DECODING THE FEMALE INVESTOR:
The Interplay of Attitudes and Decision-Making Factors

Anam QAMAR*, Areesha RIZWAN** and Zoya Hanif KHAN***

Abstract

The purpose of this research paper is to identify how market, social, and personal factors, along with loss aversion and regret bias, influence women's stock investment decisions, mediated by women's investment attitudes in the context of Pakistan. An explanatory study was conducted with a sample of 152 respondents. Using a deductive approach, data were collected through a questionnaire survey and analysed using PLS-SEM and SPSS. The findings indicate a significant positive impact of market, social, and personal factors, as well as regret bias, on women's investment decisions. Regret bias mediates women's investment attitudes, whereas loss aversion shows no significance. This study's significance is that it helps women understand these choices and options well so they can invest wisely. Their financial knowledge and independence will ultimately increase while keeping in view the possible impact of the identified factors. The study can assist in diminishing the gender gap between men and women and can make the economic world more comprehensive and competitive.

Keywords: Market facets, Social facets, Personal facets, Loss Aversion, Regret Bias, Women Stock Investors, Women Investment Attitude, Women Investment Decision-Making Styles.
JEL Classification: G11, G41, J16, M21, M50.

I. Introduction

Over an extended period, financial markets have improved with technological advancement; there are now numerous alternatives available to consumers for financial information, and the sophistication of information availability has increased (Sahi, 2017; Fang & Qamruzzaman, 2021). Traditionally, economic models, particularly efficient market hypothesis (EMH), presented investors as unemotional, free from all biases and other cognitive factors, and assumed share prices reflected all the available information and financial markets were functioned by rational actors who were major and solely focused on maximizing their wealth and returns, and only took logical decisions despite any anomalies (Putri et al., 2021). However, in the financial sector, in-

* Assistant Professor, **Research Scholar, Jinnah University for Women, Karachi, Pakistan.

vestors can make rational or irrational decisions based solely on their available knowledge, a subject of debate in traditional and behavioural finance (Kumar & Goyal, 2015). The rise of behavioral finance challenges old views and acknowledges that human beings have emotions, feelings, some psychological factors, and economic, political, cultural, and social influences which may significantly impact investors' attitudes and investment decisions, exposing a more nuanced reality where investor attitude can deviate from reason and instinct (Andriamahery & Qamruzzaman, 2022; Ritika & Kishor, 2022).

Women are participating in the stock market in exponentially increasing numbers. Research suggests that they may exhibit behavioural patterns different from those of men, contrary to the traditional model (Dawson, 2023). Women are more likely to see their parents as positive financial role models, which influences their financial behaviour and choice of financial products, while men are more financially literate and prefer long-term investing; however, women are less financially literate, more risk-averse, and choose to invest in safe products (Uifălean, 2024). Biases exert greater influence on decision-making regarding higher-risk options. Gender is important because female investors are more likely to exhibit risk-averse behaviour, thereby reducing the impact of these biases on their investment decisions. Alternatively stated, both genders are prone to these behavioural biases; however, women tend to have lower risk tolerance, which consequently makes their investment decisions more conservative (Hussain et al., 2023). By identifying the potential challenges and opportunities women investors face, we can develop targeted strategies to build women's financial knowledge and confidence, thereby helping them navigate the stock market effectively. Pakistan is currently facing critical economic conditions, with surging global commodity prices and contracting financing conditions.

These challenges also disproportionately affect women, who comprise more than half of the population and are significantly deprived of financial access, economic empowerment, educational services, health care, political participation, and decision-making power (Zahid et al., 2024). Women in Pakistan are increasingly recognized in society and in their respective fields of work. Despite this, Standard finance theory assumes that investors act rationally and prioritize maximizing returns by taking calculated risks. On the other hand, behavioural finance sheds light on the influence of socioeconomic phenomena and psychological, personal, emotional, and behavioural factors on investment decisions.

According to the World Economic Forum's 2024 Gender Gap Report, Pakistan ranks 142nd out of 146 countries in terms of gender disparity. According to the Institute of Industrial & Professional Skills (IIPS, 2023), female labour force participation declined from 24 per cent in 2016 to 22 per cent in 2021. Although there has been some progress in recent years, a considerable gender disparity persists in financial access and investment in Pakistan. As of 2025, women account for 37 million active bank accounts, and the gender disparity in financial inclusion has decreased from 39 per cent to 30 per

cent (Profit Pakistan, 2025). Despite this progress, just 14 per cent of women and 56 per cent of men have access to formal financial services (Dawn, 2025). This is particularly relevant when considering the increasing segment of women investors. Females' investment decisions may differ from those in traditional financial models. The increased level of financial literacy and other promotional measures have contributed to a gradual yet steady increase in female participation in Pakistan's financial markets.

Nevertheless, women's investment activities remain constrained by cultural, social, and psychological barriers. According to PSX data, female investors account for less than 20 per cent of the total active retail investor base, indicating a notable gender gap in financial market participation. According to a survey by the Pakistan Bureau of Statistics, women typically invest in low-risk securities, including prize bonds, National Savings Certificates, and fixed deposits, which have constrained returns and a government guarantee. Pakistan is a collectivist society in which mutual goals are preferred over individual ones. Moreover, the country is ranked as the most religious country in Asia, with religiosity statistics of 98 per cent hence, these cultural and religious norms also play a very significant role in shaping women's attitudes and their considerable participation in financial matters (Ali, 2018; Hofstede, 2011; Syed et al., 2025). Significantly, fewer women invest in high-risk assets such as equities, mutual funds, or real estate. Only about 5-7 per cent of women investors in Pakistan are considered equity holders, compared with 25-30 per cent of men (Annual Report, Pakistan Stock Exchange, 2023). It is anticipated that these investigations will provide evidence on how female investors make decisions, thereby increasing consideration of the financial environment. This study will examine the influence of socioeconomic determinants, including market and societal pressures, as well as behavioural factors that prompt women's investment decisions. The research questions are as follows:

RQ1: What is the influence of behavioural facets on women's investment decisions mediated by women's investment attitude?

RQ2: What is the influence of market, social, and personal facets on women's investment decisions mediated by women's investment attitude?

The emphasis of this study is on how women's investment decisions are influenced by socioeconomic, behavioral, and personal factors. These aspects are crucial because they provide insight into women's financial habits. By appreciating these aspects, one can comprehend how a woman's upbringing, personality, and behavior influence her decision-making. Because the study makes the financial world more accessible, it can help close the gender gap between men and women. The foremost contribution of the study is that it will provide results for Pakistani women investors regarding the aforementioned independent variables. The study's findings will benefit financial advisors, policymakers, and women investors.

The remainder of this paper is organised as follows. Section II provides a thorough review of the literature and eventually the formulation of hypotheses. Section III outlines the research methodology. Section IV presents and interprets the empirical results of this investigation. Lastly, Section V concludes the paper by presenting the theoretical and practical implications, recommendations, and limitations of this study.

II. Literature Review

1. Theoretical Exposition

Prospect theory was developed in 1979 by Daniel Kahneman and Amos Tversky. This behavioural economic theory explains how people balance prospective benefits and costs when faced with uncertainty. The conventional expected utility theory holds that people make rational decisions by maximising their utility. According to prospect theory, people perceive gains and losses differently and exhibit loss aversion, which makes losses seem more salient than gains of the same magnitude. According to Pushpa et al. (2023), this cognitive bias has significantly impeded decision-making, particularly in sectors such as banking and investing. Women investors may be more prone to losses when they are associated with equivalent earnings. This would eventually lead to a more vigilant approach to investment decisions when the risk of loss outweighs potential profits. Since this behavioural bias would significantly obstruct their attitude and investment decisions (Iram et al., 2024).

2. Women's Investment Decision

Research indicates that women are increasingly emerging as key players in the market due to their unique characteristics and strategies. In contrast, men have traditionally prevailed on the basis of equity positions (Furrebøe et al., 2023). Socioeconomic factors, mental accounting, and regret bias influence the investment behaviour of individual investors (Panja, 2023). According to Sushmitha & Jayabal (2025), women with high confidence in managing money (financial self-efficacy) were more interested in holding investments, mortgages, and savings accounts, and less likely to have debt instruments such as credit cards and loans. Another study examines financial literacy in relation to demographic and socioeconomic factors. It defines financial literacy as comprising three dimensions: financial knowledge, attitudes, and behaviours (Rehman & Mia, 2024). Studies provide evidence that males outperform females in financial knowledge. Gambetti & Giusberti (2019) suggest that decision-making styles play an important role in investment decisions; individuals with a rational style are more likely to invest than those with an avoidant style.

3.   Hypothesis Development

a)   Market Force and Women's Investment Decision

Women's investment decisions are the plans and strategies used by female investors to allocate their funds across securities such as stocks, bonds, mutual funds, and real estate. Such decisions are strongly influenced by factors such as risk tolerance, financial planning, financial knowledge, and socioeconomic conditions (Barber & Odean, 2001). On the other hand, Singh & Biswas (2024) identify market factors as external conditions, including economic trends, interest rates, inflation, and market competition, which affect financial markets and investment decisions. These aspects depict the inclusive market environment and play a significant role in shaping the pricing and behaviour of financial assets (Fama, 1970). Women's investment attitudes encompass the stances, nature, characteristics, temperament, and strategies that female investors adopt when investing in financial securities. It encompasses risk tolerance, investment confidence, decision-making, and the social and psychological facets of women investors. Individuals do not always make rational choices; therefore, such decisions are primarily shaped by women investors' financial skills (Kappal & Rastogi, 2020; Mahmood et al., 2024). Market conditions are capricious; women may adopt a more risk-averse attitude toward investments due to fear of impending losses (Dawson, 2023). Women, especially those more sensitive to loss aversion (as described in prospect theory), may adopt cautious or conservative attitudes in response to negative market signals. In contrast, favourable market conditions may foster more optimistic attitudes toward investment (Pacheco et al., 2023). This relationship hypothesis is:

H_1: Market factors significantly affect women's investment decisions, with investment attitude mediating this effect.

b)   Social Factors and Women's Investment Decision

Social factors are those derived from one's social environment, including family, friends, culture, and society (Xia & Madni, 2024). These factors are valuable for outlining behaviours, attitudes, and decisions by providing standards and potentials that individuals are persuaded to adopt (Ajzen, 1991). Social factors that influence investment decisions include social structure, cultural norms, political views, religious views, family structure, and family financial budget. Socio-economic factors, mental accounting, and regret bias influence the investment behaviour of individual investors (Kumar et al., 2024). Studies provide evidence that males perform better than females in financial knowledge; however, females outperform males in financial behaviour and financial attitudes (Kadoya & Khan, 2020). Moreover, findings from the literature indicate that economic, psychological, demographic, and social factors are the leading

components shaping themes concerning the outcomes of financial literacy on investment decisions, demographic factors, and program effectiveness, and that these gaps exist in the financial literacy literature (Sarpong-Kumankoma et al., 2023). This relationship hypothesis is:

H_2: *Social factors significantly affect women's investment decisions, with investment attitude mediating this effect.*

c) *Personal Factors and Women's Investment Decision*

Personal factors are the behaviours, traits, and features of the individual, such as personality, values, lifestyle, and demographic attributes, that affect an investor's decision-making when investing in financial securities (Vuković & Pivac, 2024). Personal factors refer to contradictions that influence investment decisions shaped by investors' personalities and can negatively affect their wealth (Hussain et al., 2021). The study by Gupta (2025) aimed to examine the significance of individuals' financial self-efficacy, using psychometric instruments to explain their behaviour toward their fiancé (e). Women with high confidence in managing money (financial self-efficacy) were more interested in maintaining investments, mortgages, and savings accounts, and less likely to hold debt instruments such as credit cards and loans. Gambetti & Giusberti (2019) examined the associations among personality, decision-making styles, and investment perceptions and decisions using the Sixteen Personality Factor. Finally, the study suggests that self-control, as well as anxiety, can affect investment decisions through decision-making styles. This relationship hypothesis is:

H_3: *Personal factors significantly affect women's investment decisions, with investment attitude mediating this effect.*

d) *Loss Aversion Bias and Women's Investment Decision*

Loss aversion is based on research by two psychologists, Daniel Kahneman and Amos Tversky, conducted in 1979. Loss aversion points out the fact that every individual feels different levels of mental distress, even if they get the same amount of loss or gain. Almansour et al. (2025) show that people feel less happy when gaining a certain amount of money but feel more upset when losing the same amount. Moreover, a loss following a prior loss feels worse than a loss following a gain. If investors' predictions match actual outcomes, they can make informed decisions (Ngoc, 2014). Loss Aversion Bias affects Women's Investment Attitudes, which in turn shape women's Investment Decisions. The greater the loss aversion, the more conservative the investment attitude becomes; this cautious attitude, in turn, leads to safer, lower-risk investment decisions (Dolder & Vandenbroucke, 2024). This relationship hypothesis is:

H_4: Loss aversion bias significantly impacts women's investment decisions, with the mediating role of women's investment attitude

e) *Regret Bias and Women's Investment Decision*

Regret bias refers to an individual's tendency to anticipate regret when a decision is unsatisfactory or inefficient. The fact will lead them to modify their choices to evade the emotion of regret (Baulkaran & Jain, 2024). Regret bias frequently leads to overly
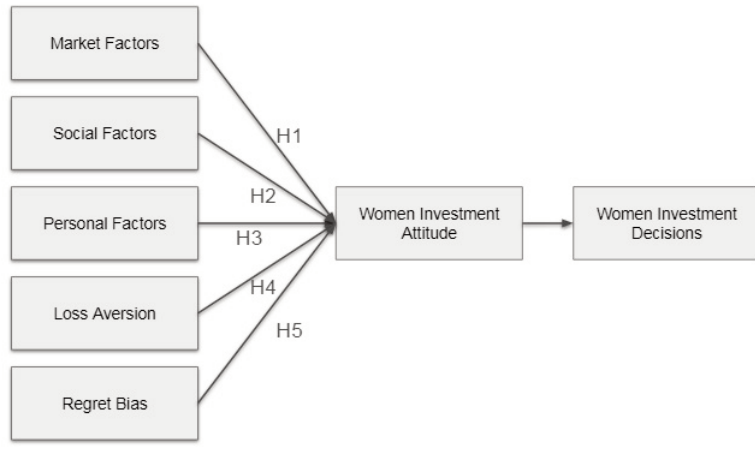

FIGURE 1

Theoretical Framework of the Study

traditional choices, as people seek to minimise anticipated future regret (Iram et al., 2024). Once shaped by regret bias, women's investment attitude will significantly impact their actual investment decisions. A cautious or regret-averse attitude leads to safer, more conservative investment choices, as women aim to avoid future regret from potential losses. This means they are more likely to choose secure investments, such as bonds or low-risk funds, over riskier assets, such as stocks or cryptocurrencies, even when the potential for higher returns exists. This relationship hypothesis is

H_5: Regret bias significantly affects women's investment decisions, with investment attitude mediating this effect.

4. *Theoretical Framework*

Figure 1 depicts the theoretical framework of this study, which comprises market, social, and personal factors, as well as loss aversion and regret bias, as independent variables. Women's investment attitude is treated as a mediator variable, and women's

investment decisions are treated as the dependent variable. The proposed theoretical framework is designed to assess the potential impact of certain rational and irrational facets on women's investment decisions within the context of a developing country, specifically Pakistan. By integrating market- and individual-level factors with behavioural biases, the framework offers a comprehensive approach to understanding how these determinants shape investment attitudes and, ultimately, investment decision-making strategies among women investors.

III. Methodology

1. Data Description

This study aims to determine whether market, social, and personal factors, as well as loss aversion and regret bias, influence women's investment decisions, with women's investment attitude serving as a mediating variable. Thus, all women in Pakistan who previously invested in stocks are considered the study population. The study participants are women from various educational backgrounds, including matriculation, undergraduate, graduate, and postgraduate levels. Because the population for this study is large, a sample is drawn as a subset representative of the entire population. Because the number of women investing in the stock market is large, we could not collect data from each of them; therefore, we used a sample of 152 respondents. The sampling technique used was convenience sampling. Data are collected from all individuals willing to respond, but respondents must have some experience and knowledge of stock market investing. This condition was applied on the assumption that individuals investing must have some savings, which will genuinely measure their self-control. The study employs convenience sampling because of its alignment with practical and theoretical limitations, this approach is suggested when a research cannot incorporate the whole population due to resources and time limitations since this study aims to assess the relationship between the mentioned variables instead of inferring from whole population therefore convenience sampling technique is considered feasible for the stated purpose (Sekaran & Bougie, 2016; Saunders et al., 2019; Bryman & Bell, 2015). Data are analysed using PLS-SEM.

2. Measures

This research employed quantitative methods for data collection; the closed-ended questionnaire comprised 37 items across eight sections. The first section is based on demographics. Then began variable measurement based on the Likert scale. Wherein market factors comprise four items drawn from research papers by Klapper et al. (2013), Mandell & Klein (2009), Musundi (2014), and Almenberg & Dreber (2015). Then take five items for social factors have been derived from (Klapper et al., 2013;

Lusardi, 2015; Musundi, 2014); 4 items for the personal factors adopted from (Asaad, 2015; Klapper et al., 2013; Lusardi, 2015); loss aversion is measured by four items taking from (Lusardi, 2015; Asaad, 2015; Almenberg & Dreber, 2015); regret bias then calculated through 4 items contain from (Klapper et al., 2013; Musundi, 2014); women investment attitude is premeditated with six items; lastly measured women investment decision consist of 5 items based on (Musundi, 2014; Assad, 2015) research papers. All variables are measured using a five-point Likert scale. Each value ranges from strongly disagree (1) to strongly agree (5), with disagree (2), neutral (3), and agree (4) in between.

3. *Data Analysis*

This study employed Smart PLS (3) and SPSS version 21, a statistical program, to analyse the data using PLS-SEM. Partial Least Square Structure Equation Modeling (PLS-SEM) is a multivariate data analysis technique that is capable to produce robust results even if the sample size is smaller or the data is not normally distributed which is the primary concern in social sciences, it included both reflective and formative constructs, the goal of PLS-SEM is theory prediction instead of theory confirmation all these characteristics of PLS-SEM are aligned with the stated research objectives (Hair et al., 2022). Hair et al. (2019) proposed the use of PLS-SEM. In a similar vein, Ringle et al. (2023) posited that this approach facilitates the relationships among variables and is appropriate for concurrently predicting a set of equations in the proposed research model. This research employs PLS-SEM, a validated reporting method, to conduct a thorough analysis in the field of management science. For theoretically constructed linear and additive causal links, SEM, a second-generation multidimensional data analysis tool, is the appropriate approach (Ahmed et al., 2024). Researchers can investigate the connections between concepts using this method. Because it can examine latent characteristics that are difficult to observe, SME is well-suited to measuring direct and indirect pathways. The inner and outer model analyses that constitute structural equation modelling (SEM) examine relationships among independent and dependent variables, as well as between latent constructs and their indicators.

a) *Demographic Characteristics of Respondents*

Table 1 displays the demographic factors of the respondents, including the frequency and percentage of age, marital status, educational status, annual income, and the amount they save annually. According to the data, there are more female respondents aged 33–40. In terms of educational status, most women are postgraduate, accounting for 34.9 per cent. Most women (45.4 per cent) have an annual income above Rs. 200,000, and most of them save less than Rs. 25,000. In the context of country like Pakistan, the sources of incomes for females' households depends upon multiple

sources such as family, joint house hold earnings, home based startups or any other forms of financial support since the sample of the study represents that most of the un-married women may still have personal savings, or other sources of income like part time jobs, internships, academic financial support. Therefore, rather than suggesting full-time employment by all participants, the stated income and savings data reveal the primary financial resources available to the respondents.

TABLE 1

Demographic Characteristics

Descriptive	Frequency	Percentage
Age		
18-25	39	25.70%
26-32	35	23.00%
33-40	45	29.60%
40 above	33	21.70%
Marital status		
Single	75	49.30%
Married	77	50.70%
Educational status		
Matriculate	20	13.20%
Undergraduate	20	13.20%
Graduate	49	32.20%
Post graduate	53	34.90%
Other	10	06.50%
Annual Income		
Below Rs. 50,000	13	08.60%
Rs. 50,000 – 100,000	11	07.20%
Rs. 100,000 – Rs. 150,000	26	17.10%
Rs. 150,000 – Rs. 200,000	33	21.70%
Rs. 200,000 above	69	45.40%
Save annually		
Below Rs. 25,000	41	27.00%
Rs. 25,000 - RS. 75,000	35	23.00%
Rs. 75,000 - RS. 125,000	30	19.70%
Rs. 125,000 - Rs. 200,000	30	19.70%
Rs. 200,000 above	16	10.50%

Source: Authors' estimation.

Note: The table provides the details about the demographic details of the respondents generated through the software SPSS Version 21.

b) *Reliability and Validity*

In Table 2, initially, to assess the sustainability of our measurement model, we conducted a diagnostic test to investigate its reliability and validity. The hypothesis was estimated by using a total of seven variables, out of which 5 are independent variables, 1 is a mediating variable, and 1 is the dependent variable. These variables were evaluated by using four items each. The threshold of Cronbach's alpha and composite reliability is above 0.7. The variables Regret bias, Social Factor, and Women's investment attitude had Cronbach's alpha values greater than 0.7, indicating acceptable internal consistency. Whereas, the variables Loss aversion, Market factor, Personal factor, and Women's investment decision had Cronbach's alpha below 0.7. When evaluating composite reliability, variables such as Market factors, Personal factors, regret bias, social factors, and Women's investment attitude have values above 0.7. In contrast, variables such as Loss aversion and women's investment attitude have values below 0.7. The AVE (Average Variance Extracted) for each variable should exceed 0.5, indicating satisfactory convergence. The variables Market factors, personal factors, regret bias, social factors, and women's investment decisions had AVE values above 0.5.

c) *Outer Loadings*

Table 3 appears to represent a factor-loading matrix or an outer-model loadings table from a Confirmatory Factor Analysis (CFA) Structural Equation Modelling (SEM) analysis. Each latent construct (e.g., LA, MF, PF, RB, SF, WIA, WID) appears to be associated with several observed variables or indicators, and the corresponding values represent the loadings (correlations) of these indicators with their respective

TABLE 2

Reliability and Validity

Variables	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	(AVE)
Loss Aversion (LA)	0.640	0.646	0.786	0.481
Market Factors (MF)	0.697	0.711	0.812	0.521
Personal Factors (PF)	0.698	0.707	0.814	0.523
Regret Bias (RB)	0.704	0.725	0.816	0.527
Social Factors (SF)	0.797	0.804	0.861	0.555
Women's Investment Attitude (WIA)	0.794	0.800	0.854	0.495
Women's Investment Decision (WID)	0.692	0.699	0.813	0.522

Source: Authors' estimation.

Note: The table depicts the details of reliability and validity of data generated through PLS-SEM algorithm using PLS-SEM.

TABLE 3

Factor Outer Loadings

	LA	MF	PF	RB	SF	WIA	WID
LA1	0.736						
LA2	0.735						
LA3	0.670						
LA4	0.625						
MF1		0.708					
MF2		0.801					
MF3		0.651					
MF4		0.718					
PF1			0.690				
PF2			0.794				
PF3			0.724				
PF4			0.679				
RB1				0.780			
RB2				0.611			
RB3				0.729			
RB4				0.773			
SF1					0.764		
SF2					0.699		
SF3					0.787		
SF4					0.643		
SF5					0.820		
WIA1						0.712	
WIA2						0.726	
WIA3						0.644	
WIA4						0.791	
WIA5						0.652	
WIA6						0.685	
WID1							0.712
WID2							0.699
WID3							0.805
WID4							0.665

Source: Authors' estimation.

Note: The table depicts the details of reliability and validity of data generated through PLS-SEM algorithm using PLS-SEM.

constructs. This outer model loading table indicates that the indicators generally have a good fit with their respective latent constructs, with most loadings exceeding 0.7. There are a few exceptions in which loadings are slightly lower (e.g., SF4, WIA3), but overall, the model appears well-structured in explaining the relationships between the latent variables and their indicators.

d) *Discriminant Validity*

The Heterotrait-monotrait ratio (HTMT) is the modern standard for assessing and computing the discriminant validity in Table 4. Values of the Heterotrait-monotrait ratio should be lower than 0.9. Discriminant validity is established between two measured variables when HTMT values are below 0.9. When it exceeds 0.9, it means that discriminant validity is not present. Henseler et al. (2015) construct that are theoretically related may naturally exhibit higher HTMT ratios, and such overlap does not automatically indicate poor discriminant validity. Notably, the majority of HTMT values in our model remain below or near the recommended threshold of 0.90, providing overall evidence of discriminant validity. Therefore, although some closely related constructs exhibit high correlations, this reflects their inherent conceptual similarity rather than a measurement artefact.

e) *Fornell-Larcker Ccriterion*

The Fornell and Larcker (1981) test is used to measure Discriminant validity. The construction of discriminant validity establishes the construct's distinctiveness and controls for phenomena not expected by others, indicating that correlations with other constructs should be lower than the square root of the diagonal element. Therefore,

TABLE 4
Heterotrait-Monotrait Ratio (HTMT)

	LA	MF	PF	RB	SF	WIA	WID
LA							
MF	0.994						
PF	0.928	0.723					
RB	0.933	0.823	0.752				
SF	0.936	0.855	0.869	0.989			
WIA	0.977	0.868	0.785	0.919	0.870		
WID	0.558	0.646	0.731	0.742	0.884	0.952	

Source: Authors' estimation.

Note: The table depicts the HTMT ratio of the variables using measurement model to ascertain discriminant validity of the reflective constructs generated through using PLS-SEM.

TABLE 5

Fornell-Larcker Criterion

	LA	MF	PF	RB	SF	WIA	WID
LA	0.693						
MF	0.647	0.722					
PF	0.642	0.525	0.723				
RB	0.623	0.912	0.544	0.726			
SF	0.669	0.654	0.655	0.769	0.745		
WIA	0.706	0.666	0.821	0.715	0.941	0.703	
WID	0.798	0.454	0.826	0.53	0.655	0.711	0.722

Source: Authors' estimation.

Note: The table depicts the Fornell-Larcker criterion ratio of the variables using the measurement model. The diagonal values of AVE must be greater than the off-diagonal correlations to ascertain discriminant validity of the reflective constructs generated through using PLS-SEM.

discriminant validity is the standards that measure the dissimilarity of a variable from the others (León et al., 2025). Table 5 characterises the validity of the variables used in the study. Furthermore, the Heterotrait-monotrait ratio (HTMT) is a modern criterion for assessing discriminant validity. According to Table 5, Heterotrait-monotrait ratio (HTMT) values of the construct should be under the recommended value of 0.9 (Henseler et al., 2015), which in that way authenticates that the discriminant validity is recognised.
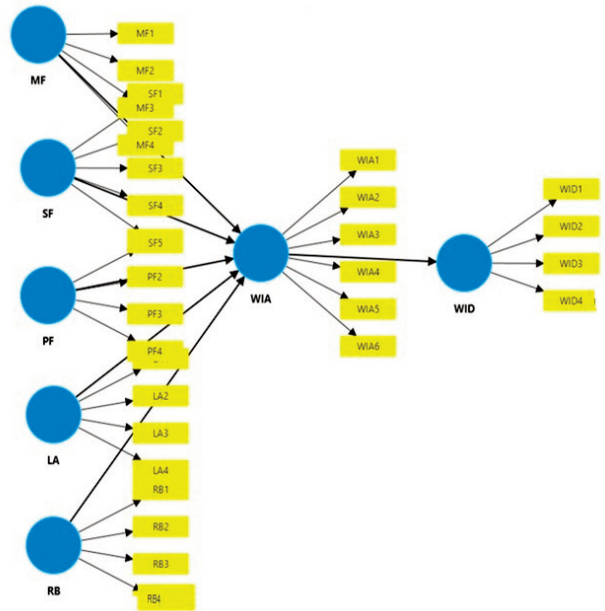
4.   *Hypotheses Testing*

a)   *Partial Least Squares Structural Equation Modelling*

The model-based hypotheses have been scrutinised using structural equation modelling. To obtain the study model's relevant results, which are essential for assessing the hypotheses and other key statistical data, this study used the Smart PLS bootstrapping method for hypothesis testing and the PLS-SEM algorithm for reliability and validity analysis. The original dataset is taken as a subsample for bootstrapping. The quantity of observations in each bootstrap subsample is equivalent to the number in the original sample.

b)   *Indirect Effects*

Table 6: Specific Indirect effects employed to examine the mediating effect on the variables. It is confirmed that women's investment attitudes mediate the positive relationship between market factors, personal factors, regret bias, and social factors, and

Source: Authors' estimation.

FIGURE 2

PLS-SEM Algorithm

women's investment decisions. However, there is no relationship between loss aversion and women's investment attitude. Moreover, there is no mediating relationship between loss aversion and women's investment attitude.

TABLE 6

Path Analysis

S#	Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Results
H_1	MF -> WIA -> WID	0.191	0.195	0.037	5.160	0.000	Accepted
H_2	SF -> WIA -> WID	0.571	0.571	0.037	15.266	0.000	Accepted
H_3	PF -> WIA -> WID	0.246	0.248	0.028	8.757	0.000	Accepted
H_4	LA -> WIA -> WID	-0.021	-0.017	0.020	1.086	0.277	Rejected
H_5	RB -> WIA -> WID	-0.226	-0.230	0.041	5.476	0.000	Accepted

Source: Authors' estimation.

Note: The table depicts the path analysis generated through bootstrapping through structural model using PLS-SEM..

IV. Results and Discussion

In line with the Women-centric intrinsic approach and in the context of the prospectus, this research provides insights into how women's attitudes affect key investment outcomes in investment decision-making. This research adds to our understanding of women's decision investment and supports the hypothesis that, in the context of developing nations. Women's decision investment and antecedents, including market forces, social factors, personal factors, and women's attitudes, are positively correlated. The following section presents the study's findings and their applicability to prior research.

H$_1$: The findings of the impact of market factors on women's investment decisions concerning the mediating role of women's investment attitude indicate that 81.6 per cent of women equity investors' investment behaviour is influenced by changes in stock prices that affect their intention towards investment in the stock market. In comparison, 7.9 per cent of women investors disagreed, and the remaining 10.5 per cent were neutral regarding the relationship between stock price changes and women's investment decisions. These results exhibit that our hypothesis is rejected (Barber & Odean, 2001). The questionnaire assessed the importance of market information for stock investors, and the survey outcomes indicated that most respondents strongly agreed or agreed, with 3.3 per cent disagreeing and 3.3 per cent neutral. Additionally, our survey includes questions about considering past trends and tracking market changes for stock investments; the data indicate that most women investors follow market dynamics and consider past trends before investing in the stock market (Dawson, 2023). The results indicate that most women investors' attitudes are significantly related to market factors, suggesting that market information for women investors is substantial, including market dynamics, past trends, and changes in stock prices.

H$_2$: One of the objectives of this research is to find the role of women's investment attitudes in influencing social factors toward women's investment decisions. According to our survey results, 72.4 per cent of respondents report that social structure affects investment. We asked about religious views on investment, and 63.2 per cent of women investors believe that religious perspectives are critical to investment decisions, while 79 per cent report that political intervention affects their investment decisions. 74.3 per cent of respondents consider family structure significant and affect their investment attitudes. Moreover, 83.6 per cent of respondents believe that investment behaviour is also affected by a family's budget (Kumar et al., 2024). The results we obtained are aligned with our hypotheses, which suggest that women's concerns about conduct while performing influence women's views of searching behaviour and ultimately their preference toward equity investment. The findings of the study are aligned with the theoretical proponents of Theory of Planned Behavior proposed by Ajzen (1991) that highlights the notable impact of social factors like subjective norms, peer pressure,

family influence that can shaped the behavioral intentions of individuals as people are more likely to engage in such behavior that is endorsed or positively accepted by the societal context particularly for the country like Pakistan which ranks as the collectivist society where the mutual benefits are preferred more over the individual ones hence the decision making power of females still limits upon the social factors.

H₃: The other aim of this research is to examine the role of personal factors in influencing women's investment attitudes and decisions. It is observed that 93.4 per cent of investment decisions are influenced by personal income and 90.8 per cent by lifestyle. Furthermore, we asked respondents about the factors they consider when determining family income and family expenditure in investment decisions. Data revealed that 78 per cent reported that family income was affected; however, 80.3 per cent reported that family expenditure was affected (Hussain et al., 2021). This indicates that women's investment attitudes are shaped by their lifestyle, personal budgeting, income, and personality traits. This result is inconsistent with the null hypothesis; therefore, the alternative hypothesis is accepted.

H₄: The study also aims to find the influence of loss aversion bias on women's investment decisions with the mediating role of women's investment attitude. When asked whether women are more stressed by prospective losses, approximately 60 per cent of women agree. 43.4 per cent of women report avoiding selling shares that have decreased in value. 41.4 per cent of women reported that they willingly remain in a risky stock position, hoping that the price will rebound. 53.3 per cent of women become more risk-averse after a prior loss. The results reject this hypothesis, indicating that loss aversion has no significant effect on women's investment decisions and, consequently, that women are no longer loss averse. The study by Bouchouicha et al. (2019) supports the finding that, under MEU (Markowitz-Expected Utility) or OPT (Original Prospect Theory) definitions, women are less loss-averse than men (Dolder & Vandenbroucke, 2024).

One objective of this study is to examine the impact of regret bias on women's investment decisions, with the mediating role of women's investment attitudes, and to assess whether women are emotionally affected by the price of purchased stock. 53.9 per cent of women responded strongly agree. In contrast, only 2.6 per cent of women strongly disagreed with it. 53.3 per cent of women agreed that they avoid selling stock to avoid regret over a bad decision. Furthermore, when asked whether they regret not buying a stock that appreciated, 41.4 per cent of women responded 'agree,' whereas 48.7 per cent responded 'strongly agree,' indicating that women are susceptible to regret bias, as with everyone else; women also seek high capital gains in stocks. Lastly, 34.9 per cent of women disagreed that they would buy stocks that everyone else is buying, whereas 32.9 per cent agreed that they would buy stocks that others are buying (Iram et al., 2024). The results, consistent with the hypothesis, support its acceptance. This indicates that women exhibit regret bias. To cope with this bias, some women involve themselves in herd bias.

V. Conclusion

The study confirms a potential association between women's loss tolerance and financial decision-making of stock investment. It reveals that women with a robust understanding of financial concepts may be more comfortable with calculated risks, potentially leading to more diversified portfolios. Moreover, Investment goals were a significant factor. Women prioritising long-term financial security may be more sensitive to market fluctuations than those motivated by near-term returns, who often believe that the higher the risk, the higher the expected rate of return. Furthermore, our study incorporated demographic factors wherein mostly 18-25 and 33-40 women with the highest literacy share of graduate and post-graduate to which 45.4 per cent annual earning of women equity investors is above Rs. 200,000 and 21.7 per cent income is around Rs. 150,000 to 200,000 as of mainly save annually around Rs. 25,000 to 75,000 which help them propel their investing attitude together with other behavioral and market factors such as a change in stock prices, market dynamics, social values, personality traits, lifestyles, and financial literacy play a significant role in women's investment decision-making styles. By considering these factors, we can accelerate progress toward a future in which women investors make informed and appropriate financial decisions and bridge the gender gap in financial contributions. Tailored investment products and financial education initiatives that address women's particular needs and preferences are essential.

1. Recommendations

Taking insights from this research on women's investment behaviour regarding decision-making in different factors and with biases, several key recommendations can direct upcoming studies and interventions:

Several detailed initiatives are recommended for relevant financial institutions to better support female investors in Pakistan. The Pakistan Stock Exchange (PSX), the Securities and Exchange Commission of Pakistan (SECP), and certified financial planners should take proactive steps to develop consistent financial education programs that are well-suited to the unique needs and preferences of women. These programs should focus on enhancing women's confidence, clarifying financial terminology, and strengthening their ability to evaluate investment opportunities. A comprehensive financial literacy curriculum specifically tailored for women must be overseen and supported by the SECP, in collaboration with the PSX and approved financial education providers. The SECP's investor education division, behavioural finance experts, and academic institutions should study the specific behavioural and emotional biases that influence female investors and develop tools and strategies to reduce their impact. Additionally, PSX and asset management firms should establish structured mentorship programs that connect experienced female investors with novice investors. Finally,

brokerage houses, fintech firms, and asset management companies should develop digital platforms and products that align with women's investment goals, time horizons, and risk tolerance. Support should also be provided for exchange-traded funds aimed at female investors.

2.   Theoretical Implications

The results of this study contribute to the understanding of how Prospect Theory and a women-centric intrinsic approach influence women's investment decision-making. The study examines several psychological and socioeconomic facets and their impact on female investors in developing nations such as Pakistan. According to Prospect Theory, female investors may perceive gains and losses differently from male investors; consequently, their investment behaviour may be less sensitive to risk perception (Kahneman & Tversky, 1979). Additionally, the study indicates that women, particularly in developing countries, may place greater subjective value on safer investment avenues that ensure their financial security (Bouchouicha et al., 2019). Essentially, this study provides empirical support for the conclusion that attitudinal and socio-economic facets are imperative for understanding women investors' behaviour, thereby extending Prospect Theory to women investors in developing nations.

3.   Practical Implications

These research findings will provide policymakers and practitioners with essential insights into the biases and variables that drive women's investment decisions, particularly in capital markets, and enable them to formulate relevant recommendations. Through this study, women investors will learn how to reduce risks, mitigate biases, and make more cautious investment decisions, accompanied by techniques for identifying opportunities to invest in venues that offer potential returns. The results also show the rationale for financial literacy initiatives for Pakistani women investors. Women investors may reduce regret bias and make more certain, sustainable investment decisions by focusing on financial literacy and addressing loss aversion. By offering these programs, governments can help reduce the gender gap in investment behaviour. Thus, the marketing and development of financial tools and applications must be tailored to women to help them evaluate market trends, manage portfolios, and make sounder decisions.

4.   Limitations and Future Directions

The study demonstrates only a few variables, including market factors, social factors, personal factors, loss aversion, and regret bias, that have an impact on women's investment decisions. Furthermore, women's investment attitude is used as a moder-

ating variable to identify the influence of investment attitude on investment decisions. Future studies should include additional women investors from diverse cultural backgrounds and geographic regions to enhance the generalizability of the findings. Only a limited set of factors and biases has been discussed in the study; future studies could incorporate additional variables and biases, such as economic indicators, cultural norms, and psychological traits, to provide a more careful consideration. Future studies can also employ alternative sampling techniques to improve sample representativeness and reduce selection bias, thereby yielding more reliable findings and enabling larger sample sizes. Upcoming studies could compare women and men, or include other demographic groups. By combining deductive analysis with inductive data collection methods, such as interviews or focus groups, this approach enables studies to provide an in-depth understanding of the motivations and perceptions underlying women's investment decisions. Although the study's sample size was sufficient for the primary analysis, future studies could incorporate a larger sample to enhance the generalisability of the findings.

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