Consumer Financial Decision-Making Under Risk: A Behavioural Analysis of Spending, Saving, and Investment Choices

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ABSTRACT

Digital finance has complicated consumer financial choices due to the variety of investments and doubts in the economic system. According to behavioural economics, financial decisions are not always made rationally and thus, their behaviour is still influenced by cognitive bias, psychological tendencies and the different financial literacy levels. The knowledge of these behavioural determinants is critical in the analysis of by what method consumers make decisions of spending, saving and investments in a risky manner. The study will seek to analyse in what manner the combination of financial literacy, behavioural biases, and the perceived risk impacts the consumer financial behaviour in terms of spending, saving and investment. It attempts to offer a composite behavioural framework that displays actual financial decision-making in the face of uncertainty. The research design that was adopted was a quantitative and cross-sectional study, through the use of a structured questionnaire, divided into adults who participated in personal financial management. The number of respondents was 300-500 due to stratified random sampling. The data were analysed through descriptive statistics, reliability and validity tests, regression test and Structural Equation Modelling (SEM) to determine the relationship between the constructs. The behavioural biases become the best predictors of financial behaviour, especially in spending and investment decisions. Financial literacy had a significant positive impact on saving and investment behaviour, and perceived risk had intermediate influence on investment decisions. All of the measurement scales have high reliability and validity, and the results of SEM proved the soundness of the proposed behavioural model structure.

Keywords: Consumer behaviour; Financial literacy; Behavioural biases; Risk perception; Investment decisions

INTRODUCTION

Modern economic conditions, which are typified by digital banking, easy availability of credit, fintech investment tools, and economic instability, have made consumer financial decision-making processes more complex. People have transitioned to making informed decisions regarding expenditure, savings, borrowing, as well as investing, often with the inputs of uncertainty and risk. According to behavioural studies, not all financial choices are made according to rational assessment but are strongly determined by psychological leans, emotional reactions, and cognitive constraints. To give an example, mental budgeting, future time orientation, and self-control substantially influence the quality of financial performance (Bai, 2023), and the overall psychological mechanisms of consumer risk, trade-offs, and long-term performance can explain the way consumers make decisions by taking risks (Greenberg and Hershfield, 2019). The financial environment itself has a powerful influence of influencing behaviour. Perceived scarcity may cause stress and cognitive tunnel vision, resulting in short-

term, unwise or risky financial judgments (Cook and Sadeghein, 2018). Likewise, financial vulnerability can be caused by constrained resources, predisposed to debt, or economic shocks, all of which have been found to affect both positive and negative financial behaviours through the psychological properties (Hoffmann and McNair, 2019). In an applied sense, the purchasing behaviour of consumers in relation to financial products indicates that behavioural, perceived risks, and product attributes all influence purchasing behaviour (Ghosh, 2024).

Financial literacy has been one of the most prominent influences in moulding responsible financial behaviour. The research is always consistent, indicating that the financial literacy level improves the level of money management and reasonable repayment (Hamid and Loke, 2021), along with informed investment decisions among younger generations (Kumari, 2020). Nevertheless, being a literate person is not enough, since cognitive biases can dominate the process of making rational decisions. Studies show that even financially literate people can become victims of the framing effect that can bias their risk perception and financial decisions (Moreira Costa et al., 2021). Financial confidence, risk preferences, and literacy of young adults are also interdependent factors that influence financial behaviours such as saving and investing habits (Mudzingiri et al., 2018). The behavioural inclination and general financial well-being of working women continue to be closely affiliated with financial management practices and investment behaviour (Sabri et al., 2020). The behavioural variables have a strong impact on real and financial investment decisions, implying that behavioural aspects like risk tolerance and emotional reactions lead to asset allocation decisions (Hala et al., 2020). Specifically, Generation Y investors have distinctive behavioural impacts that determine their risk-related investment choices (Rahman and Gan, 2020). Wider description of financial well-being Broader descriptions of financial well-being highlight the fact that subjective well-being is multidimensional and influenced by behavioural, emotional, and economic dimensions (Mahendru et al., 2022). An analysis of the financial well-being of consumers also shows that the psychological, demographic, and behavioural factors interact to produce financial outcomes (Nanda and Banerjee, 2021). Financial vulnerability also adds complexity to risk-based financial choices because consumers commonly traverse various dimensions, including liquidity, debt, and volatile income status. Diverse behavioural taxonomies substantiate the fact that almost all consumer decision-making is moulded to a certain extent by behavioural propensities and constraints (Stango and Zinman, 2023). The overall scenery of consumer financial behaviour, in its turn, highlights the fact that behavioural, psychological, and demographic factors play a critical role in the spending, saving, and investing choices (Sudindra and Naidu, 2018; Kumar et al., 2023). In spite of such full scholarly interest, there are still various gaps in the literature. First, most of the studies examine savings behaviour, investment choices

or spending patterns independently, but not all of them offer an integrated behavioural framework, which considers all three areas of research together as risky. Second, despite research conducted on financial literacy, psychological vulnerability, and cognitive biases, there has been little research on the way these constructs interact and influence the process of financial decision-making in integrated domains, including saving, spending, and investing. The information on investment behaviour (Hala et al., 2020) and generational studies (Rahman and Gan, 2020) cannot be considered exhaustive in the context of in what manner consumers make risky trade-offs daily that are risky. Third, previous research has suggested multidimensional financial vulnerability and well-being models, which do not tend to be empirically combined with behavioural variables (framing, mental budgeting, and risk perception) (Mahendru et al., 2022; O'Connor et al., 2019). Lastly, little cross-analysis exists on by what manner behavioural determinants should affect real-time spending decisions and long-term investment decisions under the same decision-making environment. The present study helps in fulfilling the requirement to have a cohesive behavioural insight into consumer financial decisions under risk, through the incorporation of financial literacy, behavioural biases, as well as psychological factors into a single analytic context. Due to an increased complexity and uncertainty in financial settings, consumers have to operate in various financial landscapes that may demand varying degrees of risk evaluation and mental activity. The available data on the effect of framing (Moreira Costa et al., 2021) and the results of financial literacy (Hamid and Loke, 2021) indicate that consumers tend to fail to form consistent decision-making in the event of risk. Additionally, the risk perception and behavioural trends influence consumer behaviour of financial products (Ghosh, 2024) and explain the necessity to analyse in what manner the processes of spending, saving, and investing can be interrelated in practice. These views have been combined in the study to help advance the holistic model of behaviour that complements theoretical knowledge and offers practical guidelines to financial educators, policymakers, and financial service providers.

Research Objectives
1. To investigate the behavioural, psychological and financial literacy determinants of consumer financial decision-making under risk about spending, saving, and investment decisions.
2. To examine the connection between financial literacy and behavioural biases and perceived risk in determining consumer financial behaviours.

METHODOLOGY
Research Design
The research design adopted in this study was quantitative and cross-sectional in nature, whereby it set out to examine the way behavioural, psychological and financial literacy variables affect consumer financial behaviour under risk. Primary data were collected using a structured form among adult consumers. It is an

appropriate design since it enables statistical analysis of several behavioural variables over a given period of time.

Population and Sampling

The sample size used was the adult population, which consists of individuals aged 18 years and above who actively make personal financial choices regarding their spending, saving and investing. A stratified random sampling method was applied to make the sample representative of demographic groups like gender, age, education and income. The sample size of the respondents was deemed to be 300-500 as it has been found that a sample size of 300-500 respondents has sufficient statistical power in terms of multivariate analysis and structural equation modelling.

Data Collection Instrument

The data was gathered with the help of a structured questionnaire that was broken down into parts that evaluated the financial literacy, behavioural biases, spending behaviour, saving and investment behaviour and demographic characteristics. Questions concerning budgeting knowledge, risk understanding, investment awareness, mental budgeting, framing, self-control, overconfidence, risk aversion and general financial habits were included in the questionnaire. Every item was rated on a 5-point Likert scale, with the anchors being 1 = Strongly Disagree to 5 = Strongly Agree, allowing the behavioural tendencies and the attitude of the psyche towards the occurrence of a financial decision-making under risk to be captured.

Data Collection Procedure

The data were collected using both online and offline methods. The online surveys were distributed through emails and social media platforms in order to access various participants effectively. Paper-based forms were handed out at workplaces, in educational institutions and community places. Taking part was voluntary, anonymous and confidential. There were no ethical issues in regard to informed consent and data protection.

Data Analysis Techniques

Data analysis was initiated by initial screening to eliminate incomplete or contradictory responses, after which descriptive statistics were employed to describe demographic information and the overall distribution of the important variables. Cronbach's alpha was used to determine the reliability of the tool to ascertain the internal consistency of the measurement scales, and tests like KMO measure and Bartlett's Test were used to assess the validity of the tool to analyse the factor. The underlying factor structures were identified using the Exploratory Factor Analysis, and the Confirmatory Factor Analysis was used to evaluate the convergent and discriminant validity. Correlation analysis was also performed to examine the relationship between variables, regression analysis was performed to determine the predictive power of behavioural and psychological variables, and Structural Equation Modelling was performed to test the conceptual framework and examine the direct and indirect effects.

Ethical Considerations

Voluntary participation, informed consent and confidentiality were used to ensure the ethical standards. No sensitive information that could be personally identified was gathered, and the data were utilised academically. The participants were assured that their answers would be anonymised.

RESULTS
Descriptive Statistics

The descriptive analysis will give a summary of the demographics of the respondents and the distribution of the key variables. The sample is well balanced, as illustrated in Table 1, because there is a gender, age group, income, and education balance, which provides sufficient diversity in analysing financial behaviour under risk.

Table 1. Demographic Characteristics of Respondents

Variable	Category	Percentage (%)
Gender	Male	52
	Female	48
Age Group	18–25	28
	26–35	34
	36–45	22
	46+	16
Education Level	Undergraduate	35
	Graduate	42
	Postgraduate	23
Monthly Income	< 30,000	27
	30,000–60,000	33
	60,000–100,000	26
	100,000+	14
Employment Status	Student	22
	Employed	61
	Self-employed	17

Mean Construct Scores

Construct-level means indicate the general levels of financial literacy, behavioural biases, and financial behaviours among the respondents. Figure 1 indicates that behavioural biases showed the meanest score (4.1), then the investment behaviour (4.0) and the saving behaviour (3.8), which shows that behavioural orientation and long-term financial planning are fairly strong among the respondents. Conversely, spending behaviour registered the least mean score (3.2), implying more variability and poor control of behaviour in day-to-day financial decisions.
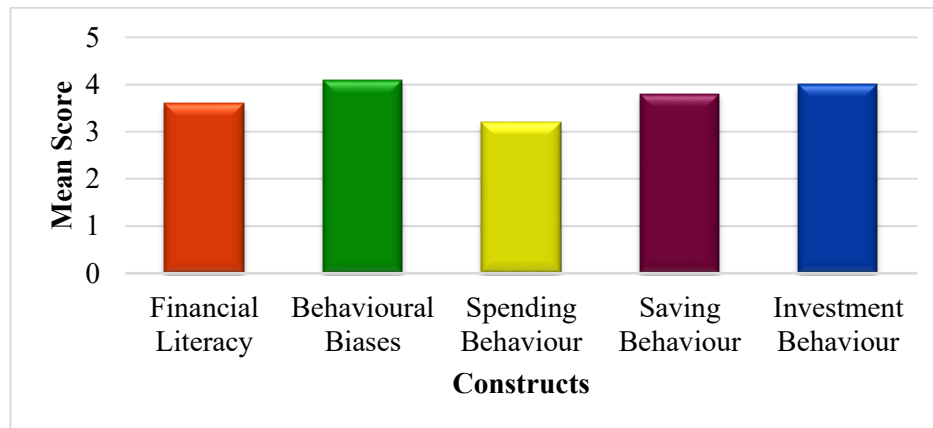

Figure 1. Mean Construct Scores

Reliability and Validity Analysis

The outcomes of reliability and validity prove the strength of measurement constructs. Table 2 demonstrates that all constructs have a Cronbach alpha value of more than 0.80 and an AVE value of more than 0.50, which implies a high internal consistency and satisfactory convergent validity.

Table 2. Reliability and Validity Statistics

Construct	Cronbach's α	KMO	AVE
Financial Literacy	0.87	0.84	0.62
Behavioural Biases	0.89	0.86	0.59
Spending Behaviour	0.82	0.79	0.57
Saving Behaviour	0.85	0.81	0.60
Investment Behaviour	0.88	0.83	0.63

Regression Path Coefficients

The role of financial literacy, behavioural biases, and the perceived risk in determining key financial behaviours was evaluated with a regression analysis. The greatest impact was experienced on the effect of behavioural biases on spending behaviour (b = 0.51) and then investment behaviour (b = 0.48), which shows that the behavioural tendencies are the most effective in influencing the financial decision-making under risk.
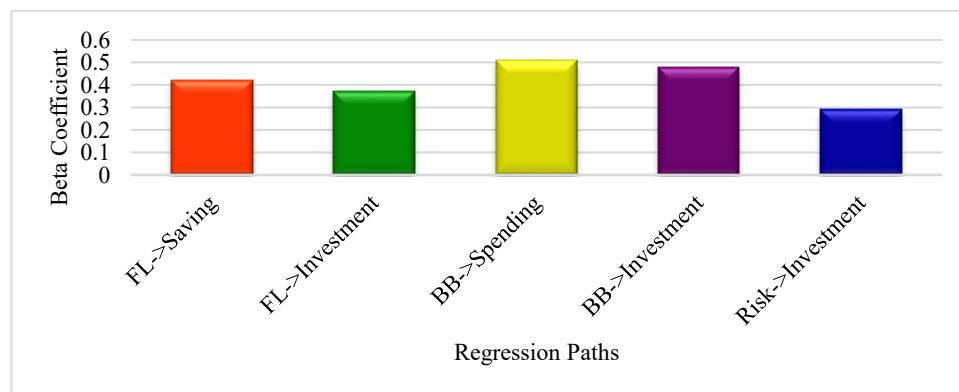

Figure 2. Regression Path Coefficients

Structural Equation Modelling (SEM) Output

The SEM analysis can be taken as additional evidence of the structural soundness of the model. Table 3 indicates that the beta values are highest in behavioural biases, then financial literacy and perceived risk, as expected in the theoretical aspect of the study.

Table 3. Regression and SEM Path Coefficients

Relationship Tested	β (Beta)	p-value	Interpretation
Financial Literacy → Saving	0.42	<0.001	Strong positive influence
Financial Literacy → Investment	0.37	<0.001	Significant effect
Behavioural Biases → Spending	0.51	<0.001	Strongest behavioural predictor
Behavioural Biases → Investment	0.48	<0.001	Major influence on risk choices
Perceived Risk → Investment	0.29	<0.01	Moderate influence
Behavioural Biases → Saving	0.33	<0.01	Significant effect

DISCUSSION

The results of the study offer an extensive insight into financial literacy, behavioural biases, and perceived risk in consumer financial choices on the spending, saving and investment fronts. The descriptive findings showed that the mean score of behavioural biases was the greatest of all the constructs, meaning that cognitive and psychological tendencies were the major determinants in the shaping of financial judgements by consumers. Responses to saving and investment were also relatively higher in terms of mean scores, implying that respondents have a tendency to exhibit greater behavioural discipline in the long-term financial behaviours as opposed to the short-term expenditure behaviours. The mean score was the lowest in spending behaviour, which would suggest that day-to-day financial choices are more vulnerable to changes, an impulsive nature, and environmental factors. Reliability and validity analysis proved that all the constructs were measured consistently and accurately, which corroborates the power of the analytical model. Regression and SEM analysis further showed that behavioural biases appeared as the most important predictors of both spending and investment behaviour, after which financial literacy was the next most influential predictor. The biggest impact was spawned by the behavioural bias in the area of spending behaviour, which shows the strong influence of the psychological aspects of financial decisions through framing, overconfidence and mental budgeting. There was a positive influence of financial literacy on saving and investment choices, which implies that enlightened people will be better placed to manage, assess risks, and allocate resources more efficiently. The perceived risk also played a moderate role in influencing investment behaviour, and this implies that emotional reactions to uncertainty are a strong factor that drives consumers to financial markets.

The results of the research are consistent with and build on the existing studies on the topic of behavioural finance and consumer decision-making. The conclusions of Suresh (2024) are supported by strong predictive effects of behavioural biases on investment behaviour, as they determined that behavioural biases are a major distortion on investment decision-making even with sufficient financial literacy. Equally, the prevalence of cognitive distortions in the determination of risk-based financial decision-making is in line with the findings of Tansuchat and Thaicharo (2025), who noted that cognitive distortions like loss aversion and mental shortcuts play a significant role in investment choices in emerging markets. The findings are also consistent with the study by Valaskova et al. (2019), who stressed that behavioural factors are key to understanding the discrepancies and the unreasonableness of financial behaviour. Their results prove the claim that consumers use a lot of heuristics and psychological biases instead of solely rational processing to make financial decisions. The medium, though not minimal, effect of perceived risk on investment behaviour aligns with that of Yazdanparast and Alhenawi (2022), who showed that increased vulnerability, especially in times of crisis like the COVID-19 pandemic and increases the emotional reactions of consumers and changes financial behaviour. Lastly, the fact that financial literacy is positively correlated with investment behaviour supports the conclusions of Zhu and Xiao (2022), who have found that the higher your level of financial education, the more probable that a consumer will have risky financial assets. This implies that money education enhances confidence, lessens uncertainty, and motivates a higher level of involvement in investment actions. Combined, these comparisons not only verify that the results of the study are well-grounded by the literature, but also provide a larger integrated perspective of behavioural, cognitive and educational factors on the decision-making process regarding finances.

The research has a number of significant theoretical and practical implications. Theoretically, the results support behavioural finance models in that they highlight that psychological and behavioural variables are better predictors than classic rational-choice variables. The combination of behavioural biases and financial literacy in the same analysis model is a more comprehensive explanation of risk-related consumer financial decisions. In practical terms, the findings lend some weight to the need to design financial education programs that transcend the fundamental financial literacy to include behavioural awareness and self-control interventions. The financial educators and policymakers ought to look at measures that can be used to help consumers identify and reduce cognitive biases like overconfidence and the framing effect. These can also be used by the financial institutions to develop more consumer-friendly financial innovations that consider behavioural tendencies like the default saving schemes, automated budgeting tools and risk-profiling systems that could advise consumers according to their behavioural patterns. Financial service providers and marketers can customise communication programs that

would make complex financial data easier to understand and require less decision-making effort.

Although the study has some significant contributions, it has a number of limitations. First, the cross-sectional type does not allow drawing a causal relationship because consumer behaviour can evolve with time, depending on the economic situation or personal experiences. Second, self-reported data creates chances of biases in responses, including social desirability or false self-perception. Third, it might not be sufficient to represent differences in the various cultural or socioeconomic environments, and in areas where financial literacy levels vary dramatically. Lastly, behavioural constructs are complex in nature and might not be fully quantified using quantitative measures only. The limitations can be overcome by future research that employs longitudinal research designs to observe changes in behaviour with time, especially during economically uncertain times. Comparisons across cultures would assist in understanding by what method behavioural biases would occur in various financial setups. Experimental or mixed methods would also offer more information on subconscious behavioural patterns and emotional triggers which determine financial decisions. Moreover, future research can explore the position of digital finance, the adoption of fintech and online investment platforms since these technologies are becoming influential on financial behaviour. Including behavioural interventions and other measures like nudges, defaults, or personalised financial coaching, and expanding the study to this area would benefit the understanding of by what means consumers can be influenced into making more rational and optimal financial choices further.

CONCLUSION

The present study discussed the effect of financial literacy, behavioural bias, and perceived risk on consumer financial decision-making in spending, saving and investment categories. The findings indicate a multidimensional interaction between cognitive, behavioural, and informational variables in determining the financial behaviour under risk. Among the major findings is the fact that behavioural biases have the greatest impact in consumer financial decision-making, especially the spending and investment behaviour. This suggests that the psychological biases of overconfidence, effects of framing, mental budgeting, and the problem of self-control tend to dominate rational judgment, particularly in cases that are accompanied by uncertainty. The other key draw is that financial literacy has a very high positive impact on saving and investment behaviour, and that financial literacy is important in increasing responsible long-term planning and wise financial decisions. Perceived risk also turned out to be a major predictor of investment behaviour, implying that consumer responses to uncertainty in terms of emotion still influence consumer disposition to participate in financial markets. The analysis confirms that day-to-day expenditure choices of consumers are more variable and unstructured than saving and investment choices, as they are more behaviourally

stable. Taken together, these results support the significance of applying behavioural knowledge in conjunction with financial education to improve the understanding and support the financial well-being of consumers. The study can be used in the literature of behavioural finance, as it outlines a more detailed model that incorporates the interaction between literacy, behavioural inclinations and risk perception in financial decision making.

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