



BEHAVIORAL BIASES: AN OVERVIEW OF COGNITIVE AND EMOTIONAL INFLUENCES ON DECISION- MAKING

Radhika, C.M.K. National P.G. College, India (radhikakansariacdlu@gmail.com)

ABSTRACT

Behavioral biases are regular, irrational thinking and decision-making tendencies that are not objectively true. These biases, which are part of human nature, can have a big impact on our decisions and behaviors in a lot of different areas, including business, economics, psychology, and daily life. The importance of recognizing and minimizing behavioral biases cannot be overstated. First of all, biases can result in poor risk management, irrational investment choices, and financial losses. Second, biases can impair creative thinking and efficient problem-solving. Thirdly, biases can have an impact on interpersonal interactions and communication because they can result in misunderstandings and incorrect assessments of the motives and actions of others. The summary of major behavioral biases in this work emphasizes their cognitive and emotional underpinnings as well as the ramifications for decision-making.

Keywords: Cognitive Errors, Irrational Thinking, Decision-making, Emotional biases, Mental accounting.

1. INTRODUCTION

Behavioral biases are ingrained tendencies that cause human decision-making to depart from rationality. Our decisions and actions in numerous domains are affected by these biases, which are influenced by cognitive and emotional variables. Making educated decisions and creating plans to lessen their effects require understanding these biases.

2. LITERATURE REVIEW

Kumar et al. (2015): Satish and Kumar analyzed the 117 research papers published between 1980 & 2013 to write this review paper. They found that a large portion of the body of literature on behavioral biases points out the paucity of research in this field in emerging economies, the predominance of secondary data-based empirical research, and the lack of primary data-based research on individuals who display herding behavior and tendency to invest in domestic equities instead of foreign equities.

Tversky et al. (1973): The availability bias, which causes people to depend on information that is easily available or immediately accessible in their memory, is examined in Tversky and Kahneman's key work. The authors talk about the cognitive processes that lead to this bias and present illustrations of how it affects making decisions in uncertain situations.

Tversky et al. (1974): Tversky and Kahneman's research on the availability heuristic explores how individuals rely on the ease with which examples or instances come to mind to make judgments and decisions. The authors provide empirical evidence for the impact of availability on decision-making and discuss its implications for various domains, including risk perception and estimation.

Lichtenstein et al. (1977): The overconfidence bias, which is the propensity for people to overestimate their skills and the reliability of their judgments, is a topic Lichtenstein and Fischhoff look at. The authors investigate the causes of overconfidence and describe how it affects decision-making in a variety of contexts, such as business and finance.

Kahneman et al. (1979): In their research, Kahneman and Tversky examine the bias known as loss aversion, in which people value averting losses more highly than achieving comparable gains. The authors explain the asymmetrical effects of losses and gains on decision-making using prospect theory and empirical data.

Tversky et al. (1981): Tversky and Kahneman's research focus on framing bias, where individuals' choices are influenced by the way options are presented or framed. The authors present experiments demonstrating the impact of framing on decision-making and propose a theoretical framework to explain this cognitive bias.

Kunda et al. (1990): Research by Kunda examines confirmation bias in relation to how information is processed and how persistently held beliefs are held. The author looks at the cognitive mechanisms that underlie confirmation bias, emphasizing the importance of motivated thinking and the propensity to only take in information that supports views that already exist.

Nickerson et al. (1998): The research by Nickerson examines confirmation bias, which is the propensity for people to look for and analyze data in a way that supports their preexisting ideas. The author analyses the

cognitive mechanisms that underlie confirmation bias and how it affects judgment in a variety of contexts, including politics, law, and science.

Ariely et al. (2001): Ariely studies the anchoring bias and how it affects economic judgment. The study investigates how arbitrary numerical anchors can affect individuals' judgments and subsequent economic behaviors. The author offers tests that show the enduring effects of anchoring and suggests cognitive explanations for this bias

Moore et al. (2008): The overconfidence bias and its effects on decision-making are examined by Moore and Healy. The study examines the causes and implications of overconfidence, as well as how it affects judgmental accuracy and risk-taking behavior. The authors offer tactics to reduce overconfidence and enhance the results of decisions.

ONSOMU (2014): Onsomu tried to examine the Impact of behavioral biases on individual investors at the Nairobi Securities Exchange & Relationship between gender and behavioral biases by using the Pearson Chi-square test with a sample size of 58 respondents. The findings concluded that there was a positive relationship between Investment decisions and Availability bias, Confirmation bias, Representativeness bias, and Disposition effect than gender and overconfidence.

Goyal (2016): investigated the relationship between behavioral biases and rational decision-making with the help of a structured questionnaire. The sample was collected from 386 respondents by using judgment and snowball sampling and analyzed by using a T-test, analysis of variance (ANOVA) and Fisher's least significant difference (LSD) test & Structure Equation Modelling (SEM). The findings indicated that there was a positive correlation between information search & overconfidence bias and evaluation of alternatives leading to the disposition effect.

Raja et al. (2017): Raja and Umer examined the relationship between behavioral biases and investment decisions at the Pakistan stock exchange by using a pre-tested questionnaire adapted from Chaffai & Medhioub (2014) with a sample size of 385 respondents. They found that five behavioral biases regret aversion, representativeness, overconfidence, anchoring, and risk aversion influenced investment decisions in a favorable way than two other behavioral biases mental accounting and availability bias.

R. Isidore et al. (2018): This study used the ANOVA test to examine the relationship between income and eight behavioral biases namely gambler's fallacy, mental accounting, anchoring, availability, loss aversion, regret aversion, representativeness, and overconfidence and the behavior of various income groups with respect to behavioral biases with a sample size of 436 secondary equity investors residing in Chennai. The findings suggest that investors with greater yearly incomes were less prone to biases, whereas the investors with lower annual incomes were more prone to biases but with overconfidence bias, the investors who earned greater yearly incomes were more overconfident than those who earned a lower annual income.

Narasimha et al. (2018): Narasimha tried to examine the relationship between investors' rationality and behavioral biases like self-attribution, and overconfidence by using Structural Equation Modeling & a sample size of 384,77 respondents from Hyderabad, Mumbai, Bengaluru, New Delhi, and 76 respondents from Kolkata. They found that there was positive covariance between biased self-attribution and overconfidence behavior.

Jain et al. (2021): This study tried to highlight the significant gaps in the existing literature on behavioral biases by using Systematic literature review (SLR), Bibliometric methods including performance analysis, and science mapping and content analysis. The findings suggested that herding behavior should be examined across several nations and the use of machine learning & robo-advisory services to lessen the influence of behavioral biases.

3. BEHAVIORAL BIASES AND THEIR IMPACTS ON DECISION-MAKING

1. Confirmation Bias:

A limited and biased assessment of the information can result from confirmation bias. People frequently look for and interpret data in a way that supports their preexisting opinions while ignoring or discounting evidence that is contrary to those assumptions. Due to this bias, judgments may not be made as well as they may be because of insufficient analysis, a lack of consideration for alternate points of view, and the reinforcement of preexisting opinions.

2. Availability Bias:

The availability bias influences judgment by favoring information that is readily available in one's memory or is easily accessible. Due to this bias, people may depend on information that is more vivid or memorable even though it is not necessarily accurate or representative. It can lead to a focus on recent events or instances that are simple to recall, altering perceptions of likelihood and potentially influencing decisions.

3. Anchoring Bias:

When people base their conclusions or judgments excessively on a first piece of information (the anchor), it is known as anchoring bias. Even if the anchor is arbitrary or irrelevant to the current choice, it might serve as a benchmark and affect later assessments or predictions. Due to this bias, the original anchor may not be

sufficiently adjusted, which could result in biased conclusions.

4. Loss Aversion:

The tendency for people to strongly favor avoiding losses over achieving similar gains is known as loss aversion bias. Due to this bias, people may exhibit risk-averse behavior in which they prioritize preventing losses over maximizing rewards. Loss aversion can result in poor risk-taking choices, a refusal to let go of bad investments, and the passing up of growth or innovation chances.

5. Overconfidence Bias:

Overconfidence bias can cause people to exaggerate their skills, expertise, or the precision of their judgments. This bias may lead to excessive confidence and an overestimation of the chances of success. Overconfidence bias can result in excessive risk-taking, failing to take into account different viewpoints, and underestimating prospective difficulties or uncertainties, which can affect the results of decisions.

6. Framing Bias:

When people's decisions are affected by the way options or information are presented or framed, it is known as framing bias. Despite the fact that the fundamental possibilities are the same, different frames can result in different decisions. Individuals may react differently depending on whether options are framed in terms of possible benefits or losses, probabilities, or positive/negative qualities, which can cause inconsistent decision-making.

7. Sunk Cost Fallacy:

The sunk cost fallacy is the tendency for people to continue funding a project or making a choice based on the resources (time, money, and effort) already committed, even if it no longer seems logical. Because people are motivated by the need to avoid wasting prior investments rather than objectively assessing the present and future prospects, this bias can result in illogical decision-making. When it comes to resource allocation and the ability to cut losses, when necessary, the sunk cost fallacy can have negative effects.

8. Availability Heuristic:

When people base their judgments or decisions on the first examples or pieces of information that come to mind, this bias is known as the availability heuristic. People tend to give easier-to-remember events or circumstances higher likelihoods, which can lead to a biased estimate of probability. The availability heuristic might cause decisions to be affected by remembered or vivid events rather than taking into account a wider variety of data or statistical possibilities.

9. Bandwagon Effect:

The bandwagon effect describes people's propensity to emulate the behaviors or ideologies of others. Due to this bias, people may adopt certain behaviors or come to specific decisions without carefully weighing the benefits and cons on their own. As people prioritize social conformity over critical thought, the bandwagon effect can lead to herd behavior and illogical decision-making.

10. Optimism Bias:

The term "optimism bias" describes a person's propensity to overestimate the likelihood that events will turn out well or their own skills. This bias can cause people to overestimate the likelihood of favorable outcomes while underestimating hazards. Overly optimistic predictions, underestimation of probable difficulties or setbacks, and a failure to effectively prepare for contingencies are all consequences of optimism bias.

11. Halo Effect:

The halo effect happens when people base their judgments or choices on a single favorable quality, spreading that favorable impression to additional, unrelated characteristics. This prejudice can result in biased evaluations and decisions because people may focus on one positive trait to make general judgments without taking into account other important elements. The halo effect can result in skewed recruiting judgments, skewed performance reviews, and unfavorable appraisals of options.

12. Herding Bias:

Herding bias describes people's propensity to imitate others' behavior or conclusions, especially in the lack of compelling arguments or sound logic. This bias can cause herd behavior, in which people copy the decisions of the majority, frequently resulting in less-than-ideal decision results. Market bubbles, high volatility, and the propagation of erroneous information are all things that the herding bias may be responsible for.

13. Authority Bias:

Authority bias is the propensity for people to take experts' or authority figures' recommendations even when exercising independent judgment would be more suitable. Encouraging people to depend on the opinion or counsel of authoritative figures without critically assessing the data or considering alternative viewpoints, this bias can influence how people make decisions. Authority can have an impact on crucial decisions in industries including healthcare, finance, and policy-making.

14. Recency Bias:

Recency bias is the propensity to ignore or minimize previous information while giving more weight or relevance to recent events or information while making decisions. This bias may cause individuals to make decisions that are excessively influenced by current events or trends while potentially ignoring important

historical or long-term information. Forecasting, performance assessments, and investment decisions can all be impacted by recency bias.

15. Gambler's fallacy

The gambler's fallacy is the idea that previous occurrences or results, even though they are independent and unconnected, might affect future probability. This bias can cause people to base their decisions on false assumptions about probability, such as thinking that a win is more likely after a run of losses. The gambler's fallacy can have an impact on risk assessment, investment plans, and gaming decisions.

4. SUGGESTIONS TO OVERCOME BEHAVIORAL BIASES, ADDRESSING EACH BIAS ONE BY ONE:

1. Confirmation Bias:

Seek diverse perspectives: Seek out information and viewpoints that challenge your beliefs. Engage with individuals who hold different opinions and consider their perspectives with an open mind.

Practice critical thinking: Engage in critical evaluation of information by examining the evidence, looking for alternative explanations, and considering the credibility and reliability of sources.

Keep a decision journal: Document your decisions, including the thought processes, assumptions, and information considered. Reviewing your decision-making patterns can help identify potential confirmation biases.

2. Availability Bias:

Seek out a variety of information: Make an attempt to obtain data from various sources and take a wide range of viewpoints into account. Look beyond the material that is simple to find or remember and look for sources that are more all-encompassing and varied.

Use statistical data: Rely on data and statistical information when evaluating probabilities or making judgments. Consider objective evidence rather than relying solely on personal anecdotes or vivid examples.

Take time to reflect: Pause and reflect before making decisions. Engage in deliberate thinking and consider a wider range of information to counteract the biases introduced by the availability heuristic.

3. Anchoring Bias:

Use multiple anchors: When evaluating or estimating, take into account various reference points or anchors. To provide a fairer assessment, contrast and compare several anchors.

Conduct independent analysis: Form your own opinion based on independent study and analysis before accepting or relying on an initial anchor. Try to alter the original anchor based on new information to avoid being too influenced by it.

Practice mindfulness: Be aware of the presence of anchoring bias and consciously challenge the influence of the initial anchor on your decision-making process.

4. Loss Aversion:

Separate emotions from decision-making: Identify and control emotions triggered by probable losses. Avoid making decisions that are simply motivated by a fear of losing and instead base them on objective standards.

Consider the bigger picture: Focus on the long-term consequences and potential gains rather than solely focusing on avoiding losses. Evaluate decisions based on their overall expected value rather than the fear of potential losses.

Review decisions objectively: Review and assess decisions frequently to see if loss aversion bias played a role. Consider your prior choices and what you can learn from them to make better judgments in the future.

5. Overconfidence Bias:

Seek feedback and diverse opinions: Actively seek out feedback from others and take into consideration different viewpoints. Engage in productive dialogue and accept suggestions that contradict your presumptions and ideas.

Exercise self-reflection: Become self-aware and critically assess your own judgments and skills. To adjust your confidence levels, periodically reflect on previous experiences and results.

Adopt a growth mindset: Develop a way of thinking that values education and acknowledges that there is always an opportunity for progress. Be willing to change your thoughts and attitudes in response to fresh information or criticism.

6. Framing Bias:

Take into account multiple frames: Actively seek out and assess various frames or viewpoints on the same problem or choice. Think about the biases that various frames could present and how they might affect your judgment.

Reframe the decision or issue: Examine different definitions or strategies for approaching the decision or issue in order to challenge the way it has been framed. By rephrasing the problem, you could find new solutions or possibilities.

More conscious of the framing effects: Learn as much as you can about framing bias and how it affects

judgment. Knowing this bias allows you to actively attempt to reduce its impact.

7. Sunk Cost Fallacy:

Focus on future prospects: When making decisions, shift the focus from past investments to future potential and expected outcomes. Evaluate decisions based on their current and future value rather than being overly influenced by sunk costs.

Conduct a cost-benefit analysis: Objectively assess the costs and benefits of continuing with a project or decision. Consider the potential gains and losses moving forward, independent of past investments.

Seek external perspectives: Consult with trusted advisors or colleagues who can provide an impartial viewpoint. They can help you evaluate the decision based on its merits rather than being swayed by sunk costs.

8. Herding Bias:

Independent research and analysis: Conduct thorough research and analysis before making decisions, rather than relying solely on the actions or opinions of others. Consider the underlying reasons and evidence supporting different viewpoints.

Develop your own criteria: Establish your own decision-making criteria and standards. Evaluate options based on objective measures and your own analysis, rather than blindly following the crowd.

Embrace contrarian thinking: Challenge prevailing opinions and consider alternative perspectives. Seek out diverse viewpoints and consider the merits of different arguments before making decisions.

9. Halo Effect:

Separate individual attributes: When evaluating individuals or entities, consciously separate different attributes and characteristics. Evaluate each aspect independently rather than allowing a positive or negative impression in one area to influence your overall judgment.

Collect comprehensive information: Gather a range of information and evidence about the person or entity under consideration. Consider both positive and negative aspects to form a more balanced and accurate assessment.

Utilize objective evaluation criteria: Establish objective evaluation criteria based on relevant factors. Use measurable criteria and specific benchmarks to make judgments, reducing the potential influence of the halo effect.

10. Authority Bias:

Encourage diverse perspectives: Seek input from multiple sources and engage with individuals who may offer different expertise or viewpoints. Consider a variety of opinions before forming your own judgment.

Evaluate expertise critically: Assess the credibility and expertise of authority figures objectively. Consider their track record, credentials, and the evidence supporting their claims before accepting their opinions or recommendations.

Develop your own expertise: Invest in learning and gaining knowledge in the relevant domain. By developing your own expertise, you can evaluate information and make informed decisions independently.

11. Recency Bias:

Consider historical data: When evaluating options or making judgments, consider historical data and trends to gain a broader perspective. Balance the influence of recent events by considering long-term patterns and historical context.

Take time for reflection: Avoid making impulsive decisions based solely on recent events. Take time to reflect, gather additional information, and consider the potential impact of long-term trends before finalizing decisions.

Utilize decision frameworks: Implement decision-making frameworks that require a systematic evaluation of options and considerations beyond recent events. By following structured decision-making processes, you can reduce the influence of recency bias.

12. Gambler's Fallacy:

Understand probabilities: Educate yourself about probabilities and statistical concepts. Develop a clear understanding that past events do not influence future outcomes in independent events.

Base decisions on objective analysis: Make decisions based on objective analysis, considering relevant factors and probabilities rather than being swayed by perceived patterns or streaks of luck.

Seek expert advice: Consult with experts or professionals who can provide a more accurate assessment of probabilities and help you make informed decisions based on statistical analysis.

5. CONCLUSION

Decision-making is significantly impacted by behavioral biases, which affect people's judgments and decisions. These biases result from cognitive and emotional processes that might sway people away from reason and impartial judgment. This overview has looked at a number of behavioral biases, including framing, availability, anchoring, loss aversion, overconfidence, and confirmation bias.

Both good and negative effects on decision-making may result from these biases. On the downside, they might

result in poor decisions, increased risk-taking, skewed assessments of options, and emotional effects that skew logical thinking. Additionally, behavioral biases can influence business decision-making, financial markets, and various other areas, leading to resource allocation bias, herd behavior, and market inefficiencies. However, people can take measures to lessen these prejudices by being aware of and comprehending them.

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