Library Progress International
Vol.44 No. 3, July-December 2024: P.23610-23623

Print version ISSN 0970 1052
Online version ISSN 2320 317X

Original Article

Available online at www.bpasjournals.com

A Comparative Analysis of Occupational Influences on Investors' Decisions: Exploring the Effects of Heuristics and Behavioral Biases

Pooja Gahlot[1*] and Kanika Sachdeva[2]

[1] Ph.D. Scholar, School of Business, Sushant University, Gurugram, India
[2]Associate Professor, School of Business, Sushant University, Gurugram, India
[1]poojagahlot36@gmail.com, [2]kanikasachdeva@sushantuniversity.edu.in
Corresponding Author: Pooja Gahlot

How to cite this article: Pooja Gahlot and Kanika Sachdeva (2024). A Comparative Analysis of Occupational Influences on Investors' Decisions: Exploring the Effects of Heuristics and Behavioral Biases. *Library Progress International,* 44(3), 23610-23623.

Abstract

Behavioral biases have emerged as significant determinants of investors' financial market decisions. These cognitive and emotional biases can often lead to suboptimal investment choices and hinder investors' abilities to achieve their financial goals. This study examines and evaluates the effects of heuristics and biases on investors' decisions while conducting a comparative analysis among investors from self-owned, private, and government organizations. Data for this purpose was collected from Indian investors in Delhi/NCR by a convenience sample approach, and questionnaires were given to 500 investors. Two statistical tools, regression and analysis of variance (ANOVA), were used to evaluate the gathered information. The outcomes indicate that availability, anchoring, recency, and herding biases significantly impact investment decisions, but representativeness did not significantly affect investors' decisions. At the same time, no significant difference exists in occupation concerning investment decisions. This study aims to enhance awareness of heuristics and biases in handling investments, providing valuable insights to those making decisions and working in financial firms. Individuals could enhance their abilities by acknowledging their biases and judgment mistakes because they are familiar, can occur to anyone, and will increase market efficiency.

Keywords: Anchoring, Availability, Behavioral Biases, Herding bias, Heuristics, Recency bias, Representativeness

1. Introduction

Investor choices are a critical component of the economy and have been an issue of extensive research for decades. Traditional finance theories, like the Efficient Market Hypothesis (Fama, 1970) and Modern Portfolio Theory (Markowitz, 1952), assume rational behavior in investment decisions, and they also propose that traders display risk aversion as they prefer lower risk for the same return. It implies that investors have similar expectations for future investment cash flows and uniform interest rates for borrowing and lending activities. Contrary to these theories, prospect theory asserts that investors tend to make irrational decisions because they focus on perceived benefits rather than using all available information. People choose financial gains over losses when faced with an option. Numerous research studies have shown that investors often make irrational decisions, trading frequently, purchasing stocks without proper evaluation, making decisions based on social influences, and relying too heavily on past performance (Baker & Wurgler, 2007; Fogel et al., 2012; Hossain & Siddiqua, 2022). In traditional finance, it is shown that the effect of individual actions has been largely disregarded in their choices of investments. However, identifying opportunities and choosing the best based on available information is essential to making investment decisions. Behavioral finance emerged as a solution to address traditional finance's limitations, leading to a significant shift in the paradigm.

The concept of behavioral finance emerged in finance and economics in the 1980s, based on cognitive psychology and the limitations of arbitrage. This field examines the implications of psychological elements, emphasizing the cognitive and affective influences on investor decisions (Tversky & Kahneman, 1971). In financial markets, emotions often lead people to make irrational decisions. Behavioral finance theory has identified several factors contributing to this phenomenon, including heuristics, herding, and prospect factors. Cognitive biases and heuristics also play a crucial role in poor investment decisions. These biases can cause market inefficiencies to affect stock prices and returns. Such biases arise from various processes, such as mental overload, a limited capacity for evaluating data, feelings, and behavioral incentives, and interpersonal context (Kahneman & Tversky,

1979).

When it comes to stock markets, the attitudes of investors affect both the volume of transactions and the value of assets. Similarly, when faced with complex and uncertain conditions, investors tend to arrive at choices by using shortcuts in their heads rather than accumulating and thoroughly evaluating all available data (Uygur & Taş, 2014). People may benefit from heuristics when they have limited knowledge and time. Individuals apply limited heuristics to achieve the desired conclusion and make decisions that may or may not be ideal but are convenient. However, despite its effectiveness, it could lead to severe errors and sometimes have negative financial consequences for investors. A heuristic, known as a "rule of thumb," solves complex problems with limited evaluation of information due to a desire for immediate results. Before deciding on a course of action, they consider their prior experiences, the present situation, and many other references (Kengatharan & Kengatharan, 2014).

Many studies (Barber & Odean, 2001; Yadav & Chaudhary, 2022; Waweru et al., 2008) have shown that both individual and institutional investors tend to rely on simplified heuristics, which can result in biased thinking and behavior. Additionally, irrational market behaviors include excessive trading, investing without considering fundamental values, and holding onto losing stocks despite selling profitable ones. Investors' decisions can significantly impact the market's direction, which has economic consequences. Even if investors are well-informed and have conducted research, they can still behave irrationally due to the fear of potential loss (Barber & Odean, 2008). Behavioral finance research helps people make better decisions by identifying biases that affect investor choices. This study analyzes the psychological factors (representativeness, availability, recency bias, anchoring, and herding) involved in the investing decision-making process for investors, which may even result in a return on investment. This study also investigates whether these biases affect self-owned, private, and government-owned organizations to the same degree.

1.1 Representativeness: Investors often make irrational investment decisions by relying too heavily on the heuristic, an impulse to estimate a situation's probability by considering how this resembles other events. in reality, most investors select "hot" equities over underperforming ones, which leads to irrational investment decisions (Tversky & Kahneman, 1974).

1.2 Availability: The term "availability" refers to the decision-making heuristics that rely on easily accessible information rather than in-depth analysis of numerous sources (Folkes, 1988). This concept originates when a prospective investor prioritizes just one easily remembered part of knowledge rather than the larger context.

1.3 Recency: The investors base their decisions on the latest incidents reported in the press while ignoring facts that would be profitable but relate to events many years ago (Zahera & Bansal, 2018).

1.4 Anchoring: Investors make judgments based on the first information they receive while making decisions. This can lead investors to establish their stock purchases at all-time high prices, which results in poor judgments (Tversky & Kahneman, 1981).

1.5 Herding: Investors often follow others instead of using their knowledge and experience, which leads to emotional biases and affects stock decisions. Herding behavior can impact stock selection, holding duration, and volume, but it is also essential for maximizing returns and minimizing risk. (Ngoc, 2013; Fatima & Sharma, 2019).

The field of behavioral finance may be relatively new, so most empirical research studies are undertaken in advanced countries like the US. However, more research is needed in developing economies where marketplaces are less established (Kumar & Goyal, 2018). Unfortunately, despite the efforts of academics in developing nations, there is not much study on this issue in India (Baker & Wurgler, 2007). This study tried to answer the research questions: How do heuristics and biases influence investors' decisions? Does the occupation of private, government, and self-owned companies' investors behave differently?

The study's findings can help investors, policymakers, students, and financial advisors. It offers insight into cognitive biases affecting decision-making and gives guidance on making accurate investments. The following are some of the primary objectives that this study aims to accomplish:

1) To conduct a comparative analysis of occupational influences on the investors' decisions.

2) To examine the effects of heuristics and behavioral biases on investors' decisions.

The remaining parts of the paper are divided into the following details: 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 outcomes obtained. The fourth part of the paper summarizes the findings and addresses their implications of the research.

1. 2. Literature Review

This part will discuss the factors of availability, representativeness, anchoring, recency, and herding bias and how these affect investors' decisions.

1.1 2.1 Availability

Investors who use availability heuristics tend to suffer more extensive losses than the market when reacting negatively to security reductions. Sometimes, investors base their judgments on inaccurate or irrelevant information, leading to illogical choices (Kirchler et al., 2005). As stated by Sadi et al. (2011), recent events can easily influence the decision-making perspective of an investor. This occurrence leads to a shift in the investing choices of investors. Some research studies have shown that the accessibility of information can significantly impact individuals' investment decisions. When investors have easy access to information, they often assume that future investment gains will be similar to their current value (Fatima & Sharma, 2019; Jain et al., 2023). Based on the research (Bakar & Yi, 2016), investors often make irrational choices by relying on intellectual shortcuts rather than analyzing every possible outcome. Folkes (1988) studied the availability heuristic and concluded that this occurs when investors focus more on easily remembered information than the overall situation.

Dhungana et al. (2022) It has been discovered that investors choose only companies that generate headlines, trade unpredictably, or provide exceptionally high profits. Therefore, investors need to evaluate the information and activities shared by stock market representatives, as their assessments may cause an overestimation of the data. The findings (Dangol & Manandhar, 2020) indicate that the availability heuristic affects the investment choices made by investors. They compare a company's performance with its competitors and base their judgments on the performance of securities. Investor competition has likely driven investors to respond swiftly to available information and make logical choices rather than relying on heuristic bias that could lead to irrational actions (Brauer & Wiersema, 2012).

1.2 2.2 Representativeness

Representativeness heuristic is a well-known phenomenon arising from people's tendency to judge based on their beliefs, prior experiences, or limited observations. This cognitive bias can cause individuals to draw conclusions based on only a narrow information set while disregarding other crucial details from their surroundings (Shefrin, 2007; Ritter, 2003). Sometimes, the representativeness heuristic overreacts to investors when they process information and make decisions. The researchers (Franses, 2007; Marsden et al., 2008) supported the conclusion that this bias may result in overreaction behavior, affecting stock prices. Unfortunately, people often do not take steps to protect themselves from this type of bias in the future.

Toma (2015) aimed to investigate irrational behavioral patterns' influence on the investing choices made by individual traders in the Romanian share market. The results contend that traders with a higher level of representativeness heuristic have the potential to earn more profits as individual investors. The trading preferences of individuals who invested in the Islamabad share market were influenced favorably by the representativeness heuristic, as indicated by Irshad et al. (2016). The study suggests that this heuristic resulted in better returns for the investors. Additionally, studies by Dhakal & Lamsal (2023), Budiman & Patricia (2021), and Soraya et al. (2023) reveal a correlation between representativeness and investment choices. These findings suggest that cognitive biases may significantly affect investors' decisions, leading to adverse investment outcomes.

1.3 2.3 Anchoring

Many individuals place excessive importance on the first piece of data they encounter when dealing with a decision situation, commonly called the cognitive bias of anchoring and adjustment (Tversky & Kahneman, 1974). It is common for individuals to place excessive weight on a single piece of data, often neglecting to consider when the information was acquired or if any other views of the information exist. This can introduce a bias that impacts the entire decision-making process. Based on Slovic & Lichtenstein (1971) research, it is evident that individuals tend to rely on initial values to form an estimate, which they subsequently adjust to arrive at the correct answer. These initial values can be influenced by the problem's presentation or inferred through partial computation, both of which are acceptable methods. As per Pompian (2006), the initial value significantly impacts the estimates provided by different starting points, which introduces a bias towards the starting value. The anchoring heuristic is attributed to the propensity of those who invest to 'anchor' their thoughts and ideas to a completely unrelated comparison point, which may not be logical.

Fajri & Setiawati (2023) stated that younger investors are prone to this behavioral bias in which they set an investment benchmark based on the initial purchase price. As a result, they tend to hold onto their investments even as their value declines, believing that they will eventually recover. Bakar & Yi (2016) This study confirms that traders are prone to irrational behavior and often make mistakes due to heuristic biases. It indicates that investors may need help identifying suitable investment opportunities due to the influence of anchoring heuristics or making judgment errors, which can result in lost potential benefits and reduced market efficiency. According to another study (Ishfaq & Anjum, 2015), anchoring favors challenging investments. Lowies et al. (2016) also

stated that anchoring positively impacted fund manager decisions in Saudi Africa. This suggests that investors should consider the unpredictable conditions under which property fund administrators operate in emerging economies like South Africa, and the unrealized profits may impact future returns due to prudent investment strategies.

1.4 **2.4 Recency Bias**

The recency effect is a phenomenon that describes when people make decisions between different options, and they tend to remember and rely on the most recent information. This behavior is commonly called recency bias, which happens when people acquire knowledge influenced by the most recent data they have received (Aren & Nayman Hamamcı, 2023). It negatively impacts the decision-making process because it only considers current occurrences and the frequency with which they occur. In particular, it gives the extraordinary events that have occurred in recent times a greater weight than they deserve in the judgment (Aren & Hamamcı, 2021). According to Pinsker (2011), investors tend to be influenced by recency bias while assessing their stock investments. This can lead to problems, as recent events may not always represent the larger picture. Additionally, it suggests that recency bias is more likely to occur when information is presented sequentially rather than concurrently. This happens because sequential presentation allows for more processing time, which can impact investors' decisions (Armansyah, 2022).

Tubbs et al. (1990) studied how the information presented affects auditors adjusting their beliefs. The results indicated that auditors tend to give more weight to the most recent evidence when evaluating and concluding, even if it is irrelevant. Messier (1992) suggests auditors who accept evidence have complex and diverse expression patterns, including positive and negative information. If this pattern follows a sequential order, the recency effect will occur. Murphy et al. (2006) researched Australia to look into primary and recency effects. Results showed that both effects were observed, but there was a notable increase in responses based on recency. The traditional recency effect states that decision-makers tend to remember the latest essential knowledge they have been exposed to. As such, it is recommended not to present the most crucial information first in any context, from lectures to alternative lists.

1.5 **2.5 Herding Bias**

Herding behavior is when individuals make choices based on the perceptions of others but not on their opinions or knowledge. This is irrational because it implies that investors rely on views about the market and choices made by others (Devenow & Welch, 1996). Unfortunately, the herding tendency of traders is the central aspect that creates bubbles in the financial industry. One of the critical characteristics of this approach is a greater reliance on collective information compared to other sources. The tendency to herd can cause the cost of shares to deviate from their actual worth and to miss out on potentially profitable investment opportunities. Additionally, herding can cause stock prices to move against their inherent value (Tan et al., 2008; Hii et al., 2023). Herding is a way for individuals to deal with uncertainty and inadequacy. Individuals may follow the crowd because they believe the majority is more knowledgeable. This can lead to instability, which is required for speculative activities to occur in financial markets, where herding is also crucial (Keynes, 1936).

Lakshmi et al. (2013) researched industry-wide herding in the stock market. Their findings indicate that institutional investors exhibit herding behavior, which is affected by volatility and return. Cipriani et al. (2014) state that herding behavior in financial markets profoundly impacts merchants' and assets' purchase or sale prices. They gathered data from Ashland Company, a New York Stock Exchange-listed company. It demonstrated that herding behavior cannot be ignored and must be taken seriously by investors. According to a study (Oehler & Wendt, 2009), mutual fund investors in Germany tend to follow each other's investment strategies. The study analyzed fund managers' purchase and sale data from 2000 to 2005 and found that investors invested 70% of their capital in the equity market. This indicates a strong tendency for herding behavior among investors.

1.6 **2.6 Research Hypothesis**

H1: The difference between occupations and investors' decisions is significant.

H2: The difference between occupations and behavioral biases is significant.

H2a: The difference between occupations and availability is significant.

H2b: The difference between occupations and representativeness is significant.

H2c: The difference between occupations and anchoring is significant.

H2d: The difference between occupations and recency is significant.

H2e: The difference between occupations and herding is significant.

H3: Availability has a significant and positive effect on investors' decisions.

H4: Representativeness has a significant and positive effect on investors' decisions.

H5: Anchoring has a significant and positive effect on investors' decisions.

H6: Recency has a significant and positive effect on investors' decisions.

H7: Herding has a significant and positive effect on investors' decisions.

A conceptual model is proposed based on the hypotheses mentioned, as represented in Figure 1.

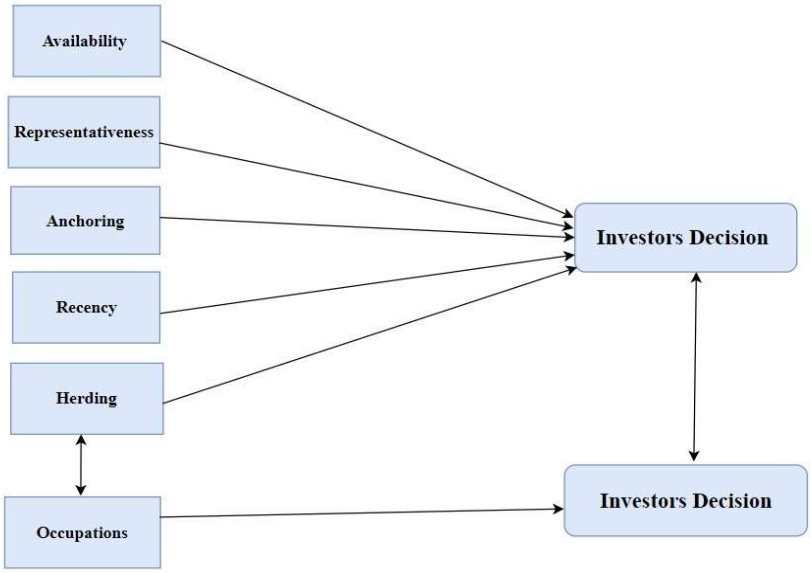

Figure 1. Proposed Model

3. Methodology

To accomplish the objectives, we gathered a representative sample from a group of people who invest in the share market through convenient sampling techniques due to easy access to respondents. The questionnaire was distributed among all the organizations' private, government, and self-owned employees. The sample comprises the IT, banking, academic, manufacturing, and pharmaceutical sectors. Adopting the four-item questionnaire measures availability (Khan, 2017). The representativeness and anchoring adopted four items from which both are (Nada & Moa'mer, 2013). The four items adopted the recency bias scale (Armansyah, 2022). The herding was also measured by adopting a four-item questionnaire (Keswani et al., 2019). The investment decision scale comprises five items (Sarwar & Afaf, 2016). The 500 questionnaires were circulated in the Delhi/NCR region through Google Forms and social platforms, but after eliminating the incomplete ones, 467 responses were used for the study. The SPSS 26 version software and two statistical tools—regression and analysis of variance (ANOVA)—were used to evaluate the gathered information.

1.7 3.1 Reliability

Utilizing Cronbach's alpha is a method of assessing the reliability and validity of data. According to Sigma et al. (2015), to confirm the reliability of a survey questionnaire, it must be between 0.60 and 0.90. The fact that Cronbach's alpha is around 0.8 shows that the measurements are reliable and accurate, as shown in Table 1.

Table 1. Reliability Statistics

Variables	Cronbach's Alpha	No. of Items
Availability	0.843	4
Representativeness	0.825	4
Anchoring	0.818	4
Recency	0.803	4
Herding	0.826	4
Investment decision	0.843	5

Source: Author's Calculation

1.8 **3.2 Demographic background**

As a result of our investigation into the demographic distribution, we have determined that about 62.1% of the population comprises men. In comparison, 37.9% include females, with a frequency of 290 and 177, respectively (see Table 2).

During the evaluation of the age distribution, it was found that 10% of the respondents were in the age range of 18 to 25 years, while 36.6% of the participants were associated with the age group of 26 to 35 years. The survey found that 31.9% of the participants were 36–45 years old, while 18% belonged to the age group of 46–55 years. Interestingly, just a tiny proportion of 2.6% of the respondents were aged 56 years and beyond. Regarding education, most respondents held bachelor's and post-graduation degrees, with 40.5% and 37.7%, respectively. On the other hand, the rest of the participants came from high school and other courses at 4.3% and 3.0%. Doctoral degrees occupied 14.6%, respectively. In terms of the marital status of respondents, 28.1% were unmarried, with a frequency level of 131. On the other hand, 71.9% of those who responded were married, and the total number was 336. As per the nature of the family, nuclear was 62.3%, and joint was 37.7%. Of the number of earning members in the family, 15.6% were respondents with one member, 42.6% were with two members, 24.2% were with three members, and 17.6% had more than three members. Regarding the monthly income of the family, 34.5% of respondents come under the range of 0-200000, 32.1% under 200000-500000, 22.1% under 500000-900000, and 11.3% come under the scope of more than 900000.

As per investment experience, 54.4% of respondents had less than two years, 29.8% experienced 2-4 years, 11.3% experienced 4-6 years, and only 4.5% had more than six years. Occupation-wise, respondents from the private sector were 46.9% with a frequency of 219, the government sector was 31.3% with a frequency of 146, and the self-owned (business) sector was 21.8% with a frequency of 102 respectively.

Table 2. Demographic Characteristics

Category	**Frequency**	**Percentage %**
Gender		
Male	290	62.1
Female	177	37.9
Age		
18-25	51	10.9
26-35	171	36.6
36-45	149	31.9
46-55	84	18.0
56 and above	12	2.6
Education		
High School	20	4.3
Under Graduate	189	40.5
Post Graduate	176	37.7
Doctoral	68	14.6
Others	14	3.0
Marital Status		
Single	131	28.1
Married	336	71.9
Nature of Family		
Nuclear	291	62.3
Joint	176	37.7
Numbers of Earning members in Family		
One	73	15.6
Two	199	42.6
Three	113	24.2
More than three	82	17.6
Monthly Income of family (in lakhs)		
0-200000	161	34.5
200000-500000	150	32.1
500000-900000	103	22.1
More than 900000	53	11.3
Investment experience (in years)		

0-2	254	54.4
2-4	139	29.8
4-6	53	11.3
More than six years	21	4.5
Occupation		
Private job	219	46.9
Government job	146	31.3
Business	102	21.8

Source: Author's calculation

1.9 **3.3 ANOVA Test**

The one-way ANOVA test showed a significant difference between occupations and rational investment decisions. The occupations include private, government, and self-owned (business). The behavioral biases include availability, representativeness, anchoring, recency, and herding. Table 3 displays the outcomes of the ANOVA for respondents' occupation differences and investors' decisions. The results indicate that the F-statistic is 1,319, which is not statistically significant and therefore rejects H1. As displaced in Figure 2, the graph also shows no significant differences between investors' decisions concerning the occupations of individual investors.

Table 3. ANOVA for occupations difference in investment decision

ANOVA					
Investment decision					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.908	2	1.454	1.319	0.268
Within Groups	511.419	464	1.102		
Total	514.327	466			

Source: Author's calculation

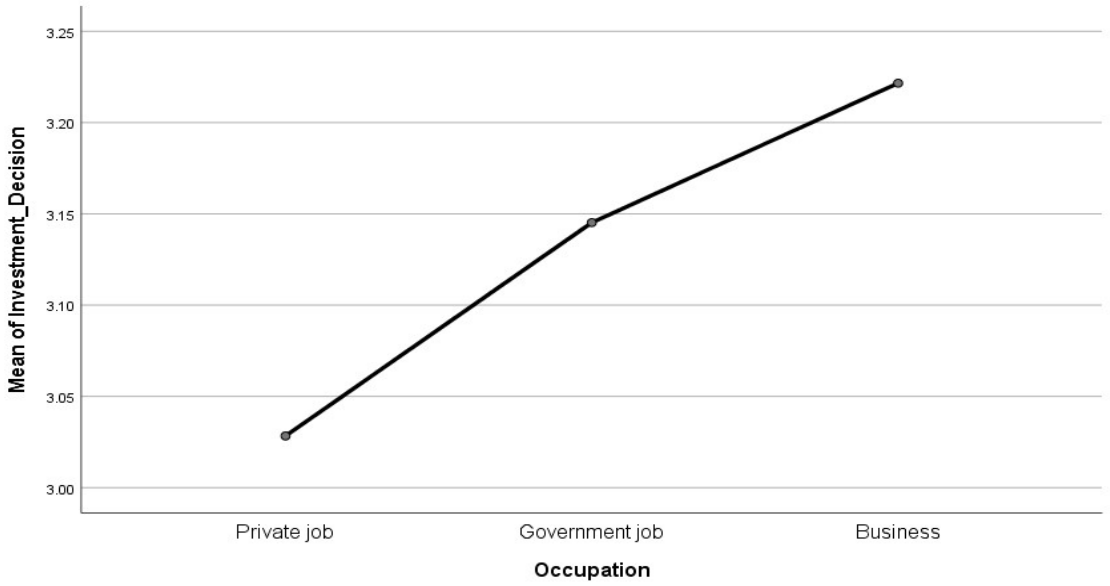

Figure 2. Means plots

Table 4 presents the result of the ANOVA for respondents' occupation differences and behavioral biases. The result shows that availability, representativeness, and herding do not significantly differ across occupations, and the results do not support the hypothesis (H2a, H2b, and H2e). However, a significant difference exists in anchoring and recency bias regarding the occupations of investors, which supports the hypothesis (H2c and H2d).

Table 4. ANOVA for occupations difference among behavioral biases

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Availability	Between Groups	5.789	2	2.894	2.236	0.108
	Within Groups	600.74	464	1.295		
	Total	606.529	466			
Representativeness	Between Groups	3.058	2	1.529	1.379	0.253
	Within Groups	514.434	464	1.109		
	Total	517.492	466			
Anchoring	Between Groups	12.824	2	6.412	5.44	0.005
	Within Groups	546.908	464	1.179		
	Total	559.732	466			
Recency	Between Groups	6.946	2	3.473	3.073	0.047
	Within Groups	524.437	464	1.13		
	Total	531.382	466			
Herding	Between Groups	0.905	2	0.453	0.385	0.68
	Within Groups	544.93	464	1.174		
	Total	545.835	466			

Source: Author's calculation

1.10 **3.4 Regression analysis**

A regression test explores the effect of independent factors on dependent variables. As depicted in Figure 3, it represents the histogram of the residuals for the investment decision is normally distributed. Table 5 presents linear regression, such as a value of R2 =.403, indicating that representativeness, availability, anchoring, recency, and herding influence around 40 percent of the variance in investment decisions. Nevertheless, it should be noted that the remaining 60 percent of the variation remains unexplained. The value of the F-statistic, which is 62.250, indicates that the model is generally valid, and its p-value (sig.) of.000 means that the independent variables significantly impact the dependent variable (see Table 6).

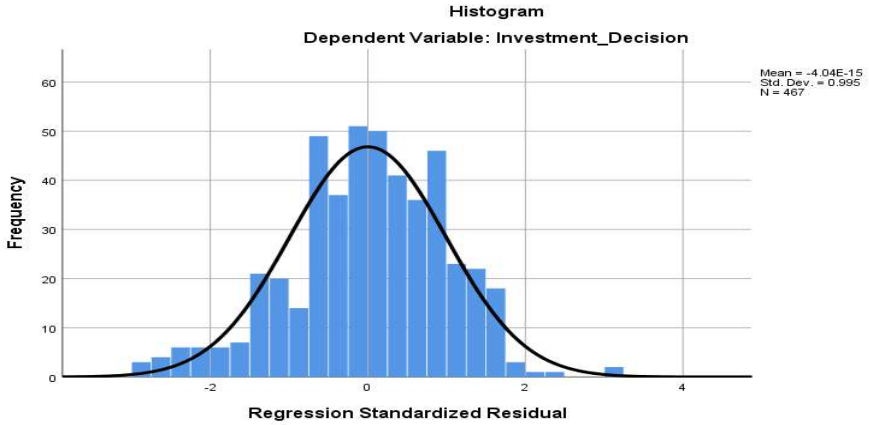

Figure 3. Histogram of residual

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.635[a]	0.403	0.397	0.816

Table 5. Regression analysis
a. Predictors: (Constant), Herding Bias, Availability Bias, Anchoring Bias, Recency Bias, Representativeness Bias
b. Dependent Variable: Investment decision
Source: Author's calculation

Table 6. Overall Significance

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	207.296	5	41.459	62.25	.000[b]
	Residual	307.031	461	0.666		
	Total	514.327	466			

a. Dependent Variable: Investment decision
b. Predictors: (Constant), Herding Bias, Availability Bias, Anchoring Bias, Recency Bias, Representativeness Bias
Source: Author's calculation

According to the results shown in Table 7, it can be concluded that the dependent variable's investors' decisions are statistically significantly impacted by heuristic and behavioral biases such as availability (β =.336, p <.05), anchoring (β =.137, p <.05), recency (β =.285, p <.05), and herding (β =.120, p< .05). Besides this, representativeness was found to be negatively insignificant (β = -0.486, p > 0.05).
Table 7. Individual significance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.575	0.155		3.704	.000
	Availability	0.309	0.045	0.336	6.895	.000
	Representativeness	-0.025	0.051	-0.025	-0.486	.627
	Anchoring	0.131	0.044	0.137	2.974	.003
	Recency	0.281	0.05	0.285	5.589	.000
	Herding	0.117	0.048	0.12	2.404	.017

a. Dependent Variable: Investment decision
Source: Author's calculation

1.11 **3.5 Discussion**

This research examines how heuristics and behavioral biases influence the choices made by investors in the Delhi/NCR region. 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 heuristics and biases influence stock market investment choices. This research also examined the different occupations' investor decisions' effect on behavioral biases to the same degree. The result confirmed no significant differences exist between private, government, and self-owned employees regarding their investors' decisions. Moreover, availability, representativeness, and herding do not differ substantially between occupations. On the other hand, there is a substantial distinction between anchoring and recency bias among the professions of investors.

This study's result shows (in Table 8) that the availability heuristic positively and significantly affects investors' decisions. This conclusion is aligned with the research results of Qureshi et al. (2012) and Quang et al. (2023), who asserted that investors place unnecessary importance on easy-to-find information. The findings show the representativeness heuristic's negative, insignificant effect on investor decisions. This study's findings align with the most recent research by F. Mahmood et al. (2023) and Chen et al. (2007). Conversely, this research contradicts the results of Hussain et al. (2023) and Athur (2013), who discovered that representativeness had a detrimental effect on investment choices. The anchoring heuristic was found to have significantly positive effects on the investors' decisions. These results align with what Wamae (2013) and Lowies et al. (2016) discovered in their research. As a result of the anchoring heuristic, investors may be less likely to recognize acceptable investment possibilities or more likely to make judgmental mistakes. This may result in reduced market efficiency and a loss of prospective benefits.

Furthermore, the results prove that recency bias positively and significantly affects investors' decisions. This

conclusion fits what Habbe & Mande (2016) and Rudiawarni et al. (2020) found in their studies. It shows that the effect of this bias is so significant that the emotional state does not change how much recency bias is seen when making choices. The result also states the significant effects of herding bias on investors' decisions. The results align with the findings discovered in the research by Z. Mahmood et al. (2016) and Chiang et al. (2013). It means that investors typically follow market trends or are readily influenced by the opinions of their peers. The research findings from traditional finance theories' perspective may conclude that investors do not base their decisions on a comprehensive assessment and evaluation of all the relevant facts about a particular stock. However, behavioral finance theory proposes that it is difficult for markets to exhibit complete rationality. It has been identified that psychological biases substantially influence investor decisions.

Table 8. Hypothesis tests from regression analysis

Variables		**Impact**		**Hypothesis Support**
		Beta Coefficients	**p-value**	
Availability	Investor's decision making	0.336	0.000 ($p < 0.05$)	H3 is Accepted
Representativeness	Investor's decision making	-0.025	0.627 ($p > 0.05$)	H4 is Rejected
Anchoring	Investor's decision making	0.137	0.003 ($p < 0.05$)	H5 is Accepted
Recency	Investor's decision making	0.285	0.000 ($p < 0.05$)	H6 is Accepted
Herding	Investor's decision making	0.120	0.017 ($p< 0.05$)	H7 is Accepted

Source: Author's Calculation.

4. Conclusion/Implications

The investor's decision is complicated and heavily influenced by behavioral aspects, including critical assessment disposition, proficiency in analyzing financial information, and ability. The study proves that various biases and heuristics affect individual investors' behavior. It found that availability, anchoring, recency, and herding significantly impact investors' decisions. However, representativeness was found to influence the investment decision insignificantly. Investors are prone to several behavioral and mental biases, and making decisions based on rational considerations is not always feasible. 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 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.

2. References

Aren, S., & Hamamcı, H. N. (2021). Biases in managerial decision making: Regret aversion, endowment, confirmation, self-control, recency. *International Journal of Multidisciplinary Research and Development*, *8*(7), 62–69. www.allsubjectjournal.com

Aren, S., & Nayman Hamamcı, H. (2023). Evaluation and Classification of Behavioral Biases According to Thinking Styles, Risky Investment Intention, and Subjective Financial Literacy. *Istanbul Business Research*, *51*(1), 133–160. https://doi.org/10.26650/ibr.2023.52.961368

Armansyah, R. F. (2022). Herd Instinct Bias, Emotional Biases, and Information Processing Biases in Investment Decisions. *Jurnal Manajemen Dan Kewirausahaan*, *24*(2), 105–117. https://doi.org/10.9744/jmk.24.2.105-117

Athur, A. D. (2013). *Effect of Behavioral Biases on Investment Decisions of Invidual investors in Kenya* (Issue November). http://hdl.handle.net/10603/313688

Bakar, S., & Yi, A. N. C. (2016). The Impact of Psychological Factors on Investors' Decision Making in Malaysian Stock Market: A Case of Klang Valley and Pahang. *Procedia Economics and Finance*, *35*(October 2015), 319–328. https://doi.org/10.1016/s2212-5671(16)00040-x

Baker, M., & Wurgler, J. (2007). Investor sentiment in the stock market. *Journal of Economic Perspectives*, *21*(2), 129–151. https://doi.org/10.1257/jep.21.2.129

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., & Odean, T. (2008). All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors. *Review of Financial Studies*, *21*(2), 785–818. https://doi.org/10.1093/rfs/hhm079

Brauer, M. F., & Wiersema, M. F. (2012). Industry divestiture waves: How a firm's position influences investor returns. *Academy of Management Journal*, *55*(6), 1472–1492. https://doi.org/10.5465/amj.2010.1099

Budiman, J., & Patricia. (2021). Pengaruh Overconfidence Bias, Herding Bias, Representativeness Bias, Loss Aversion, dan Risk perception terhadap Investment Decision di Kota Batam. *CoMBInES*, *1*(1), 1979–1987.

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

Chiang, T. C., Tan, L., Li, J., & Nelling, E. (2013). Dynamic Herding Behavior in Pacific-Basin Markets: Evidence and Implications. *Multinational Finance Journal*, *17*(3/4), 165–200. https://doi.org/10.17578/17-3/4-3

Cipriani, M., Gale, D., & Guarino, A. (2014). Estimating a Structural Model of Herd Behavior in Financial Markets : Executive Summary State of the Art. *American Economic Review*, *104*(1), 1–5.

Dangol, J., & Manandhar, R. (2020). Impact of Heuristics on Investment Decisions: The Moderating Role of Locus of Control. *Journal of Business and Social Sciences Research*, *5*(1), 1–14. https://doi.org/10.3126/jbssr.v5i1.30195

Devenow, A., & Welch, I. (1996). Rational herding in financial economics. *European Economic Review*, *403*(3–5), 603–615.

Dhakal, S., & Lamsal, R. (2023). Impact of Cognitive Biases on Investment Decisions of Investors in Nepal. *The Lumbini Journal of Business and Economics*, *11*(1), 35–48. https://doi.org/10.3126/ljbe.v11i1.54315

Dhungana, B. R., Bhandari, S., Ojha, D., & Sharma, L. K. (2022). Effect of Cognitive Biases on Investment Decision Making: A Case of Pokhara Valley, Nepal. *Quest Journal of Management and Social Sciences*, *4*(1), 71–84. https://doi.org/10.3126/qjmss.v4i1.45868

Fajri, A., & Setiawati, E. (2023). The Influence of Over Confidence , Illusion of Control , Availability , Anchoring Bias and Financial Literacy on Investment Decision Making in the Community of Demak District As Beginning Investors . *The International Journal of Business Management and Technology*, *7*(4), 187–198.

Fama, F. E. (1970). Efficient capital Markets: A review of theory and empirical work. *The Journal Of Finance*, *45*(2), 216–226. https://doi.org/10.1016/0002-8703(53)90182-3

Fatima, A., & Sharma, J. K. (2019). Review of Biases in Individual Investment Decision-Making. *RESEARCH REVIEW International Journal of Multidisciplinary*, *3085*, *2455*(03), 768–774.

Fogel, S. O. C., Berry, T., Fogel, S. O. C., & Berry, T. (2012). *The Disposition Effect and Individual Investor Decisions: The Roles of Regret and Counterfactual Alternatives*. *February*, 107–116. https://doi.org/10.1207/s15427579jpfm0702

Folkes, V. S. (1988). Recent attribution research in consumer. *Journal of Consumer Research*, *14*(4), 548–565.

Franses, P. H. (2007). Experts adjusting model-based forecasts and the law of small numbers. *Econometric Institute, Erasmus University Rotterdam.*, *6*(August), 128. https://repub.eur.nl/pub/10563/

Habbe, A. H., & Mande, H. (2016). the Effect of Information Sequential and Personality on the Investor Belief Revision (an Experimental Study in Decision Making). *PONTE International Scientific Researchs Journal*, *72*(10), 150–166. https://doi.org/10.21506/j.ponte.2016.10.13

Hii, I. S. H., Li, X., & Zhu, H. (2023). Behavioural Biases and Investment Decisions during COVID-19: An Empirical Study of Chinese Investors. *Institutions and Economies*, *15*(3), 81–103. https://doi.org/10.22452/IJIE.vol15no3.4

Hossain, T., & Siddiqua, P. (2022). Exploring the influence of behavioral aspects on stock investment decision-making: a study on Bangladeshi individual investors. *PSU Research Review*.

https://doi.org/10.1108/PRR-10-2021-0054

Hussain, W., Ashiq, M., Qazi, M. U., & Ali, M. (2023). *The Impact of Cognitive Biases on The Investment Decision of Individual Investors : The Role of Risk Propensity*. *2*, 47–72. https://doi.org/org/10.52461/jftis.v2il.2068

Irshad, S., Badshah, W., & Hakam, U. (2016). Effect of Representativeness Bias on Investment Decision Making. *Management and Administrative Sciences Review*, *5*(1), 26–30. https://www.researchgate.net/publication/328996161

Ishfaq, M., & Anjum, N. (2015). Effect of Anchoring Bias on Risky Investment Decision. Evidence from Pakistan Equity Market. *International Journal of Engineering and Management Research*, *5*(4), 32–38. http://www.iiste.org/Journals/index.php/JPID/article/view/24508/25083

Jain, J., Walia, N., Singla, H., Singh, S., Sood, K., & Grima, S. (2023). Heuristic Biases as Mental Shortcuts to Investment Decision-Making: A Mediation Analysis of Risk Perception. *Risks*, *11*(4), 1–22. https://doi.org/10.3390/risks11040072

Kahneman, D., & Tversky, A. (1979). PROSPECT THEORY: AN ANALYSIS OF DECISION UNDER RISK. *World Scientific Handbook in Financial Economic Series.*, *47*(2), 263–291.

Kengatharan, L., & Kengatharan, N. (2014). The Influence of Behavioral Factors in Making Investment Decisions and Performance: Study on Investors of Colombo Stock Exchange, Sri Lanka. *Asian Journal of Finance & Accounting*, *6*(1), 1. https://doi.org/10.5296/ajfa.v6i1.4893

Keswani, S., Dhingra, V., & Wadhwa, B. (2019). Impact of Behavioral Factors in Making Investment Decisions and Performance: Study on Investors of National Stock Exchange. *International Journal of Economics and Finance*, *11*(8), 80. https://doi.org/10.5539/ijef.v11n8p80

Keynes, J. M. (1936). The General Theory of Employment, Interest and Money. *International Problems and Relations*, *51*(4), 116–122. https://doi.org/10.2307/2143949

Khan, M. Z. U. (2017). IMPACT OF AVAILABILITY BIAS AND LOSS AVERSION BIAS ON INVESTMENT DECISION MAKING, MODERATING ROLE OF RISK PERCEPTION. *Journal of Modern Developments in General*, *1*(1), 17–28. www.impactjournals.us

Kirchler, E., Maciejovsky, B., & Weber, M. (2005). Framing effects, selective information and market behavior: An experimental analysis. *Journal of Behavioral Finance*, *2*, 90–100. https://doi.org/10.1207/s15427579jpfm0602_4

Kumar, S., & Goyal, N. (2018). Behavioral Biases and Investment Decision Making- a systematic literature review. *Financial Decision Making*, *4*, 55–64. https://doi.org/10.4324/9781315619859-7

Lakshmi, P., Visalakshmi, S., Thamaraiselvan, N., & Senthilarasu, B. (2013). Assessing the linkage of behavioural traits and investment decisions using SEM approach. *International Journal of Economics and Management*, *7*(2), 221–241.

Lowies, G. A., Hall, J. H., & Cloete, C. E. (2016). Heuristic-driven bias in property investment decision-making in South Africa. *Journal of Property Investment & Finance*, *34*(1), 51–67. https://doi.org/10.1108/JPIF-08-2014-0055

Mahmood, F., Arshad, R., Riaz, A., Usman, M., & Bashir, M. (2023). Do Behavioral Biases Impact Investment Decisions? Stock Market Investor's-Based View. *Multicultural Education*, *February*.

Mahmood, Z., Kouser, R., Abbas, S. S., & Saba, I. (2016). The Effect of Hueristics, Prospect and Herding Factors on Investment Performance Syed Shafqat Abbas Irum Saba. *Pakistan Journal of Social Sciences (PJSS)*, *36*(1), 475–484.

Markowitz, H. (1952). Portfolio selection. *The Journal of Finance*, *7*(1), 77–91. https://doi.org/10.2307/2975974

Marsden, A., Veeraraghavan, M., & Ye, M. (2008). *Heuristics of Representativeness , and Anchoring and Adjustment , Leniency : Impact on Earnings ' Forecasts by Australian Analysts*. *47*(2), 83–102. https://doi.org/10.2307/40473457

Messier, W. F. (1992). The Sequencing of Audit Evidence: Its Impact on the Extent of Audit Testing and Report Formulation. *Accounting and Business Research*, *22*(86), 143–150. https://doi.org/10.1080/00014788.1992.9729429

Murphy, J., Hofacker, C., & Mizerski, R. (2006). Primacy and Recency Effects on Clicking Behavior. *Journal of*

Computer-Mediated Communication, *11*(2), 522–535. https://doi.org/10.1111/j.1083-6101.2006.00025.x

Nada, S. M. A., & Moa'mer, D. F. abu. (2013). *Behavioural Factors Influencing Investment Decision Making: An Empirical Study of Palestine Stock Exchange*. 159.

Ngoc, L. T. B. (2013). Behavior Pattern of Individual Investors in Stock Market. *International Journal of Business and Management*, *9*(1), 1–16. https://doi.org/10.5539/ijbm.v9n1p1

Oehler, A., & Wendt, S. (2009). Herding Behavior of Mutual Fund Managers in Germany. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.1343470

Pinsker, R. (2011). Primacy or recency? A study of order effects when nonprofessional investors are provided a long series of disclosures. *Behavioral Research in Accounting*, *23*(1), 161–183. https://doi.org/10.2308/bria.2011.23.1.161

Pompian, M. M. (2006). BEHAVIORAL FINANCE AND WEALTH MANAGEMENT: How to build optimal portfolios that account for investor Biases. *Wiley & Sons*, *57*(1), 96–97. https://doi.org/10.1590/s0034-759020170108

Quang, L. T., Linh, N. D., Van Nguyen, D., & Khoa, D. D. (2023). Behavioral Factors Influencing Individual Investors' Decision Making in Vietnam Market. *Journal of Eastern European and Central Asian Research*, *10*(2), 264–280. https://doi.org/10.15549/jeecar.v10i2.1032

Qureshi, S. A., Rehman, K., & Hunjra, A. I. (2012). Factors Affecting Investment Decision Making of Funds Managers. *Wulfenia Journal*, *19*(10), 280–291.

Ritter, J. R. (2003). Behavioral finance. *Pacific Basin Finance Journal*, *11*(4), 429–437. https://doi.org/10.1016/S0927-538X(03)00048-9

Rudiawarni, F. A., Narsa, I. M., & Tjahjadi, B. (2020). Are emotions exacerbating the recency bias?: An experimental study. *International Journal of Trade and Global Markets*, *13*(1), 61–70. https://doi.org/10.1504/IJTGM.2020.104913

Sadi, R., Asl, H. G., Rostami, M. R., Gholipour, A., & Gholipour, F. (2011). Behavioral Finance: The Explanation of Investors' Personality and Perceptual Biases Effects on Financial Decisions. *International Journal of Economics and Finance*, *3*(5). https://doi.org/10.5539/ijef.v3n5p234

Sarwar, A., & Afaf, G. (2016). A comparison between psychological and economic factors affecting individual investor's decision-making behavior. *Cogent Business and Management*, *3*(1). https://doi.org/10.1080/23311975.2016.1232907

Shefrin, H. M. (2007). Behavioral Corporate Finance. *Journal of Applied Corporate Finance*, *14*, 113–126. https://doi.org/10.2139/ssrn.288257

Sigma, S., Technology, I., & Industry, M. (2015). *Chapter 5 Summary of Findings , Suggestions and*. 171–222.

Slovic, P., & Lichtenstein, S. (1971). Comparison of Bayesian and regression approaches to the study of information processing in judgment. *Organizational Behavior and Human Performance*, *6*(6), 649–744. https://doi.org/10.1016/0030-5073(71)90033-X

Soraya, R., Risma, A., & Siswanri, I. (2023). The Effect of Overconfidence Bias and Representativeness Bias on Investment Decision With Risk Tolerance as Mediating Variable. *Indikator: Jurnal Ilmiah Manajemen Dan Bisnis*, *7*(1), 1. https://doi.org/10.22441/indikator.v7i1.18396

Tan, L., Chiang, T. C., Mason, J. R., & Nelling, E. (2008). Herding behavior in Chinese stock markets: An examination of A and B shares. *Pacific Basin Finance Journal*, *16*(1–2), 61–77. https://doi.org/10.1016/j.pacfin.2007.04.004

Toma, F.-M. (2015). Behavioral Biases of the Investment Decisions of Romanian Investorson the Bucharest Stock Exchange. *Procedia Economics and Finance*, *32*(15), 200–207. https://doi.org/10.1016/s2212-5671(15)01383-0

Tubbs, R. M., Messier, W. F., & Knechel, W. R. (1990). Recency Effects the Auditor ' s Process Belief-Revision. *The Accounting Review*, *65*(2), 452–460. https://doi.org/10.2307/247633

Tversky, A., & Kahneman, D. (1971). Belief in the law of small numbers. *Psychological Bulletin*, *76*(2), 105–110. https://doi.org/10.1037/h0031322

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Judgment Under*

Uncertainty: Heuristics and Biases, *185*, 1–92. https://doi.org/10.4324/9781912282562

Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science New Series*, *211*(4481), 453–458. https://doi.org/10.1126/science.7455683

Uygur, U., & Taş, O. (2014). The impacts of investor sentiment on different economic sectors: Evidence from Istanbul Stock Exchange. *Borsa Istanbul Review*, *14*(4), 236–241. https://doi.org/10.1016/j.bir.2014.08.001

Wamae, J. N. (2013). Behavioural Factors Influencing Investment Decision in Stock. *International Journal of Economics and Finance*, *1*(5), 1–15.

Waweru, N. M., Munyoki, E., & Uliana, E. (2008). The effects of behavioural factors in investment decision-making: a survey of institutional investors operating at the Nairobi Stock Exchange. *International Journal of Business and Emerging Markets*, *1*(1), 1399. https://doi.org/10.1504/IJBEM.2008.019243

Yadav, K., & Chaudhary, R. (2022). Impact of Heuristic-Driven Biases on Investment Decision-Making of Individual Investors: The Mediating Role of Risk Perception. *Orissa Journal of Commerce*, *43*(1), 127–143. https://doi.org/10.54063/ojc.2022.v43i01.10

Zahera, S. A., & Bansal, R. (2018). Do investors exhibit behavioral biases in investment decision making? A systematic review. *Qualitative Research in Financial Markets*, *10*(2), 210–251. https://doi.org/10.1108/QRFM-04-2017-0028