

Availability Heuristics and Its Applications in Behavioral Economics

Yixin Gou^{1,a,*}

¹*Political Economy-Economics, Duke Kunshan University, Suzhou, Jiangsu Province, China,
215300*

a. yg203@duke.edu

**corresponding author*

Abstract: Heuristics are often employed in simplifying decision-making processes but can also lead to thinking errors and biases. Availability is one common type of heuristics, which relies on the ease with instances coming to mind. It affects decision-making of consumers, investors, firms, and other perspectives, sometimes resulting in thinking biases. The topic is searching for the role of availability in the thinking process of consumers, investors and firms and put forward possible suggestions to diminish negative impacts and take advantage of positive effect. This essay begins by introducing an overview of heuristics and a precise definition of availability heuristics and then analyzes implications relevant to understanding individual behavior and economic outcomes. Subsequently, it explores the respective suggestions according to the analyses based on existing literature and statistical data. Through this exploration, availability heuristics affect the decision-making process, which is more obvious when things are more impressive by increasing the ease with them coming to mind. At that moment, to approach to perfect decision, thinking comprehensively is an integral part.

Keywords: availability, heuristics, cognitive shortcut, decision-making, systematic bias

1. Introduction

As one type of heuristics, availability heuristics is cognitive shortcut through which individuals assess the frequency of classes or the probability of events based on how easily relevant instances come to mind [1]. However, this type of thinking often leads to systematic biases. Understanding the influence and application of availability heuristics is crucial because it helps to recognize potential biases in the decision-making process and allows for more comprehensive choices. There is a variety of research on availability heuristics. For instance, Tversky and Kahneman explored the concept of availability heuristics and its mechanism by designing experiments to investigate participants how to make judgements [1]. In addition, several research was conducted to examine the effect of availability heuristics. According to Nazlan et al., availability heuristics influence the choice of online consumers as they place more weight on negative information and display pictures [2]. This type of heuristics plays a crucial role in the process of decision-making, which is demonstrated in different categories. Based on past studies, this essay tries to further explain the behaviors of consumers, investors, and firms through availability heuristics, connecting previous literature, and puts forward specific suggestions to reduce the negative impact of availability heuristics.

2. Availability Heuristics

Looking back on the development of economics, the classical approach incorporated numerous insights from human psychology, utilizing principles to effectively summarize individual behavior during that period [3]. According to Camerer and Loewenstein, with the exploration of the expected utility (EU) framework making assumptions that human preferences are consistent, and humans have the ability to retain information and engage in intricate calculations involving probabilities, extensive research in psychology demonstrates that our memory, problem-solving, and decision-making processes deviate significantly from the assumptions of the EU framework [3]. Actually, it is the heuristics that influence individual behavior when making decisions. Heuristics are cognitive shortcuts that our brain uses to simplify complex tasks, gather, recall information, and make inferences [3].

With deep exploration, availability heuristics appear, which is reinforced by dramatic events and personal experiences, even if they do not align with the actual frequency of events. One famous instance illustrates the comparison between participants' predicted number of people killed by sharks per year and the actual number. The outcome shows that the predicted number tends to be significantly higher, which can be attributed to the influence of availability heuristics [4].

3. The Application in Consumer Behavior

Availability heuristics can influence consumer behavior through emotions. Emotions activate availability heuristics, prompting us to quickly recall and list several familiar emotions [5]. Based on this influence, emotional marketing has emerged as a practice that utilizes emotions to shape consumers' attitudes, behaviors, and purchasing decisions. A study conducted by Pringle and Feld examined the differential impact on profit growth between communication activities employing emotional and rational approaches. They analyzed the data from the UK-based Institute of Practitioners in Advertising, which includes 1400 case studies of successful advertising campaigns. In a specific examination of the IPA data, the researchers compared the increase in profitability between campaigns that predominantly utilized emotional appeal and those that employed rational persuasion and information [6]. The findings revealed that emotional route creation resulted in an average growth of 31%, nearly doubling the 16% growth achieved through the rational route [7]. Besides, when combining two approaches, the outcome creation increased, which is more than the rational route [6]. From this perspective, emotional marketing proves to be more effective than rational marketing. Based on the mechanism of availability heuristics, the effectiveness of emotional marketing can be attributed to availability in three key aspects. First, ease of recall — emotional marketing messages that are memorable and elicit strong emotions are more readily accessible in consumers' minds. When making purchasing decisions, individuals may rely on these emotionally charged memories and give them greater weight, leading to a bias towards emotional appeals in marketing. Second, vividness and salience — emotional marketing campaigns often employ attention-grabbing content that stands out in people's memories.

Nike serves as an exemplary brand that has effectively employed emotional marketing in its campaigns. Their marketing initiatives often revolve around powerful storytelling and highlight personal achievements [8]. A notable example is Nike's iconic "Just Do It" campaign, which exemplifies the intersection of emotional marketing and availability heuristics. According to the case study, this campaign relies heavily on emotional appeal, aiming to inspire and motivate individuals to pursue their dreams and overcome challenges. It features real-life stories of individuals who have achieved greatness through determination and resilience, evoking emotions such as inspiration, empowerment, and aspiration [8]. These emotional connections foster a strong bond between consumers and the brand, enhancing the brand's availability in their minds.

4. Application in Investor Behavior

According to Barber and Odean, investors often gravitate towards attention-grabbing stocks due to the significant effort and time required to choose suitable stocks from a vast market selection [9]. Consequently, they tend to restrict their search to these attention-grabbing stocks. Research also indicates that stock purchases increase nearly twofold during high trading days compared to normal trading days [9]. Furthermore, investors demonstrate a propensity to acquire more stocks from companies that are prominently featured in the news [9]. However, this type of choice of investors is not completely rational and cannot bring surprising profits, which is a cognitive bias caused by availability heuristics. Availability heuristics indicate that humans rely on easily accessible information when making judgments or decisions. In this case, attention-grabbing stocks become more readily available in investors' minds, accompanied by extensive media coverage and public attention. The vividness and salience of these kinds of stocks let them be more easily recalled and considered as potential investment options. Besides, one characteristic of news is its strong timeliness. The stocks appearing recently on social media can be attributed to recent exposure to market information and fluctuations. Investors tend to give greater weight to recent events and news. The increased media coverage further reinforces the availability of information related to stock trading, leading to higher engagement in buying and selling activities. Therefore, the availability and accessibility of information, driven by media exposure and recent events, play a significant role in shaping investors' behavior and decision-making processes.

5. Application in Firm Behavior

A study conducted by Huang et al., explores the impact of natural disasters on the environmental, social and governance (ESG) disclosure policies of firms located in counties neighboring the affected areas. In this study, the authors collected natural disaster data of the United States, analyzed different ESG disclosure policies, utilized the difference-in-difference approach to control independent variable and examined the extent to which natural disasters affect corporate ESG disclosure policies [10]. The findings reveal that managers of these firms tend to enhance transparency in ESG disclosure following a disaster, compared to similar firms unaffected by such events in the vicinity [10]. Additionally, firms with a higher percentage of local institutional ownership are more likely to increase ESG disclosure after experiencing nearby disasters [10]. This behavior can be explained by availability heuristics. When a disaster occurs near a firm, it creates a vivid and easily accessible example in the minds of the managers. The recent and impactful nature of the disaster increases the salience and availability of the associated ESG issues. As a result, managers are more likely to consider and prioritize these ESG issues in their decision-making process. The availability of disaster related ESG concerns influences their perception of the importance and urgency of addressing those issues. This heightened awareness prompts them to enhance transparency in ESG disclosure, as they recognize the need to communicate their efforts and actions taken to mitigate similar risks or social and environmental impacts. This response is driven by the cognitive shortcut that emphasizes the accessibility and impact of disaster related ESG factors, which in turn shapes their behavior towards greater transparency in ESG disclosure. Furthermore, it is important to note that while the availability heuristic provides insight into the behavior of firms' managers, other factors, and motivations, such as stock performance, company revenue, and capital expenditures, may also play a role in their decision-making process.

6. Discussion

It is not exaggerated that availability deeply influences consumers', investors', and firms' behaviors, but the systematic biases brought about by these heuristics need to be paid attention to. For consumers,

it is significant to seek diverse perspectives while purchasing goods. Even though availability heuristics can have a powerful impact on consumers' attitudes and behaviors, it is necessary to consider other factors such as product quality, price, and personal preferences while making informed decisions. For investors, do not hesitate to diversify their portfolios. Instead of focusing solely on attention-grabbing stocks or companies in the news, consider diversifying the investments across different industries, sectors, and asset classes. This can help mitigate risks and maximize potential returns. On the other hand, it is necessary for investors to conduct thorough research. They should take the time to research and analyze the fundamentals of potential investments, looking beyond the headlines and considering factors such as financial performance, competitive advantage, management quality, and long-term growth prospects. For firms, through the case of Nike, building brand identity is important. Emotional marketing is one beneficial strategy to create a positive emotional association with the brand, enhance brand loyalty, and ultimately drive consumer actions such as making a purchase, recommending the brand to others, or becoming brand advocates. Secondly, in order to avoid the drawbacks of availability, firms need to adopt a comprehensive and balanced approach, which means being mindful of potential biases to assess factors objectively and based on a holistic understanding of the long-term sustainability and societal impacts of operations.

7. Conclusion

Availability heuristics shows one shortcut mode to make decisions more quickly when facing complex and uncertain situations. However, it does not represent complete accuracy and sometimes results in overestimation of probability, which easily results in systematic biases. In the process of analyzing the application of availability heuristics in consumer, investor, and firm behaviors, it is obvious that this type of heuristic can be applied in different occupations and play a positive role when properly used. Being aware of its availability and actively seeking out additional information helps mitigate its potential biases. Measuring in a comprehensive mind promotes the appearance of better outcomes. This essay focuses on analyzing decision-maker behaviors through availability heuristics. However, the appearance of a behavior can be influenced by more than one factor, which needs to be improved in the future study. It is necessary to control other determinants to explore the relationship between behaviors and availability heuristics. From this point on, future research will mainly focus on connecting qualitative and quantitative strategies in order to exclude the effects of irrelevant variables.

Acknowledgement

Firstly, I would like to show my deepest gratitude to Dr. Edoardo Gallo, who has provided me with valuable guidance in every stage of the writing of this thesis. Besides, I want to express my gratitude to my mentor, who contributed to the structure of this essay. Further, I would like to thank all my friends and parents for their encouragement and support. Without all their enlightening instructions and impressive kindness, I could not have completed my thesis.

References

- [1] Tversky, A., & Kahneman, D. *Availability: a heuristic for judging frequency and probability*. Academic Press. (1973).
- [2] Nazlan, N. H., Tanford, S., & Montgomery, R. *The effect of availability heuristics in online consumer reviews*. *Journal of Consumer Behaviour*, 17(5), 449–460. <https://doi.org/10.1002/cb.1731>. (2018).
- [3] Camerer, C. F., & Loewenstein, G. *Behavioral Economics: Past, Present, Future - CaltechAUTHORS*. Caltech.edu. (2011).
- [4] Dale, S. *Heuristics and biases: The science of decision-making*. *Business Information Review*, 32(2), 93–99. <https://doi.org/10.1177/0266382115592536>. (2015).

- [5] Pogorzelski, J. *Managing brands in 4D: understanding perceptual, emotional, social and cultural branding*. Emerald Publishing Limited. (2018).
- [6] Pringle, H., & Field, P. *Brand immortality: how brands can live long and prosper*. Kogan Page. (2008).
- [7] Dooley, R. *Emotional Ads Work Best*. *Neuromarketing*. (2009, July 27). <https://www.neurosciencemarketing.com/blog/articles/emotional-ads-work-best.htm>
- [8] Stoeva, M. *Emotional Branding Online: Case Study: Nike*. (2017). https://www.theseus.fi/bitstream/handle/10024/136114/Stoeva_Margarita_Emotional_Branding_Online.pdf?sequence=1
- [9] Barber, B. M., & Odean, T. *Online Investors: Do the Slow Die First?* *Review of Financial Studies*, 15(2), 455–488. (2002). <https://doi.org/10.1093/rfs/15.2.455>
- [10] Huang, Q., Li, Y., Lin, M., & McBrayer, G. A. *Natural disasters, risk salience, and corporate ESG disclosure*. *Journal of Corporate Finance*, 72, 102152. (2022). <https://doi.org/10.1016/j.jcorpfin.2021.102152>