limits their capacity to grow and succeed in a business environment that is always changing (Oggero et al., 2020).

Pakistan, as a developing country, has been facing several challenges in its pursuit of economic growth and advancement (Afshan et al., 2021). Among its many strategies is the promotion of entrepreneurship, particularly that of women. This approach recognizes the enormous potential that, with the correct support and resources, women must contribute to economic success (Khan et al., 2021). Women entrepreneurs still face a variety of challenges despite government efforts to promote them, including limited access to capital, a shortage of business networks, and inadequate support and training programs (Noor & Isa, 2020). One of the main problems faces by women entrepreneurs is access to funding. Pakistan's propensity for risk-averse financial institutions means that three out of every four female entrepreneurs are unable to obtain the capital they needed to establish or expand their businesses (Shah et al., 2021).

It has been noted that financial literacy is essential for entrepreneurs in developing countries, particularly women entrepreneurs, to properly manage their businesses. It is a crucial skill that enables business owners to effectively budget, handle cash flow, and analyze financial accounts (Yousfani et al., 2019). There is research on how financial literacy effects the growth of women entrepreneurs' enterprises in Pakistan. One way to address the challenges faced by Pakistani women entrepreneurs is to provide them with financial literacy training (Mehta et al., 2022). This

training empowers women entrepreneurs with financial skills like budgeting, cash flow management, and reading financial statements. As a result, they might be in a better position to handle their money and make sensible investment decisions (Yasin et al., 2020).

For female entrepreneurs, having financial literacy offers various benefits. First of all, it can improve their chances of getting funding from financial institutions and help them get financing (Andriamahery & Qamruzzaman, 2022). Secondly, it can help them in effectively managing their businesses, perhaps leading to increased profitability and business growth. Additionally, they might have better knowledge about the financial elements of their business, which will enable them to make more informed decisions (Tara et al., 2020). In Pakistan, numerous initiatives have been launched to promote financial literacy among female entrepreneurs. For instance, the State Bank of Pakistan has launched a program to educate financial literacy to female entrepreneurs in collaboration with commercial banks and microfinance institutions. Initiative aims to increase women entrepreneurs' access to capital and financial literacy (Muhammad et al., 2021).

Women entrepreneurs in Pakistan need more than just financial literacy training; they also need extra support services. Among these services include market access, networking events, firm incubation programs, and mentoring (Noor et al., 2020). By providing these services, female entrepreneurs can get over some of their challenges and raise their chances of success. Pakistan recognizes the enormous potential that female entrepreneurs have, to promote advancement and economic growth (Bilal et al., 2021). There are still several challenges for women entrepreneurs, including limited financial availability, a lack of business networks, and insufficient training and support resources. Financial literacy has been emphasized as being essential to the successful management of businesses by entrepreneurs, particularly women entrepreneurs in developing countries (Nasir et al., 2019). Women entrepreneurs may be able to overcome some of their

challenges and improve their chances of success if they have access to financial literacy training and other support services (Junoh et al., 2019).

1.2 Problem Statement:

The goal of the study is to better understand the complex relationship that exists between Pakistani women entrepreneurs' risk-taking behavior and financial literacy. Although the significance of risk management and financial literacy for the success of entrepreneurs is widely recognized, there is a noticeable gap in recognizing the specific ways in which these factors interact in the context of women entrepreneurship in Pakistan. By exploring this relationship, the study aims to shed light on how much financial literacy affects women entrepreneurs' propensity for taking risks and provides insightful information about the factors influencing these decisions. This study delves deeply into the opportunities and difficulties encountered by Pakistani women entrepreneurs. By examining these connected ideas, it aims to identify better ways to support them. This could lead to new policies and programs that help women entrepreneurs succeed and grow economically.

1.3 Research Gap:

Pakistan recognizes the potential of women entrepreneurs to drive economic growth. There's a growing emphasis on entrepreneurship and financial literacy as key tools for achieving this (Younas & Rafay, 2021). However, a significant research gap remains. Despite this recognition, no studies have directly explored how financial literacy impacts the growth of businesses led by women in Pakistan (Iram et al., 2021). Furthermore, understanding the risk-taking behavior of these women entrepreneurs, especially how it relates to their financial literacy, is an entirely unexplored area. Existing research, like studies by Ali et al. (2023) and Malik et al. (2022), has looked at financial literacy among women entrepreneurs in Pakistan. However, there's a gap in

research that specifically examines their risk-taking tendencies and how they make decisions. While Siddiqui and Haque (2023) emphasize the need for a gendered perspective on Pakistani entrepreneurship, their work doesn't explore the nuances of risk-taking behavior among women entrepreneurs. Unfortunately, few studies in Pakistan have examined how financial literacy affects women entrepreneurs' risk-taking. This lack of research makes it difficult to fully understand what helps these women succeed and bounce back from challenges.

1.4 Research Questions:

In order to identify the solutions, the following research questions were developed keeping the aforementioned problems in mind.

Research Question #1:

What is the impact of financial knowledge on women entrepreneurship in Pakistan?

Research Question #2:

What is the impact of financial management skills on women entrepreneurship in Pakistan?

Research Question #3:

How does risk-taking propensity mediate the relationship between financial Knowledge and women entrepreneurship in Pakistan?

Research Question #4:

Hoe does risk-taking propensity mediate the relationship between financial management skills and women entrepreneurship in Pakistan?

1.5 Research Objectives:

This study determines the relationship between financial literacy and women entrepreneurship. Risk-taking propensity has also been incorporated as a potential mediator between the links in the model. The following are the research objectives:

Research Objective #1:

To investigate the impact of financial knowledge on women entrepreneurship in Pakistan?

Research Objective #2:

To investigate the impact of financial management skills on women entrepreneurship in Pakistan?

Research Objective #3:

To investigate the mediating role of risk-taking propensity on the relationship between financial knowledge and women entrepreneurship.

Research Objective #4:

To investigate the mediating role of risk-taking propensity on the relationship between financial management skills and women entrepreneurship.

1.6 Research Significance:

The contributions of women entrepreneurs are becoming more and more important to Pakistan's economic development. Still, a number of issues prevent them from reaching their full potential. This study explores the important connection between Pakistani women entrepreneurs' risk-taking propensity and financial literacy. It is valuable to look at how financial literacy enables people to

manage their finances and take measured risks. Firstly, this thesis can clarify how financial literacy empowers women entrepreneurs to make wise decisions. Women who possess knowledge of financial concepts such as risk management, investment strategies, and budgeting are more equipped to make informed decisions about the starting, expansion, and operation of their businesses. Increased business sustainability, profitability, and general economic engagement may result from this.

Secondly, the study can provide light on the relationship between risk-taking propensity and financial literacy. Entrepreneurship is inherently risky, women with a background in finance are better able to identify and mitigate these risks. They can create plans to minimize possible losses, identify potential profits, and take measured risks that advance the businesses they run.

Furthermore, in order to improve women's financial literacy and create an atmosphere that is more favorable for entrepreneurship; this research can offer important evidence to support the development of focused educational initiatives and governmental interventions. The results may also have an impact on the creation of financial services and products that are specifically designed to meet the demands of female entrepreneurs, which would ultimately benefit both the broader socioeconomic development of Pakistan and the economic empowerment of these individuals. This research contributes to the global conversation on entrepreneurship and gender by providing comparative insights that can be used to comprehend similar phenomena in other developing nations. This study emphasizes the relationship between risk-taking propensity and financial literacy, which highlights the vital role that financial education, plays in enabling female entrepreneurs to successfully negotiate the challenges of the business world and drive economic growth.

Chapter Summary:

An overview of the research topic, background of the study, research gap, problem statement, research questions and objectives, research significance, and research contribution are given in this chapter. The literature on financial literacy, risk-taking propensity and entrepreneurship will be reviewed in the following chapter, which will be followed by chapters on methodology, data analysis, and findings, and discussion and conclusion.

Chapter 2: Literature Review

2.1 Financial Literacy:

The capability to apply one's knowledge of various financial concepts and products to make well-informed financial decisions is known as financial literacy. It requires skills in budgeting, debt management, investing, saving, and risk assessment. People who are financially literate can make wise financial judgments that improve their overall security and well-being, prepare for their future financial goals, and navigate the complexities of the financial world. Previous studies have demonstrated the significant impact that financial literacy has on entrepreneurial behaviors. By utilizing the Structural Equation Model, Wise (2013) showed that Canadian entrepreneurs produced financial statements more frequently as their financial literacy increased. It was proved by Guliman (2015) that certain Filipino entrepreneurs have a poor understanding of financial institutions, investment securities, and taxes. Data from Portugal also showed that there was little proof of a meaningful correlation between the performance of micro and small businesses and financial literacy (Fernandes, 2015). Similarly, Njoroge (2013) discovered that among entrepreneurs in Nairobi, Kenya, financial literacy and SME success were positively correlated. Oseifuah (2010) investigated the youth in the province of Limpopo, South Africa, with regard to their level of financial literacy about entrepreneurship. According to reports, the youth of Vhembe District possessed above-average financial literacy, which had a significant impact on their capacity for entrepreneurship. Accordingly, it is evident that capital or financial literacy abilities are necessary for all businesses, which establishes the connection between financial literacy and entrepreneurship (Usama & Yusoff, 2018).

In today's market, financial literacy is essential to the success of any business. Andrew Tait, the founder and president of Tait Laboratories Inc., states in his book "Every Entrepreneur Needs Financial Literacy" that while financial literacy is an essential skill for entrepreneurs to have; many of them get overly fixated on the process of developing a good or service. Without understanding basic finance, an entrepreneur could find it challenging to expand or even stay in business. Furthermore, As per Jacob et al. (2000) and Nguyen & Nguyen (2020), financial literacy is not only a necessary survival skill for everyone to possess, but it's also a convenience and information that everyone possesses. Regardless of its importance, financial illiteracy continues to impact a significant portion of the global population, as noted by Messy and Monticone (2016), who argue that this issue should be addressed as a top priority. Individuals who possess greater financial literacy typically make fewer mistakes when making financial decisions, which put them in a solid financial position (Meier & Sprenger, 2013).

According to Kalekye and Memba (2013), financial literacy is defined by the World Bank as “In order to make informed decisions, know where to seek assistance, and take other practical steps to improve their financial wellbeing, consumers and investors must possess a combination of understanding financial products and concepts as well as the ability and confidence to recognize financial risks and opportunities.” An entrepreneur's financial literacy may therefore be summed up as a combination of his knowledge of financial issues, ability to reduce risks, and ability to make the best financial investments.

Academics and financial analysts believe that in order to encourage entrepreneurship and practice effective financial management, vibrant and dynamic women entrepreneurs must possess financial literacy (Odebiyi, Fasesin& Ayo-Oyebiyi, 2020; Odetayo, Sajuyigbe, &Adeyemi, 2020; Kuruvilla&Harikumar, 2018; Lafortune&Tessada, 2015). Sucuahi (2013) asserts that financial

literacy is essential to women's success in entrepreneurship, and it includes skills like budget creation, maintaining documentation, managing inventory, feasible company planning, savings, personal finance, and reconciliation. In light of this, the Financial Literacy Framework (FLF) was developed by the Nigerian Central Bank in January 2013, in an effort to fulfill Sustainable Development Goal number 5, which calls for the eradication of gender inequality in all its manifestations by 2030. According to Afshan et al. (2021) the expansion of female SMEs owners in Pakistan and their total economic empowerment depends on financial literacy. Jobs and educational opportunities have always been tough for Pakistani women to obtain. However, as efforts to improve gender equality and the increased recognition of women's potential have occurred, there has been an increasing focus on empowering women via entrepreneurship (Younas & Rafay, 2021).

A study by Egbo et al. (2020) explores the relationship between women entrepreneurs in Nigeria's ability to obtain financing and their level of financial literacy. The study showed that having a solid understanding of finance was essential for growing women-owned firms, especially in their early stages of development. The study also proved that financial understanding is important for the growth and prosperity of women-owned enterprises. Women who want to develop an entrepreneurial mindset, expand their business ventures successfully, manage their personal and family finances, and achieve greater success in their chosen fields of entrepreneurship must possess financial literacy and aptitude. It is crucial to equip female entrepreneurs with the knowledge and skills necessary to make wise financial choices.

Financially educated women entrepreneurs typically experience a greater sense of independence and self-sufficiency. By understanding financial concepts, they are capable of managing their own money and make informed choices on retirement planning, investing, and saving (Junoh et al.,

2019). Their ability to be independent and financially stable is made possible by this independence, which also contributes to their total economic empowerment (Ali et al., 2019). Furthermore, financial literacy plays a major role in promoting entrepreneurship as a viable career path for women in Pakistan. It provides women with the necessary financial knowledge and skills, lowering barriers for entrance and encouraging them to engage in entrepreneurial activities.

2.2 Risk-Taking Propensity:

It is nearly impossible to manage a firm without taking business risks. Risk-taking is an ongoing decision-making process for entrepreneurs. A key component of a successful entrepreneur's personality is their willingness to take risks. According to Setiawan (2014), an entrepreneur's ability to take calculated risks is one of their traits. Research has been carried out on the ability to take risks in order to succeed as an entrepreneur. These comprise taking financial risks (Kozubíková et al., 2017), perceiving risks, having an attitude toward risk, and having a propensity to take risks (Singh et al., 2020), as well as risk-taking and entrepreneurship education (Gathungu & Sabana, 2018). Easy access to finance and a lenient view of debt have been linked to students' poor business risk-taking (Jiang & Dunn, 2013). Jiang and Dunn (2013) go further to say that younger people's financial issues are partly caused by their greater debt levels and increased credit card use. Consequently, there is a significant impact on business management due to the fact that the ability of students to take risks is still inadequate in many regions of the world (Beal & Delpachitra, 2003). For instance, Herdjiono and Damanik (2016) find no relationship between students' financial management practices and their ability to take entrepreneurial risks. Additionally, Setiawati and Nurkhin (2018) confirmed that students' financial conduct is unaffected by their ability to take risks in business. It has been studied how gender differs among students when it comes to taking business risks. Research has indicated that male students have a

greater inclination towards taking business risks compared to their female peers (de Oliveira, 2020; Refera et al., 2016). For example, Yong and Tan (2017) found that respondents who are male are more focused on company risk than respondents who are female. According to Potrich et al. (2016), men exhibit good financial literacy and saving, whereas women continue to exhibit low levels of risk-taking behavior and attitude in business. Conversely, research by Igbokwe et al. (2014) showed that female students outperformed male students in terms of financial intelligence. According to a related study, there is no difference in risk-taking abilities between male and female students (Lončar & Golemac, 2014). According to de Oliveira (2020), women exhibit a higher degree of risk aversion than men due in part to a "fear of failure."

When a woman chooses to start her own business, she will put in all of her effort and dedication into making it successful. According to Anja and Franck (2012), women entrepreneurs are motivated by their understanding of financial security, their passion, which boosts self-confidence, and their flexibility. The beliefs that entrepreneurs are risk-takers who expect profits and lead to improved performance results are common in personality studies on entrepreneurs (Carland et al., 1995; Cromie, 2000; Sefiani, 2013; Stewart & Roth, 2001). Women entrepreneurs can overcome their challenges by combining personal attitudes including ambition, strong needs, assurance in oneself, and dedication to job achievement, as stated by Jamali and Keshishian (2009). Therefore, the traits of female micro and small business owners, particularly in terms of risk adoption, indicate that they are also capable of taking calculated risks with clear goals in mind, which might help in determining the component that makes a firm successful. Most of the research on how gender affects one's readiness to take business risks reveals that women are more homogenous and risk averse than males (Castillo & Freer, 2018). This research helps in determining the risk-taking inclinations and the causes of the lower risk-taking attitude toward company success among female

entrepreneurs. It also provides guidance on how to effectively manage activities associated with a higher risk tolerance for increased competitiveness and the capacity to recognize business opportunities (Ferreiro & Carmen, 2013). Additionally, Quero and Ventura's (2013) study discovered that, in the case of women entrepreneurs, the elements of entrepreneurship had a greater impact on views favorable to—or adverse to—participating in risky entrepreneurship. As per the research conducted by Belwal & Belwal (2015), the biggest barriers to success for female entrepreneurs were a fear of failing and unwillingness to take chances.

2.3 Women Entrepreneurship:

Women who take the initiative and assume responsibility in starting, running, and expanding a business are known as women entrepreneurs. A woman entrepreneur is someone who takes on difficult roles in order to fulfill her own needs and achieve financial independence (Vinay et al., 2015). They take up the business's financial risks to make a profit. According to Cardella et al. (2020), female entrepreneurs are the group of entrepreneurs with the fastest rate of growth in the globe and have drawn the interest of numerous scholars in recent years. The crisis facing entrepreneurs is caused by a variety of social, religious, cultural, economic, and other elements in the society. Women entrepreneurs are essential for supporting social advancement, gender equality, and economic progress.

The global economy is powered by women. They generate more than 50% of the world's food and perform more than 66% of the work in the world (ILO 2016). More than 40% of all private firms worldwide, both in the formal and informal sectors are owned by over 187 million women entrepreneurs, according to statistics (World Bank, 2015). Oyebamiji (2020) confirms to the fact that more than 30% of businesses in developed and developing nations are owned by female

entrepreneurs. Globally, women entrepreneurs are playing increasingly important roles in sustainable economic growth.

By giving women access to the right tools, innovative strategies, and multifaceted leadership, entrepreneurship may empower them (Kumari & Eguruze, 2021; Tabassum & Nayak, 2021).

Women are much more impacted by their feelings and attitudes than males are (Pompian, 2011).

The same is true for Pakistani women, who encounter a variety of obstacles such as work-family balance, harsh working conditions, fear of cultural norms and traditions, and more (Ull Ann Javaid et al., 2020). According to Nasir et al. (2019), a number of elements, such as education, societal factors, personal factors, and financial issues, all contribute to the rise of women entrepreneurs.

To overcome the challenges associated with subordination, strong family policies are necessary in developing nations like Pakistan to promote women entrepreneurs and encourage them to choose entrepreneurship as a respectable career. Therefore, women's admission into the entrepreneurial area will revolutionize society and serve as a silver bullet for the nation's economic development (Amutha, 2011; Noor, Md & Mohd, 2019; Noor & Isa, 2020). Firstly, when it comes to starting their businesses and hiring other women, women entrepreneurs are crucial. The working ladies might later launch their own company. Accordingly, prosperous women entrepreneurs not only help the nation's economy grow overall but also significantly contribute to the inclusion of women in the workforce (Nagarajan, 2016; Ong, Habidin, Salleh, & Fuzi, 2017; Phonthanukitithaworn, Ketkaew & Naruetharadhol, 2019).

According to Kevehazi (2020), women entrepreneurship gives women the ability to earn money while ensuring their independence and reducing their concerns about their capacity to raise their children. This, in turn, inspires other women to work for economic, political, or even personal

autonomy, to make independent decisions, and to defend their own way of life. According to Khanum et al.'s (2020) study, establishing the sustainable development process in Bangladesh would be unfeasible without the economic empowerment of women through participation in mainstream initiatives for development. Bangladesh has seen an increase in the number of female entrepreneurs and their economic impact since the 1990s. Furthermore, Women in SME's are essential to the growth of the economy and the generation of jobs. However, individuals frequently face barriers based on gender that prevent them from accessing markets, resources, and decision-making processes. Due to the potential for higher productivity, creativity, and competitiveness, empowering women in SMEs is not only a social justice issue but also a business necessity (Noor & Isa, 2020, Onyebuchi et al., 2024, Sallah & Caesar, 2020).

The efforts of women entrepreneurs also have a significant positive impact on the advancement of gender equality. Historically, women have faced numerous challenges and issues in their pursuit of employment, advancement, and leadership roles (Noor & Isa, 2020). However, women who pursue entrepreneurship have the potential to overcome obstacles, challenge gender norms, and emerge as powerful business owners and executives. By inspiring other women and acting as role models, women entrepreneurs make a positive and inclusive contribution to society. Additionally, women entrepreneurs have a favorable impact on the economy's growth and the creation of jobs. In addition women-owned businesses not only give women employment opportunities, but they also help the larger community. Women entrepreneurs contribute to economic growth, pay taxes, and strengthen local economies as they grow their businesses. The presence of female entrepreneurs increases economic resilience and competitiveness in addition to promoting creativity and diversity within the company environment (Ali et al., 2019). Globally, women are heavily involved in SMEs, where they foster innovation, job creation, and economic expansion.

According to the International Finance Corporation (IFC), about 30% of all registered enterprises globally are women-owned SMEs (Crane, 2022, Ge, et. al., 2022, Odonkor, et. al., 2024). But as compared to their male counterparts, female entrepreneurs frequently work in industries with lower productivity and profitability levels. In addition, women encounter obstacles such restricted access to markets, capital, and technology that limit their capacity to expand their enterprises and realize their full potential. There are several challenges faced by female entrepreneurs. Gender-specific obstacles, such as limited funding availability, a lack of mentorship opportunities and networks, cultural biases and stereotypes, and difficulties balancing work and home responsibilities, are common for female entrepreneurs. However, to solve these problems, a variety of initiatives and programs have been implemented, such as targeted finance plans, mentorship programs, and regulatory reforms (Afshan et al., 2021). A few countries have passed laws that support female entrepreneurs by giving them access to technology, financial resources, and training, all while taking gender equality into mind. For example, the Women Entrepreneurship Development Program (WEDP) in India offers training and financial support to women entrepreneurs. Increasing women's access to credit, insurance, and savings is the aim of financial inclusion programs (Abrahams et al., 2024; Aziz, Sheikh & Shah, 2022; Pal, Gupta & Joshi, 2022). Financial literacy training is often included in these programs to help women manage their money well. It is common for women entrepreneurs to have limited access to technology, including computers, smartphones, and the internet. This limits their ability to employ digital technologies for expanding into new areas, operating their business, and marketing. Funding is a challenge for women entrepreneurs because of limited credit availability, biased lending policies, and a lack of collateral. They find it more challenging to expand their businesses, invest in technology, and compete in the market as a result (Kang, 2022, Odonkor, et al., 2024, Parthiban, et al., 2022).

2.4 Current Level of Financial Literacy among Women Entrepreneurs:

Women entrepreneurs are defined as women who launch, plan, and manage a business. Consequently, a confident, inventive, and talented woman who aspires to financial independence while also generating jobs for others is a woman entrepreneur. While, as per the President's Advisory Council on Financial Literacy (PACFL), the capability to govern professional and personal resources of finance skillfully and competently is financial literacy. Financial knowledge is crucial for female entrepreneurs to effectively manage their businesses and overcome problems. If women entrepreneurs had a solid command of financial literacy, they could succeed in business.

There are a lot of research works with different point of views related to the current level of financial literacy among women entrepreneurs in Pakistan. Some shows that there is a rapid increase in the number of female business owners with the knowledge of finance, whereas some predicts that not every entrepreneur woman is confident enough to have financial knowhow. There are many reasons which lead towards the lack of financial literacy in women entrepreneur. Women's entrepreneurship is particularly difficult in impoverished nations due to a lack of opportunity, limited resources, and specific hurdles.

(Afshan et al., 2021) claims that in Pakistan, men have more privileges than women. For instance, choosing career, women in Pakistan are more into teaching, agricultural or medical professions. The reasons are educational imbalances, discrimination, work-life blend, societal barriers, and harassment. Pakistan is ranked as having the lowest levels of early-stage entrepreneurial activity by the global entrepreneurship monitor (Mian and Qureshi, 2011). Another investigation by (Guzman and Kacperczvk, 2019) revealed that, in terms of risk capital, women are 63% less likely than men to acquire external financing, and most of this difference is due to their nature and

confidence level. Furthermore, in contrast to 55% of male entrepreneurs, just 38% of female entrepreneurs felt extremely knowledgeable at handling the finances of their businesses, according to a National Association of Women Business Owners (NAWBO) poll conducted in the US (Baporikar & Akino, 2020). While comparing the expertise of some behaviors of women in the market for financial instruments with men, the women typically have fewer insights (Fonsca et al., 2012, Lusardi and Mitchell, 2008; Lusardi and Tufano, 2015). However, some organizations are working on boosting Pakistan Women's inclusion to Finance. News on 11 December 2023, from Country Offices announced that the new program from ADB will help transform the financing ecosystem currently in place in Pakistan, enabling women to access much-needed capital and improve their standard of living while making significant economic contributions.

As stated by ADB Senior Financial Sector Economist Andrew McCartney, "there are many women entrepreneurs in Pakistan, but they remain unrecognized, being small and informal in nature and lacking the incentives to register their businesses officially or to grow." Leaders need to acknowledge the value of women in entrepreneurship and establish supportive environments that help women participate more in the formal economy and expand their businesses. And that could be possible by having financial literacy so they feel confident and will work more effectively towards their future and country's betterment. And to strengthen policy changes to promote women's access to credit and fund micro, small, and medium-sized businesses run by women, Asian Development Bank (ADB) has approved a funding of \$155.5 million. Approximately 2 million female entrepreneurs are anticipated to gain from it, including 510,000 who did not previously have access to financing through loans from partner financial institutions. Despite abundance of options available, women entrepreneurs in Pakistan have significant challenges in capitalizing on these chances due to systemic obstacles and cultural barriers. It has been shown

that for women to run their businesses and get beyond challenges, they need to be financially literate. Women entrepreneurs could be successful in business if they possessed a strong understanding of financial literacy. Therefore, the success of female-owned businesses will benefit empowered women.

2.5 Relationship between Financial Literacy and Risk-Taking Propensity:

Women contribute significantly to the entrepreneurial ecosystem with their creative concepts, offerings, and methods. Notwithstanding the significance of their contributions, female entrepreneurs encounter several obstacles to their success in various domains. The idea of risk propensity has significant consequences for risk behavior as well as valuable understanding into the motives behind the decisions made by entrepreneurial women to engage in risky behavior.

Experts in the field of company start-ups have written extensively about financial literacy and risk-taking skills. Entrepreneurs frequently behave impulsively, take calculated risks, and occasionally, as a result of their optimism and overconfidence, neglect to consider all of the facts presented to them about the firm they have selected, leading to several losses. For entrepreneurs, financial literacy is essential since it enables them to make wise decisions based on facts and the most responsible financial decisions. Since they enable the efficient use of financial resources, entrepreneurship and financial literacy are two themes that are highly valued on the global agenda. Proper product selection based on informed decisions is encouraged by adequate financial education (Atandi et al., 2017). Numerous studies have been conducted in the literature to evaluate the impact of financial literacy on the growth of entrepreneurship worldwide; these include work by Kojo Oseifuah (2010), Atandi et al. (2017), Cossa et al. (2018), Egbo et al. (2020), and Nguyen et al. (2021). Furthermore, research has also shown that an entrepreneur's propensity to take business risks is positively impacted by financial literacy (Refera et al., 2016). Taking risks is a

crucial component of financial decision-making, and a variety of factors can affect it (Musie, 2015). An individual's capacity to take on greater investment risk is positively correlated with an increase in investments, according to Singh et al. (2020). Similarly, financial services and risk-taking behavior have been found to be significantly correlated by Aydin and Selcuk (2019). Aren and Zengin (2016) discovered that an investment decision is positively influenced by financial knowledge and a sense of risk-taking. The survey also showed that men are more inclined than women to take commercial risks. According to Sharif et al. (2020), financial literacy and taking business risks did not significantly correlate. Previous research by Borden et al. (2008) showed that there is little correlation between financial literacy and prudent risk-taking in business. It was suggested that if students knew more about money, they would be more inclined to make wise financial decisions, like starting a business. Additionally, Jones (2005) discovered a negligible correlation between credit card debt and financial literacy. According to Sugiyanto et al.'s (2019) investigation of young, innovative business owners in Indonesia, financial behavior is greatly influenced by one's attitude toward finance, while financial literacy has little effect on the financial conduct of these individuals. This indicates that business owners' capacity to make wise business decisions is not much impacted by their level of financial literacy.

The inclination of women-led entrepreneurial ventures to take on risk is significantly influenced by their financial literacy. According to research, women might face different risks when it comes to entrepreneurship because they frequently encounter barriers specific to their gender while trying to obtain financial resources and education. Subsequent analysis by Ahrens and colleagues (2019) reveals that, female entrepreneurs with greater financial literacy typically makes better financial decisions and are more capable of identifying and controlling risks.

And it supports the idea that by giving women entrepreneurs the information and abilities needed to assess risks and make wise financial decisions, financial literacy might serve as a barrier against excessive risk-taking tendencies. Furthermore, research done in Pakistan suggests that enhancing women's financial literacy can result in more successful entrepreneurial endeavors. For example, an investigation by Khan and Ahmed (2020) illustrates that entrepreneur women in Pakistan who actively engaged in financial literacy programs are probabilistic to pursue growth-oriented strategies and have a boosted confidence in managing business finances.

Conversely, Women entrepreneurs may be more prone to take risks if they have little financial knowledge. According to research, a lack of financial understanding can result in to misinformation regarding risk and financial management, potentially resulting in poor decision-making and increased sensitivity to financial dangers. For example, Lusardi and Tufano (2015) found that individuals who lack financial knowledge are more prone to participate in risky financial behaviors, such as holding high levels of debt or failing to effectively diversify investment portfolios.

In the case of women-led entrepreneurial initiatives, this could mean a higher chance of business failure and financial setbacks because of uneducated risk taking. Furthermore, data from Pakistan indicates that women entrepreneurs with little financial literacy face considerable barriers to accessing official funding channels, which can compound their risk exposure and stifle business growth. As per the State Bank of Pakistan (2020), women-owned businesses in the country frequently fail to acquire loans from banks because to a lack of collateral and credit history, forcing them to rely on informal sources of funding with higher associated risks.

Furthermore, the association of gender and financial literacy complicates the relationship between financial literacy and risk propensity in female-led companies. According to research, cultural norms and expectations about women's financial duties and obligations can impact their financial literacy and risk-taking behaviors. Robb and Watson (2012) emphasize the necessity of addressing gender-specific financial literacy gaps to empower women entrepreneurs and improve their capacity to navigate financial risks.

Thus, while financial literacy can help to reduce risk in women-led entrepreneurial ventures, addressing systemic barriers and promoting financial education tailored to women's needs are critical steps toward creating a more inclusive and resilient entrepreneurial ecosystem. In Pakistan, measures to improve financial literacy among female entrepreneurs have yielded good results. For instance, the Khushhali Microfinance Bank's Women Entrepreneurship Program offers financial education and training to female entrepreneurs, allowing them to make better educated financial decisions and lower their exposure to business hazards.

2.6 Barriers to Financial Literacy for Women Entrepreneurs:

2.6.1 Gender Stereotypes and Social Norms:

Gender norms and cultural expectations greatly impede women's access to financial education and opportunities. Cultural norms often prevent women from actively participating in financial conversations or taking on financial responsibilities, which leaves them unaware of important financial ideas and procedures. According to Baporikar and Akino (2020), these stereotypes have an impact on the confidence that female entrepreneurs have in their capacity to make wise financial judgments. The belief that men should make financial decisions is something that women may take up, which perpetuates the cycle of low financial literacy growth (Kamberidou, 2020). Due to

a lack of confidence and limited access to financial knowledge, women entrepreneurs are unable to fully achieve their financial potential and run their businesses effectively. Defeating these gender conventions and building an inclusive climate that fosters women's active involvement in financial education and decision-making are both crucial (Singla & Mallik, 2021).

2.6.2 Limited Access to Financial Education:

It might be challenging to obtain formal financial education programs, training seminars, and tools designed specifically to meet the needs of female entrepreneurs. Since most financial literacy programs available today are designed with men in mind, it can be difficult for women to connect with the content and find examples and case studies that resonate with them. The gender bias in program design that keeps women entrepreneurs from accessing the financial information being offered contributes to the gender gap in financial literacy (Andarsari & Ningtyas, 2019). Furthermore, these programs frequently ignore the particular requirements and difficulties faced by female entrepreneurs, failing to consider the unique situations they encounter when pursuing their business ventures (Goel & Madan, 2019). The lack of specialized financial education further hinders women entrepreneurs' ability to gain the knowledge and abilities necessary for effective financial management. In order to close this gap, financial education programs that consider the challenges, experiences, and objectives of female entrepreneurs must be developed and implemented. This will provide them with relevant and relatable information that enhances their ability to make sound financial decisions (Kappal & Rastogi, 2020).

2.6.3 Work-Family Conflict:

Women entrepreneurs have a difficult time balancing their work and family responsibilities, which affects how often they participate in self-study and financial literacy programs. Due to the time-

and energy-consuming nature of juggling work and personal obligations, women entrepreneurs are less able to fully engage in programs designed to increase their financial knowledge and expertise (Baporikar & Akino, 2020). The constant juggling of work and family duties often leaves little time available for focused study and financial literacy growth. Due to their challenges with job and family obligations, women who run their own businesses are less likely to self-study and financial literacy initiatives. Women entrepreneurs are less able to fully participate in programs intended to develop their financial knowledge and competence since balancing job and personal duties takes time and energy (Baporikar & Akino, 2020). There is often little time for serious study and the advancement of financial literacy due to the ongoing balancing of job and family responsibilities.

2.7 Theoretical Background:

2.7.1 Human Capital Theory:

According to the human capital theory, experience, education, and training all contribute to a person's ability to be productive and successful. In the context of women entrepreneurs, financial literacy can be seen as a crucial form of human capital. Research by Egbo et al. (2020) highlights how financial literacy can bridge access gaps for women entrepreneurs. When women possess a solid grasp of financial concepts, risk management, and investment strategies, they are more qualified to make wise choices. This financial knowledge can empower them to take calculated risks, a key element of entrepreneurial success (Egbo et al., 2020). Overall, financial literacy acts as a form of human capital that equips women entrepreneurs with the tools and confidence to direct the inherent risks of starting and running a business.

2.8 Research Framework:

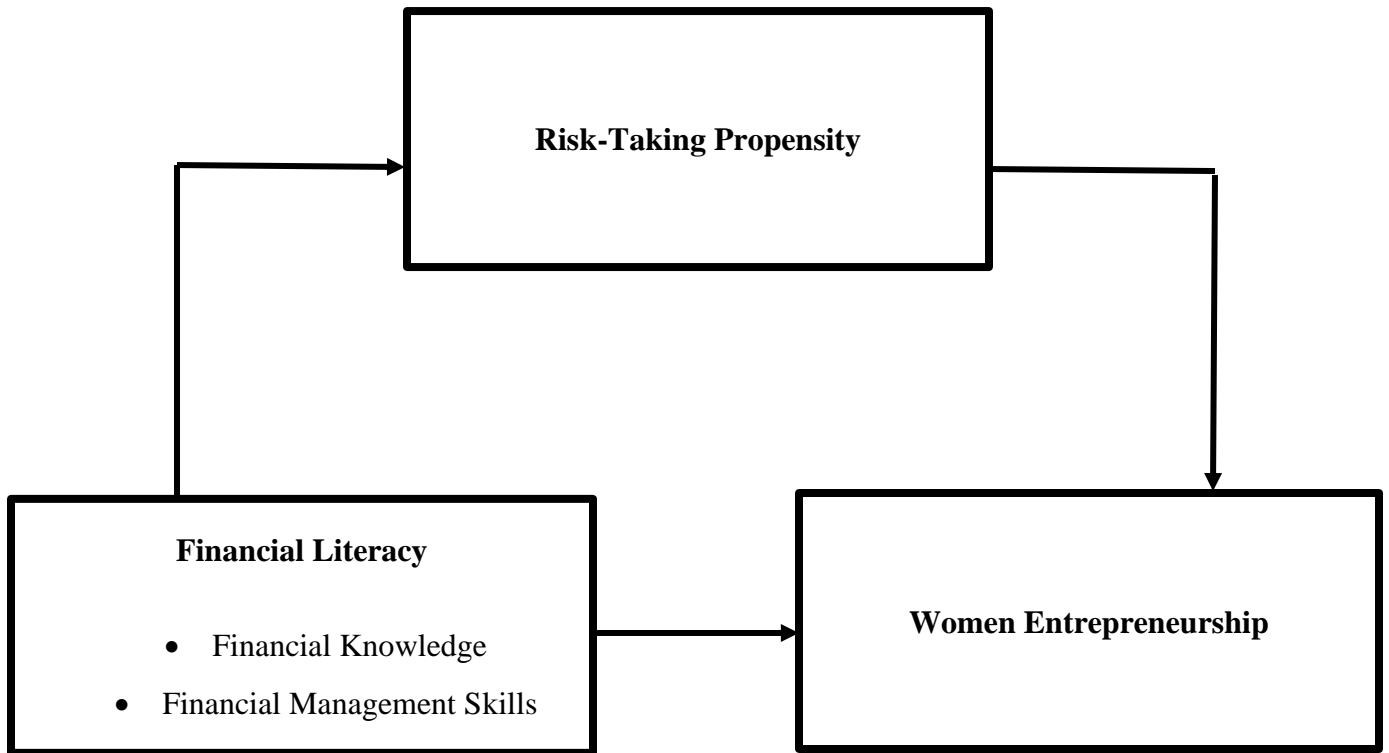


Figure 1: Proposed Theoretical Framework

2.9 Research Hypothesis:

Following are research hypotheses of current study:

H1: Financial knowledge has positive impact on women entrepreneurship in Pakistan.

H2: Financial management skills have positive impact on women entrepreneurship in Pakistan.

H3: Risk-taking propensity positively mediates the relationship between financial knowledge and women entrepreneurship in Pakistan.

H4: Risk-taking propensity positively mediates the relationship between financial management skills and women entrepreneurship in Pakistan.

Chapter 3: Research Methodology

Introduction:

Methods or processes used by researchers to manage their inquiries are often referred to as research methods. However, Kothari (2004) states that all strategies and methodologies used in study preparation are included in research methodology. It includes all of the methods, techniques, processes, and equipment used to successfully address research questions or hypotheses. The credibility, reliability, and trustworthiness of research findings are ensured by a clearly specified research methodology. The methodology, approach choices, and mindset of the study will all be thoroughly explained in this chapter.

3.1 Research Design:

According to Wiersma and Jurs (2005), efficient study designs raise the importance of research in addition to producing high-quality results. A "research design" is a strategy for gathering, analyzing, and presenting data (Mackey & Gass, 2015). According to Flick (2015), research design is "the approach adopted by researchers for collecting and analyzing important information." In social science research, two different kinds of research design methodologies have been referred to as "quantitative approach" and "qualitative approach." The great majority of researchers believe that quantitative research is more accurate and successful than qualitative research, according to De Vaus & de Vaus (2001). As stated by Chase et al. (2016), researchers can get trustworthy and accurate data by using a quantitative technique. This study employed quantitative methodology. To collect information for quantitative study, closed-ended communication was employed. To examine the relationship between financial literacy and risk-taking behavior on women entrepreneurship, the quantitative research has adopted for this study.

3.2 Research Philosophy:

The term "research philosophy" describes the collection of essential presumptions, ideas, and guidelines that underpin the research process and guide the researcher's approach to knowledge generation. It includes methodological, ontological, and epistemological issues that impact different facets of research design, data gathering, and analysis in addition to forming the theoretical framework of a study. A researcher's perspective on reality, knowledge sources, and the relationship between the researcher and the researched is reflected in their research philosophy. Philosophical paradigms like positivism, interpretivism, and critical realism are among them; they all provide distinctive perspectives on the acquisition, comprehension, and application of information in research. The rigor, coherence, and authenticity of research projects are improved when researchers clarify their research philosophy and provide justification for the methodologies they have used. In the end, research philosophy serves as a basis for investigation, guiding researchers in their quest for understanding and augmenting the body of information in their field of study. The current study is based on positivism. The goal of positivism is to objectively observe and measure occurrences in order to uncover universal laws and regularities. A positivist approach to studying the relationship between financial literacy and risk-taking behavior on women entrepreneurship involve quantitative methods, such as surveys or experiments, to quantify and analyze variables.

3.3 Research Approach:

The overall plan you use to investigate your research question is known as your research approach. It includes the fundamental procedures you will employ to collect, handle, and evaluate data as well as the broad assumptions that direct your research. Inductive and deductive research

approaches are the two primary approaches. In the inductive approach, researchers collect and examine empirical data in an effort to find recurrent patterns or regularities. Researchers create concepts or hypotheses to explain the occurrences they have observed based on these patterns. In the deductive approach, researchers start with a theoretical framework or hypothesis based on preexisting knowledge or theories. Then, using research study designs, they gather information to support or contradict the hypothesis generated by theory. The deductive research approach was used in this research study. The deductive method is sometimes referred to as the top-down method.

3.4 Research Strategy:

Because of the quantitative nature of the study, a researcher may employ case studies, experiments, surveys, and other methods (Ryder et al., 2020). However, a survey approach was used as the research strategy in this study. The survey was conducted using a questionnaire that included closed-ended questions. Based on participant responses, this research study determined whether to accept or reject the research hypotheses.

3.5 Research Type:

This study used correlational research. In order to investigate the relationship between variables, primary data is used. One type of research method used to look at the relationship between two or more variables is correlational research. Researchers use this method to examine the relationship between changes in one variable and changes in another. The direction and degree of a relationship between two variables are indicated by a correlation coefficient. Positive correlation between two variables indicates that when one increases, the other also tends to rise (or when one falls, the other also tends to fall). If there is a negative correlation, then one variable tends to decrease as the other

one grows, or vice versa. There may be little to no association between the variables if the correlation coefficient is near to 0.

3.6 Unit of Analysis:

Women entrepreneurship serves as the study's unit of analysis. The study mainly emphasizes on the importance of financial literacy and risk-taking behavior on women entrepreneurship.

3.7 Population:

A population is a collection of people and things related to a topic that needs to be studied. The collection of objects, events, and individuals connected to the study topic is referred to as the "population" (Flick, 2015). In this study woman entrepreneurs of Pakistan are the population.

3.7 Sample Size:

The definition of sampling is choosing the appropriate number of participants from a larger group to study with the goal of having these individuals represent the whole population (Leary, 2004). It's a crucial element as it impacts the reliability and generalizability of your findings. Quantitative sampling, like qualitative research, seeks to assemble a group of people who may either reflect a wider population or offer a particular type of information as a representative sample (McMillan, 1996). The study's sample size was 221 respondents for the proper representation of the population of women entrepreneurs.

3.8 Sampling Technique:

In this study, the convenience sampling approach was used. Convenience sampling involves reaching out to members of the population who are available and willing to take part. The researcher requested volunteers for this survey who had indicated that they would be ready to take

part in the research and complete the questionnaire. This sampling technique made it easier to obtain information from participants who were able and willing to respond.

3.9 Research Instrument:

For data collection a questionnaire is adopted from previous research papers (Mehta et al., 2022; Bilal et al., 2021; Zhuang et al., 2022; M Chhabra et al., 2023). The data for all of the study's variables financial knowledge, financial management skills (independent variables), risk taking behavior (mediator), and women entrepreneurship (dependent variable) were collected through questions in the survey. Financial Knowledge was measured by six items adopted from (Bilal et al., 2021), financial management skills was measured by six items adopted from (Mehta et al., 2022), risk-taking propensity was measured by five items adopted from (Zhuang et al., 2023) and women entrepreneurship was measured by three items adopted from (M Chhabra et al., 2023). Each item was scored on a Likert scale of 1 to 5. 1 was representing strongly disagree, 2 was representing disagree, 3 was representing Neutral, 4 was representing agree and 5 was representing strongly agree.

3.10 Data Collection Process:

The systematic approaches and strategies used to get appropriate data or information for study purposes are included in data collection procedures. This procedure is essential for producing empirical data and insights to successfully address research questions or hypotheses. The process of collecting primary data entails systematically obtaining authentic information straight from the source in order to fulfill the objectives of the research. Usually, this process starts with careful planning and design, during which researchers specify the study questions or hypotheses and choose the best tools and techniques for gathering data. Primary data collection techniques include

surveys, interviews, observations, experiments, or focus groups, depending on the study's objectives. The data collection tool used for collecting data for this study was a questionnaire. A total of 221 questionnaires were delivered among the participants. The questionnaire was provided to them through electronic version.

3.11 Data Analysis Technique:

To support decision-making in research, data analysis is the act of gathering, modeling, and interpreting data (Snyder, 2019). To examine the relationship between variables; financial literacy (financial knowledge and financial management skills), risk taking behavior and women entrepreneurship, the data for all the variables were gathered. Surveys will be used in this study to gather primary data. For quantitative research, surveys are the most appropriate type of method. The data collected from participants through survey was assessed by correlation analysis and regression analysis. The goal of the study was to use data analysis with the help of SPSS software to examine the relationships between women entrepreneurship (the dependent variable) and financial knowledge, financial management skills, and (the independent variables) and risk-taking behavior (the mediator).

3.12 Research Ethics:

The terms "research ethics" refer to the values and rules that control how research is carried out to guarantee objectivity, excellence, and participant respect. These guidelines are intended to uphold the integrity of the research process while safeguarding the welfare, rights, and dignity of study participants. To protect the integrity of the study and the participants' welfare, a number of ethical considerations were carefully taken into account when conducting this research. Study procedures, risks, benefits, and goal were explained to participants. Participants' personal information was kept

completely confidential. Anonymization of data was employed to protect privacy. The identity of the participants and other private data were only accessible to the researcher. The data was safely saved and only the researcher could access it. Efforts were made to reduce the potential harm to participants. Interactions took cultural sensitivities and settings into account. Stereotypes and biases based on gender were avoided since gender-specific issues were acknowledged. Everyone who took part was treated fairly. Ethical criteria guided the selection of appropriate research procedures. Regarding the study's objectives, transparency was maintained. Results were also presented in an honest and truthful manner.

Chapter 4: Data Analysis:

The methodology used in this research to investigate how the variables relate to one another under study is discussed in this chapter. The conceptual model facilitates comprehension of how the Financial Knowledge & Financial Management Skills affect the Women Entrepreneurship including Risk Taking Propensity. Numerous tests and analysis are used to investigate these correlations. To determine whether these variables are related to one another and have associations, correlation analysis is used. This analysis helps to identify any significant correlations or patterns between the variables. Furthermore, regression analysis is also used to examine the relationship between Financial Literacy factors predicts the Women Entrepreneurship including Risk Taking Propensity.

4.1 Descriptive Statistics:

The descriptive statistics table shows the means and standard deviations for every variable. The mean values show the respondents' agreement and disagreement levels with the questions. A propensity for respondents to agree is indicated by higher mean values, whilst a tendency for respondents to disagree is indicated by lower mean values.

Table 1: Descriptive Statistics

Variables	Minimum	Maximum	Mean	Std. Deviation
Financial Knowledge	14.00	35.00	30.438	3.071
Financial Management Skills	11.00	30.00	26.134	3.036
Risk Taking Propensity	5.00	25.00	20.365	3.119
Women Entrepreneurship	4.00	15.00	13.099	1.758

No of Samples=224

All the information related to the means, maximum and minimum as well as standard deviations of the variables is shown in the above given Table 1. Financial knowledge ranges from a minimum of 14.00 to a maximum of 35.00, whereas the mean value is 30.438, suggesting that participants generally have a high level of financial knowledge. The standard deviation is 3.071, indicating moderate variability around the mean value.

The mean value of 26.134 financial management skills indicates a relatively high level of proficiency in financial management among participants. Whereas the minimum and maximum values range from 11.00 to 30.00, a standard deviation of 3.036 suggests moderate dispersion around the mean, reflecting consistent financial management skills among respondents. The scores for risk-taking propensity vary between 5.00 and 25.00 and the mean score is 20.365, implying that participants generally exhibit a moderate to high inclination towards taking risks. With a standard deviation of 3.119, there is a moderate spread around the average score, indicating some variability in participants' risk-taking tendencies. Women entrepreneurship scores range from 4.00 to 15.00 and the mean score is 13.099, suggesting a high level of engagement or

capability in entrepreneurship among the women surveyed. A relatively low standard deviation of 1.758 implies limited variability, indicating that most participants score similarly on women entrepreneurship.

4.2 Reliability Analysis:

Scale consistency is referred to in psychometrics as reliability. Carlson et al. (2009) state that scales that is reliable yield results that are comparable in different circumstances. Reliability and internal consistency analyses were performed in order to estimate the scale. Cronbach alpha has a value between 0 and 1. A high Cronbach value denotes better reliability, while a low Cronbach value denotes poor scale and reliability. A value higher than 0.7 is regarded as an appropriate Cronbach alpha value.

Table 2: Reliability Analysis

Variables	Cronbach's Alpha Reliability	No. of Items
Financial Knowledge	.821	6
Financial Management Skills	.764	6
Risk Taking Propensity	.855	5
Women Entrepreneurship	.815	3

Table 2 above summarizes the reliability analysis using Cronbach's Alpha. The Cronbach's alpha value of 0.821 for financial knowledge and 0.815 for women entrepreneurship indicates high internal consistency and reliability. Whereas 0.764, the financial management skills scale

demonstrates good reliability and 0.855, indicating very high internal consistency reliability for the risk-taking propensity. Overall, the reliability coefficients indicate that the measurement scales for all these variables are reliable and consistent which is greater than 0.70. The high Cronbach's Alpha values across these variables support the dependability of the scales used in this research, affirming that the items within each scale are well-suited to measure their respective constructs.

4.3 Correlation Analysis:

To determine correlations between the variables, the current study performed correlation analysis. A correlation study was done to determine how two variables fluctuated and how much the variables varied together. Using a correlation that spans from -1 to +1, Pearson correlation analysis determines the kind and intensity of the association. When variables show positive indications, it means that move in together, and when they show negative indicators, it means they are going against each other. The "r" number indicates the strength of this connection as well. There is weak correlation when the Pearson coefficient is between .1 and .3, moderate correlation when it is between 0.3 and 0.5, and strong correlation when it is greater than 0.5. The variables' correlation findings are displayed below.

Table 3: Correlation Analysis

Variables	FK	FMS	RTP	WE
Financial Knowledge (FK)	1			
Financial Management Skills (FMS)	.719**	1		
Risk Taking Propensity (RTP)	.455**	.616**	1	
Women Entrepreneurship (WE)	.686**	.743**	.641**	1

***. Correlation is significant at the 0.01 level (2-tailed).*

A high positive link between financial knowledge and financial management skills is indicated by the correlation coefficient of financial knowledge (FK), which stands at 0.719**. The significance level ($p < 0.01$) confirms that this relationship is statistically significant, and the correlation coefficient of risk-taking propensity (RTP) is 0.455** reveals a moderate positive relationship between financial knowledge and risk-taking propensity. This indicates that as financial knowledge increases, the propensity to take risks also tends to increase. This correlation is statistically significant at the 0.01 level. Whereas the correlation of women entrepreneurship (WE) is 0.686** shows a strong positive relationship between financial knowledge and women entrepreneurship. This implies that women who possess greater financial literacy are more inclined to participate in entrepreneurial activities. The relationship is significant at the 0.01 level. Furthermore, the coefficient of risk-taking propensity (RTP) is 0.616** indicates a moderate to strong positive correlation between financial management skills and risk-taking propensity. This suggests that individuals with better financial management skills tend to have a higher propensity for taking risks. The correlation is statistically significant ($p < 0.01$) and the coefficient of women

entrepreneurship (WE) is 0.743** shows a strong positive relationship between financial management skills and women entrepreneurship. This implies that women with superior financial management skills are more likely to engage in entrepreneurial ventures. This relationship is statistically significant at the 0.01 level. And lastly the correlation of women entrepreneurship (WE) is 0.641** indicates a strong positive relationship between risk-taking propensity and women entrepreneurship. This suggests that individuals with a higher propensity to take risks are more inclined towards entrepreneurial activities. This correlation is statistically significant at the 0.01 level. These findings suggest that financial knowledge and management skills not only enhance risk-taking propensity but also play a crucial role in promoting entrepreneurial engagement among women. The strong and statistically significant correlations highlight their relevance in understanding and fostering women's entrepreneurship.

4.4 Regression Analysis:

The causal relationship and dependability between the variables have been demonstrated by regression analysis. The two types of regression used in this study were multiple regression and simple regression. Multiple regressions are used when a study has more than two factors, such as mediation and moderation, whereas linear regression is used when the study has two variables. The information below provides details on the two forms of regression that were used in this study

4.4.1 Simple Regression:

Table 3: Simple Regression

Hypothesis	Regression weights	Beta Coefficient	R Square	t value	P value
H1	FK→WE	0.689	0.471	14.30	<0.001

H1 hypothesis shows that the financial knowledge has significant impact on women entrepreneurship. The unstandardized regression weight for the relationship between financial knowledge (FK) and women entrepreneurship (WE) is 0.689. This indicates that for each unit increase in financial knowledge, women entrepreneurship increases by 0.689 units, and the standardized beta coefficient is 0.471. A beta coefficient of 0.471 suggests a moderate to strong positive relationship, meaning that as financial knowledge increases, women entrepreneurship also tends to increase. Whereas the R square value is 0.471. This indicates that approximately 47.1% of the variance in women entrepreneurship (WE) can be explained by financial knowledge (FK) and the t value is 14.30 which indicates that a high t value suggests that the regression coefficient is significantly, supporting the strength of the relationship between financial knowledge and women entrepreneurship. Furthermore, the p value is less than 0.001. This means there is a less than 0.1%. Consequently, we can confidently reject the null hypothesis, which posits that there is no relationship between financial knowledge and women entrepreneurship and accept the alternative hypothesis (H1) that financial knowledge positively influences women entrepreneurship.

Table 4: Simple Regression

Hypothesis	Regression weights	Beta Coefficient	R Square	t value	P value
H2	FMS→WE	0.743	0.553	16.55	<0.001

H2 hypothesis explain that there is a significant relationship between the financial management skills and women entrepreneurship. The unstandardized regression weight for the relationship between financial management skills (FMS) and women entrepreneurship (WE) is 0.743. This indicates that for each unit increase in financial management skills, women entrepreneurship increases by 0.743 units, while the standardized beta coefficient is 0.553. The t value of 16.55 represents the ratio of the estimated regression coefficient to its standard error. A high t value indicates that the relationship between financial management skills and women entrepreneurship is statistically significant. Whereas the value of R square is 0.553. This indicates that 55.3% of the variance in Women Entrepreneurship (WE) is explained by financial management skills (FMS). Additionally, the statistical significance of the observed link is demonstrated by the p-value, which is less than 0.001. There is less than a 0.1% possibility that this relationship is the result of random chance. Consequently, we can confidently reject the null hypothesis, which suggests no relationship between financial management skills and women entrepreneurship and accept the alternative hypothesis (H2) that financial management skills positively influence women entrepreneurship.

4.4.2 Multiple Regressions:

Process macros were used to carry out the mediation analysis in this study (Hayes, 2013). The risk-taking propensity as a mediator between financial literacy (financial knowledge and financial management skills) and women entrepreneurship was examined using multiple regression analysis.

Table 5: Mediation

Direct effects						
	Estimate	SE	T	P	<u>95% Confidence Interval</u>	
					Lower	Upper
Financial Knowledge →	0.285	0.02	10.469	<0.001	0.231	0.338
Women Entrepreneurship		7				
Indirect effects						
	Estimate	SE			<u>95% Confidence Interval</u>	
					Lower	Upper
Financial Knowledge →	0.108	0.03			0.042	0.181
Risk Taking Propensity →		6				
Women Entrepreneurship						
Total effects						
	Estimate	SE	T	P	<u>95% Confidence Interval</u>	
					Lower	Upper
Financial Knowledge →	0.392	0.02	13.952	<0.001	0.337	0.448
Women Entrepreneurship		8				

Table 5 shows the result of the mediation of hypothesis 3. Financial knowledge directly influences women entrepreneurship positively, with a coefficient of 0.285 (SE = 0.027,

$t = 10.469, p < 0.001$), suggesting that each unit increase in financial knowledge contributes to a 0.2846 unit increase in entrepreneurial activities among women. This relationship remains significant, as evidenced by the range of the confidence interval which is from 0.231 to 0.338. Whereas a significant indirect effect of financial knowledge on women entrepreneurship through risk-taking propensity, with an estimate of 0.108 ($SE = 0.036$) and the confidence interval from 0.042 to 0.181. This indicates that the effect of financial knowledge on women's entrepreneurial activities is mediated by risk-taking behavior. Furthermore, the total effect of financial knowledge on women entrepreneurship, combining both the direct and indirect effects, is significant and positive, with a coefficient of 0.392 ($SE = 0.028, t = 13.952, p < 0.001$). This effect indicated by the confidence interval from 0.337 to 0.448. So, the hypothesis 3 which explains a mediating effect between financial knowledge and the women entrepreneurship which shows that there is a mediation effect of risk-taking propensity between them. So, in this way the hypothesis will support the hypothesis.

Table 6: Mediation

Direct effects						
	Estimate	SE	T	P	<u>95% Confidence Interval</u>	
					Lower	Upper
Financial Management Skills	0.327	0.03	10.537	<0.001	0.266	0.388
→ Women Entrepreneurship		1				
Indirect effects						
	Estimate	SE			<u>95% Confidence Interval</u>	
					Lower	Upper
Financial Management Skills	0.105	0.03			0.049	0.173
→ Risk Taking Propensity		2				
Women Entrepreneurship						
Total effects						
	Estimate	SE	T	P	<u>95% Confidence Interval</u>	
					Lower	Upper
Financial Management Skills	0.432	0.02	16.567	<0.001	0.380	0.483
→ Women Entrepreneurship		6				

Table 6 shows the results of mediation of hypothesis 4. The direct effect of financialmanagement skills on women entrepreneurship is also significant and positive, with a coefficient

of 0.327 and a standard error of 0.031. The t-value is 10.537, and the p-value is less than 0.001, with a confidence interval ranging from 0.266 to 0.388. This implies that each unit increase in financial management skills directly enhances women’s entrepreneurial activities by 0.327 units. Whereas, the indirect effect mediated by risk-taking propensity, is 0.105 with a standard error of 0.032. The confidence interval is between 0.049 and 0.173. Furthermore, the total effect of financial management skills on women entrepreneurship, combining both direct and indirect pathways, is significant and positive. The coefficient is 0.4315 (SE = 0.0260, t = 16.5673, p < 0.001), with a confidence interval ranges from 0.3801to 0.4828. So, the hypothesis 4 which explains a mediating effect between financial management skills and the women entrepreneurship shows that there is a mediation effect of risk-taking propensity between them. So, in this way the hypothesis will support the hypothesis.

4.5 Summary of Hypothesis Tests:

Hypothesis	Statement	Result
H1	Financial knowledge has positive impact on women entrepreneurship in Pakistan.	Supported
H2	Financial management skills have positive impact on women entrepreneurship in Pakistan.	Supported
H3	Risk-taking propensity positively mediates the relationship between financial knowledge and women entrepreneurship in Pakistan.	Supported
H4	Risk-taking propensity positively mediates the relationship between financial management skills and women entrepreneurship in Pakistan.	Supported

Chapter 5: Conclusion and Recommendation:

5.1 Conclusion:

The purpose of this research is to explore the relationship between financial literacy and risk-taking propensity on women entrepreneurship in Pakistan. Financial literacy is considered as the independent variable, while women entrepreneurship is the dependent variable, with risk-taking propensity acting as the mediator. Employing a quantitative research design, this study analyzes data collected from a large sample of women entrepreneurs of SMEs in Pakistan. 221 responses were collected using a questionnaire. Responses were collected from the women entrepreneurs of SMEs in Pakistan. The questionnaire was based on 5-Likert scale. The data collected was analyzed by statistical test with the help of SPSS Software. Independent variables (financial knowledge, financial management skills) were experimentally tested with dependent variable (women entrepreneurship) and mediating role of risk-taking propensity to investigate the relationship between them. Through data analysis it is proved that there is a positive relation among them.

The significance level scale was used to assess the hypothesis H1, H2, and H3 and H4 in order to decide whether to accept or reject them. The unstandardized regression weight for the relationship between Financial Knowledge (FK) and Women Entrepreneurship (WE) is 0.689.

This indicates that for each unit increase in financial knowledge, women entrepreneurship increases by 0.689 units and the p value is less than 0.001, which indicates that the relationship is highly statistically significant. This means research hypothesis 1 was approved. The unstandardized regression weight for the relationship between Financial Management Skills (FMS) and Women Entrepreneurship (WE) is 0.743. This indicates that for each unit increase in financial management skills, women entrepreneurship increases by 0.743 units whereas, the p

value is less than 0.001, indicating that the observed relationship is highly statistically significant. This means research hypothesis 2 was approved. A significant indirect effect of Financial Knowledge on Women Entrepreneurship through Risk-Taking Propensity, with an estimate of 0.108 and the confidence interval from 0.042 to 0.181. This indicates that the effect of financial knowledge on women's entrepreneurial activities is mediated by risk-taking behavior. This means research hypothesis 3 was approved. A significant indirect effect of Financial Management Skills on Women Entrepreneurship through Risk-Taking Propensity, with an estimate of 0.105 and the confidence interval from 0.049 to 0.173. This indicates that the effect of financial management skills on women's entrepreneurial activities is mediated by risk-taking behavior. This means research hypothesis 4 was approved. As a result, this research indicates that increase in financial literacy (financial knowledge, financial management skills) increases the risk-taking propensity among women entrepreneurs of SMEs in Pakistan. Furthermore, by investigating how financial literacy impacts women's propensity to take risks in their business ventures, this research seeks to uncover critical insights that can inform policymaking and the design of targeted educational programs. Enhancing financial literacy and promoting positive risk-taking behaviors among women entrepreneurs could significantly improve their business outcomes and contribute to the broader economic development of Pakistan. Women's empowerment and entrepreneurial development are mutually reinforcing, claim Islam et al. (2018). The social, economic, and cultural spheres are more empowered for female entrepreneurs. Women's exposure to and influence over decisions made both inside and outside the family has increased as a result of their involvement in economic ventures. Women's organizations are a key area in expanding budgetary and improving tasks to support vulnerable women for their exceptional performance among various business tasks (Nasir et al., 2019) as well as Hussaini and Chibuzo (2018), have shown that financial inclusion offers supplementary and incremental ways to reduce poverty and

accomplish the MDGs. Making financial decisions is aided by financial knowledge. Financial fraud is less likely to occur when well-informed financial decisions are made regarding savings, banking, borrowing, and investments. The importance of financial knowledge has increased due to the complexity of financial products that are easily available to large audiences, such e-wallets and internet banking.

5.2 Research Implications:

5.2.1 Theoretical Implications:

This study explores a crucial facet of women's entrepreneurship in Pakistan by investigating the relationship between financial literacy and risk-taking propensity. The findings can have significant theoretical implications. By examining how financial literacy enables women to manage financial complexity and make informed choices, this thesis can refine our understanding of the factors that influence women's entrepreneurial behavior. Furthermore, it can shed light on how financial literacy programs can be designed to meet the specific needs of women entrepreneurs, potentially impacting broader theories on entrepreneurship development and financial inclusion.

5.2.2 Practical Implications:

This research has significant practical implications for those involved in empowering women entrepreneurs in Pakistan. By uncovering the link between financial literacy and risk-taking propensity, this thesis can inform the development of targeted programs. These courses can give women the financial literacy and competence they need to handle their money wisely, take calculated risks, and make wise decisions. This, in turn, can lead to increased access to funding, improved business management, and ultimately, a higher rate of success for women-led ventures in Pakistan. Furthermore, in order to properly mobilize women interested in business and provide

management and marketing skill training, the Ministry of Women Chamber of Commerce and Industry (WCCI) should take the appropriate measures. Women should also be provided with comprehensive information about microcredit lending programs offered by banks, the Small and Medium Enterprise Development Authority, and the Small Industries Development Board. The successful management of businesses by women entrepreneurs will be facilitated by this practice. The government should take the necessary steps to establish the Women Entrepreneur's Guidance Cell in order to facilitate the process for women across the state. Since empowering women and utilizing their labor force to the fullest results in the country's development and economic prosperity, industrial estates could serve as marketing venues for female entrepreneurs looking to showcase and sell their own goods. The results can also help policymakers build a more welcoming atmosphere for women entrepreneurs, promoting national economic expansion and women's empowerment.

5.3 Research Limitations:

The sample size and variety are important limitations that may restrict the generalizability of the results. The sample may not be large or varied enough to correctly represent the whole population of women entrepreneurs in Pakistan. Because of the study's heavy reliance on self-reported data, the accuracy and dependability of the replies may be compromised by biases such as social desirability bias and recollection bias. Additionally, the cross-sectional form of the study makes it challenging to demonstrate causation between the two variables, making it difficult to conclude whether financial literacy increases risk-taking or vice versa. Longitudinal studies are required for more robust causal inferences. The overall validity and reliability of the assessment tools used to evaluate risk-taking propensity, entrepreneurial success, and financial literacy may be lacking, which could have an impact on the robustness of the findings. Furthermore, it's

possible that the survey missed some of the subtle cultural, social, and economic differences between Pakistan's many areas, which play a significant role in influencing women's entrepreneurial endeavors. In today's technologically advanced society, factors like digital financial literacy—which is becoming more and more important—are not given enough thought. It's possible that the regulatory and policy environment—which has a big impact on entrepreneurship—isn't fully taken into consideration, missing important outside opportunities and limitations. The results of the study may be impacted by respondents' varying levels of access to financial resources, which plays a crucial role in figuring out their degree of financial literacy and risk-taking propensity. Furthermore, there isn't much research done on the influence of support systems and mentorship, which can be crucial in determining the success of an entrepreneur. Additionally, the study does not adequately investigate how behavioral and psychological characteristics of an individual can have a significant impact on risk-taking behavior and financial literacy. Lastly, a lack of attention is paid to the dynamics of interpersonal and communal support, as well as external factors like political unpredictability, economic downturns, and global financial crises, which may have a big impact on women's entrepreneurship. In order to contextualize the results and direct future research to close these gaps and expand on the findings, it is imperative to acknowledge these limitations.

5.4 Future Directions:

These are recommendations for further research.

1. In the future, to overcome the sample size problem, researchers might think about broadening the sample by including more individuals from different backgrounds. This will improve the representativeness and generalizability of the results.
2. Examine the aspects of financial literacy (such as risk management, investing expertise,

- and budgeting) that have the biggest effects on Pakistani women's business decisions.
3. Analyze the effectiveness of different financial literacy program delivery strategies for Pakistani women entrepreneurs, including workshops, online courses, and peer-to-peer learning.
 4. Examine the long-term effects of financial literacy initiatives on Pakistani women-owned enterprises' viability and expansion.
 5. Distinguish between risk tolerance (comfort level with uncertainty) and risk-taking behavior (actual actions involving risk) in the context of Pakistani women's entrepreneurship.
 6. the risk-management techniques used by prosperous Pakistani women businessowners and the ways in which financial literacy initiatives might apply these techniques.
 7. Assess the contribution of risk management and financial literacy to the empowerment of women entrepreneurs in Pakistan via the lens of microfinance programs.
 8. Examine how women entrepreneurs are affected by digital financial literacy, paying particular attention to how they utilize digital financial platforms and tools.
 9. Evaluate how peer networks, professional support systems, and mentoring influence risk-taking and entrepreneurial success by acting as a moderator of the impacts of financial literacy.
 10. Assess the efficacy of current initiatives and policies targeted at improving financial literacy among female entrepreneurs and make recommendations for enhancements in light of empirical data.
 11. Assess how well technology-enhanced educational resources—like smartphone applications and online courses—work to promote entrepreneurial skills and financial literacy.

12. Plan training sessions and workshops with government funding that are especially intended for female entrepreneurs and that concentrate on risk assessment, financial management, and strategic planning.
13. Collaborate with technology companies to create user-friendly digital financial tools tailored to women entrepreneurs' needs.
14. Conduct impact analyses of current policies and initiatives to pinpoint areas that require change and successful tactics.
15. Encourage private businesses to include assistance for female entrepreneurs in their corporate social responsibility activities.

Research Questionnaire:

Section A: Demographic Information

1. Age:

18-25

26-35

36-45

46-55

56 and above

2. Education Level:

Primary

Secondary

Bachelor's Degree

Master's Degree

Doctorate

3. Marital Status:

Single

Married

Divorced

Widowed

4. Years in Business:

Less than 1 year

1-3 years

4-6 years

7-10 years

More than 10 year

Section B: Independent Variable

Financial Knowledge (Bilal et al., 2021)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am familiar with the principles of insurance and the types of insurance coverage available.					
I am aware of the importance of credit scores and how they affect my financial standing.					
I understand the concept of risk and return in investment decision making.					
I can explain the concept of interest rates and their impact on borrowing and saving.					

I have knowledge about different types of financial products and services available in the market.					
I am familiar with basic financial concepts such as budgeting, savings, and financial planning.					

Financial Management Skills (Mehta et al., 2022)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I adapt to changing financial circumstances and make adjustments to my financial plans.					
I have strategies in place for managing debt, including loan repayment, and minimizing interest costs.					
I am skilled in managing cash flow, including monitoring income and expenses, and optimizing working capital.					

<p>I am very confident in my ability to develop and implement financial plans to achieve my business goals.</p>					
<p>I regularly review and analyze my financial statements to assess the financial health of my business.</p>					
<p>I effectively manage my personal or business finances, including budgeting and expense tracking.</p>					

Section: C Mediator

Risk-Taking Propensity (Zhuang et al., 2022)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am willing to take higher risks for higher returns.					
I am ready to take risks.					
I take chances regardless of the risks.					
I prefer a business that offers high returns with high risks over a secure job with a steady salary.					

I do not fear moving into a new undertaking I know nothing about.					
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Section: D Dependent Variable

Women Entrepreneurship (M Chhabra et al., 2023)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I have the capacity to identify potentially valuable business opportunities accurately.					
I am able to gather the resources required to run a business venture.					

I am able to seize high-quality business opportunities.					
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