

Role of Financial Literacy and Choice Paralysis Bias in Investment Decisions: A Review

Prof. D.P. Warne, Rakesh Kumar

Senior Academic Analyst and Planner, Haryana State Higher Education Council, Panchkula (134112)
Research Scholar, Department of Commerce, Chaudhary Devi Lal University Sirsa (125055)

Date of Submission: 20-03-2023

Date of Acceptance: 30-03-2023

ABSTRACT

In today's saving and investment era, the choice paralysis bias is an emerging phenomenon that affects the cognition and judgment of investors. It is also called paradox of investment choice in behavioral finance. It is a situation when an investor feels anxious due to the diversity and abundance of investment instruments. It is becoming a prominent issue confronted by the investment community in which investors find themselves entangled in the puzzle of making the right investment choice amidst diversity and availability of ample investment options. This article deals with the role of financial literacy and choice paralysis bias in the investment decision-making of investors. It offers a comprehensive review and analysis of the impact of financial literacy, revealing that financial literacy can provide a yardstick in the hand of investors to abrogate the effects of the choice paralysis bias on the judgment of investors.

KEYWORDS: -Choice Paralysis Bias, Financial Literacy, Investment Decisions

I. INTRODUCTION

In today's times, every investor is surrounded by innumerable investment instruments. This abundance and diversity of investment instruments have made it a rigorous task for investors to invest their limited financial resources in the right investment options. In this regard, generally, people hold the belief that abundance and variety of choices help humans to select good choices but many researchers and scholars have found that this may not be true rather they found that the availability of more options gives birth to the problem named paradox of choice or choice overload. In the context of investment choice, this phenomenon is termed as choice paralysis bias (paradox of investment choice). The concept of choice paralysis bias originated from

paradox of choice which has been a topic of research studies in many disciplines like psychology, consumer behavior, humanities, and social sciences. Its origination and background can be traced from these disciplines. Many researchers and scholars have contributed significantly to the literature through their research works in this context. More choices may open the door of opportunities to the individual for better decision outcomes but also the multiplicity of alternatives may result in choice overload and prove to be discouraging and steer people to decision paralysis (Iyengar & Lepper, 2000). In this regard, they conducted both laboratory and field experiments. They empirically examined the effects of choice-set size on the behavior of people. Their results suggest that mere presence of additional choices may fend decision makers' potential to recognize the choice that best matches with their preferences which in turn renders them less likely to take decisions. For example, in an experiment, they offered buyers a choice of six or twenty-four flavors of jam to make the purchase. Their results suggested that a larger percentage of buyers (30%) made purchases from limited choice-set size while only a small percentage of buyers (3%) made purchases from larger choice-set size. Consistent with these results, other consumer behavior studies revealed that consumers are more likely to delay their choices or forgo their decisions with an increment in choice-set size which adversely impacts consumers' choices and preferences (Chernev, 2003). The hurdle of Choice overload is faced by those who have a huge list of options than those who have fewer options. It seems difficult to make the decision about selection within a limited time frame with an extensive list of choices. People with too many choices expressed being less satisfied with their decisions in comparison to people with fewer choices (Haynes, 2009). Consumers stave off their buying decisions if

they found that they have to make selection from too many options while they make decisions with fervour if they have to choose from limited options. Moreover, abundance of choices gives birth to the paradox of choice which in turn generate decision paralysis because more choices lift the expectation of individual (Kurien et al., 2014). The choice is a good thing but too many choices come with consequences like decision paralysis and dissatisfaction. The problem of choice overload is fiercer for maximizers than satisficers (Schwartz, 2015). There are more chances of non-purchase behavior in case of more quantity and variety of products due to the existence of paradox of choice (Kinjo & Ebina 2015). The paradox of choice gives birth to decision paralysis in consumers as the multiplicity of options makes it difficult for them to decide. It comes with consequences like increased evaluation costs, preference uncertainty, and delayed decisions (Manolica et al., 2021). All the above research studies point to the fact that too many alternatives give birth to confusion during selection of choices in humans and indicated towards existence of choice paralysis bias.

CHOICE PARALYSIS BIAS AND INVESTMENT DECISIONS

Investment instruments work as financial vehicles for investors to move their financial resources to productive activities. These investment instruments are those means through which capitalist earns their reward in the form of dividend income, interest, capital gains, etc. by investing their limited capital resources. In today's time, when people are changing their mindset toward saving and investment activities, there are plethora of investment instruments easily accessible to them like stocks, mutual funds, exchange-traded funds, bonds, life insurance, certificates of deposits (CDs), treasury bills, real estate, gold, bank deposits, etc. Investors can move forward towards the selection of any investment instruments as per their convenience but the extensive list of investment options made it a rigorous task for them. In this situation, they sense overwhelmingness as too much options put them in a state of indecisiveness leading to consequences like decision paralysis and increased evaluation cost. With the increment in fund options, an investor feels trapped in confusion during the selection of options and prefers to stick to his earlier selected choices (Kempf & ruenzi, 2006). Employees are more likely to make the investment in those retirement plans which offer fewer options than plans with more options (Iyengar et al., 2004). In the field of behavioral finance, this behavioral bias is known as choice

paralysis bias in which investors become confused and found themselves incapable to make decisions if they have to select from too many investment instruments. In general words, multiplicity and variety of investment instruments, on one hand, allows the investors to choose the best investment option matching their investment objectives, on the other hand, it also traps the investors in the jaws of the paradox of investment choice (choice paralysis bias). In this context, it is a general perception that more choices are good as they came to the investment community in the form of opportunity which helps them to choose what is best for their financial well-being but many research studies suggest that more choices elevate expectations and increase cognitive stress which in turn generate indecisiveness among investors and retard their decision-making. However, the right investment made at right time in the right investment alternatives yields good returns, while improper investment decisions result in the illiquidity of funds and undesirable returns. Thus, investors should take rational investment decisions to maximise their financial well-being. Investors' financial literacy level and their money management skills can play a significant role in this regard.

FINANCIAL LITERACY AND INVESTMENT DECISIONS

Nowadays, every individual whether he is the ultimate consumer or investor enters into financial transactions daily to cultivate their interest like earning, saving, investment, etc. They are becoming part of such a risky financial marketplace with a bewildering array of investment options that often confound the investors while understanding complex information and the risk associated therein. This makes financial literacy essential for every individual as it influences financial decisions. These financial decisions require an individual's financial knowledge, money management skills, and understanding of financial concepts especially in the rapidly changing market conditions to protect their financial interest. Financial literacy is concerned with an individual's finance management skills and potential to make sound financial judgments. It is such a confluence of a person's skills, knowledge, and behavioral awareness which enables them to attain the objective of financial well-being. It helps the investment community by improving their knowledge, skills, and financial behavior so that they can make better investment decisions. In this context, investment decisions depend on how investors receive and analyse market information

with the help of their intellectual skills. Every individual has different cognitive and judgment abilities hence their financial literacy level is different. Therefore, their financial decisions vary with their financial literacy level. Financial literacy level affects these investment decisions and guides them to behave in a certain manner. It can help the investors to overcome the effects of choice paralysis bias (Paradox of Investment choice) during the selection of investment instruments. Several research studies have been done in this regard. Investors with more financial experience and knowledge were found to be less affected by the paradox of choice phenomenon (Kida et al., 2010). Financial literacy is significantly positively associated with investment decisions about retirement planning (Klapper & Panos 2011). Financial literacy level significantly affects individual investors' investment decisions (Jariwala, 2015). Financial literacy has significant positive association with households' investment choices (Kasalirwe & Lokina, 2016). The paradox of choice, financial literacy, and investment experiences are significantly positively associated with investment decisions (Latif et al., 2019).

II. LITERATURE REVIEW

With the rapidly growing numbers of financial products and services, investors have to grapple with conflict of choice while choosing the right investment alternatives. In such a time, financial literacy works as a boon to investors, enabling them to make prudent decisions by enhancing their financial awareness regarding investment instruments. Many researchers have made significant contributions in this regard. **Iyengar et al., (2004)** examined archival data acquired from the Vanguard Center for retirement research, about 401(k) retirement saving plans offered by 647 institutions to approximately 8,00,000 employees. They found that as the number of plans increases participation rates of employees in plans decrease. For every increase of 10 fund options, employee participation rates declined by 2%. They revealed that as the number of investment options increases, participation rate of investment declines because paradox of choice hampers their investment decisions. **Kempf & ruenzi (2006)** studied investment decisions when large number of mutual fund options were available to investors. They found that increase in the number of fund options leads the investors to confusion and maintain their status quo (previously chosen alternative). Their study revealed increase in the number of fund options leads the investors to inaction or delay in decision-making. **Al-Tamimi &**

Kalli (2009) examined the level of financial literacy and investment decisions of UAE (United Arab Emirates) Investors. They found that income level, education level, and workplace activity put considerable impacts on the level of financial literacy and investment decisions of investors. Their results suggest that there is a significant difference in the financial literacy level of investors in the case of their gender. In this regard, they found low financial literacy in women in comparison to male investors. They also found that Investment decisions mostly influenced by religious reasons, firm's reputation, and diversification purposes. Their study revealed that financial literacy level exerts a significant influence on the investment decisions of individual investors. **Kida et al., (2010)** studied paradox of choice phenomenon about the experience of investors. They investigated effect of choice-set size on the investment decisions of investors. Their study revealed that paradox of choice was more evident for investors who are less experienced while paradox of choice may not exist for investors who are more experienced. **Bhushan (2014)** investigated the relationship between financial literacy of salaried people and their awareness about investment options. They revealed that highly financially literate individual has higher awareness. They found that individuals with low financial literacy levels primarily make their investments in conventional and safe investment options. Their study suggests that financial literacy level influences investment preferences as well as their awareness. **Aren & Zengin (2016)** identified a significant association between financial literacy and investment choices of individual investors. They studied personality characteristics and risk perception about investment preferences. They found that low financial literate individuals were more likely to invest in deposits and foreign currency while they invest in equity and stocks with increment in financial literacy. **Palm & Zwaan (2016)** investigated the relationship between financial literacy and increasing the number of investment choices in the context of superannuation funds in Australia. They found that fund members with higher financial literacy levels were more likely to exercise investment choice and individuals who perceived themselves higher financially literate are more likely to choose active default options. Regarding socio-demographic variables, their study confirms that older, male, and more educated people with large superannuation fund amount tends to have higher financial literacy. **Chu et al., (2016)** examined the potential effects of financial literacy on

investors' choices and investment returns. Their results revealed that investors with higher financial literacy tended to invest in mutual funds while individuals who were overconfident about their financial knowledge were more likely to invest in stocks. They found that higher financially literate investors have chances of good investment returns. **Khan et al., (2019)** aim to investigate the role of paradox of choice, financial literacy, and investors' experience with investment decisions. Furthermore, they studied the mediating role of web disclosure in the investment context of Chinese market. They concluded that paradox of choice and financial literacy positively influences investment decisions. **Nguyen et al., (2019)** investigated how financial literacy levels and pension knowledge impact investment choice decisions for their retirement. Their results show that both basic financial literacy level and pension knowledge are vital factors that like the chances of employing their resources in retirement investment choices while advanced financial literacy level has a significant influence on choosing growth investing options for retirement purposes. They concluded that financial literacy levels affect investment choices for their retirement. **Lotto (2020)** studied the influence of financial literacy on investment choices of household investors. Their study revealed that there is a significant positive relationship between financial literacy and investors' investment choices. They found financially literate households move their financial resources from informal to more formal investment platforms. They also found significant relationship between financial literacy and socio-demographic factors. **Li et al., (2020)** studied the impact of financial literacy on Chinese households' portfolio choices and their investment return. They found that financial literacy significantly increases households' investments in risky assets. Their results revealed that financial literacy increases households' efficiency in understanding financial assets. They also found that financial literacy has significantly increased returns for younger and more educated people.

III. CONCLUSION

This article articulates the behavioral responses of financial consumers concerning their investment choices and depicts their financial literacy level. It exhibits how financial literacy and choice paralysis bias are inter-related and makes impact on investment decisions. As we know, choice paralysis bias has emerged as a global phenomenon affecting the investment choices of investors. This effect of choice paralysis bias on

investment choices attracted the attention of researchers and investment community to study this phenomenon. Therefore, several researchers, scholars, and investment experts have attempted to examine and explain the consequences of choice paralysis. They came to the inference that choice paralysis comes with consequences like decision paralysis due to which investors either delay or adjourn their investment decisions. In this regard, the literature contains many empirical and theoretical research about paradox in choices from various disciplines such as consumer behavior, psychology, social sciences, and behavioral finance, etc. while there are major findings about financial literacy and investment decision-making but how financial literacy and choice paralysis both affect the investment decisions of investors is still a matter of research in behavioral finance. Although numerous research studies have investigated various aspects related to financial literacy, paradox of investment choice, and their impact on investment decisions but they have produced mixed and inconclusive results. Earlier research studies suggest that financial literacy can perform a crucial role to protect the investors from adverse effects of choice paralysis bias in the matter of investment decisions. To serve this purpose, the initiatives of organising financial literacy programs among investors need to be started. These financial literacy programs can help the investment community by improving their financial knowledge and investment behavior which in turn helps investors to take appropriate and prudent financial decisions. From the above research studies and facts, it is concluded that both financial literacy and choice paralysis bias have significant role in framing investment decisions and selecting investment choices.

REFERENCES

- [1]. Aren, S., & Zengin, A. N. (2016). Influence of financial literacy and risk perception on choice of investment. *Procedia-Social and Behavioral Sciences*, 235, 656-663.
- [2]. Bhushan, P. (2014). Relationship between financial literacy and investment behavior of salaried individuals. *Journal of Business Management & Social Sciences Research (JBM&SSR)*, 3(5), 82-87.
- [3]. Chernev, A. (2003). When more is less and less is more: The role of ideal point availability and assortment in consumer choice. *Journal of consumer Research*, 30(2), 170-183.

- [4]. Chu, Z., Wang, Z., Xiao, J. J., & Zhang, W. (2017). Financial literacy, portfolio choice and financial well-being. *Social Indicators Research*, 132(2), 799-820.
- [5]. Hassan Al-Tamimi, H. A., & Anood Bin Kalli, A. (2009). Financial literacy and investment decisions of UAE investors. *The journal of risk finance*, 10(5), 500-516.
- [6]. Haynes, G. A. (2009). Testing the boundaries of the choice overload phenomenon: The effect of number of options and time pressure on decision difficulty and satisfaction. *Psychology & Marketing*, 26(3), 204-212.
- [7]. Iyengar, S. S., & Lepper, M. R. (2000). When choice is demotivating: Can one desire too much of a good thing? *Journal of personality and social psychology*, 79(6), 995.
- [8]. Jariwala, H. V. (2015). Analysis of financial literacy level of retail individual investors of Gujarat State and its effect on investment decision. *Journal of Business & Finance Librarianship*, 20(1-2), 133-158.
- [9]. Kasalirwe, F., & Lokina, R. (2016). Financial literacy and household investment choices in Uganda.
- [10]. Kempf, A., & Ruenzi, S. (2006). Status quo bias and the number of alternatives: An empirical illustration from the mutual fund industry. *The journal of behavioral finance*, 7(4), 204-213.
- [11]. Khan, N., Latif, K., Sohail, N., & Zahid, Z. (2019). Web disclosure as mediating role in the relationship between paradox of choice, investor experience, financial literacy, and investment decision making: evidence from China. *Journal of Accounting and Finance in Emerging Economies*, 5(1), 83-92.
- [12]. Kida, T., Moreno, K. K., & Smith, J. F. (2010). Investment decision making: do experienced decision makers fall prey to the paradox of choice? *The journal of behavioral finance*, 11(1), 21-30.
- [13]. Kinjo, K., & Ebina, T. (2015). Paradox of choice and consumer nonpurchase behavior. *Ai & Society*, 30, 291-297.
- [14]. Klapper, L., & Panos, G. A. (2011). Financial literacy and retirement planning: the Russian case. *Journal of Pension Economics & Finance*, 10(4), 599-618.
- [15]. Kurien, R., Paila, A. Rao., & Nagendra, A. (2014). Application of paralysis analysis syndrome in customer decision making. *Procedia Economics and Finance*, 11, 323-334.
- [16]. Li, J., Li, Q., & Wei, X. (2020). Financial literacy, household portfolio choice, and investment return. *Pacific-Basin Finance Journal*, 62, 101370.
- [17]. Lotto, J. (2020). Towards Improving Households' Investment Choices in Tanzania: Does Financial Literacy Really Matter? *International Journal of Financial Studies*, 8(2), 29.
- [18]. Manolica, A., Guta, A. S., Roman, T., & Dragan, L. M. (2021). Is Consumer Overchoice a Reason for Decision Paralysis? *Sustainability*, 13(11), 1-16.
- [19]. Nguyen, T. A. N., Polach, J., & Voznakova, I. (2019). The role of financial literacy in retirement investment choice. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 14(4), 569-589.
- [20]. Palm, C., & de Zwaan, L. (2016). Financial literacy and investment choice decisions: Evidence from Australian superannuation fund members. *Proceedings of the 2016 Accounting and Finance Association of Australia and New Zealand*, 1-44.
- [21]. Schwartz, B. (2015). The paradox of choice. *Positive psychology in practice: Promoting human flourishing in work, health, education, and everyday life*, 121-138.
- [22]. Sethi-Iyengar, S., Huberman, G., & Jiang, W. (2004). How much choice is too much? Contributions to 401 (k) retirement plans. *Pension design and structure: New lessons from behavioral finance*, 83, 84-87.