

The Influence of Behavioural Biases on Household Financial Decision-Making: Evidence from the Mediating Role of Financial Literacy

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Abstract: This study aims to analyze the role of behavioural biases in financial decision-making of households by considering the role of financial literacy as a mediator. While household financial decision-making is critical in financial wellbeing, people often make poor financial decisions because of their cognitive and emotional biases. Based on Prospect Theory, behavioural finance theory and the Theory of Planned Behaviour, this paper suggests that behavioural biases have a direct and indirect effect on money-related decisions made by the household via financial literacy. In particular, this research analyzes how the overconfidence bias, loss aversion, herding behaviour, mental accounting, and anchoring bias affect household financial decision-making and evaluates the mediation effect of financial literacy. The research design adopted was quantitative with a cross sectional survey of household financial decision makers. A total of 386 valid respondents were targeted for data collection and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with the Smart PLS 4 software. The results show that all of the five behavioural biases negatively affect household financial decision making and that all are significant. The findings also suggest that behavioural biases have a profound impact in lowering financial literacy and financial literacy plays a positive role in financial decision-making within households. Mediation testing reveals that using mediation analysis the path from behavioural biases to financial decision-making by the household is partially mediated by financial literacy, indicating that knowledge can play a role in reducing harmful effects of behavioural biases on financial behaviour. The findings of the structural model show good explanatory and predictive power, which supports the conceptual framework proposed. This study is useful to the literature of behavioural finance in two ways: firstly, it combines behavioural biases into a single compass and secondly it establishes financial literacy as a key mechanism between psychological biases and household financial decision making.

Keywords: Behavioural biases; Household financial decision-making; Financial literacy; Behavioural finance; Prospect Theory

1. Introduction

Financial decision making within the household is a basic key factor in the financial welfare, economic security and future prosperity of individuals and families. Households face myriad financial choices in their day-to-day lives that are connected to budget, saving, borrowing, investing, insurance, retirement, and consumption. Together, these choices impact a household's ability to build wealth, financial security, and standard of living. The classical economic theory assumes people make rational decisions by always selecting the alternative that maximises their utility, and that they have all the information they need to make these decisions. In practice, however, financial decisions are not always made under this assumption as people are affected by emotions, cognitive constraints, heuristics and psychological biases. Thus, behavioural finance has become an essential area of study, providing insight into why people often make financial choices that defy conventional economic theories.

Behavioural finance is a blend of psychology and economics that helps to understand financial behaviour. Behavioural finance believes that people are not perfectly rational and

use mental shortcuts and subjective judgment when making financial choices, especially when uncertainty is involved. These behavioural propensities can lead to systematic errors that affect saving rates, investment decisions, debt holdings, retirement decisions, and consumption patterns. Behaviours have been found to be important in financial decision-making in different contexts, and this finding is consistent with previous research. A systematic review of literature on behavioural finance by Zahera and Bansal (2018) reveals that behavioural biases are always present in investors and have an impact on their investment decisions. In the same vein, Nigam et al. (2018) were able to identify behavioral biases as one of the most significant factors affecting financial decision making, whereas Khare and Kapoor (2024) reported that psychological biases play a significant role in rational decision making of financial professionals.

In the literature, many behavioural biases have been identified, of which overconfidence bias, loss aversion, herding behaviour, mental accounting, and anchoring bias have been the subject of much scholarly interest due to their direct impact on financial decision-making. Overconfidence bias can lead people to believe they know more about money than they do and minimise investment risks, often leading to overwhelming confidence and inadequate financial returns. Loss aversion refers to people's stronger reaction to a loss than to an equivalent gain, which can cause them to make overly conservative financial decisions. Herding behaviour leads people to mimic the financial behaviour of other people and anchor bias leads to overreacting with the first piece of information when considering financial options. Mental accounting also influences the financial behaviour of households when they allocate resources as they categorise their income and expenditure in different mental accounts that can result in inefficient allocation of financial resources.

One of the key elements that can mitigate the negative influences of behavioural biases is financial literacy. Financial literacy is defined as the knowledge, skills, confidence and understanding of financial concepts and how that knowledge can be used to make informed financial decisions. An individual who is financially literate will be better able to compare investment opportunities, evaluate financial products, understand the financial risks, prepare a budget, manage debt and have long-term financial plans. Previous studies have found that financial education has a positive influence on financial habits and financial choices. García (2013) found that financial education can decrease the information gap and that can help people make better financial decisions. Similarly, Loerwald and Stemmann (2016) highlighted the importance of financial literacy programmes explicitly tackling behavioural biases as the knowledge of psychological constraints improves financial judgement. Rasool and Ullah (2020) also showed that financial literacy helps to overcome the negative impacts of behavioural biases among individual investors, whereas Suresh (2024) concluded that despite the behavioural biases, financial literacy significantly enhances investment decision-making. Most recently however, Pitthan and De Witte (2025) demonstrated that providing information on behavioural biases can have a strong positive impact on financial literacy, thus encouraging better financial decisions.

Households are one of the most significant economic units in the society as their financial decisions have a direct relationship with national savings, investment, financial market participation and last but not least, economic stability. Recent years have seen a more complex financial environment, rapid digitalisation, more access to credit and growth of financial technologies which all have had an impact on the complexity of household financial choices. Consumers must now make decisions in the digital world, including digital banking, online investments, insurance products, retirement savings and consumer credit. These advancements bring new financial possibilities but also introduce a heightened risk of behavioural problems due to misinformation, overconfidence, emotional decisions, and cognitive biases. Hence, knowledge of the behavioural factors influencing household financial decision-making has been of growing significance to policy makers, financial institutions and financial educators for enhancing financial capability and financial resilience of households.

While there has been significant literature on behavioural biases of investors and financial professionals, there are important research gaps to be addressed. First, much of the literature has focused on investment decision-making, and not on household financial

decision-making, which encompasses saving, budgeting, borrowing, insurance, and retirement planning. Second, there has been a tendency in previous research to examine behavioural biases separately as opposed to examining multiple behavioural biases within a conceptual framework. Third, whilst financial literacy has been widely acknowledged as an important factor affecting financial behaviour, there is a lack of empirical research that has studied its mediating role in the relationship between behavioural biases and financial behaviour of households. Last but not least, the evidence for emerging economies is still relatively scarce, although there are significant differences in financial education, institutional settings and household financial behavior.

Theoretically, this study combines the theories of Prospect Theory, behavioural finance theory and Theory of Planned Behaviour to explain the financial decision-making of households. According to Prospect Theory, people do not assess gains and losses in the same way; thus there are behavioural biases that affect financial decisions in situations of uncertainty, like loss aversion. Behavioural finance also describes how cognitive biases can cause a systematic deviation from rational financial decision making, and the theory of planned behaviour suggests that attitudes, perceived behavioural control and knowledge are determinants of behavioural intentions and behaviour. The convergence of these theoretical arguments offers a holistic view to explain how behavioural biases might impact household financial choices and how financial literacy could help reduce their impacts.

Thus, the main goal of this study is to look at the mediating role of financial literacy between behavioural biases and financial decision making of households. In particular, the study explores the impact of overconfidence bias, loss aversion, herding behaviour, mental accounting and anchoring bias on household financial decision making and tests whether financial literacy acts as a mediator between these biases and financial decision making. The study makes several contributions to the literature. First, it creates a unified conceptual model that brings together several behavioural biases and embeds them in a single empirical model. Second it broadens the scope of behavioural finance research by suggesting a possible behavioral mechanism that occurs between behavioural biases and household financial decisions: financial literacy. Third, it offers practical implications to policy makers, financial institutions and educators who are interested in designing effective financial education programmes to enhance financial capability and resilience of the households. Finally, the results will help advance behavioral finance research, and evidence-based policy through the identification of the potential role of financial literacy in minimizing the negative impact of behavioral biases and facilitating better financial decision-making within the household.

2. Literature Review

One of the most powerful viewpoints to explain why people often do not do what is economically rational is behavioural finance. The traditional theories of finance are based on the assumption that individuals have perfect information and make rational financial decisions in order to maximise their utility. But behavioural finance posits that often, financial choices are made in light of cognitive constraints, emotions, heuristics, and psychological biases. These biases systematically influence the income allocation, savings management, investment in financial assets, debt management and planning for future financial needs of households. Based on an extensive literature review on behavioural finance, Nigam et al. (2018) have concluded that behavioural biases are one of the key factors of financial decisions in various contexts. In the same vein, Zahera and Bansal (2018) conducted a systematic review on the literature of behavioural finance and concluded that the investors have always shown cognitive and emotional biases that greatly affect their financial decisions. More recently, Khare and Kapoor (2024) found that behavioural biases have significant impact on the rational decision making process of financial professionals and Sharma et al (2025) found that behavioural biases impact the rationality of consumers even among the experienced decision makers.

In the field of behavioural finance, a number of biases have been studied, including overconfidence, loss aversion, herding, mental accounting and anchoring. Overconfidence can lead people to believe that they know more about their finances and can predict investment outcomes more accurately than they actually can, leading to higher risk-taking

and less optimal investments. Prospect Theory suggests that loss aversion is one of the reasons why people will avoid a loss stronger than a identical gain, which may cause over-conservative behavior when it comes to cash. Herding drives people to follow others' financial decisions without performing objective analysis while anchoring causes people to over-depend on the initial information when making financial judgment. In addition, mental accounting impacts financial behavior by leading people to allocate financial resources into different mental accounts, where some of these accounts may be reserved for unnecessary expenditure. A mental accounting effect was observed to have a significant impact on the financial decisions of Indian households (Mahapatra & Mishra 2020) and the financial decisions of rural women micro-entrepreneurs were also found to be affected by behavioural biases (Panja 2023). Similarly, Baulkaran and Jain (2025) showed that behavioral biases impact the retirement funding advice provided by professional financial planners, suggesting that psychological biases are prevalent in financial decision-making even among experts.

Financial decision making within the household includes a variety of activities such as budgeting, saving, borrowing, investing, retirement planning, insurance choice and the management of emergency funds. Good household financial choices are critical to secure long-term financial security and enhance overall financial well-being. Foremost, previous studies indicated that in addition to money, decisions are affected by cognitive abilities and behavioral characteristics as well as by demographic and socio-economic factors. Agarwal and Mazumder (2013) showed that more cognitive skills are likely to have a strong positive impact on household financial decision making as it helps individuals process financial information better and helps them avoid unnecessary and expensive financial choices. Likewise, Kurian, et al. (2022) identified that domestic migrant families make financial decisions based on various socio-economic and behavioural factors, which makes the financial decision-making process complex. While Frederiks et al. (2015) focused on the energy consumption of households instead of traditional financial decisions, their use of behavioural economics showed that cognitive biases play a very significant role in the decision-making process of households under uncertainty.

Financial literacy has come to be seen as a key channel of behavioural biases affecting financial decision making. Financial literacy is the knowledge, skills and confidence of an individual to make decisions about their finances and to manage financial resources well. The more financially literate people tend to be better at identifying cognitive biases, understanding financial options and making rational financial choices. García (2013) stated that financial education helps to decrease information asymmetry and aids in better financial decision-making by augmenting people's knowledge of financial products and markets. In addition, Loerwald and Stemmann (2016) noted that financial literacy training should be directly linked to behavioural biases as being aware of the own biases can enhance financial literacy. More recently, Rasool and Ullah (2020) discovered that financial literacy was a significant factor to mitigate the negative impact of behavioural biases among individual investors, and Suresh (2024) concluded that financial literacy has a positive impact on the investment decision-making of individual investors despite the presence of behavioural biases. Pitthan and De Witte (2025) also showed that financial literacy education, focusing on behavioural biases, has a significant impact on enhancing financial literacy, which in turn fosters more rational financial decision-making.

While there is an increasing body of research on behavioural finance, there are key gaps in the literature. First, most previous work has investigated the investment decisions of individual investors or financial professionals, and not much has been done on household financial decision making as a behavioural phenomenon. Second, much of the existing literature has focused on testing single behavioural biases and not drawn together multiple cognitive biases into a holistic view. Thirdly, financial literacy has been well documented to be one of the key factors affecting financial behaviour, but there has been limited research that has investigated the role it plays in examining the impact of behavioural biases on household financial decisions. Lastly, empirical findings for emerging economies are still scarce, especially on the link between behavioural biases and financial literacy and their effects on financial decision making by households. The present study is

motivated by this gap and suggests an integrated behavioural finance model in which the overconfidence bias, loss aversion, herding behaviour, mental accounting and anchoring bias affect the financial decision-making of households both directly and indirectly via financial literacy. Prospect Theory, Theory of Planned Behaviour and behavioural finance are combined to give a better overall picture of financial behaviour of households and add to the literature on behavioural economics and personal finance. Figure 1 shows the conceptual model.

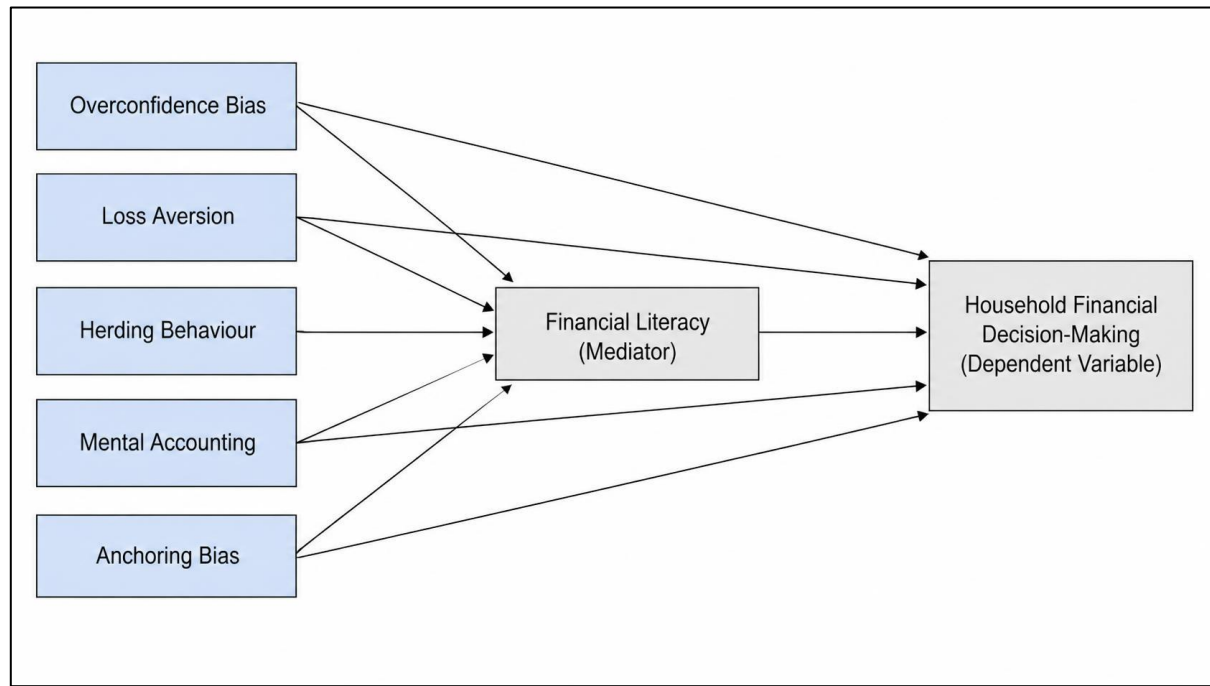


Figure 1. Conceptual model

3. Methodology

This study was designed with a quantitative approach to study the effect of behavioural biases on the financial decision making of households through the mediation of financial literacy. A cross-sectional survey method was employed as it requires a large amount of respondents to be completed within a relatively short timeframe, and is suitable for measuring the complex relationships between the latent constructs using Structural Equation Modelling (SEM). The study targeted adult household financial decision makers who are mainly responsible for managing household finances: income, savings and investments, debt, insurance, and other types of finance. The unit of analysis was the individual decision-maker of the household because he is directly engaged in the financial decision-making process which influences the financial well-being of the household.

Household heads and other adult family members who are actively involved in financial decision making were targeted. A purposive sampling method was used, with respondents having a good knowledge and experience in the Household Finance Management. Respondents had to be at least 18 years old, and directly participate in financial decision making in at least one of the areas of budgeting, saving, borrowing, investing, and retirement planning. Households were sampled from urban and semi-urban areas to represent a variety of socio-economic status. According to the recommendations for Partial Least Squares Structural Equation Modelling (PLS-SEM), the sample of over 300 respondents was adequate to estimate the proposed mediation model. Thus about 500 questionnaires were distributed and 386 valid questionnaires were obtained after discarding incomplete and inconsistent questionnaires.

Primary data was gathered using a structured questionnaire that was adopted from existing measurement scales as found in the behavioural finance and financial literacy literature. There were three sections to the questionnaire. The first section was

demographic and comprised of respondents' gender, age, education, occupation, monthly household income, marital status, and financial decision making experience. The second section assessed behavioural biases with five latent constructs: overconfidence bias, loss aversion, herding behaviour, mental accounting and anchoring bias. The third was the financial literacy and financial decision making of the households. Financial literacy was measured by items that were related to budgeting, saving, investment, inflation, interest rate, risk diversification, and financial products. Household financial decision making was assessed by saving behavior indicators, investment indicators, debt management indicators, budgeting indicators, retirement planning indicators, emergency fund indicators, and insurance indicators. Each measurement item was rated on a seven-point Likert scale with a range from 1 (strongly disagree) to 7 (strongly agree) in which respondents could rate each item according to their level of agreement.

The questionnaire was content-validated and contextually appropriate to the target group by academic experts in behavioural finance, economics and personal financial management before the main survey. A pilot study was then carried out with 30 household respondents to evaluate the items for clarity, reliability and comprehensibility. The questionnaire was made up of minor revisions that were based on the respondents' feedback to improve the wording and readability of the questionnaire. The ethical aspects were taken care of throughout the research process. The participation was entirely voluntary, the respondents were told about the goals of the study before they took part in the study, anonymity and confidentiality were guaranteed, and informed consent was obtained from all respondents. No personally identifiable information was gathered, and the information was only used for academic research.

The collected data was analysed based on the two-stage approach recommended for Partial Least Squares Structural Equation Modelling (PLS-SEM) using SmartPLS 4 software. During the first stage, measurement model was evaluated through indicator reliability, internal consistency reliability, convergent validity and discriminant validity. Outer loadings were used to assess indicator reliability and Cronbach's alpha, rho_A and composite reliability were used to assess construct reliability. The average variance extracted (AVE) was used to assess the convergent validity where the result of more than 0.50 shows a good convergent validity. The Fornell–Larcker criterion, cross-loadings, and heterotrait–monotrait ratio (HTMT) were used to check the discriminant validity. The second stage involved evaluating the structural model by analyzing collinearity, path coefficients, coefficients of determination (R^2), effect sizes (f^2), predictive relevance (Q^2) and out-of-sample predictive performance (PLS-Predict). Bootstrapping with 5,000 resamples was used to test the significance of the direct and indirect associations. The mediation was tested through indirect effect analysis and Variance Accounted For (VAF) calculation to assess the mediation as partial or full mediation. This analytical exercise offers a thorough examination of the suggested conceptual model and guarantees the validity and strength of the empirical results on the impact of behavioral biases on household financial decision making.

4. Results

Table 1 shows the demographic characteristics of the 386 respondents who participated in the study. There was a relatively even split between males (56.7%) and females (43.3%). The majority of the respondents (37.0%) were in the age group of 30–39 years followed by 40–49 years (24.9%) which indicated that the majority of the respondents were economic active people with responsibilities of managing the financial affairs of the household. In terms of educational level, 44.3% had a Bachelor's Degree while 22.0% had postgraduate degrees, indicating a highly educated sample that was able to comprehend financial issues. The largest group of respondents was employed in the private sector (40.4%), followed by employed in the government (25.4%), self-employed (19.2%) and other occupations (15.0%). The majority of households had a monthly income of USD 1,001 to USD 2,000 (35.2%) and 63.7% of the respondents were married. In addition, 39.1% described their experience in financial decision-making as 5-10 years, which means that

the respondents had ample practical experience to ensure quality information on the financial behaviour of households.

Table 1. Demographic Profile of Respondents (N = 386)

Variable	Category	Frequency	Percentage (%)
Gender	Male	219	56.7
	Female	167	43.3
Age (Years)	18–29	84	21.8
	30–39	143	37.0
	40–49	96	24.9
	50 and above	63	16.3
Education	Secondary School	52	13.5
	Diploma	78	20.2
	Bachelor's Degree	171	44.3
	Postgraduate Degree	85	22.0
Occupation	Government Employee	98	25.4
	Private Employee	156	40.4
	Self-employed	74	19.2
	Others	58	15.0
Monthly Household Income	Below USD 1,000	74	19.2
	USD 1,001–2,000	136	35.2
	USD 2,001–3,000	101	26.2
	Above USD 3,000	75	19.4
Marital Status	Single	118	30.6
	Married	246	63.7
	Others	22	5.7
Financial Decision-Making Experience	Less than 5 years	97	25.1
	5–10 years	151	39.1
	More than 10 years	138	35.8

Table 2 shows the descriptive statistics, internal consistency reliability, convergent validity, and correlations between the constructs of the study. The mean values fell between 4.83 and 5.46, showing that the individual values of the respondents generally agreed with the items used in the measurement in moderate to high level. The highest mean score ($M = 5.46$) was obtained for Household Financial Decision-Making, while Financial Literacy ($M = 5.38$) was the second highest score which indicates that financial behaviours of the respondents were relatively positive. The standard deviations vary between 0.68 and 0.82, which are acceptable ranges of variation. The Cronbach's alpha value ranged from 0.896 to 0.932, and composite reliability value ranges from 0.923 to 0.949, which is greater than 0.70 and indicated good internal consistency reliability. Likewise, all the average variance extracted (AVE) values were higher than 0.50 (between 0.751 and 0.829), indicating convergent validity. The correlation showed medium relationships between the constructs, and no extremely high correlations between constructs, indicating no concern for multicollinearity. The results overall indicate that the measurement scales are reliable and valid for further analysis of the structural model.

Table 2. Descriptive Statistics, Reliability, and Correlation Matrix

Construct	Mean	SD	CA	CR	AVE	OCB	LA	HB	MA	AB	FL	HFD
Overconfidence Bias (OCB)	4.87	0.81	0.903	0.928	0.764	0.874						
Loss Aversion (LA)	5.12	0.73	0.912	0.934	0.781	0.421	0.884					
Herding Behaviour (HB)	4.95	0.77	0.896	0.923	0.751	0.367	0.448	0.867				
Mental Accounting (MA)	5.21	0.69	0.918	0.939	0.794	0.392	0.471	0.409	0.891			
Anchoring Bias (AB)	4.83	0.82	0.905	0.929	0.768	0.438	0.416	0.392	0.401	0.876		
Financial Literacy (FL)	5.38	0.71	0.926	0.944	0.809	-0.326	-0.284	-0.241	-0.318	-0.291	0.899	

Household Financial Decision-Making (HFDM)	5.46	0.68	0.932	0.949	0.829	-0.304	-0.266	-0.228	-0.297	-0.271	0.684	0.910
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The results of the measurement model evaluation are shown in Table 3. Each indicator outer loading was above the cutoff value of 0.70 and ranged between 0.831 and 0.927, suggesting that each indicator was a good representation of its latent construct. All the Cronbach's alpha values were above 0.70 (the suggested threshold value) and ranged from 0.896 to 0.932, indicating excellent internal consistency reliability. The rho_A values ranged from 0.901 to 0.935 while the composite reliability values ranged from 0.923 to 0.949, also exhibiting excellent internal consistency reliability. Besides, the AVE also ranged from 0.751 to 0.829, well above the minimum acceptable value of 0.50, indicating satisfactory convergent validity. The results all together suggest that the measurement model satisfies all recommended criteria for reliability and convergent validity in Partial Least Squares Structural Equation Modelling (PLS-SEM) and has good psychometric properties.

Table 3. Measurement Model Assessment

Construct	Item	Outer Loading	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Overconfidence Bias	OCB1	0.842	0.903	0.907	0.928	0.764
	OCB2	0.885				
	OCB3	0.901				
	OCB4	0.872				
Loss Aversion	LA1	0.864	0.912	0.916	0.934	0.781
	LA2	0.891				
	LA3	0.905				
	LA4	0.876				
Herding Behaviour	HB1	0.831	0.896	0.901	0.923	0.751
	HB2	0.874				
	HB3	0.891				
	HB4	0.868				
Mental Accounting	MA1	0.883	0.918	0.921	0.939	0.794
	MA2	0.901				
	MA3	0.918				
	MA4	0.874				
Anchoring Bias	AB1	0.851	0.905	0.909	0.929	0.768
	AB2	0.883				
	AB3	0.892				
	AB4	0.866				
Financial Literacy	FL1	0.894	0.926	0.929	0.944	0.809
	FL2	0.912				
	FL3	0.903				
	FL4	0.885				
Household Financial Decision-Making	HFDM1	0.904	0.932	0.935	0.949	0.829
	HFDM2	0.918				
	HFDM3	0.927				
	HFDM4	0.901				

Table 4 shows the results of the discriminant validity based on the Fornell–Larcker criterion and the Heterotrait–Monotrait Ratio (HTMT). All inter-construct correlations (shown below diagonal) were lower than the average variance extracted (shown on the diagonal) for each construct, supporting Fornell–Larcker criterion that indicates that each construct has more variance with its own indicators than with other constructs. This finding indicates that the latent variables are indeed empirically different. The same can also

be confirmed from the HTMT values, which are all well below the recommended limit of 0.85, ranging from 0.251 to 0.742. No of the HTMT values was above the critical value, which confirms the discriminant validity. So, the findings suggest that all constructs measure different phenomena and thus the measurement model proposed was valid.

Table 4. Discriminant Validity Assessment

Construct	OCB	LA	HB	MA	AB	FL	HFDM
Overconfidence Bias (OCB)	0.874						
Loss Aversion (LA)	0.421	0.884					
Herding Behaviour (HB)	0.367	0.448	0.867				
Mental Accounting (MA)	0.392	0.471	0.409	0.891			
Anchoring Bias (AB)	0.438	0.416	0.392	0.401	0.876		
Financial Literacy (FL)	-0.326	-0.284	-0.241	-0.318	-0.291	0.899	
Household Financial Decision-Making (HFDM)	-0.304	-0.266	-0.228	-0.297	-0.271	0.684	0.910
HTMT Ratio	OCB	LA	HB	MA	AB	FL	HFDM
Overconfidence Bias (OCB)	—						
Loss Aversion (LA)	0.481	—					
Herding Behaviour (HB)	0.432	0.531	—				
Mental Accounting (MA)	0.446	0.556	0.462	—			
Anchoring Bias (AB)	0.507	0.486	0.441	0.452	—		
Financial Literacy (FL)	0.362	0.321	0.274	0.351	0.329	—	
Household Financial Decision-Making (HFDM)	0.339	0.301	0.251	0.332	0.309	0.742	—

Table 5 shows the results of the structural model and testing of hypotheses. The results showed that all the hypothesised relationships are statistically significant. The magnitude of each behavioural bias has a significant negative effect on household financial decision-making, with overconfidence bias ($\beta = -0.141$, $p = 0.001$), loss aversion ($\beta = -0.118$, $p = 0.004$), herding behaviour ($\beta = -0.097$, $p = 0.013$), mental accounting ($\beta = -0.156$, $p = 0.001$) and anchoring bias ($\beta = -0.104$, $p = 0.009$) all exhibiting significant negative effects. Likewise, all behavioural biases significantly and negatively affect financial literacy, indicating that cognitive biases have a negative impact on the ability to effectively gain and apply financial knowledge. Financial literacy, on the other hand, has a strong positive effect on household financial decision-making ($\beta = 0.481$, $p < 0.001$) which underscores its crucial role in enhancing financial behaviour. The variance of financial literacy ($R^2 = 0.467$) and household financial decision-making ($R^2 = 0.612$) was explained moderately and substantially, respectively. Moreover, the Q^2 values also indicate that the model has an appropriate predictive relevance.

Table 5. Structural Model Assessment and Hypothesis Testing

Hypothesis	Structural Path	β	Std. Error	t-value	p-value	f^2	Decision
H1	OCB $\rightarrow$ HFDM	-0.141	0.044	3.205	0.001	0.041	Supported
H2	LA $\rightarrow$ HFDM	-0.118	0.041	2.878	0.004	0.032	Supported
H3	HB $\rightarrow$ HFDM	-0.097	0.039	2.487	0.013	0.025	Supported
H4	MA $\rightarrow$ HFDM	-0.156	0.048	3.250	0.001	0.047	Supported
H5	AB $\rightarrow$ HFDM	-0.104	0.040	2.600	0.009	0.028	Supported
H6	OCB $\rightarrow$ FL	-0.201	0.043	4.674	<0.001	0.081	Supported
H7	LA $\rightarrow$ FL	-0.142	0.040	3.550	<0.001	0.052	Supported
H8	HB $\rightarrow$ FL	-0.118	0.038	3.105	0.002	0.039	Supported
H9	MA $\rightarrow$ FL	-0.189	0.045	4.200	<0.001	0.073	Supported
H10	AB $\rightarrow$ FL	-0.136	0.039	3.487	<0.001	0.046	Supported
H11	FL $\rightarrow$ HFDM	0.481	0.049	9.816	<0.001	0.296	Supported
Endogenous Construct		R^2		Adjusted R^2		Q^2	Interpretation
Financial Literacy		0.467		0.460		0.352	Moderate
Household Financial Decision-Making		0.612		0.605		0.488	Substantial

The results of the mediation analysis and model fit indices and predictive assessment are presented in Table 6. The mediation findings show that the financial literacy significantly mediates the relationship between each of the behavioural biases and household financial decision-making. All indirect effects are statistically significant ($p < 0.01$), which indicates that behavioural biases not only have a direct impact on financial decisions, but also an indirect impact on financial decisions via financial literacy. The direct effect was still significant when the mediator was added to the model, supporting partial mediation. As illustrated in the total effects, the overall impact of mental accounting and overconfidence bias on household financial decision-making is the largest. In terms of the overall quality of the model, the structural model had an acceptable fit: an SRMR of 0.047, an NFI of 0.936, and an RMS Theta of 0.089, all of which are below recommended values. Finally, the PLS-Predict assessment shows that the model has moderate to good out-of-sample predictive power – evidenced by positive Q^2 Predict values and smaller RMSE values for the PLS model than for the linear benchmark model. These results taken together, indicate the soundness, explanatory power, and predictive power of the proposed conceptual framework.

Table 6. Mediation Analysis and Model Fit

Indirect Relationship	β	Std. Error	t-value	p-value	Mediation
OCB $\rightarrow$ FL $\rightarrow$ HFDM	-0.097	0.025	3.880	<0.001	Partial
LA $\rightarrow$ FL $\rightarrow$ HFDM	-0.068	0.021	3.238	0.001	Partial
HB $\rightarrow$ FL $\rightarrow$ HFDM	-0.057	0.019	3.000	0.003	Partial
MA $\rightarrow$ FL $\rightarrow$ HFDM	-0.091	0.024	3.792	<0.001	Partial
AB $\rightarrow$ FL $\rightarrow$ HFDM	-0.065	0.020	3.250	0.001	Partial
Relationship	Total Effect (β)	p-value			
OCB $\rightarrow$ HFDM	-0.238	<0.001			
LA $\rightarrow$ HFDM	-0.186	<0.001			
HB $\rightarrow$ HFDM	-0.154	0.001			
MA $\rightarrow$ HFDM	-0.247	<0.001			
AB $\rightarrow$ HFDM	-0.169	0.001			
Fit Index	Value	Recommended Threshold	Decision		
SRMR	0.047	< 0.08	Acceptable		
NFI	0.936	> 0.90	Good Fit		
RMS Theta	0.089	< 0.12	Acceptable		
Endogenous Construct		RMSE (PLS)	RMSE (LM)	Q^2 Predict	Predictive Power
Financial Literacy		0.566	0.592	0.334	Medium
Household Financial Decision-Making		0.521	0.547	0.427	High

5. Discussions

The results of this paper suggest that there is strong empirical evidence to support the notion that behavioural biases have a profound impact on financial decisions made by households. In particular, overconfidence bias, loss aversion, herding behaviour, mental accounting and anchoring bias were identified as being significant negative determinants of the quality of household financial decisions. These findings corroborate several core tenets of behavioural finance, including that individuals have inherent cognitive biases and constraints that prevent them from making optimal choices. Household decision-makers are not unbiased in assessing their financial alternatives, but rather guided by subjective perceptions, emotions, and mental shortcuts that impact saving, budgeting, investment, borrowing, and retirement planning. The findings are in line with those of Zahera and Bansal (2018), who found in their systematic review that behaviour biases are systematically pervasive in all financial domains. Likewise, Nigam et al. (2018) contended that behavioural biases are one of the most significant factors that influences the financial decision making, which makes it difficult for people to make rational financial decision. More recently, Khare and Kapoor (2024) showed that such behavioural biases are large

enough to screw with rational financial decision-making even for financial professionals, indicating that the presence of such biases does not wane with experience or expertise.

Overconfidence bias had a significant negative relationship with household financial decision-making among the individual behavioural biases. This suggests that those who perceive themselves to be knowledgeable about finance and good forecasters tend to make poorer financial decisions as they underestimate financial risks and overestimate potential returns. These people are likely to have too many loans, investments that are risky, or they may not plan their finances very carefully, which decreases their household's financial welfare. This finding corroborates Agarwal and Mazumder (2013) who showed that cognitive skills have a significant effect on the financial decision making of households and that overconfidence without adequate financial skills can mean poor financial outcomes. Similarly, Sharma et al. (2025) observed that behavioural biases negatively impact rational consumer behaviour and Baulkaran and Jain (2025) identified a strong impact of overconfidence and other psychological biases on retirement funding decisions by professional financial planners. Taken together, the results indicate that overconfidence is still a significant challenge in the financial arena of both leisure and work.

The findings also show that loss aversion, herding behaviour, mental accounting and anchoring bias are significant factors in limiting household financial decision making effectiveness. Loss averse individuals are less likely to take financial risks even when they make good economic sense, and herding behaviour causes individuals to follow family, friends or community members' financial choices rather than their own. Mental accounting also forces households to group financial means into different mental accounts and spend the funds in a way that is not efficient, whereas anchoring bias causes people to over-value financial options based on initial information. These results support the results of Mahapatra and Mishra (2020) that mental accounting is playing a significant role in household financial behaviour in India. Behavioural biases also have been found to significantly affect financial decisions of rural women micro-entrepreneurs, especially in investment and credit decisions as reported by Panja (2023). In addition, Kurian et al. (2022) found that behavioural and socio-economic factors affect household financial behaviour, and Frederiks et al. (2015) found that behaviour biases have an impact beyond the traditional financial sphere on household decision-making, which again indicates that the theory of behavioural economics is more widely applicable.

The key results of the current study are that behavioural biases have a strong impact on financial literacy, and financial literacy has a significant positive impact on the financial decision making of households. This indicates that behavioural biases can affect financial decisions directly as well as make it more difficult for people to access, understand and use financial knowledge. On the other hand, a financially literate person can assess financial products, know about the risks of investing, compare financial options and make better household financial decisions. The results are consistent with the arguments of García (2013) that financial education improves financial decision-making reducing the information asymmetry and increasing financial capacities. Likewise, Loerwald & Stemann (2016) stated that financial literacy programmes need to make a point of discussing these behavioural biases as awareness of these biases leads to better financial judgement. Previous research by Rasool and Ullah (2020) also concluded that financial literacy reduced the impact of behavioural biases of individual investors, and Suresh (2024) found that even after being exposed to behavioural biases, financial literacy helped the people to make rational investment decisions. More recent, Pitthan and De Witte (2025) showed that financial education on behavioural biases has a significant positive effect on financial literacy, allowing to make more informed and rational financial decisions.

The mediation analysis is a key theoretical contribution of this study. The results provide evidence that financial literacy partially mediates behavioural biases with household financial decision-making. This implies that there are behavioural biases that may affect financial decision directly or indirectly as a result of the level of financial literacy. In other words, while the behavioural biases remain relevant in financial decisions, the adverse impact of the behavioural biases can be significantly lowered with the help of financial literacy. The results of the partial mediation imply the role of financial literacy as a

significant behavioural intervention that can dampen the impact of the cognitive biases and encourage more rational financial behaviours. This finding builds upon the existing behavioural finance literature, which has mainly focused on the direct relationship between behavioural biases and financial outcomes, without specifically taking the financial literacy factor into account. It also validates the results of Sharma et al. (2025) who found that investment decisions act as a mediator between behavioural biases and financial satisfaction and shows that financial literacy is also a key psychological pathway between behavioural biases and financial outcomes.

Theoretically, the results strongly support Prospect Theory as well as behavioural finance, as they indicate that households' financial decisions are not just based on rational evaluation, but also a combination of cognitive and emotional biases. The findings further support the Theory of Planned Behaviour which posits that people's financial intentions and financial decisions are influenced by their financial knowledge and behavioural beliefs. The study combines these theoretical approaches and shows that both psychological biases and financial capability play a role in explaining the financial decision making process of households. From a practical viewpoint, the results indicate that financial literacy education programs should be enhanced, and financial education programs should include the concepts of behavioural finance for governments, financial institutions, educational organizations and policy makers. Training programs designed for the specific purpose of identifying overconfidence, loss aversion, herding behavior, mental accounting and anchoring could be useful to help households identify these biases and make better financial decisions. Such schemes are likely to help in strengthening the financial resilience of households, promote responsible saving and investment practices, curb excessive indebtedness and, ultimately, contribute to overall long-term financial resilience.

6. Conclusions

This study investigated the mediating role of financial literacy in household financial decision making process by studying the role of behavioural biases. Based on the theory of behavioural finance, Prospect Theory and the Theory of Planned Behaviour, the study proposed and empirically tested a conceptual model that includes five behavioural biases as important factors in household financial decision-making: overconfidence bias, loss aversion, herding behaviour, mental accounting and anchoring bias. The results reveal that all five behavioural biases have a significant and negative impact on the household financial decision-making process, using the quantitative research design and Partial Least Squares Structural Equation Modelling (PLS-SEM). The results also show that these behavioural biases substantially lower the financial literacy level and financial literacy has a positive impact on financial decision making among households. Most significantly, the effect of behavioural biases on household financial decision-making was partially mediated by financial literacy, suggesting that financial knowledge is a key mechanism to mitigate the negative impact of behavioural biases.

The results have several key contributions to the behavioural finance and household finance literature. Firstly, the study goes beyond the previous work, as it combines several behavioural biases in a single conceptual model, instead of investigating each bias separately. An integrated one brings a better understanding of the combined effect of cognitive and emotional biases on household financial behaviour. Second, the study pinpoints financial literacy as an important mediating construct and shows that behavioural biases influence financial decisions directly as well as indirectly, via financial knowledge and capability. This discovery builds on earlier research that has mostly been focused on the direct connection between behavioural biases and financial outcomes. Third, the study contributes to the theoretical frameworks of household financial behaviour by combining Prospect Theory, behavioural finance and the Theory of Planned Behaviour, and provides a more holistic explanation for how financial decisions are made in a context of uncertainty.

The study also has a number of policy, finance, pedagogy, and household implications. The results indicate that financial literacy should be viewed as a national imperative as financially literate people are more able to identify their cognitive biases and assess

their financial options more effectively, which will lead to better financial decisions. Financial education programmes should be structured and created to not only educate on finance but to also reflect the common behavioral biases of overconfidence, loss aversion, herding behaviour, mental accounting and anchoring. Financial institutions can also use the behavioural finance concepts in customers' education programs, online financial advisory services, and investment advices to help households make better financial decisions. Financial capability can also be built by embedding personal finance and behavioural economics into the school and university curriculum, equipping the next generation with the knowledge and skills needed for good financial management.

However, the study is not without its limitations that need to be noted. In the first place, the cross sectional research design prevents the possibility of determining causal relationships between the variables over time. Longitudinal studies could be considered for future research to look at the development of behavioural biases and financial literacy across the stages of the household life cycle. Second, the data in the study were self-reported in questionnaires using established measurements, but due to the fact that the data came from the same source, there is a possibility of common method variance and social desirability bias. There is potential for future research to develop a more objective financial data method or experimental method for more accurate measurement. Thirdly, the study was conducted in one country only, and although the sample included household financial decision makers, the results may not be applicable to financial decision makers in other countries where the social-economic and cultural environment is different. Comparative cross-country studies would be interesting in determining the role that institutional and cultural factors play in influencing behavioural finance. Lastly, future research could expand the proposed model by adding other variables as mediators and/or moderators, including financial self-efficacy, electronic financial literacy, financial stress, risk tolerance, self-control, financial well-being, or personality traits to get a more detailed understanding of household financial behavior.

To conclude, the findings of this study have shown that behavioural biases are important factors in household financial decision making and financial literacy is an important mediator to reduce the negative influence of behavioural biases. More financially literate households have more ability to overcome cognitive biases, make informed financial decisions and have greater financial stability and well-being. The results indicate that knowledge about finance is not the only prerequisite to good financial decision making but also an understanding of the psychological aspects which shape individual actions. The study offers important theoretical and practical implications for financially resilient households and for sustainable economic development by seeing financial literacy as a strategic mechanism and channel connecting the behavioural biases and the financial decision-making of households.

Declarations

Ethics and Guidelines: The study was conducted in accordance with the Declaration of Helsinki. The ethical approval specifically covers the research procedures and data collection activities conducted for this study.

Consent to participate: Written informed consent was obtained from all participants prior to data collection. Consent was obtained using a standardized written form, signed by each participant before participation in the survey.

Consent to publish: The authors have provided consent to publish.

Competing interests: The authors declare no competing interests.

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Declaration of using generative AI: During the preparation of this work the author(s) used ChatGPT in order to correct the grammatical errors. After using this tool/service, the author(s) reviewed and edited the content as needed and take full responsibility for the content of the published article.

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References

- Agarwal, S., & Mazumder, B. (2013). Cognitive Abilities and Household Financial Decision Making. *American Economic Journal: Applied Economics*, 5(1), 193–207. <https://doi.org/10.1257/app.5.1.193>
- Baulkaran, V., & Jain, P. (2025). Behavioral Biases of Financial Planners: The Case of Retirement Funding Recommendations. *Journal of Behavioral Finance*, 26(3), 303–316. <https://doi.org/10.1080/15427560.2024.2305412>
- Frederiks, E. R., Stenner, K., & Hobman, E. V. (2015). Household energy use: Applying behavioural economics to understand consumer decision-making and behaviour. *Renewable and Sustainable Energy Reviews*, 41, 1385–1394. <https://doi.org/10.1016/j.rser.2014.09.026>
- García, M. J. R. (2013). FINANCIAL EDUCATION AND BEHAVIORAL FINANCE: NEW INSIGHTS INTO THE ROLE OF INFORMATION IN FINANCIAL DECISIONS. *Journal of Economic Surveys*, 27(2), 297–315. <https://doi.org/10.1111/j.1467-6419.2011.00705.x>
- Khare, T., & Kapoor, S. (2024). Behavioral biases and the rational decision-making process of financial professionals: Significant factors that determine the future of the financial market. *Journal of Advances in Management Research*, 21(1), 44–65. <https://doi.org/10.1108/JAMR-03-2023-0086>
- Kurian, V., Sreedharan, S., & Valenti, F. (2022). Calling the Shots: Determinants of Financial Decision-making and Behavior in Domestic Migrant Households in India. *Journal of Emerging Market Finance*, 21(3), 317–342. <https://doi.org/10.1177/09726527221082005>
- Loerwald, D., & Stemann, A. (2016). Behavioral Finance and Financial Literacy: Educational Implications of Biases in Financial Decision Making. In C. Aprea, E. Wuttke, K. Breuer, N. K. Koh, P. Davies, B. Greimel-Fuhrmann, & J. S. Lopus (Eds.), *International Handbook of Financial Literacy* (pp. 25–38). Springer Singapore. https://doi.org/10.1007/978-981-10-0360-8_3
- Mahapatra, M. S., & Mishra, R. (2020). Behavioral influence and financial decision of individuals: A study on mental accounting process among Indian households. *Cogent Economics & Finance*, 8(1), 1827762. <https://doi.org/10.1080/23322039.2020.1827762>
- Nigam, R. M., Srivastava, S., & Banwet, D. K. (2018). Behavioral mediators of financial decision making – a state-of-art literature review. *Review of Behavioral Finance*, 10(1), 2–41. <https://doi.org/10.1108/RBF-07-2016-0047>
- Panja, S. (2023). Effect of Behavioural Biases on the Financial Decisions of Rural Women Micro-entrepreneurs: A Scale Development Approach. *Vision: The Journal of Business Perspective*, 09722629231182835. <https://doi.org/10.1177/09722629231182835>
- Pitthan, F., & De Witte, K. (2025). How learning about behavioural biases can improve financial literacy? *International Review of Economics & Finance*, 99, 103989. <https://doi.org/10.1016/j.iref.2025.103989>
- Rasool, N., & Ullah, S. (2020). Financial literacy and behavioural biases of individual investors: Empirical evidence of Pakistan stock exchange. *Journal of Economics, Finance and Administrative Science*, 25(50), 261–278. <https://doi.org/10.1108/JEFAS-03-2019-0031>
- Sahi, S. K. (2017). Psychological biases of individual investors and financial satisfaction. *Journal of Consumer Behaviour*, 16(6), 511–535. <https://doi.org/10.1002/cb.1644>
- Sharma, A., Hewege, C., & Perera, C. (2025). Exploring the Relationships Between Behavioural Biases and the Rational Behaviour of Australian Female Consumers. *Behavioral Sciences*, 15(1), 58. <https://doi.org/10.3390/bs15010058>
- Sharma, V., Kumar, R., Jain, J., & Kaur, M. (2025). The impact of behavioral biases on financial satisfaction: The mediating role of investment decisions. *International Review of Economics*, 72(2), 27. <https://doi.org/10.1007/s12232-025-00502-0>
- Suresh G. (2024). Impact of Financial Literacy and Behavioural Biases on Investment Decision-making. *FIIB Business Review*, 13(1), 72–86. <https://doi.org/10.1177/23197145211035481>
- Zahera, S. A., & Bansal, R. (2018). Do investors exhibit behavioral biases in investment decision making? A systematic review. *Qualitative Research in Financial Markets*, 10(2), 210–251. <https://doi.org/10.1108/QRFM-04-2017-0028>

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