

Behavioral Biases Influencing Investor's Decisions in NCR: Locus of Control a Moderating Variable

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Abstract:

Purpose- The study aims to recognize the behavioral biases influencing the investor's decisions with the locus of control moderating role. Classical finance theories assert that rational investors utilize all available information to optimize their wealth. Behavioral finance contends that psychological factors influence investment decisions.

Design/methodology/approach- A survey was used to test the hypotheses, and questionnaires were distributed throughout the NCR region. The data was analyzed from 490 investors after eliminating incomplete ones using the Smart PLS 4 software to apply the PLS algorithm and bootstrapping technique in partial least squares structural equation modeling.

Findings- The result suggests that behavioral biases (availability, familiarity, overconfidence, representativeness, and herding) have a significant and positive relation with investment decisions. However, endowment bias had no significant contribution to the investment decisions of individual investors. Moreover, the study found no moderating role of locus of control.

Research limitations/implications- The primary constraint of this research is that it focused only on the NCR region.

Practical implications- This research raises investors' awareness of the influence of psychological aspects on their decision-making in the stock market. By doing so, it seeks to improve the rationality of investment choices and promote market efficiency.

Originality- This research offers a unique perspective on the investor profile that is consistent with each bias that is being considered. Not only does it update the research on behavioral biases, but it also highlights the prejudice that is most effective in the context of India.

Keywords: Availability, Familiarity, Overconfidence, Representativeness, Herding, Endowment, Locus of control

1. Introduction

As the financial markets have expanded, customers now have a more comprehensive range of alternatives. Consequently, the information accessible to them has become more complex over time.

The development of financial markets has happened with the progress of corresponding technology (Khan, 2017). According to conventional finance theories, individuals are rational, and their decision-making process is only influenced by relevant factual information (Toma, 2015). When it comes to the field of finance, investors often make judgments that are either reasonable or irrational based on the information available to them. This subject is an intense dispute in both traditional and behavioral finance communities. Traditional finance theory indicates that investors are rational and use

intelligent decision-making to optimize their returns by selecting the most favorable investment choice, even in difficult situations (Boussaidi, 2013). Decision-making refers to the cognitive process by which an individual chooses a particular course of action from various available options. Although all individuals are affected by emotional and cognitive shortcomings or biases, conventional finance fails to acknowledge these defects by presuming that people continuously make logical judgments. People are prone to adopting behavioral biases when making decisions. Due to these biases, people

cannot make rational or typical judgments (Verma, 2016). Behavioral economics argue that most human decisions are not made deliberately and consciously via an in-depth evaluation of all the many factors and changes. Investors who submit to their behavioral biases while making judgments might inflict substantial harm on their money. Humans are inclined to make suboptimal judgments due to the inherent biases ingrained in our thoughts and bodies (Madaan & Singh, 2019).

When making individual investing selections, it is crucial to remember that each option has a certain level of risk and uncertainty. Market anomalies lead markets to deviate from an individual's logical conduct (Ogunlusi & Obademi, 2021). People limit their capacity for logical thinking due to various cognitive biases. Individuals endowed with rationality can examine all available information. With this knowledge, they may provide unbiased forecasts of future events, allowing them to make optimal financial decisions. Psychology and sociology are vital promoters of behavioral finance research. Mahanthe & Sugathadasa (2018); Lo (2021) Many studies have demonstrated that investors have behavioral biases, which contradict the efficient market idea. The behavioral finance approach replaces classical rationality with the idea that individuals are affected by their biases. Behavioral finance examines how psychological variables affect financial markets and choices (Lather et al., 2020). It is a novel financial phenomenon that emerged from traditional finance problems. However, it is essential to note that all individuals are affected by emotional and cognitive limits or biases. An investor is deemed to be rational, as per the principles of behavioral finance. The results of much research conducted by professionals in behavioral finance indicate that investors may not consistently exhibit rational behavior while making decisions about their investments (Isidore et al., 2020).

The main focus of this study is to enlighten ordinary investors by offering a comprehensive explanation of the pertinent issues and misunderstandings surrounding the stock market. These beliefs are mainly influenced by our psychological cognition, leading to increased frustration rather than success. Many concepts have emerged in the stock market, impacting investors' decision-making. The present paper aims to explain the development of behavioral finance despite rival theories. This study will examine some concepts of behavioral finance and their impact on the investing decision-making process.

The main aim of this paper is to examine the impact of locus of control on behavioral biases in Delhi/NCR investor decisions. Many biases impact investor decisions, but this will affect mainly a few biases: availability, representativeness, familiarity, overconfidence, herding, and endowment. The remaining parts of the paper are divided into the following parts: The second part overviews the existing literature and outlines the research hypothesis. The third part of the paper explains the approach used in the study and discusses the obtained outcomes. The fourth part of the paper summarizes the findings and the fifth concludes the paper with the study's limitations.

2. Literature Review

1. Availability

The "availability heuristic" is a mental shortcut that produces bias. Heuristics are based on an individual's initial thoughts, allowing them to make quick assessments and conclusions. The phenomenon in which humans prefer to give more weight to thoughts that quickly come to mind than facts is known as AB (Baker & Nofsinger, 2002). The field of psychology encompasses several cognitive biases that impede critical thinking and, hence, influence the decision-making process. Investors frequently choose to invest in countries where access to information is relatively easy (Waweru et al., 2008). The state of availability Preference bias occurs when managers rely on preexisting knowledge rather than exploring alternative alternatives and processes; this leads to irrationality in the decision-making process. At times, investors make judgments without taking into account the relevant facts. Furthermore, investors had increased difficulties during the financial crisis

due to their reactions influenced by AB. This is precisely due to the tendency of investors to react negatively when they hear news regarding redundancies and securities. Investors rely on readily accessible information instead of attempting to estimate all available information (Wang et al., 2014). In a competitive environment, stakeholders react quickly to information. Instead of making sensible investment decisions, they rely on shortcuts like availability.

Availability bias may also cause investors to mistakenly believe that a company with high yields has low risk. Simultaneously, investors mistakenly perceive hazardous securities as having a low return and a high-risk profile, resulting in less-than-ideal judgments (Ganzach, 2000). Information on the financial gains and losses in the stock market and the overall macroeconomic conditions impact investors' decisions. Moreover, how information is disseminated in the stock market, and the involvement of mediators play vital roles in modifying investment choices and significantly impact investors' viewpoints and attitudes (Brauer & Wiersema, 2012). The available information influences investor preferences, resulting in a specific investing pattern. Furthermore, there are situations when non-essential information influences the process of making investment decisions. The latest information might affect investors' opinions and risk-taking about specific assets, leading to potential changes (Kirchler et al., 2005). Therefore, it is suggested that

H1: Availability is significant and positively influenced by investment decisions.

2. Representative

The concept of representativeness pertains to the extent to which an event resembles its parent population. This heuristic is evident when an individual is willing to make broad generalizations about a different individual or organization, such as equities, given just a few specific characteristics (Richard & Ross, 1980). Investors base their investment decisions on mental heuristics and rules of thumb, and they can decide to invest in a business based purely on its attributes, such as managerial approach, past performance, or market standing, among others. However, if one ignores additional evidence, this pattern recognition may not be sufficient. Investors with a tendency for representativeness may make biased decisions, such as emphasizing recent performance over long-term averages (Ritter, 2003).

Another manner in which representativeness induces investors to make irrational decisions is by prompting them to respond excessively. This occurs when investors acquire "high-performing" stocks rather than those underperforming ones. Investors often see their past experiences and actions as mostly true (Rosman et al., 1994). Additionally, they believe that by drawing on their past encounters, they can make logical choices in the future. As a result, investors find themselves trapped in repetitive investing patterns, hindering their ability to monitor the present situation (Prechter, 2001) closely. In recent years, researchers have been striving to highlight several factors that impact investor behavior, particularly representativeness and its contribution to irrationality. People are expected to tend to concentrate more on the past than the future (Boussaidi, 2013). Nevertheless, investors often need to pay more attention to the fact that future results may diverge from their prior experiences. Moreover, the reputation of the firm's investors may influence their decision-making process, as they may consider the company's past success. The occurrence of representativeness is the fundamental reason behind all of these events, which often compels investors to make a suboptimal decision (Ying Luo, 2013). Therefore, it is suggested that

H2: Representative is significantly and positively influenced by investment decisions.

3. Familiarity

Familiarity bias refers to decision-makers' tendency to react differently to different situations depending on how an option is presented. This inclination enables decision-makers to choose other options (Pompian, 2012). A link exists between familiarity bias and conservative bias, which might impact investment decisions. Once an individual's thinking is fully formed, they may be unable to alter their original perspective. (Almansour & Arabyat, 2017) This study shows that investors affected by conservative bias change their opinions slowly, leading to systematic errors when making investment decisions. Consequently, individuals do not react positively to new knowledge. Familiarity bias is a phenomenon that occurs when investors excessively prioritize investing in their home countries. Investors like to allocate their funds to easily understandable and widely recognized assets. To mitigate these biases, investors engage in worldwide market participation (Verma, 2016). Empirical studies have consistently shown that investors are reluctant to spread their investments across other countries, even though international diversification is generally acknowledged as an effective strategy for reducing portfolio risk. (Coval & Moskowitz, 1999) It has been demonstrated that investment managers in the United States prefer to include locally based firms in their domestic portfolios. "Home country bias" is the phrase used to describe the absence of international variety that people may exhibit. According to the collected information, people seem to have a positive disposition towards stocks with which they are familiar. They believe these equities are more inclined to provide superior returns while presenting a reduced level of risk. As a result of this perspective, which deviates significantly from reality and is almost wishful thinking, their portfolio allocation is biased towards familiar and local assets (Huberman, 2001; Tourani-Rad & Kirkby, 2005).

H3: Familiarity is significant and positively influenced by investment decisions.

4. Overconfidence

Overconfident bias occurs when people or investors exhibit excessive belief in the capability to make financial choices and forecasts related to their performance. This results in overtrading, which then causes incorrect investing choices (Al-Dahan et al., 2019). It has been observed that investors who own inexpensive brokerage accounts tend to become too confident and participate in excessive trading activity. Nevertheless, (Odean, 1999) contends that the gains earned are insufficient to cover the transaction cost, which he attributes to excessive trading. Similarly, (Barber & Odean, 2000) analyzed a dataset of 78,000 families from a well-known discount brokerage firm in the United States of America. It was shown that engaging in excessive trading led to worse investment results. Overconfidence undermines confidence by causing investors to overlook the risks and uncertainties associated with their prior successes, leading them to engage in excessive trading. This behavior ultimately increases the possibility of failure. Confidence, however, is often a positive attitude shown by investors that shows courage in the investing process (Parkash & Parkash, 2024; Grežo, 2020). The study (Malmendier & Tate, 2005) examined the influence of overconfidence on investments made by businesses. The conclusion of their investigation revealed that overconfidence significantly impacts the functioning of corporate governance. Overconfidence significantly influences the actions of those who invest, and they make rational choices.

H4: Overconfidence is significant and positively influenced by investment decisions.

5. Herding

Herding behavior is the most influential behavioral bias in substantially influencing the financial markets. A period of evolution occurs before significant shifts in the dynamics of financial markets, and during this phase, herding behavior becomes evident (Rahayu et al., 2021). Herding behavior occurs when investors do not conduct adequate due diligence before imitating their actions. Herding behavior occurs when an investor imitates the conduct of other investors. This suggests that if an

investor selects security "A," other investors will likewise allocate their funds to that asset without formulating their strategies (Keswani et al., 2019). Investors often place more trust in general knowledge rather than confidential information, potentially impacting the fluctuation of stock values. Consequently, several potentially valuable investment possibilities now face the possibility of being placed at risk (Qasim et al., 2019) (Gahlot et al., 2024). Scholars in academics are intrigued by the concept of the herd effect due to its potential impact on return on risk models via changes in stock prices. These findings have significant ramifications for ideas related to the value of assets, equity valuation, and pricing in general. The herd factor may induce psychological and cognitive biases (Hsieh, 2013). Investors often prefer the herd factor when they feel it may help them get valuable and trustworthy information. Moreover, the effect of herd behavior is evident in the financial market, as investors rely on traders' actions to determine their own investment choices about the purchase or sale of shares.

(Yahya et al., 2024) examined the phenomenon of herding among investors in the Pacific Basin stock market. According to the results, it was concluded that the inclination to follow the crowd changes depending on whether the market is experiencing a positive or negative trend. Moreover, the study indicated that herding had a favorable association with market performance but showed a negative connection with market volatility. (Oehler & Wendt, 2009) Identified the phenomenon of mutual fund herding in Germany. They accomplished this by gathering data on the buying and selling transactions conducted by managers during the years 2000 and 2005. The data indicates a significant herding tendency in the stock market since they invest seventy percent of their money in this market.

H5: Herding is significantly and positively influenced by investment decisions.

6. Endowment

Individuals tend to associate the value of ownership with the items they own, overestimating their worth compared to their actual value (Banerji et al., 2020). The endowment effect argues that investors develop irrational preferences and emotional attachments to assets they already own, potentially resulting in resource allocation inefficiencies and market price distortions (Nguyen & Schuessler, 2012). Consistently, financial research demonstrates that the endowment effect significantly affects the trading behavior of investors, the pricing of assets, and market efficiency. For instance, when confronted with negative information, investors tend to overvalue equities and other financial assets they already own and are reluctant to sell. This can result in an underreaction or overreaction of the market (Sapkota, 2023). There is a broad incidence of this bias among investors who have formed an emotional commitment to a particular asset or firm. Consider the scenario when a parent transfers shares to their child, and the child has a strong emotional connection to the stock. This emotional attachment motivates the child to hold onto the stock, even if its performance is poor in market conditions (Yi, 2024).

Endowment bias is a unique idea and function of expected destructive emotions in decision-making. Accordingly, (Armansyah, 2022) suggested that endowment bias exists among the investors of the Iraq Stock Exchange. On the other hand, (Parkash & Parkash, 2024) The study revealed that the endowment bias strongly influenced the earning management choices made by Indonesian students in a positive manner.

H6: Endowment is significantly and positively influenced by investment decisions.

7. Locus of control

The locus of Control refers to people's faith that the expected results are directly influenced by their skills and qualities. Within the context of IDM, the level of influence (LC) exerted by an investor on a decision or choice is quantified based on the magnitude or extent of its effect (Lam & Schaubroeck, 2000). Investors are more inclined to make investment choices when they perceive they have control

over some aspects of the scenario (Selart, 2005). The notion of LC, or consumer decision-making, is a crucial element of study that explores the factors that impact purchasing decisions and the benefits of consumer decision-making. Some investors strongly dislike risk because they fail to acknowledge their ability. Conversely, several investors overestimate their abilities and believe they can exert influence or alter market circumstances. These investors have the mistaken belief that they are superior to ordinary investors, which might lead them to make investment choices that are more irrational than they would typically make (Ganzach, 2000).

LC affects investors and decision-makers who assume they can manage the situation. Both groups are affected by the LC. Some investors are ignorant of their talents and risk-averse. However, some investors overestimate their talents because they can sometimes modify market circumstances (Jamal & Riaz, 2024). The investors perceive themselves as superior to others, resulting in their imprudent financial choices. Investors with internal LC perform poorly and make bias-influenced decisions. LC occurs in investment decision-making (IDM) when an investor expects to control the investment's cause and resistor. Thus, IDM investors become illogical and biased in their decisions (Grežo, 2020).

H7a: Locus of control moderates the relationship between Herding and Investment decision.

H7b: Locus of control moderates the relationship between Availability and Investment decision.

H7c: Locus of control moderates the relationship between Representative and Investment decision.

H7d: Locus of control moderates the relationship between Familiarity and Investment decision.

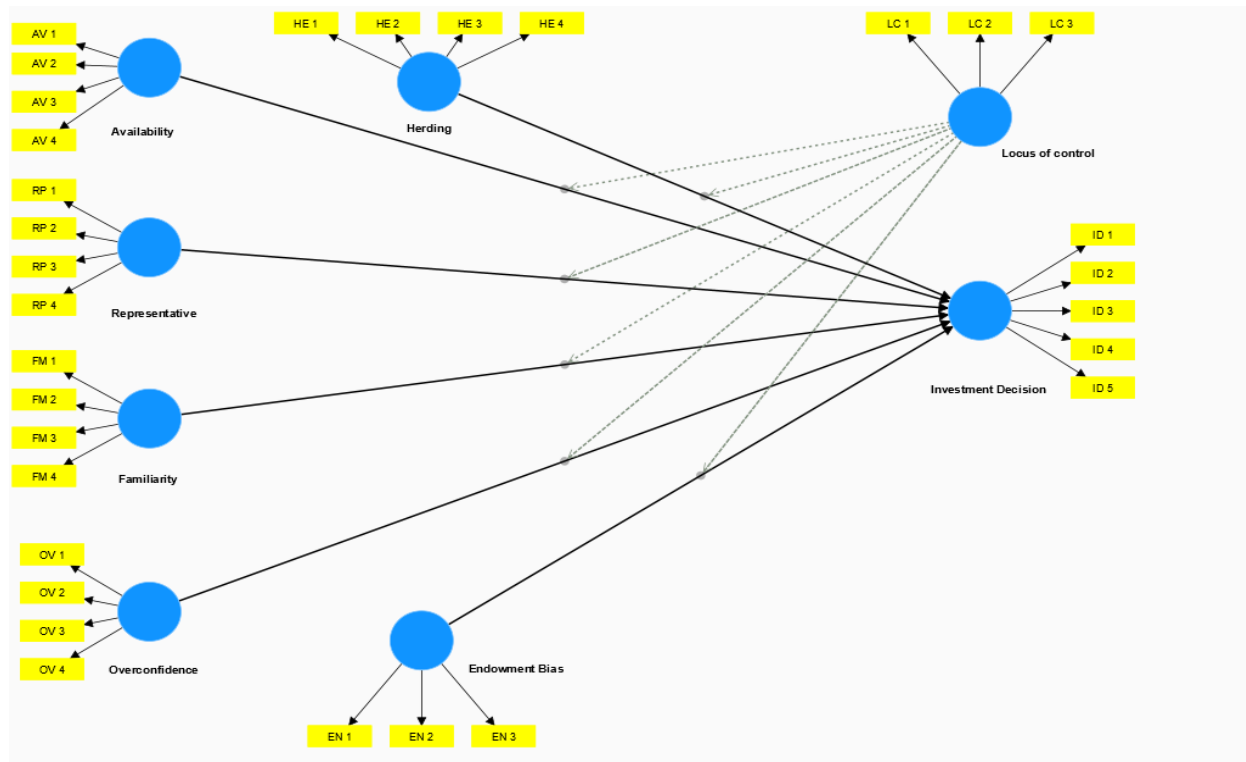
H7e: Locus of control moderates the relationship between Overconfidence and Investment decision.

H7f: Locus of control moderates the relationship between Endowment and Investment decision.

3. Methodology

A structured questionnaire collected data on who had invested in the stock market to accomplish the research objectives. The sample was selected using the convenience sampling approach due to its accessibility for respondents. The questionnaire was distributed among all private and government employees from the banking, academic, IT, automobile, and pharmaceutical sectors. Information was collected using a rating system ranging from 1 to 5, with 1 indicating significant disagreement and 5 indicating strong agreement. A total of 600 questionnaires were circulated, and after removing non-usable responses, 490 responses were used for data analysis. Partial least square structural equation modeling was used to analyze the data through the PLS algorithm and bootstrapping technique in SmartPLS software. The proposed measurement model was investigated through a reliability test and validity analysis through convergent and discriminant validity. The proposed structural model was assessed using path coefficient values and an r-square assessment.

Figure 1. Proposed model



Source: Author's calculation

Results

Descriptive statistics are represented in Table I. As depicted, the mean score of all the variables was above 3.2, and the maximum standard deviation was 1.46. Of 490 respondents, 280 were males, and 210 were females.

Table I Descriptive statistics

Construct	Mean	SD
Availability	3.902	1.337
Representative	3.427	1.394
Familiarity	3.201	1.460
Herding	3.832	1.268
Overconfidence	3.731	1.348
Endowment	3.432	1.467
Locus of control	3.768	1.340
Investment Decision	3.211	1.784
Total Number of Respondents	490	
Male	280	
Female	210	

Source: Author's calculation

Demographic background

Our investigation into the demographic distribution has determined that about 61.6% comprises

men. In comparison, 38.4% include females, with a frequency of 302 and 188, respectively (refer Table II).

During the evaluation of the age distribution, it was found that 10.4% of the respondents were in the age range of 18 to 25 years, while 37.6% of the participants were associated with the age group of 26 to 35 years. The survey found that 31.4% of the participants were 36–45 years old, while 17.3% belonged to the age group of 46–55 years. Interestingly, just a tiny proportion of 3.3% of the respondents were aged 56 years and beyond. Regarding education, most respondents held bachelor's and post-graduation degrees, with 39.6% and 38.4%, respectively. On the other hand, the rest of the participants came from high school and other courses at 4.3% and 3.5%. Doctoral degrees occupied 14.3%, respectively. Regarding the marital status of respondents, 30% were unmarried, with a frequency level of 147. On the other hand, 70% of those who responded were married, and the total number was 343. As per the nature of the family, nuclear was 59.6%, and joint was 40.4%. Of the number of earning members in the family, 16.7% were respondents with one member, 41.4% were with two members, 24.3% were with three members, and 17.6% had more than three members. Regarding the monthly income of the family, 34.3% of respondents come under the range of 0-200000, 32.1% under 200000-500000, 22.9% under 500000-900000, and 11.6% come under the scope of more than 900000.

As per investment experience, 53.7% of respondents had less than two years, 29.2% experienced 2-4 years, 12.7% experienced 4-6 years, and only 4.5% had more than six years. Occupation-wise, respondents from the private sector were 45.9% with a frequency of 225, the government sector was 31.4% with a frequency of 154, and the self-owned (business) sector was 22.7% with a frequency of 111, respectively.

Table II Demographic characteristics

Category	Frequency	Percentage %
Gender		
Male	302	61.6
Female	188	38.4
Age		
18-25	51	10.4
26-35	184	37.6
36-45	154	31.4
46-55	85	17.3
56 and above	16	3.3
Education		
High School	21	4.3
Under Graduate	194	39.6
Post Graduate	188	38.4
Doctoral	70	14.3
Others	17	3.5
Marital Status		
Single	147	30.0
Married	343	70.0

Nature of Family		
Nuclear	292	59.6
Joint	198	40.4
Numbers of Earning members in Family		
One	82	16.7
Two	203	41.4
Three	119	24.3
More than three	86	17.6
Monthly Income of family (in lakhs)		
0-200000	168	34.3
200000-500000	153	31.2
500000-900000	112	22.9
More than 900000	57	11.6
Investment experience (in years)		
0-2	263	53.7
2-4	143	29.2
4-6	62	12.7
More than six years	22	4.5
Occupation		
Private job	225	45.9
Government job	154	31.4
Business	111	22.7

Source: Author's own compilation

Measurement Model Investigation Results

The measurement model was investigated in terms of indicator reliability and validity, including convergent and discriminant validity of the questionnaire. Content validity was demonstrated through the opinions of 6 experts regarding the questionnaire. With reference to Hulland et al. (2017), exploratory factor analysis was not conducted due to the adaptive nature of the scales used in this study. Confirmatory factor analysis was performed to certify the belongingness of each statement to its respective variable.

Table III shows the factor loading of all the statements, which was above the threshold limit of 0.7 (Sarstedt et al., 2017). Internal consistency of the scale was demonstrated with the help of Cronbach's alpha and composite reliability. As depicted in Table IV, Cronbach's alpha and composite reliability values were above the minimal allowed value of 0.7 (Hair et al., 2019). The average variance extracted (AVE) for all the variables was calculated to confirm the convergent validity. As represented in Table 4, the AVE values of all the variables were above the minimum allowed value

of 0.5 (Sharma, 1996), confirming the convergent validity of all the variables.

Table III Factor loading of all the statements

Construct	Item code	Factor Loadings
Availability Bias	AV 1	.871
	AV 2	.794
	AV 3	.835
	AV 4	.873
Endowment Bias	EN 1	.853
	EN 2	.786
	EN 3	.784
Familiarity Bias	FM 1	.839
	FM 2	.823
	FM 3	.853
	FM 4	.857
Herding Bias	HD 1	.829
	HD 2	.910
	HD 3	.890
	HD 4	.811
Investment Decision	ID 1	.852
	ID 2	.871
	ID 3	.821
	ID 4	.839
	ID 5	.854
Locus of control	LC 1	.882
	LC 2	.951
	LC 3	.943
Overconfidence Bias	OV 1	.813
	OV 2	.877
	OV 3	.835
	OV 4	.818
Representative Bias	RP 1	.797
	RP 2	.797
	RP 3	.832
	RP 4	.813

Source: Author's calculation

Table IV Cronbach's alpha and Composite Reliability

	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Availability	.868	.908	.712
Endowment Bias	.739	.849	.653
Familiarity	.865	.908	.711
Herding	.883	.92	.742

Investment Decision	.902	.927	.718
Locus of control	.916	.947	.857
Overconfidence	.856	.903	.699
Representative	.825	.884	.656

Source: Author's calculation

The discriminant validity of the questionnaire was demonstrated with Hetrotrait-Monotrait ratio values. As depicted in Table V, the HTMT ratio of all the variables was less than the maximum value of 0.85 (Henseler et al., 2015), which ascertained the instrument's discriminant validity.

Table V HTMT Ratio

	AV	EN	FM	HD	ID	LC	OV	RP
AV								
EN	0.2							
FM	0.338	0.625						
HD	0.364	0.598	0.813					
ID	0.311	0.461	0.76	0.714				
LC	0.238	0.463	0.715	0.662	0.815			
OV	0.275	0.557	0.678	0.742	0.645	0.548		
RP	0.28	0.497	0.673	0.623	0.641	0.543	0.754	

Source: Author's calculation

Structural Model Investigation Results

Since the various measures of the measurement model were confirmed, the next step was to investigate the structural model through r square and model fit results. Further, the bootstrapping method was used to assess path coefficient values. As depicted in Table VI, the model fitness was demonstrated with SRMR criteria. The SRMR value was 0.049, below the set criteria of 0.80 (Henseler et al., 2016), illustrating the proposed model as a good fit.

Table VI Model fitness

	Saturated model	Estimated model
SRMR	.049	.049
d_ULS	1.191	1.193
d_G	.545	.545
Chi-square	1620.146	1622.523
NFI	.843	.843

Source: Author's calculation

As depicted in Table VII, the r square of the investment decision was computed to be 0.669, which represents a variance of 66% in investment decisions explained by selected independent variables.

Table VII R Square value

Dependent Variable	R Square	R Square Adjusted
Investment Decision	.669	.659

Source: Author's calculation

All the structural relationships were measured through path coefficient results. Table VIII shows a significant and positive relationship between availability bias and investment decision ($\beta = 0.058$, $p < 0.05$); therefore, H1 is supported.

Hypothesis 2 of the study investigates the influence of endowment bias on investment decisions. The results reveal an insignificant and negative impact of endowment bias on investment decisions ($\beta = -0.036$, $p > 0.05$); thus, we rejected H2. Other biases like familiarity ($\beta = 0.163$, $p < 0.05$), herding ($\beta = 0.108$, $p < 0.05$), overconfidence ($\beta = 0.096$, $p < 0.05$), and representative bias ($\beta = 0.124$, $p < 0.05$) were found to have significant and positive impacts on investment decisions; thereby, H3, H4, H5, and H6 were accepted.

Table VIII Path coefficient results

Relationships	Path Coefficient	STDEV	T statistics	P values	Inference
Availability -> Investment Decision	.058	.027	2.157	.031	Supported
Endowment Bias -> Investment Decision	-0.036	.035	1.078	.281	Not Supported
Familiarity -> Investment Decision	.163	.055	2.944	.003	Supported
Herding -> Investment Decision	.108	.053	1.992	.046	Supported
Overconfidence -> Investment Decision	.096	.044	2.148	.032	Supported
Representative -> Investment Decision	.124	.041	2.989	.003	Supported

Source: Author's calculation

Table IX indicates the moderating effect of the study variable. The results show that locus of control has no significant moderating effect on the relationship between herding ($\beta = -0.019$, $p > 0.05$), availability ($\beta = 0.015$, $p > 0.05$), representative ($\beta = 0.049$, $p > 0.05$), familiarity ($\beta = -0.064$, $p > 0.05$), overconfidence ($\beta = -0.005$, $p > 0.05$), endowment ($\beta = 0.028$, $p > 0.05$) and investment decisions. Therefore; rejected H7a, H7b, H7c, H7d, H7e and H7f. The possible description of the insignificant moderation effect of locus of control may have occurred for some reasons; one is that the characteristics of the sample used in each research study, such as personal traits, vary from culture to culture.

Table IX Moderating effect

Relationships	Path Coefficient	STDEV	T statistics	P values	Inference
Locus of control x Herding -> Investment Decision	-0.019	.057	.338	.735	Not Supported

Locus of control x Availability -> Investment Decision	.015	.023	0.713	.476	Not Supported
Locus of control x Representative -> Investment Decision	.049	.042	1.122	.262	Not Supported
Locus of control x Familiarity -> Investment Decision	-0.064	.058	1.105	.269	Not Supported
Locus of control x Overconfidence -> Investment Decision	-0.005	.048	.065	.948	Not Supported
Locus of control x Endowment Bias -> Investment Decision	.028	.035	.758	.448	Not Supported

Source: Author's calculation

4. Discussion

The research seeks to examine the influence of behavioral biases on investor decision-making, with locus of control being considered as a moderating component. Behavioral biases are more likely to occur in India due to investors' general lack of financial literacy and India's status as a developing nation. The empirical studies supported that these biases influence investor decisions while investing in the stock market. The result confirmed that availability positively and significantly impacts investors' decisions. This conclusion is corroborated by the research findings of (Quang et al., 2023; Qureshi et al., 2012), who proposed that investors assign undue importance to easily accessible information. The results indicate that the representativeness heuristic has a strong and statistically significant impact on investor decision-making. This study's findings align with the most recent research (Athur, 2013; Hussain et al., 2023). The judgments made by investors were shown to be much benefited by familiarity. The results agree with studies by (Ankhita Nair .M et al., 2017; Toma, 2015).

Additionally, this research discovered that overconfidence had a substantial and beneficial influence on investors' decision-making. The results of the research is supported by the study's results (Kiran et al., 2017; Riaz & Iqbal, 2015). The herding was also found to positively and significantly impact investors' decisions. It corresponds to the research conducted by (Ankhita Nair .M et al., 2017; Kanojia et al., 2022). The endowment was found to have negatively and insignificantly affected investor decisions. This study is consistent with the result of (Sapkota, 2023). The investigation did not find any moderating effect of Locus of control. The moderate moderating impact of LC may be explained by the many sample traits included in the study, including personal qualities that vary across various cultures. Investors may rely on cognitive shortcuts gained via skill and knowledge. The results align with the findings of previous investigations (Kamaram et al., 2020; Lin & Ding, 2003).

5. Conclusion

After the housing bubble in the United States and the stock market crash in 2009, it is crucial to emphasize that the current economic models cannot fully understand the financial systems' actual condition. The importance of psychological factors in influencing people's decision-making cannot be ignored. Economists, neurologists, and psychiatrists have undertaken several endeavors to examine the economic decision-making process within sociology, psychology, and economics. Due to their decision-making, the ordinary individual investor tends to achieve poorer investment returns than the market average. To achieve this objective, the article aims to provide a concise and expeditious elucidation of how behavioral biases influence decision-making procedures. The

decision-making process requires individuals to use relevant information and evaluate it to reach the most profitable action.

The primary outcomes of this study will assist retail investors in understanding behavioral bias and how it affects their investment decisions. This study uses structural equation models to establish the causal relationship between behavioral bias factors. This research has many practical consequences for mutual funds. The conceptual model provides a systematic framework for fund managers to create specialty products (funds) to meet customer needs. This research allows the mutual fund sector to educate customers about behavioral biases prohibiting them from making effective investment decisions. This research holds significant implications for individuals who invest in the capital markets, financial advisors, and authorities seeking to increase their financial decisions. Additionally, financial institutions and policymakers can benefit from understanding how to design more effective regulations and market mechanisms that account for the realities of investor behavior. Investors should not depend solely on cognitive heuristics and emotions while making investment decisions. Instead, they should evaluate capital opportunities comprehensively, establish quantitative business requirements, define investment criteria and limitations, and thoroughly understand the available behavioral finance theories. Individual investors and financial industry professionals must know the essentials of heuristics and cognitive biases in investors' choices. Identifying and recognizing these biases might assist investors in making better choices, mitigating the potential negative consequences of irrational behavior, and developing strategies that align with their long-term financial goals. This will aid in mitigating the potential for retail customers to make lousy investment selections.

Future research

1. First, this study investigated the impact of heuristics and behavioral biases on investor decisions in the Delhi/ NCR region. Future research should focus on other parts of India and other North Indian regions.
2. Second, to better understand how biases influence investing choices, consider factors such as risk acceptance, financial knowledge, and personality traits by taking mediator and moderator. This study also focused on selected factors as more factors must be considered for further analysis.
3. Third, Future studies may compare analyses between individual and institutional investors or morning and night traders.

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