

Influence of information processing bias on investment decision of equity investors at Nairobi securities exchange in Kenya

Mary Kavele Patrick¹, Charles Guandaru Kamau^{1*}, Scholastica Nkirote Ratanya¹

¹Technical University of Mombasa, Kenya; Marypatrick365@gmail.com (M.K.P.); cguandaru@tum.ac.ke (C.G.K.); ratanyadr@gmail.com (S.N.R.).

Abstract: The goal of the study was to establish the influence of information processing bias on investment decision of equity investors at Nairobi Securities Exchange. The study improved the existing finance literature, which increased the body of general knowledge. Researchers and aspiring academics would utilize the findings as a future source of reference for expanding their understanding of behavioral finance. This study employed regret aversion theory, descriptive research design applied in this research and the stratified random sampling technique. In this study, primary data was also employed. SPSS version 26 (Statistical Package for Social Science) was used for data analysis. Descriptive, correlation as well as regression analysis were undertaken and outcome was offered in tables followed by pertinent interpretation and discussion. The most influential variable was Market's competition-related information with a regression coefficient of 0.502 (p-value = 0.027) and lastly Product's market potential-information with a coefficient of 0.403 (p-value = 0.041). The study concludes that information processing bias holds a significant and influential role in shaping investment decisions among equity investors at the Nairobi Securities Exchange. Thus, it can be concluded that understanding and leveraging product market potential can positively impact investment decisions. It is crucial for investors to carefully assess market competition dynamics to maximize investment returns. This study also implies that by analyzing investor behavior, company management can further evaluate capital markets' performance of stocks and adjust policies and strategies appropriately.

Keywords: Equity investors, Information processing bias, Investment decision, NSE, Portfolio diversification, Regret aversion, Trade volume.

1. Introduction

Information processing bias refers to the necessity of seeking advice from many resources before taking any decision of buying investment product. Agreeing with other people's perspectives despite partial information is known as information processing bias; yet, some of the missing information must be incorporated if a reasonable judgment is to be made. Decision independence is diminished by information cascades, which impairs the real estate market (Kumar, 2020). Information processing bias happens when buyers alter their original opinions and make judgments after learning new facts that comes to their attention. Information cascades hinder decision makers' ability to fully comprehend a product's actual value. As a result, they look to society and their forebears for guidance when forming ideas on the worth of items. Decision makers' information can be dominated by the behaviors of other people to such an extent. Because of this, decision-makers in these situations copy their predecessors, irrespective of the quantity and type of information they are provided (Aduda, Odera, & Onwonga, 2012). In order to lessen the uncertainty of these judgments, risk taking theory suggests a number of tactics, such as searching out and acquiring more and more market data to reduce risk in investing decisions. Before making any decisions about purchasing investment products, it is imperative to do

information searches. This helps investors make more informed judgments and reduces the risk involved in those decisions. When making judgments, people disregard their personal information; herd behavior arises when a sizable group of people follow suit, possibly without completely disregarding their personal information (Olisen, 2020).

1.1. Problem Statement

According to Agrawal (2019) compared to professional investors who strictly adhere to fundamental and technical research, ordinary investors do depend more on news sources, the market, and market noise when making investment decisions. This often exposes all stock market participants to an information flow that seems to be ongoing and includes anything from quantitative financial data to media reports on financial matters. But for those less experienced stock market investors, especially individual investors, analyzing all this information is a difficult undertaking, leading them to base their investing decisions on less sophisticated information which may be misleading and causes wrong investment decision therefore, most investors experience company losses due to irreversible mistakes and struggle to make long-term financial decisions, which forces them to rely on financial prejudices. In light of this, this investigation will try to fill the knowledge gap by identifying the variables that seem to affect each investor's choice of investments.

1.2. Objective of the Study

- 1.To establish the influence of information processing bias on investment decision of equity investors at Nairobi Securities Exchange.

1.3. Research Hypothesis

The following null hypothesis research guided the current research to achieve the study objective.

H₀1: Information processing bias has no significant influence on investment decision of equity investors at NSE.

2. Literature Review

2.1. Regret Aversion Theory

The unfavorable human emotion of regret is frequently felt if information regarding the optimum course of action in the face of ambiguity is learned after one has made a firm choice. The regret theory was first developed in early 1982 when someone believes they would have been better off if they had not done something in the past, they experience regret. This hypothesis has advanced thanks to the work of many experts. Additionally, they demonstrate that, contrary to conventional wisdom, Companies who don't like making mistakes alter their output level when advance trade is forbidden (Keswani, Dhingra, & Wadhwa, 2019). According to Wang (2019) equity investors should aim to maximize forecasted portfolio gains while minimizing expected regrets. A hazardous asset's excess return will, in equilibrium, be proportional to its regret beta, which gauges the emotional exposure of investors. The significance of this theory to the study aided in evaluating the influence of equity investors on investment decision but also even when the final outcome is the same, decisions may vary depending on the order in which prospective benefits and losses occur. When an investor is unable to understand information correctly that is information processing bias then they may end up experiencing regret aversion.

2.2. Conceptual Framework

A conceptual framework is a comprehensive and structured theoretical framework that defines, connects, and organizes key concepts, variables, and relationships relevant to a specific research area (Bhatia, Chandani, & Chhateja, 2020). This study looked at the relationship between independent

variable information processing bias; and dependent variable, investment decision that are presented in Figure 1.

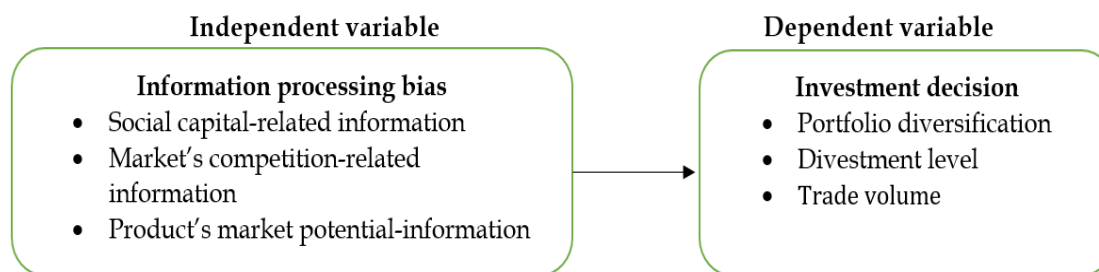


Figure 1.
Conceptual framework.

2.3. Empirical Literature Review

This information processing approach claims, in accordance with [Thomas \(2022\)](#) the information that people gather from the outside world and how they interpret that knowledge inside determine how they act. The goal of information processing concept, sometimes referred to as the information processing model, is to describe how the brain processes information and forms memories. In order to connect with the market and eliminate information asymmetry, social contacts and professional network participation are important ([Benjamin, 2019](#)). This reflects the success of new businesses as well because business owners use these networks to connect with clients and expand their consumer base. Due to the subjectivity involved in judging the value of social capital information, understanding it can be challenging. Although social capital matters for performance, it might be challenging to evaluate subjective and non-standardized data as a result of its complexity, which might cause bias to diverge in any direction, this shows a balance between the desire to include and reluctance. Investors favor industry competition because it improves new venture performance ([Bharath, 2019](#)) but it also strains resources and hurts future prospects.

A study by [Nugraheni, Kellen, and de Rozari \(2021\)](#) how financial behavior, financial literacy, and information processing bias affect investment decision making in East Nusa Tenggara, found out that partially or simultaneously independent variables have a favorable and noteworthy influence on investing choices. In their assertions, adverse selection was more pronounced as the key undoing while making financial decisions. A study by [Suzaida and Amelia \(2020\)](#) on how the information processing bias influences equity investors decision-making processes in investment firms found out that information availability bias significantly affected the investors' ability to make reasonable investment decisions. However, investors propensity for mental accounting and forecasting based on the knowledge at their disposal was fueled by the conditions of the market, which made them more painful when they experience a loss and, conversely more joyful when a particular investment succeeded.

3. Research Methodology

The descriptive research design was employed in this research, whereas the study population was 136 listed equity companies in Nairobi Securities Exchange and the sample size for the research was 102. Schedules for data observation and questionnaires were used to gather data for the study. With the use of the Statistical Package for Social Sciences, the acquired data was examined. This study produced regression statistics, correlation statistics, and descriptive statistics. In order to determine whether to reject or not reject the null hypothesis, the regression coefficients that were produced were utilized to test the hypothesis at the 0.05 level of significance. The regression model guiding this study was formulated in the following manner.

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where:

- Y = Represented investment decision (Dependent Variable).
 Bo = Intercept (Constant).
 X1 = Represented information processing bias (Independent Variable).
 ε = Error term.

4. Finding and Discussion

4.1. Descriptive Results

Descriptive statistics for the information processing bias was generated using SPSS and the results tabulated in [Table 1](#). On a scale of 1-5, where 1= Strongly Agree (SA), 2= Agree (A), 3= Neutral (N) 4= Disagree (D), 5= Strongly Disagree (SD).

Table 1.
Descriptive results of information processing bias.

Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Mean	Std. dev
Social connections lessen information asymmetry and establish a connection with the market to influence investors' decisions	4.3	25.7	45.7	21.4	2.9	3.07	1.172
Social presence in professional networks help connect with the market to influence investors' decisions	2.9	14.3	7.2	68.6	7.2	2.41	1.634
Social capital influences investors' decisions	25.7	67.1	5.7	1.4	0	4.17	0.589
The fundamentals of underlying stocks impact investors' investment decisions	1.4	11.4	8.6	35.7	42.9	1.93	1.386
Investors carefully consider the price changes of stocks that they intend to invest in	5.7	58.6	14.3	15.7	5.7	3.37	0.783
Market information is important for investors' stock investment	1.4	51.4	30	17.1	0	3.43	1.015
Investors look for market potential when making investment decisions	18.6	44.3	28.6	8.6	0	3.73	0.867
Market stress compels investors sometimes to follow other's opinion for investment	24.3	41.3	12.9	12.9	8.6	3.6	1.139
Investors consider information about the product market aspect during appraisal	20	44.3	5.7	28.6	1.4	3.53	0.984
Overall mean score		35.90	17.70	23.30	7.30	3.249	1.063

With an overall mean score of 3.249 and standard deviation = 3.249, it is evident that the respondents were uncertain with most of the statements describing the extent to which information processing bias influences investment decision. There was uncertainty on whether social connections lessen the asymmetry of information and establish a connection with the market to sway the decisions of investors with a mean of 3.07. There were, however, indications that the social presence in professional networks help connect with the market to influence investors' decisions with a mean of 2.41. However, there were strong indications that social capital influences investors' decisions with a mean of 4.17. These results are supported [Owino \(2019\)](#) who argue that social connections and presence in professional networks help reduce information asymmetry and connect with the market, thus positively affecting investors' decisions.

It was reported that the underlying stocks' fundamentals impact investors' investment decisions with a mean of 1.93. However, the majority of investors closely monitor changes in the stock prices they plan to purchase with a mean of 3.37, while a mean of 3.43 indicates that market information is significant for investors' stock investments. The results also showed that most investors look for market

potential when making investment decisions with a mean of 3.73. Further, market stress compels investors sometimes to follow other's opinion for investment with a mean of 3.6. Also, Investors take into account product market information aspect during appraisal with a mean of 3.53. These results are in agreement with [Mahmood, Ayyub, Imran, Naeem, and Abbas \(2020\)](#) they contends that it will be challenging to earn a profit on a product with cutting-edge technology if there is no market for it to be competitive. Researchers have discovered that market potential plays a substantial role in predicting the real performance of a new company, something that investors consider important when evaluating proposals ([Novianggie & Asandimitra, 2019](#)). The existence of a market for the goods indicates a possible avenue for generating profits. It is anticipated that this will generate motivation unique to information signals relating to market potential.

4.2. Correlation Results of Information Processing Bias Sub-Variables and Investment Decision

The study sought to establish the bivariate correlation between information processing bias and investment decision. The Pearson correlation results was the main item. According to [Daniel and Titman \(2019\)](#) Pearson correlation analysis indicates the strength, direction, and significance of bivariate relationship among the variables. To establish the correlation between information processing bias sub-variables and investment decision of equity investors at Nairobi Securities Exchange (NSE) the results are presented in [Table 2](#).

Table 2.

Correlation matrix of information processing bias sub-variables and investment decision.

Variables		Social capital-related information	Market's competition-related information	Product's market potential-information	Investment decision
Social capital-related information	Pearson correlation	1			
	Sig. (2-tailed)				
	N	90			
Market's competition-related information	Pearson correlation	0.679**	1		
	Sig. (2-tailed)	0.000			
	N	90	90		
Product's market potential-information	Pearson correlation	0.546	0.434	1	
	Sig. (2-tailed)	0.004	0.011		
	N	90	90	90	
Investment decision	Pearson correlation	0.609**	0.518**	0.640**	1
	Sig. (2-tailed)	0.000	0.000	0.007	
	N	90	90	90	90

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Correlation results revealed that there was a strong and positive significant correlation between social capital-related information and investment decision ($r = 0.609$, $P = 0.000$). Additionally, correlation results indicated a moderate and positive linear relationship between market's competition-related information and investment decision ($r = 0.518$, $P = 0.000$). Higher coefficient on the investment decision with social capital-related information shows that investment decision is more influenced by social capital-related information than market's competition-related information. These findings are agreeing with [Benjamin \(2019\)](#) who mentions that in order to connect with the market and eliminate information

asymmetry, social contacts and professional network participation are important. This reflects the success of new businesses as well because business owners use these networks to connect with clients and expand their consumer base.

4.3. Multiple Regression Results on Information Processing Bias Sub-Variables and Investment Decision

Regression analysis is a statistical tool for the investigation of the relationship between variables. Regression analysis allows you to model, examine and explore spatial relationship, and can help explain the factors behind observed spatial patterns. Regression analysis was also used for prediction. The regression results for establishing the relationship between information processing bias sub-variables and investment decision of equity investors at NSE, are presented in the following sub-sections.

4.3.1. Coefficient of Determination

The results presented in Table 3 present the coefficient of determination used in explaining the relationship between the study variables. The results showed that the coefficient of correlation (R) was positive at 0.727 and this meant that there was a positive correlation between Information processing bias sub-variables and investment decision.

Table 3.

Coefficient of determination for information processing bias sub-variables.

Model	R	R square	Adjusted R square	Std. error of the estimate
1	0.727 ^a	0.529	0.518	1.768

Note: a. Predictors: (Constant), product's market potential-information, market's competition-related information, social capital-related information.

Table 3 reveals that the predictor variables explained 52.9% of the variation in the dependent variable, investment decision. This means that 47.1% of the variability in the dependent variable, investment decision, was not explained by the factors included in this particular model. The unaccounted portion of 47.1% suggests the presence of other influential factors outside the scope of the variables considered in this analysis.

4.3.2. Regression Coefficients

Since the objective of the study was to establish the influence of information processing bias sub variables on investment decision of equity investors at Nairobi Securities Exchange (NSE), the multiple linear regression model was used to assess the overall influence of information processing bias sub-variables on the investment decision. The multiple regression coefficients results are provided in Table 4.

Table 4.

Regression coefficients for information processing bias sub-variables.

Model		Unstandardized coefficients		T	Sig.
		B	Std. error		
1	(Constant)	9.108	2.512	3.625	0.000
	X ₁ -Social capital-related information	0.316	0.128	2.468	0.030
	X ₂ -Market's competition-related information	0.502	0.236	2.127	0.027
	X ₃ -Product's market potential-information	0.403	0.198	2.247	0.041

Note: Dependent variable: Investment decision.

In [Table 4](#), the results show that social capital-related information was positively correlated with Investment Decision. It is further reported that a 0.316-point increase in social capital-related information led to a one-point increase in Investment Decision. Similarly, a 0.502-point increase in market's competition-related information resulted into an increase of a one-point increase in Investment Decision, *ceteris paribus*. Therefore, it could be concluded that for a point unit increase in the Investment Decision, there was a unit increase in information processing bias sub-variables, *ceteris paribus*. In summary, it could be claimed with 95 percent confidence that every one-unit increase in Investment Decision, information processing bias sub-variables increased between 0.316 and 0.502.

Additionally, the results in [Table 4](#) indicated that the three independent variables (Product's market potential-information, market's competition-related information, and social capital-related information) had a significant and positive influence on the dependent variable (Investment Decision) since the significance values for the variables were: Product's market potential-information(.041), market's competition-related information (0.027), and social capital-related information (.030) and were all found to be less than 0.05. The most influential variable was Market's competition-related information with a regression coefficient of 0.502 (p-value = 0.027) and lastly Product's market potential-information with a coefficient of 0.403 (p-value = 0.041). According to this model, when all the independent variables values were zero, Investment Decision would have a score of 9.108.

From the regression results, the regression equation $Y = 9.108 + 0.316X_1 + 0.502X_2 + 403X_3$ was established and adopted. Taking all factors constant at zero, Investment Decision would be 9.108. From the regression coefficients results, it was confirmed that the independent variables had a p-value of 0.05 and below which implied that the coefficients were statistically significant.

These results are in agreement with [Zahera and Bansal \(2018\)](#) who argued that the unpredictability of yield is decreased when market data is collected and appropriately handled. In order to lessen the uncertainty of these judgments, risk taking theory suggests a number of tactics, such as searching out and acquiring more and more market data to reduce risk in investing decisions. Before making any decisions about purchasing investment products, it is imperative to do information searches. This helps investors make more informed judgments and reduces the risk involved in those decisions ([Olisen, 2020](#)). In order to reduce the uncertainty in their investing decisions, more knowledgeable investors look for more market information. Because it allows them to lower their level of uncertainty while investing in the stock market, well-informed investors are able to manage risk more effectively. Making better financial decisions requires keeping up with the continually evolving financial markets and their products. To guarantee that the desired information is accurate, professional counsel is required. When making investment selections, intelligent investors, particularly institutional investors, must take into account the operational, financial, and growth potential of stocks. Investors individually obtain some information. This can be found through online or general advice-seeking searches ([Emami, Welsh, Ramadani, & Davari, 2020](#)). According to [Wangzhou, Khan, Hussain, Ishfaq, and Farooqi \(2021\)](#) market factors have a favorable effect on equity investors' investment choices in Tehran. Market knowledge significantly influences investors' investing decisions. According to [Dasari \(2020\)](#) market circumstances in Pakistan are what characterize equity investors' general attitudes toward investment activities. Stock information and investment choices have a considerable and favorable association.

5. Conclusion

This study concludes by highlighting the importance of considering product market potential, market competition dynamics, and social capital, in making informed investment decisions as follows:

Based on the regression analysis, it was found that Product's market potential-information significantly influences investment decision, with a coefficient of 0.403 (p-value = 0.041). This indicates that for every unit increase in Product's market potential-information, there is a corresponding increase in investment decision. Thus, it can be concluded that understanding and leveraging product market potential can positively impact investment decisions. The analysis also revealed that market's competition-related information has a significant impact on investment decision, as evidenced by a

regression coefficient of 0.502 (p-value = 0.027). This suggests that a deeper understanding of market competition can lead to more informed investment decisions. Hence, it is crucial for investors to carefully assess market competition dynamics to maximize investment returns.

Furthermore, social capital-related information was found to be positively correlated with Investment Decision, with a coefficient of 0.175. Despite being relatively lower compared to the other variables, the significance value of 0.030 suggests that social capital-related information still plays a meaningful role in influencing investment decisions. Therefore, nurturing social capital and networks can contribute to better investment outcomes.

6. Recommendations

This study recommends as follows:

Enhance social capital, given the positive correlation between social capital-related information and investment decision, it is recommended to focus on strengthening social networks and relationships within the investment community. Encouraging networking events, fostering mentorship programs, and participating in industry-related associations can help investors build valuable connections and access information that may positively impact investment decisions. Additionally, incorporating social capital-building activities into investment strategies can lead to more informed and profitable outcomes.

Deepen market competition analysis, Considering the significant influence of market's competition-related information on investment decision, it is crucial to conduct thorough analyses of market competition dynamics. Investing resources in comprehensive market research, competitor analysis, and trend forecasting can provide valuable insights into market trends, consumer preferences, and competitive strategies. By staying ahead of market competition, investors can identify emerging opportunities and mitigate risks, thereby optimizing investment decisions for sustainable growth and profitability. Maximize product market potential. With Product's market potential-information also playing a significant role in investment decision, it is recommended to focus on maximizing the understanding and utilization of product market potential. This can involve conducting market segmentation studies, analysing consumer behaviour patterns, and exploring innovative marketing strategies to effectively position products in the marketplace. By aligning investment decisions with product market potential, investors can capitalize on market opportunities and drive business success.

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The Ethical Committee of the Technical University of Mombasa, Kenya has granted approval for this study on 12 December 2023 (Ref. No. TUM SERC MSF/021/2023).

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Data Availability Statement:

The corresponding author may provide study data upon reasonable request.

Competing Interests:

The authors declare that they have no competing interests.

Authors' Contributions:

All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

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References

- Aduda, J., Odera, E. O., & Onwonga, M. (2012). The behaviour and financial performance of individual investors in the trading shares of companies listed at the Nairobi stock exchange, Kenya. *Journal of Finance and Investment Analysis*, 1(3), 33-60.
- Agrawal, K. (2019). A conceptual framework of behavioural biases in finance. *Journal of Behavioural Finance*, 9(1), 7-18.
- Benjamin, D. J. (2019). Errors in probabilistic reasoning and judgment biases. *Handbook of Behavioral Economics: Applications and Foundations*, 2(1), 69-186. <https://doi.org/10.3386/w25200>
- Bharath, K. (2019). A study on relevance of behavioural finance theories on investor decision making. *Journal of Emerging Technologies and Innovative Research*, 6(6), 176-183.
- Bhatia, A., Chandani, A., & Chhateja, J. (2020). Robo advisory and its potential in addressing the behavioral biases of investors—A qualitative study in Indian context. *Journal of Behavioral and Experimental Finance*, 25, 100281. <https://doi.org/10.1016/j.jbef.2020.100281>
- Daniel, K., & Titman, S. (2019). Market efficiency in an irrational world. *Financial Analysts Journal*, 55(6), 28-40.
- Dasari, R. B. (2020). Behavioural finance heuristic driven factors impact on Indian stock market investors investment decisions: A review. *Asia Pacific Journal of Research*, 1(114), 2347-4793.
- Emami, A., Welsh, D. H., Ramadani, V., & Davari, A. (2020). The impact of judgment and framing on entrepreneurs' decision-making. *Journal of Small Business & Entrepreneurship*, 32(1), 79-100. <https://doi.org/10.1080/08276331.2018.1551461>
- 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), 80-90. <https://doi.org/10.5539/ijef.v11n8p80>
- Kumar. (2020). The effect of behavioral biases on information processing bias by investors in Kenya. *Journal of Finance*, 53(6), 1887-1934.
- Mahmood, T., Ayyub, R. M., Imran, M., Naeem, S., & Abbas, W. (2020). The behavioral analysis and financial performance of individual investors at Pakistan stock exchange. *International Journal of Economics and Financial Issues*, 10(5), 158-164.
- Novianggie, V., & Asandimitra, N. (2019). The influence of behavioral bias, cognitive bias, and emotional bias on investment decision for college students with financial literacy as the moderating variable. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 9(2), 92-107.
- Nugraheni, N. N. A., Kellen, P. B., & de Rozari, P. E. (2021). The effect of financial behavior, financial literacy, and macroeconomics on stock investment decision-making in East Nusa Tenggara. *Annals of Management and Organization Research*, 3(1), 1-20. <https://doi.org/10.35912/amor.v3i1.1183>
- Olisen, R. A. (2020). Behavioral finance and its implications for stock price volatility. *Financial Analysts Journal*, 54(2), 10-18.
- Owino, B. (2019). An empirical analysis empirical analysis of behavioral biases and their influence on investment decisions at the Nairobi securities exchange. *International Journal of Economics, Commerce, and Management*, 7(3), 194-212.
- Suzaida, B., & Amelia, N. Y. (2020). The impact of psychological factors on investors' decision making in Malaysian stock market: A case of Klang valley and Pahang. *7th International Economics & Business Management Conference, 5th & 6th October 2015*, 35, 319-328.
- Thomas, M. (2022). Heuristic price theory: A model of pluralistic price evaluations. *Consumer Psychology Review*, 6(1), 75-91. <https://doi.org/10.1002/arcv.1087>
- Wang, Y. (2019). Behavioral biases in investment decision-making. In (pp. 140-146). USA: University of California.
- Wangzhou, K., Khan, M., Hussain, S., Ishfaq, M., & Farooqi, R. (2021). Effect of regret aversion and information cascade on investment decisions in the real estate sector: The mediating role of risk perception and the moderating effect of financial literacy. *Frontiers in Psychology*, 12, 736753. <https://doi.org/10.3389/fpsyg.2021.736753>
- 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>