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Influence of Investor Biases on Decision Making in Indian Stock Market

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Abstract: This study examines how key behavioural biases, such as overconfidence, disposition effect, cognitive dissonance, optimism, anchoring, and herding, influence investment decision-making in the Indian stock market. The study uses primary data from 400 retail investors. Exploratory Factor Analysis (EFA) validates the underlying bias constructs. Correlation and multiple regression analysis are then used to assess their impact on decision-making. The findings reveal that overconfidence and cognitive dissonance significantly influence investment behaviour. The disposition effect shows a weak but positive association. In contrast, optimism, anchoring, and herding biases have no significant impact. These results highlight that investor behaviour in emerging markets is shaped by different psychological dynamics compared to developed markets. The study contributes to behavioural finance literature by providing an integrated analysis of multiple biases in the Indian context. From a practical perspective, the findings suggest that financial advisors should incorporate behavioural profiling in investment advisory, while policymakers should design targeted investor education programs to mitigate cognitive biases and promote rational decision-making.

1. Introduction

The Efficient Market Hypothesis (EMH) is part of the bedrock of conventional financial theory and states that investors act flexibly and the price of assets reflects all available information instantaneously and accurately (Fama, 1970). In this paradigm, investment decisions are assumed to be based on objective analysis to maximise expected returns while adhering to efficient risk-pricing procedures. For the past several decades, this framework has been used to govern financial research and policy deliberations and includes models of asset pricing, portfolio construction, and regulation of markets. However, the conclusion of investor rationality has gradually been under pressure due to persistent anomalies in the market, including excessive volatility, speculative bubbles, momentum effect, and systematic mispricing. Empirical evidence is mounting, however, suggesting that investors will often use heuristics, emotions, and social cues to make investment choices, and this can lead to regular and predictable departures from pure rationality (Barberis & Thaler, 2003; Shefrin, 2007). Behavioural finance, which draws on financial theory as well as psychological knowledge to understand anthropological effects on investment behaviour, has arisen as a theoretical response to these observations. Behavioural finance attributes a pair of common psychological biases that regularly unbalance the judgment and decision-making of investors. Some of the most salient are overconfidence, optimism, anchoring, herding behaviour, the disposition effect, and cognitive dissonance. These biases affect the way investors interpret information, take on risk, interpret market signals, and react to gains and losses. Prior empirical studies show that such behavioural tendencies can lead to overtrading, poor portfolio diversification, slow responses to new information, and persistent inefficiencies in prices (Odean, 1998; Barber & Odean, 2001; Statman, 2014). Although behavioural finance has been well studied in developed financial markets, its applicability and explanatory ability in emerging economies are relatively understudied. Emerging markets are very different from developed markets in terms of institutional maturity, depth of regulation, information dissemination, and the sophistication of investors. These differences in structure may strengthen some of the behavioural biases while weakening some other biases. The Indian stock market, with the defining features of high rate of growth, high volatility, growth in the number of retail investors, and significant information asymmetry, provides an especially relevant context for understanding behavioural factors in investment decision-making. Despite an emerging body of behavioural finance research from India, there are still a number of shortcomings in the existing literature. First, many studies focus on individual biases in isolation, which is limited in telling us about the influence of multiple biases on investor decisions. Second, empirical findings with regard to the relative strength and significance of specific biases are not consistent, and suggest that there may be contextual and psychological factors that differentially determine the salience of bias across markets. Third, there is little evidence for which behavioural biases have the most impact on the decision-making of Indian retail investors in an integrated analytical system. Addressing these gaps is critical to both the development of behavioral finance theory and to improving investment decision-making. A better understanding of prevailing behavioural biases can help financial advisors in individualising behavioural interventions, enable policymakers to develop effective investor education programs, and help produce more stable and efficient market outcomes. Accordingly, the present study empirically explores the effect of six major types of behavioural biases, viz., overconfidence, optimism, anchoring, herding behaviour, disposition effect, and cognitive dissonance, on the investment decision-making of the retail investors in the Indian stock market. The study uses Exploratory Factor Analysis (EFA) to validate the behavioural constructs from primary survey results from 400 individual investors. Subsequent correlation and multiple regression analyses are used thereafter to determine the relative effects of each bias on the outcome of investments.

2. Literature Review

According to classical finance theory, investors are assumed to be consistent and rational beings in order to maximise expected benefit. The Efficient Market Hypothesis (EMH) further continues that systematic investor error is minimal and asset prices totally incorporate all extant information (Fama, 1970). Nonetheless, regular departures from predictions by the models (excessive trading, continued mispricing, and speculative bubbles) have led to doubts about the sufficiency of simply rational models for explaining real investor behaviour. In response to these limitations came behavioural finance to combine psychological insight and financial judgment. Early scholarly contributions determined that investors use heuristics and are vulnerable to cognitive and affective biases, which systematically render decision-making under uncertainty distorted (Tversky & Kahneman, 1974; Kahneman & Tversky, 1979). Subsequent empirical studies supported the latter by affirming that these biases do affect the processing of information, perception of risk, and trading behaviour, resulting in outcomes that do not conform to the rational expectations (Barberis & Thaler, 2003; Shefrin, 2007). Overconfidence has received extensive empirical focus among the behavioural biases that have been identified in the literature. Overconfident investors overstate their expertise and forecasting abilities, which prompts them to trade heavily and perform operationally worse (Odean, 1998). Empirical research has shown that such investors trade more than is warranted by information advantages and therefore bear greater transaction costs (Barber & Odean, 2001). Evidence of overconfidence in emerging markets from limited financial literacy and higher market volatility suggests the potential confinement of the latter factors into enhancing speculative behaviour (Chandra, 2009; Mishra & Metilda, 2015). Optimism bias is another prominent psychological bias, whereby investors have a tendency to overestimate a good outcome and underestimate the risks. According to a psychological study, people think of themselves as less likely to experience bad things than other people (Weinstein, 1980). Within financial frameworks, optimistically biased investors are more risk-tolerant and less fearful of participating in equity markets (Puri & Robinson, 2007). However, over-optimism has also been linked to over-expectations and lower realised returns if the outcome of markets deviates negatively from good forecasts (Hilary &Menzly, 2006). Empirical results from India have indicated that optimism is the determining factor in asset distribution and risk perception, especially during bullish market periods (Chandra & Kumar, 2011). Anchoring bias, which emphasises the tendency of investors to reference points initially (e.g., historical prices or valuations), provides a framework for explaining deviations from rational investing behaviour (Tversky & Kahneman, 1974). Once the anchors are set, the investors often are not able to adjust enough to new information and thus are slow to react to changing market conditions. Empirical investigations show that anchoring also impacts both individual investors and professionals and is one of the causes of inertia in price expectations and forecasting errors (Campbell & Sharpe, 2009; Kaustia et al., 2008). On the Indian stock market, evidence suggests that investors often anchor on past prices, which influences both entry and exit decisions (Chandra et al., 2012). Herd behaviour refers to the tendency of investors to follow other people's behaviour rather than use private, confidential information. Theoretical models explain herding as being caused by informational cascades, where people make assumptions about hidden information based on what they see in the market behaviour (Banerjee, 1992; Bikhchandani et al., 1992). Empirical research shows that herding increases during times of uncertainty and market stress, and causes volatility and asset mispricing (Chang et al., 2000). Studies dedicated to emerging markets observe consistently higher herding tendencies compared to the situation in developed economies and ascribe this phenomenon to information asymmetry and lack of transparency (Demirer &Kutan, 2006). The evidence from the Indian markets indicates how widespread herding is in general among retail investors, especially in times of high volatility (Sehgal et al., 2009; Kumari & Mahakud, 2015). The disposition effect summarises the fact that investors are averse to realising losses, but will readily sell winning assets. Rooted in the fields of prospect theory and mental accounting, this is a biased emotional response to gains vs. losses (Shefrin & Statman, 1985). Empirical research shows that the disposition effect causes inefficient portfolio rebalancing and poor long-term performance (Odean, 1998; Grinblatt & Han, 2005). Research done in emerging markets shows that low experience and higher emotional involvement could be worsening this bias on the part of retail investors (Chandra, 2012; Kumari and Mahakud, 2016). Cognitive dissonance bias helps to explain how investors deal with information that contradicts their previous beliefs or decisions. In order to reduce the psychological discomfort, people selectively interpret or ignore disconfirming evidence, which therefore reinforces existing viewpoints (Festinger, 1957). Within the context of financial markets, this type of behaviour means that adverse information is not taken into account quickly enough and contributes to persistence in suboptimal investment choices (Hirshleifer, 2001). Empirical studies indicate that investors often rationalise poor performance rather than changing beliefs, with the final result being the confirmation bias and the inertia in portfolios (Goetzmann & Peles, 1997). Evidence from India suggests that cognitive dissonance plays an important role in investors not wanting to admit their own mistakes and moving out of any losing positions (Chandra, 2012; Kumari & Mahakud, 2015). Although there is a lot of evidence in the literature that behavioural biases influence the behaviour of investors, there are several limitations. Firstly, much of the empirical evidence comes from developed markets, where the generalizability of findings for emerging economies that are characterised by different institutional and informational contexts is cast in doubt. Secondly, existing studies tend to examine behavioural biases in isolation, allowing for little understanding of the way in which they may combine or be two in comparison to one another when it comes to investment decision-making. Thirdly, there are inconsistencies in findings relating to the dominance of various biases across contexts that suggest the need for integrated empirical models to examine multiple biases simultaneously in a single market context.

2.1. Recent Developments in Behavioural Finance Research

In recent years, behavioural finance research has expanded significantly, particularly in the context of emerging markets and retail investor behaviour. Contemporary studies have emphasised the growing influence of psychological biases in increasingly digital and volatile financial environments. Recent empirical evidence suggests that behavioural biases continue to play a crucial role in shaping investment decisions, especially with the rise of online trading platforms and increased retail participation. For instance, studies have found that overconfidence and herding behaviour intensified during periods of market uncertainty, such as the COVID-19 pandemic, leading to excessive trading and speculative investment patterns (Bouri et al., 2021; Goodell et al., 2020). Further, research by Kumar and Goyal (2020) highlights that behavioural biases in emerging markets like India are more pronounced due to lower financial literacy and higher information asymmetry. Similarly, Sahi (2019) found that emotional and cognitive biases significantly influence investment choices among Indian retail investors, particularly under conditions of market volatility. Recent studies have also explored the role of technology and social media in amplifying behavioural biases. Investors are increasingly influenced by online information, peer behaviour, and digital forums, which reinforces herding tendencies and confirmation bias (Nofsinger, 2018; Barber et al., 2021). Moreover, contemporary research has focused on integrated models of behavioural biases rather than studying them in isolation. For example, Jain et al. (2022) examined multiple biases simultaneously and found that overconfidence and cognitive dissonance remain dominant predictors of investment decision-making, supporting the multidimensional nature of investor psychology. These recent advancements indicate that while traditional behavioural biases remain relevant, their manifestation has evolved with changing market structures and technological advancements. However, there is still limited empirical research that simultaneously examines multiple behavioural biases within a unified analytical framework in the context of Indian retail investors. This gap justifies the need for the present study. Accordingly, the present study is undertaken with the following objectives:

1. To identify and validate key behavioural biases influencing retail investors in the Indian stock market.
2. To examine the relationship between selected behavioural biases and investment decision-making.
3. To analyse the relative impact of behavioural biases, namely, overconfidence, optimism, anchoring, herding behaviour, disposition effect, and cognitive dissonance, on investors' decision-making.
4. To determine which behavioural biases exert the most significant influence on investment decisions in the Indian stock market.

Based on the theoretical framework and empirical evidence reviewed in the literature, the following hypotheses are proposed:

- **H_1:** Overconfidence bias has a significant impact on investment decision-making among retail investors in the Indian stock market.
- **H_2:** Optimism bias has a significant impact on investment decision-making among retail investors in the Indian stock market.
- **H_3:** Anchoring bias has a significant impact on investment decision-making among retail investors in the Indian stock market.
- **H_4:** Herding behaviour has a significant impact on investment decision-making among retail investors in the Indian stock market.
- **H_5:** Disposition effect has a significant impact on investment decision-making among retail investors in the Indian stock market.
- **H_6:** Cognitive dissonance bias has a significant impact on investment decision-making among retail investors in the Indian stock market.

3. Research Methodology

3.1. Research Design

To investigate the role of behavioural biases in terms of the impact on investment decision-making of retail investors operating in the Indian equity market, the current study uses a quantitative, cross-sectional study design. This methodological choice allows for the objective evaluation of the psychological constructs and to validate the hypothesised relationships statistically, thus making the quantitative approach a very appropriate one regarding the research objectives. Consistent with well-established practices in behavioural finance scholarship, a cross-sectional framework makes it possible to capture the perceptions of investors and their behavioural inclinations at a single point in time.

3.2. Population and Sample

The target population of the study comprised individual retail investors actively participating in the Indian equity market. To ensure the relevance and reliability of responses, only those individuals with prior trading experience were included, thereby capturing informed and experience-based investment behaviour rather than hypothetical responses. A total of 400 valid responses were collected and analysed. The sample size is considered adequate for multivariate statistical techniques such as Exploratory Factor Analysis (EFA) and multiple regression analysis, as suggested by established methodological guidelines (Hair et al., 2019). The study employed a purposive sampling technique, which is particularly suitable in behavioural finance research where the objective is to select respondents with specific characteristics relevant to the research problem. Since the study aims to examine behavioural biases in actual investment decision-making, it was essential to include only those respondents who actively engage in stock market transactions. Random sampling may include non-investors or inexperienced participants, which could dilute the validity of behavioural insights. Therefore, purposive sampling ensures that the selected participants possess adequate exposure, knowledge, and decision-making experience, thereby enhancing the internal validity and relevance of the findings.

3.3. Data Collection Procedure

For the present investigation, an instrument that was standardised and self-administered was developed and used to gather primary data. In order to maintain conceptual clarity and content validity, the questionnaire included existing instruments that were taken from the literature on behavioural finance. Data were gathered using in-person interactions and distribution through online information delivery possibilities based on respondent availability.

Prior to the implementation of the main survey, pilot research was carried out with forty participants so that the relevance, reliability, and clarity of the items on the questionnaire could be evaluated. The feedback received from the pilot was used to make adjustments to ensure better uniformity of response and to improve the wording of the items. Responses from the pilot were excluded from the final analytical data set. The pilot study also enabled a preliminary assessment of the reliability of the instrument, ensuring that the items were internally consistent before final data collection.

3.4. Measurement of Variables

The questionnaire measured six constructs of behavioural biases, namely overconfidence, optimism, anchoring, herding behaviour, and disposition effect, in addition to cognitive dissonance and investment decision-making behaviour. All of the items were assessed on a five-point Likert scale, from 1 (Strongly Disagree) to 5 (Strongly Agree). The measurement scales were drawn from well-established studies in behavioural finance in order to maintain validity and reliability. Items regarding overconfidence were adapted from Barber and Odean (2001), optimism from Puri and Robinson (2007), anchoring from Kaustia et al. (2008), herding behaviour from Bikhchandani et al. (1992), disposition effect from Shefrin and Statman (1985), and cognitive dissonance from Pompian (2006). Minor contextual adjustments were made to make the scales appropriate to the stock market situation in India without any changes in the basic theoretical constructs of the scales. To ensure the reliability and validity of the measurement instrument, several statistical checks were performed. Internal consistency reliability was assessed using Cronbach's alpha coefficient, and all constructs demonstrated acceptable reliability levels exceeding the recommended threshold of 0.70. Construct validity was evaluated through Exploratory Factor Analysis (EFA), where factor loadings for all items exceeded 0.50, indicating satisfactory convergent validity. Furthermore, the adequacy of the data for factor analysis was confirmed using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity. The KMO value exceeded the minimum acceptable level of 0.60, and Bartlett's test was statistically significant ($p < 0.001$), confirming the suitability of the data for factor extraction. These results collectively establish the robustness, reliability, and validity of the measurement scales used in the study.

Table 1: Reliability Analysis of Measurement Constructs

Construct	No. of Items	Cronbach's Alpha
Overconfidence	3	0.781
Optimism	4	0.752
Anchoring	2	0.738
Herding Behaviour	3	0.721
Disposition Effect	4	0.769
Cognitive Dissonance	2	0.734
Investment Decision-Making	2	0.802

Source: SPSS output.

The reliability of the measurement constructs was assessed using Cronbach's alpha coefficient. As shown in Table 1, all constructs exhibit alpha values above the recommended threshold of 0.70, indicating satisfactory internal consistency reliability (Hair et al., 2019). The results confirm that the measurement scales used in the study are reliable and suitable for further statistical analysis.

4. Results and Discussion

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS). A structured and sequential analytical approach was adopted. Initially, Exploratory Factor Analysis (EFA) was performed to identify the underlying factor structure of behavioural bias constructs and to assess construct validity. The suitability of the data for factor analysis was evaluated using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity. Subsequently, correlation analysis was employed to examine the strength and direction of relationships between behavioural biases and investment decision-making. Finally, multiple regression analysis was conducted to test the proposed hypotheses and to determine the relative influence of each behavioural bias on investment decision-making.

4.1. Demographic Profile of Respondents

The demographic characteristics of the respondents were checked to ensure the proper understanding of the composition of the sample. The study was based on valid responses from 400 participants who are retail investors who actively participate in the Indian stock market. The demographic variables considered in this study were gender, age, income, educational background, and investment experience. Table 2 provides an overview of the demographic characteristics of the respondents.

Table 2: Demographic Profile of Respondents (N = 400)

Variable	Category	Frequency	Percent	Valid%	Cumulative%
Gender	Male	232	58	58	58
	Female	168	42	42	100
Marital status	Married	222	55.5	55.5	55.5
	Unmarried	178	44.5	44.5	100
Age	Less than 30	79	19.8	19.8	19.8
	30-40	187	46.8	46.8	66.5

Variable	Category	Frequency	Percent	Valid%	Cumulative%
	41-50	54	13.5	13.5	80
	More than 50	80	20	20	100
Qualification	Undergraduate	107	26.8	26.8	26.8
	Graduate	188	47	47	73.8
	Post Graduate	39	9.8	9.8	83.5
	Any Other (PhD)	66	16.5	16.5	100
Income	Less than 4 lakhs	274	68.5	68.5	68.5
	4-6 lakhs	60	15	15	83.5
	7-9 lakhs	40	10	10	93.5
	Above 9 lakhs	26	6.5	6.5	100
Investing Period	Less than one year	212	53	53	53
	1-3 year	78	19.5	19.5	72.5
	3-5 year	75	18.8	18.8	91.3
	More than 5 years	35	8.8	8.8	100

Source: SPSS output.

4.2. Interpretation of Demographic Profile

The demographic perspective shows that the sample consists of active retail investors who have a heterogeneous market exposure and experience. The number of male participants, reflecting a higher ratio, reflects the gender structure that is commonly found in the Indian equity markets, whereby male participation in retail trading remains the leading trading activity. Using age structure, it suggests that a high percentage of the respondents are in the economically active age groups, suggesting that there is a high level of involvement in financial decisions. In terms of educational level, most of the surveyed participants have graduate or postgraduate degrees, which means that they possess an adequate financial literacy level and mental ability to evaluate investment-related data critically. Therefore, the sample can be considered suitable in terms of the study of the behavioural bias, which requires reflective consideration but not intuitive processing. Additional data on experience in investing supports the fact that the respondents are not passive participants but are actively engaged in equity-market transactions. These attributes increase the validity of the data on behaviour gathered because the choices reported are based on actual field experience in the market and not imaginary. Overall, the demographic structure justifies the suitability of the sample to examine behavioural antecedents of investment decision-making in the Indian stock market.

4.3. Exploratory Factor Analysis (EFA)

To confirm the dimensional validity of the constructs of behavioural bias and to explore the structure behind the measurement items, an exploratory factor analysis was performed. The test of sphericity conducted by Bartlett showed statistically significant outcomes ($\chi 2 = 1096.273$, $p < 0.001$) and, thus, proved that the data were suitable to extract factors. The Kaiser-Meyer-Olkin sampling adequacy measure was 0.612, which was found to have an adequate sample size (see Table 3). This analysis has discovered that there are six different components, such as overconfidence, optimism, anchoring, herding, disposition effect, and cognitive dissonance, that are very similar to the theoretical framework. All items redeemed their own construct, and all factor loadings were over 0.50, which presented a measure of satisfactory convergent validity.

All these facts support the idea that the chosen variables represent the complex character of behavioural biases displayed by Indian retail investors and testify to the effectiveness of the measurement model. A detailed overview of the outputs of the exploratory factor analysis is given in Table 4.

Table 3: KMO and Bartlett Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.612
Bartlett's Test of Sphericity	Approx. Chi-Square	1096.273
	Df	190
	Sig.	0

Source: SPSS output.

Table 4: Results of Scale Purification

Dimension	Item No.	Element	Factor Loadings	Communalities	Eigen Values	Explained Variance
Overconfidence	viii)	While making wrong investment decisions, you justify your mistakes.	**0.791**	0.577	2.563	12.814
	vii)	While trading, stop-losses do have an influence on your trade.	**0.676**	0.562		
	xi)	If you are severely criticised for holding a losing stock or selling off a winning stock, you will rethink your decision.	**0.593**	0.585		
Optimism	xxviii)	My outlook for the Indian equity market in the near future is optimistic	**0.764**	0.599	2.068	10.34
	xxv)	A particular experienced investor who has gathered all the information available to him before deciding to invest made a successful investment. His investment can be described more in terms of skill than luck.	**0.628**	0.448		
	xxiv)	You tend to collect as much information as possible before making a decision to buy the stock.	**0.624**	0.491		
	xxii)	The last investment was more of bad luck than it was my own poor judgment.	**0.547**	0.532		
Anchoring	xv)	A stock which follows an increasing trend will show a decelerating growth afterwards.	**0.88**	0.759	1.603	8.014
	xiv)	Indian stock market is going to see a severe crash in the coming times.	**0.877**	0.769		
Herd Behaviour	v)	You will invest in a stock even if your valuation does not match with that of an expert.	**0.701**	0.533	1.439	7.195
	xii)	The buying and selling of stocks by other investors affects your decision-making to invest.	**0.592**	0.504		
	x)	If an expert makes an opinion about a stock that contradicts your opinion, you will change your opinion	**0.554**	0.59		

Dimension	Item No.	Element	Factor Loadings	Communalities	Eigen Values	Explained Variance
		immediately.				
Decision Making	ii)	You did an analysis of a share, and you did not find it worth investing in. You meet your coworkers/friends the other day and they had invested heavily in the same stock. This will not positively influence your investment behaviour.	**0.897**	0.744	1.364	6.821
	i)	While making investment decisions you trust yourself the most.	**0.833**	0.711		
Disposition Effect	xviii)	The expected return from my investment will be between 10 and 20 percent.	**0.764**	0.609	1.294	6.472
	xix)	I am holding to my investment because selling them would not be painful to me since I would incur a loss.	**0.645**	0.597		
	xx)	I intend to sell my investments immediately if it goes back to the acquisition price.	**0.523**	0.423		
	xvii)	Your loss margin was not more than 50 percent when subprime crisis hit the market.	**0.4**	0.409		
Cognitive Dissonance	xxiii)	I am holding to my investments because I know the prices will revert soon.	**0.772**	0.601	1.194	5.972
	ix)	You indulge in making an investment while your mind does not agree.	**0.675**	0.483		

Source: SPSS output.

4.4. Correlation Analysis

Correlation analysis was used to investigate the interrelations between six behavioural biases and the styles of decision-making (investors). Table 5 indicates that overconfidence ($r = 0.262$, p = less than 0.01) and cognitive dissonance ($r = 0.200$, p = less than 0.01) have significant positive relationships with decision-making in investments. These results indicate that investors with increased confidence in their judgements or with cognitive immunity to counter-evidence are more likely to make determinate, though possibly biased, financial judgements. On the other hand, the relationships showed no statistically significant, thematic relations between optimism, anchoring, herding, and the disposition effect on the results of decisions. This trend shows that these biases could have been embedded in the cognitive structures of investors, but their immediate influence on decision-making could be mitigated or depend on situational variables. Each of the six behavioural dimensions was retained to be analysed since they have a robust theoretical support in the available extant literature of behavioural finance and thus were used to offer a holistic assessment of psychological factors affecting investment behaviour.

Table 5: Relationship between Various Behavioural Biases and Decision Making

Psychological Traits	Decision Making	
	r- value	p-value
Over Confidence	.262*	0
Optimism	0.023	0.654
Anchoring	0.02	0.697
Herd behaviour	0.001	0.983
Disposition effect	0.091	0.068
Cognitive dissonance	.200**	0

Source: SPSS output.

4.5. Multiple Regression Analysis

A multiple regression model was employed to examine the combined predictive ability of six behavioural biases on investors' decision-making. The overall model was found to be statistically significant ($F = 10.430$, $p < 0.01$), indicating that the selected predictors jointly explain variations in investment behaviour. The coefficient of determination ($R^2 = 0.140$; Adjusted $R^2 = 0.126$) suggests that approximately 14% of the variance in investment decision-making is explained by the included behavioural biases. Although the explanatory power appears modest, such values are not uncommon in behavioural finance research, where decision-making is influenced by a wide range of psychological, situational, and market-related factors that are difficult to fully capture within a single model. The relatively low R^2 indicates that additional variables, such as demographic characteristics (e.g., age, income, education), market experience, financial literacy, and macroeconomic conditions, may further improve model specification. However, the present model remains theoretically grounded, as it focuses specifically on well-established behavioural biases identified in prior literature. Importantly, the statistical significance of the model ($p < 0.01$) confirms that behavioural biases, taken together, have a meaningful impact on investment decision-making. Furthermore, individual coefficient analysis (as reported in the subsequent section) highlights those certain biases, particularly overconfidence and cognitive dissonance, that exert a stronger predictive influence compared to others. Overall, the findings reinforce the relevance of behavioural factors in explaining investor behaviour, while also suggesting scope for incorporating additional explanatory variables in future research to enhance model robustness.

Table 6: Model

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics				
					R^2 Change	F Change	df1	df2	Sig. F Change
1	.374[a]	.140	.126	.92275	.140	10.430	6	386	.000

a. Predictors: (Constant), CD, DE, HE, AN, OP, OC

b. Dependent Variable: DM

4.6. Coefficients

The coefficients table provided insights into the relative contribution of each predictor to the model. Results are summarised as follows:

Table 7: Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-.013	.047		-.277	.782		
OC	.233	.049	.234	4.810	.000	.942	1.062

OP	.054	.048	.054	1.113	.267	.948	1.055
AN	-.050	.049	-.050	-1.029	.304	.947	1.056
HE	.012	.048	.012	.248	.804	.975	1.026
DE	.120	.049	.120	2.473	.014	.940	1.063
CD	.238	.049	.237	4.905	.000	.955	1.047

a. Dependent Variable: DM

Source: SPSS output.

The findings confirm that overconfidence (0.234, $p < 0.001$) and cognitive dissonance (0.237, $p < 0.001$) are significant predictors of decision-making in the cohort group of Indian retail investors. Whereas the other biases were deemed statistically significant despite their theoretical significance, the rest of the biases did not reach statistical significance in the current sample.

5. Findings

The study set out to identify and analyse the impact of behavioural biases on retail investors' decision-making in the Indian stock market. In line with the first objective, the exploratory factor analysis confirmed the presence of key behavioural biases, including overconfidence, optimism, anchoring, herding behaviour, disposition effect, and cognitive dissonance among retail investors. These findings are consistent with earlier studies that highlight the prevalence of psychological biases in financial decision-making (Ricciardi & Simon, 2000; Kumar & Goyal, 2016). Addressing the second objective, the correlation analysis revealed significant relationships between these behavioural biases and investment decision-making, indicating that psychological factors play a crucial role in shaping investor behaviour. This result supports the behavioural finance perspective proposed by Kahneman and Tversky (1979), which emphasises that investor decisions are often influenced by cognitive heuristics and biases rather than purely rational evaluation. With respect to the third and fourth objectives, the regression results demonstrated that overconfidence and cognitive dissonance exert the most significant influence on investment decisions, while other biases such as optimism, anchoring, herding, and disposition effect showed comparatively weaker predictive power. The strong influence of overconfidence is consistent with the findings of Barber and Odean (2001) and Odean (1998), who observed that overconfident investors tend to trade excessively and make suboptimal decisions. Similarly, the role of cognitive dissonance aligns with the theoretical arguments of Festinger (1957), which explain how investors may ignore contradictory information to maintain consistency in their beliefs. These findings suggest that self-perception and information-filtering mechanisms are critical determinants of investor behaviour, particularly in emerging markets characterised by uncertainty and information asymmetry. Similar observations have been reported in studies focusing on emerging market investors (Chen et al., 2007; Sahi, 2019). Based on these findings, it is recommended that retail investors enhance their awareness of behavioural biases to improve decision-making quality. Financial advisors should incorporate behavioural assessment tools to better understand client biases and design suitable investment strategies. Furthermore, policymakers should strengthen investor education initiatives by integrating behavioural finance concepts to promote more rational and disciplined investment practices.

6. Conclusion

The study was empirical research that investigated how Indian stock market retail investors make investment decisions, considering six big behavioural biases- overconfidence, optimism, anchoring behaviour, herding behaviour, disposition effect, and cognitive dissonance. The presented work offered empirical data concerning the role of psychological factors in the investment behaviour of a group of investors in a developing market, using primary data on 400 investors and applying the methods of exploratory factor analysis, correlation analysis, and multiple regression analysis. The findings have shown that overconfidence and cognitive dissonance are the most serious biases that influence investor decision-making. Over-confident investors are more prone to over-reliance on their own judgment and underestimate risk, and people affected by cognitive dissonance are more likely to rationalise previous choices and selectively ignore information that contradicts these choices. These biases are collectively important in explaining differences in decisions made on investments, and therefore, the internal influences of cognitive distortions take an upper hand over external influences of bias. On the contrary, though optimism, anchoring, herding behaviour, and the disposition effect are theoretically applicable and empirically proven as latent constructs, no statistically significant direct effect on the decision making in the current sample was observed, indicating that they could be situation or context-specific. The analysis confirms the behavioural finance theory by showing how the decision-making of investors always deviates from the assumptions of rational choice and market efficiency. The results of the study related to the differentiated impacts of behavioural biases emphasise the relevance of situational factors in defining bias salience. The study, therefore, moves the study of investor psychology in a less dramatic hierarchy of behavioural bias, as it also shows that not every behavioural bias will have an equally strong impact in a developing market like India. The study offers several important implications for investors, financial practitioners, and policymakers. From a managerial perspective, the findings highlight the need for retail investors to develop greater self-awareness of cognitive biases such as overconfidence and confirmation bias, which adversely affect rational decision-making. Financial advisors and portfolio managers can incorporate behavioural profiling tools into their advisory processes to identify client-specific biases and tailor investment strategies accordingly. This can enhance advisory effectiveness, improve portfolio outcomes, and strengthen client trust. From a policy perspective, the results underscore the necessity for regulators and policymakers to design more comprehensive investor education programs that extend beyond technical and financial literacy. Specifically, such programs should incorporate modules on behavioural biases and decision-making errors to help investors recognise and mitigate common psychological traps. Policymakers may also consider integrating behavioural nudges, simplified disclosure frameworks, and digital interventions to guide investors toward more disciplined and informed investment practices in equity markets. Overall, the study provides actionable insights that can contribute to improving investment decision-making quality and promoting greater stability and efficiency in financial markets. The study is subject to certain limitations. The cross-sectional research design restricts the ability to observe changes in investor behaviour across different market cycles over time. Additionally, the reliance on self-reported data may introduce response bias, as actual trading behaviour may not fully align with reported perceptions. Although the sample size is adequate for statistical analysis, it is limited to individual investors and does not include professional or institutional market participants. These limitations provide avenues for future research, particularly through longitudinal designs and more diverse samples. Overall, the research proves that behavioural biases are critical influences in the decisions made by investors in the Indian stock exchange. The discovery and reduction of these biases is the key to enhancing the results of investment in the emerging economies, improving the level of financial literacy, and ensuring market efficiency.

References

Barber, B. M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *Quarterly Journal of Economics, 116*(1), 261–292. https://doi.org/10.1162/003355301556400

Barber, B. M., Huang, X., Odean, T., & Schwarz, C. (2021). Attention-induced trading and returns: Evidence from Robinhood users. *The Journal of Finance, 76*(6), 3141–3195. https://doi.org/10.1111/jofi.13085

Barberis, N., & Thaler, R. (2003). A survey of behavioral finance. In G. Constantinides, M. Harris, & R. Stulz (Eds.), *Handbook of the economics of finance* (Vol. 1, pp. 1053–1128). Elsevier. https://doi.org/10.1016/S1574-0102(03)01027-6

Bouri, E., Demirer, R., Gupta, R., & Nel, J. (2021). COVID-19 pandemic and investor herding in international stock markets. *Risks, 9*(9), 168. https://doi.org/10.3390/risks9090168

Chen, G., Kim, K. A., Nofsinger, J. R., & Rui, O. M. (2007). Trading performance, disposition effect, overconfidence, representativeness bias, and experience of emerging market investors. *Journal of Behavioral Decision Making, 20*(4), 425–451. https://doi.org/10.1002/bdm.561

Chen, G., Kim, K. A., Nofsinger, J. R., & Rui, O. M. (2007). Trading performance, disposition effect, overconfidence, representativeness bias, and experience of emerging market investors. *Journal of Behavioral Decision Making, 20*(4), 425–451. https://doi.org/10.1002/bdm.561

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance, 25*(2), 383–417. https://doi.org/10.2307/2325486

Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford University Press.

Goodell, J. W. (2020). COVID-19 and finance: Agendas for future research. *Finance Research Letters, 35*, 101512. https://doi.org/10.1016/j.frl.2020.101512

Jain, J., Walia, N., & Gupta, S. (2022). Evaluation of behavioral biases affecting investment decision making of individual investors. *Journal of Behavioral and Experimental Finance, 33*, 100605. https://doi.org/10.1016/j.jbef.2021.100605

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica, 47*(2), 263–291. https://doi.org/10.2307/1914185

Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1991). Anomalies: The endowment effect, loss aversion, and status quo bias. *Journal of Economic Perspectives, 5*(1), 193–206. https://doi.org/10.1257/jep.5.1.193

Kumar, A., & Goyal, N. (2016). Evidence on rationality and behavioural biases in investment decision making. *Qualitative Research in Financial Markets, 8*(4), 270–287. https://doi.org/10.1108/QRFM-05-2016-0016

Kumar, S., & Goyal, N. (2020). Behavioural biases in investment decision making: A systematic literature review. *Qualitative Research in Financial Markets, 12*(2), 219–241. https://doi.org/10.1108/QRFM-07-2018-0089

Nofsinger, J. R. (2018). *The psychology of investing* (6th ed.). Routledge.

Odean, T. (1998). Volume, volatility, price, and profit when all traders are above average. *Journal of Finance, 53*(6), 1887–1934. https://doi.org/10.1111/0022-1082.00078

Odean, T. (1998). Volume, volatility, price, and profit when all traders are above average. *Journal of Finance, 53*(6), 1887–1934. https://doi.org/10.1111/0022-1082.00078

Odean, T. (1999). Do investors trade too much? *American Economic Review, 89*(5), 1279–1298. https://doi.org/10.1257/aer.89.5.1279

Park, A., & Sabourian, H. (2011). Herd behavior in efficient financial markets. *The Economic Journal, 121*(555), 569–601. https://doi.org/10.1111/j.1468-0297.2010.02407.x

Pompian, M. M. (2012). *Behavioral finance and investor types: Managing behavior to make better investment decisions*. John Wiley & Sons.

Ricciardi, V., & Simon, H. K. (2000). What is behavioral finance? *Business, Education & Technology Journal, 2*(2), 1–9.

Ricciardi, V., & Simon, H. K. (2000). What is behavioral finance? *Business, Education & Technology Journal, 2*(2), 1–9.

Sahi, S. K. (2019). Role of behavioral biases in investment decisions: A study of Indian investors. *IIMB Management Review, 31*(3), 248–261. https://doi.org/10.1016/j.iimb.2019.07.001

Shefrin, H., & Statman, M. (1985). The disposition to sell winners too early and ride losers too long: Theory and evidence. *Journal of Finance, 40*(3), 777–790. https://doi.org/10.2307/2327802

Shiller, R. J. (2000). *Irrational exuberance*. Princeton University Press.

Statman, M. (2008). Countries and culture in behavioral finance. *CFA Institute Conference Proceedings Quarterly, 25*(3), 38–44. https://doi.org/10.2469/cp.v25.n3.2

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science, 185*(4157), 1124–1131. https://doi.org/10.1126/science.185.4157.1124