

The Effect of Overconfidence Behavior on Investment Decision-Making Among Indonesian Investors

Khoirunnisa Virgiana Khan¹, Hesti Juni Thalia², Afina Medina Azaleya³

Universitas Bina Sarana Informatika, Jakarta. Jl. Kramat Raya No.98, RT.2/RW.9, Kwitang, Kecamatan Senen, Kota Jakarta Pusat, Daerah Khusus Ibukota Jakarta 10450

Universitas Gunadarma, Jl. Margonda Raya No. 100, Pondok Cina, Beji, Kota Depok, Jawa Barat 16424

Email: khoirunnisa.kvk@bsi.ac.id¹ hestijunithalia18@gmail.com², azaleyamedina@gmail.com³

ARTICLE INFO

Keywords:

Behavioral Finance, Investment Decision-Making, Investor Behavior, Overconfidence Behavior, Psychological Bias.

ABSTRACT

Investment decision-making plays a crucial role in achieving optimal financial outcomes. However, investors frequently make irrational decisions due to psychological biases, one of which is overconfidence behavior. This study aims to empirically examine the effect of overconfidence behavior on investment decision-making among Indonesian investors. A quantitative research approach with an explanatory design was employed. Data were collected through an online questionnaire distributed to 52 investors selected using purposive sampling. The research instruments consisted of a six-item Overconfidence Behavior scale and a twelve-item Investment Decision-Making scale measured using a five-point Likert scale. Data were analyzed using descriptive statistics, reliability testing, normality testing, and simple linear regression analysis with IBM SPSS Statistics 24. The findings reveal that the measurement instruments are reliable, with Cronbach's Alpha values of 0.809 and 0.914, respectively, and that the data satisfy the normality assumption. Hypothesis testing indicates that overconfidence behavior has a significant positive effect on investment decision-making ($F = 49.141$; $p < 0.001$). The coefficient of determination ($R^2 = 0.496$) demonstrates that overconfidence behavior explains 49.6% of the variance in investment decision-making, while the remaining 50.4% is influenced by other factors. These findings support Behavioral Finance Theory by confirming that psychological biases significantly influence investment decisions and suggest that investors should balance self-confidence with objective financial analysis and comprehensive risk assessment.

Email: khoirunnisa.kvk@bsi.ac.id

Copyright © 2026 Jurnal Ju- SoSAK. All rights reserved is Licensed under a Creative Commons Attribution- Non Commercial 4.0 International License (CC BY-NC 4.0)

INTRODUCTION

The emergence of the Fourth Industrial Revolution (Industry 4.0) has transformed various aspects of human life, including the economic sector. One of the most significant changes is the increasing opportunity to generate additional income through passive income sources. Passive income refers to earnings generated with minimal ongoing effort, enabling individuals to maintain their primary occupations while receiving supplementary financial returns [1]. Among the most popular approaches to generating passive income is investment, which includes financial instruments such as stocks, mutual funds, real estate, gold, and other investment assets [2].

Investment can be defined as the allocation of financial resources at the present time with the expectation of obtaining future economic benefits [3]. In Indonesia, investment participation has grown substantially in recent years as individuals increasingly seek to build long-term wealth through passive income. This trend is reflected in the rapid increase in the number of capital market investors. According to the Indonesia Stock Exchange (IDX), the number of investors exceeded nine million in 2022. The number of Single Investor Identification (SID) accounts increased by more than 1.57 million, representing an annual growth of approximately 21% compared to 2021. Similarly, stock investors reached 3,988,341 SID accounts as of June 2, 2022, reflecting an increase of more than 536,000 investors (15.6%) from the previous year [4].

Despite this encouraging growth, many Indonesian investors continue to experience financial losses, particularly due to fraudulent and illegal investment schemes. Financial experts have reported a substantial increase in cases involving unauthorized investment products that lack approval from the Financial Services Authority (OJK) and, in cases involving payment systems, authorization from Bank Indonesia (BI) [5]. Such incidents are largely attributed to investors' desire for rapid wealth accumulation, especially among younger individuals who often make investment decisions hastily without conducting adequate due diligence. These circumstances indicate that many investors fail to sufficiently evaluate investment risks before committing their financial resources. Consequently, careful and rational investment decision-making has become increasingly important.

Decision-making is defined as a systematic process of selecting the most appropriate alternative from several available options to solve a particular problem [6]. Decision-making plays a fundamental role in human activities because it determines future actions and their long-term consequences. Within the investment context, decision-making is particularly critical because every investment choice directly influences future financial outcomes, either in the form of gains or losses.

Rational investment decisions generally enable investors to maximize expected returns while effectively managing investment risks [7]. Nevertheless, investment decisions are not always driven by rational analysis. Psychological and emotional factors frequently influence investors' judgments, resulting in behavioral biases that may reduce decision quality. One of the most widely discussed behavioral biases in the behavioral finance literature is overconfidence.

Overconfidence refers to an individual's excessive belief in the accuracy of their knowledge, predictions, or personal abilities beyond their actual level of competence [8]. According to Pompian, overconfidence bias may lead investors to engage in excessive trading, overestimate their forecasting abilities, underestimate investment risks, and neglect portfolio diversification [8]. Consequently, investors tend to believe that they possess superior investment skills and are capable of consistently identifying profitable investment opportunities.

The presence of overconfidence can substantially influence investment decision-making. Investors with excessive confidence often make investment decisions impulsively because they overestimate their analytical abilities while underestimating potential risks. As a result, they may fail to conduct comprehensive evaluations before making investment decisions. Previous empirical evidence supports this argument. Addinpujoartanto and

Darmawan found that overconfidence significantly influences investment decisions, leading investors to exhibit behavioral biases that increase the likelihood of decision-making errors [9].

Similar findings were reported by Kartini and Nugraha, who investigated stock investors aged between 17 and 40 years. Their study demonstrated that overconfidence has a positive and statistically significant effect on investment decision-making, indicating that investors with higher levels of overconfidence tend to make investment decisions more frequently [7]. Likewise, Budiarto and Susanti reported that overconfidence significantly affects investment decisions among capital market investors. Their findings revealed that highly overconfident investors predominantly relied on personal intuition and instincts rather than objective financial analysis when making investment decisions [10].

Based on the preceding discussion, investment decision-making is influenced not only by rational considerations but also by psychological factors that shape investors' behavior. Among these factors, overconfidence has consistently emerged as one of the most influential behavioral biases affecting investment decisions. Although previous studies have documented the relationship between overconfidence and investment behavior, empirical evidence remains limited within the Indonesian investment context, particularly among individual investors with diverse investment characteristics. Therefore, this study aims to empirically examine the effect of overconfidence behavior on investment decision-making among Indonesian investors.

Literature Review And Problem Statement

Behavioral Finance Theory

Behavioral Finance is an interdisciplinary field that integrates finance and psychology to explain why investors often make decisions that deviate from the assumptions of rational economic theory. Unlike traditional finance, which assumes that investors are rational and always seek to maximize expected utility, behavioral finance argues that investment decisions are frequently influenced by cognitive limitations, emotional responses, and psychological biases [9]. These behavioral biases may cause investors to misinterpret information, underestimate risks, and make suboptimal investment decisions.

According to Afriani and Halmawati [7], behavioral finance explains how cognitive and emotional factors shape investors' financial decisions. Investors frequently rely on subjective judgments rather than objective financial information, resulting in systematic deviations from rational decision-making. Similarly, Fitriarianti [8] argued that investment behavior is influenced not only by financial knowledge but also by investors' psychological characteristics. Consequently, understanding behavioral biases has become increasingly important in explaining investment decisions, particularly in volatile financial markets.

Among the various behavioral biases identified in the behavioral finance literature, overconfidence has received considerable attention because of its significant influence on investors' judgments and decision-making processes. Investors who exhibit overconfidence tend to believe that their investment knowledge and analytical abilities are superior to those of others, leading them to make overly optimistic predictions regarding future market performance [10].

Overconfidence Behavior

Overconfidence is defined as an excessive level of confidence in one's own knowledge, judgment, or forecasting ability beyond what is objectively justified [11]. Investors with overconfidence believe that they possess superior analytical capabilities and are therefore more capable of identifying profitable investment opportunities than other market participants. This excessive confidence creates an illusion of knowledge, causing investors to overestimate the accuracy of their predictions while underestimating investment risks [12].

Baker and Nofsinger [13] explained that overconfidence arises because investors tend to believe that the information they possess is sufficient to generate accurate investment decisions, even when their experience and analytical capabilities remain limited. Consequently, investors often fail to recognize uncertainty and become excessively optimistic about expected returns.

According to Pompian [14], overconfidence produces several investment biases, including excessive trading, overestimation of expected returns, underestimation of investment risks, and inadequate portfolio diversification. These behavioral tendencies frequently result in poor investment performance because investors become less willing to seek additional information or reconsider alternative investment strategies before making financial decisions.

Investment Decision-Making

Investment decision-making refers to the process of allocating financial resources to investment alternatives that are expected to generate future economic benefits [15]. Because investment decisions generally involve long-term financial commitments, investors must carefully evaluate expected returns, associated risks, market conditions, and available information before selecting an investment alternative.

Ramdani [16] emphasized that investment decisions are strategic decisions with long-term consequences; therefore, they require comprehensive evaluation to minimize uncertainty and maximize expected returns. Rational investment decision-making involves collecting relevant information, analyzing potential risks, comparing investment alternatives, and selecting the option that best aligns with the investor's financial objectives [15]. However, in practice, many investors fail to follow such systematic procedures because psychological biases often interfere with objective evaluation.

The Relationship Between Overconfidence and Investment Decision-Making

Behavioral Finance Theory suggests that emotional biases significantly influence investors' decision-making processes. One of the most prominent emotional biases is overconfidence, which encourages investors to rely excessively on their own judgments while ignoring contradictory information [9].

Highly overconfident investors generally believe that they possess sufficient knowledge to predict market movements accurately and therefore become more willing to undertake risky investment activities [10]. This excessive confidence often reduces investors' willingness to conduct comprehensive financial analysis or seek external advice before making investment decisions. As a result, overconfidence may increase trading frequency, encourage speculative investment behavior, and ultimately reduce decision quality [14].

Empirical evidence consistently supports the relationship between overconfidence and investment decision-making. Addinpujoartanto and Darmawan [17] reported that

overconfidence significantly influences investment decisions by creating cognitive biases that increase investors' susceptibility to decision-making errors. Similarly, Kartini and Nugraha [18] found that investors with higher levels of overconfidence tend to make investment decisions more frequently because they possess stronger confidence in their personal judgments. Furthermore, Budiarto and Susanti [19] demonstrated that overconfidence significantly affects investment decisions among Indonesian capital market investors, with highly overconfident investors relying primarily on intuition rather than objective financial analysis.

Collectively, these findings indicate that overconfidence constitutes an important determinant of investment decision-making. Investors who overestimate their abilities frequently underestimate investment risks, resulting in decisions that may not accurately reflect actual market conditions.

Problem Statement

Investment participation in Indonesia has grown rapidly during the past decade, accompanied by increasing accessibility to digital investment platforms and financial technology services. However, this growth has also been associated with a rise in irrational investment behavior, speculative trading, and participation in fraudulent investment schemes. These phenomena suggest that investment decisions are not solely determined by rational financial analysis but are also influenced by psychological biases.

Among these behavioral biases, overconfidence has been consistently identified as one of the most influential factors affecting investors' decisions. Nevertheless, although previous studies have demonstrated a significant relationship between overconfidence and investment decision-making [17]–[19], empirical evidence remains limited within the Indonesian context, particularly among individual investors with diverse investment experiences and financial backgrounds. Moreover, most previous studies focused primarily on stock investors, leaving uncertainty regarding whether similar behavioral patterns exist across broader investment instruments.

Therefore, this study seeks to address this research gap by empirically examining the influence of overconfidence behavior on investment decision-making among Indonesian investors. The findings are expected to contribute to the Behavioral Finance literature by providing empirical evidence regarding the role of psychological bias in investment decisions while offering practical implications for investors to improve the quality of their financial decision-making.

METHOD

Research Design

This study employed a quantitative research approach to examine the effect of overconfidence behavior on investment decision-making among Indonesian investors. A quantitative design was selected because it enables researchers to objectively measure the relationship between variables through statistical analysis and hypothesis testing. The study adopted an explanatory research design to investigate the causal relationship between overconfidence behavior as the independent variable and investment decision-making as the dependent variable. This approach is widely applied in behavioral finance studies to examine psychological factors influencing investors' decisions [9], [10].

Population and Sample

The population of this study comprised individuals who had experience in making investments. Since the exact population size was unknown, a non-probability sampling technique was employed using purposive sampling. Respondents were selected based on the following criteria:

1. Individuals who had experience investing in financial or non-financial assets.
2. Individuals who had invested in at least one investment instrument, including stocks, mutual funds, gold, bonds, property, cryptocurrency, or time deposits.
3. Individuals who voluntarily agreed to participate in the study.

Based on these criteria, 52 investors were selected as research respondents.

Data Collection

Primary data were collected through an online questionnaire distributed using Google Forms. The questionnaire consisted of two sections. The first section collected respondents' demographic information, including gender, age, domicile, investment type, and investment experience. The second section measured the research variables using standardized measurement scales.

The Overconfidence Behavior scale consisted of six statement items, while the Investment Decision-Making scale consisted of twelve statement items. Both instruments were adapted from the measurement scales developed by Sari (2019), which were designed based on behavioral finance concepts and investment decision theory. Responses were measured using a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Research Variables

This study investigated one independent variable and one dependent variable. The independent variable was Overconfidence Behavior, which refers to investors' excessive confidence in their knowledge, analytical ability, and investment decisions beyond their actual competence [11]–[14].

The dependent variable was Investment Decision-Making, defined as the process through which investors allocate financial resources after evaluating available investment alternatives, expected returns, and associated risks [15], [16].

Instrument Validity and Reliability

Before testing the research hypothesis, the quality of the research instruments was evaluated through reliability analysis. Instrument reliability was assessed using Cronbach's Alpha coefficient. Following Hair et al., an instrument is considered reliable when Cronbach's Alpha exceeds 0.70. The results showed that the Overconfidence Behavior scale obtained a Cronbach's Alpha value of 0.809, while the Investment Decision-Making scale achieved 0.914, indicating that both instruments possessed satisfactory internal consistency and were reliable for subsequent statistical analyses.

Data Analysis

The collected data were analyzed using IBM SPSS Statistics version 24. Prior to hypothesis testing, descriptive statistics were performed to describe respondents' demographic characteristics.

Classical assumption testing included the normality test using the Kolmogorov–Smirnov test to determine whether the research data followed a normal distribution. A significance value greater than 0.05 indicated normally distributed data.

To test the research hypothesis, Simple Linear Regression Analysis was employed because the study investigated the influence of a single independent variable on one dependent variable. The regression model is expressed as follows:

$$Y = \alpha + \beta X + \varepsilon$$

where:

Y = Investment Decision-Making

X = Overconfidence Behavior

α = Constant

β = Regression coefficient

ε = Error term

The significance of the regression model was evaluated using the F-test, while the explanatory power of the model was assessed using the coefficient of determination (R^2). The research hypothesis was accepted when the significance value was less than 0.05, indicating that overconfidence behavior significantly influences investment decision-making.

RESULTS AND DISCUSSION

Respondent Characteristics

A total of 52 investors participated in this study. Based on gender, the respondents consisted of 26 males (50%) and 26 females (50%), indicating that both men and women have equal participation in investment activities. Regarding age, most respondents were between 20 and 40 years old (88%), while only 10% were under 20 years old and 2% were above 40 years old. In terms of domicile, the majority of respondents (75%) resided in the Greater Jakarta area (Jabodetabek), whereas 25% lived outside the region.

With respect to investment instruments, stocks were the most preferred investment option, accounting for 38% of respondents, followed by gold (25%), mutual funds (17%), property (10%), cryptocurrency (6%), and bonds and time deposits (2% each). Regarding investment experience, most respondents had invested for one to two years (42%), followed by less than one year (38%), indicating that the majority of participants were relatively new investors.

Table 1. Demographic Characteristics of Respondents

Characteristics	Frequency	Percentage
Gender		
Male	26	50%
Female	26	50%
Age		
< 20 years	5	10%
20–40 years	46	88%
> 40 years	1	2%
Domicile		
Greater Jakarta (Jabodetabek)	39	75%
Outside Jabodetabek	13	25%

Type of Investment		
Cryptocurrency	3	6%
Time Deposit	1	2%
Gold	13	25%
Bonds	1	2%
Property	5	10%
Mutual Funds	9	17%
Stocks	20	38%
Investment Experience		
< 1 year	20	38%
1–2 years	22	42%
3–4 years	5	10%
4–5 years	1	2%
> 5 years	4	8%

Reliability Test

Instrument reliability was evaluated using Cronbach's Alpha coefficient. According to Hair et al., a Cronbach's Alpha value greater than 0.70 indicates satisfactory internal consistency [20]. The results demonstrate that the Overconfidence Behavior scale achieved a Cronbach's Alpha coefficient of 0.809, while the Investment Decision-Making scale obtained a coefficient of 0.914. Since both values exceed the recommended threshold of 0.70, the measurement instruments are considered reliable and suitable for further statistical analysis.

Table 2. Reliability Test Results

Variable	Cronbach's Alpha	Interpretation
Overconfidence Behavior	0.809	Reliable
Investment Decision-Making	0.914	Reliable

Normality Test

The normality of the research data was examined using the Kolmogorov–Smirnov test. A significance value greater than 0.05 indicates that the data are normally distributed [21]. The results show significance values of 0.183 for Overconfidence Behavior and 0.200 for Investment Decision-Making. Since both values exceed 0.05, it can be concluded that the research data satisfy the assumption of normality and are appropriate for parametric statistical analysis.

Table 3. Normality Test Results

Variable	Sig.	Interpretation
Overconfidence Behavior	0.183	Normal
Investment Decision-Making	0.2	Normal

Hypothesis Testing

Hypothesis testing was performed using Simple Linear Regression Analysis to examine the effect of Overconfidence Behavior on Investment Decision-Making.

The regression analysis produced an F-statistic of 49.141 with a significance value of 0.000 ($p < 0.01$), indicating that the regression model is statistically significant. Therefore, the

research hypothesis is accepted, suggesting that Overconfidence Behavior has a significant positive effect on Investment Decision-Making.

Furthermore, the coefficient of determination (R^2) was 0.496, indicating that 49.6% of the variation in Investment Decision-Making can be explained by Overconfidence Behavior, while the remaining 50.4% is attributable to other variables not included in the present study.

Table 4. Hypothesis Testing Results

F	Sig.	R ²
49.141	0	0.496

Discussion

The findings demonstrate that Overconfidence Behavior significantly influences Investment Decision-Making, indicating that investors with higher levels of self-confidence tend to make investment decisions more readily than those with lower confidence levels. Investors who strongly believe in their knowledge, experience, and analytical capabilities are more likely to make investment decisions based on their personal judgments while paying less attention to potential investment risks. This behavioral tendency was reflected in respondents' answers, where many participants expressed high confidence in their investment choices and believed they possessed sufficient knowledge to evaluate investment opportunities.

These findings are consistent with Behavioral Finance Theory, which argues that investment decisions are influenced not only by objective financial information but also by psychological biases that shape investors' perceptions and behavior [9]. Excessive confidence often creates an illusion of superior knowledge, encouraging investors to rely on their own judgments rather than conducting comprehensive analyses or seeking additional information before making investment decisions [13].

The present findings also support the study conducted by Wulandari and Iramani [15], who found that overconfident investors tend to overestimate their ability to identify profitable investment opportunities while simultaneously underestimating investment risks. Such behavior may lead investors to ignore important information, resulting in less objective investment decisions. Likewise, Pompian [14] explained that overconfidence encourages excessive trading, unrealistic expectations regarding future returns, inadequate portfolio diversification, and insufficient consideration of investment risks. These behavioral biases frequently reduce investment performance because investors become overly optimistic regarding their own analytical capabilities.

Overall, the findings confirm that overconfidence represents one of the most influential psychological biases affecting investment decision-making. While confidence is an essential characteristic for successful investing, excessive confidence may impair rational judgment by encouraging investors to rely excessively on intuition and personal beliefs instead of objective financial analysis. Therefore, investors should balance confidence with careful risk assessment and comprehensive information analysis before making investment decisions.

CONCLUSION

This study concludes that Overconfidence Behavior has a statistically significant positive effect on Investment Decision-Making among investors. The regression analysis demonstrates that overconfidence behavior explains 49.6% of the variation in investment

decision-making, while the remaining 50.4% is attributable to other factors not examined in this study. These findings indicate that investors who possess excessive confidence in their knowledge, experience, and analytical abilities are more likely to make investment decisions based on their own judgments, often without adequately considering the potential risks associated with their investments. Consequently, overconfidence may lead investors to overestimate their ability to identify profitable investment opportunities while underestimating possible investment risks, thereby influencing the quality of their investment decisions.

The findings contribute to the Behavioral Finance Theory by providing empirical evidence that psychological factors, particularly overconfidence, play an important role in shaping investors' decision-making behavior. From a practical perspective, investors should balance self-confidence with objective financial analysis and comprehensive risk assessment before making investment decisions.

This study has several limitations. The sample size was relatively small and may not fully represent the broader population of Indonesian investors. Therefore, future research is encouraged to involve a larger and more diverse sample to improve the generalizability of the findings. In addition, future studies should incorporate other behavioral finance variables, such as herding behavior, risk perception, financial literacy, regret aversion, and risk tolerance, to develop a more comprehensive understanding of the factors influencing investment decision-making. Such investigations would enrich the behavioral finance literature while providing more practical insights for investors, financial practitioners, and policymakers.

References

- [1] M. D. Anggara, "Tambah Penghasilan Selain Bekerja, Berikut 5 Cara Hasilkan Passive Income yang Ramah bagi Pemula," *Warta Kota Tribunnews*, May 30, 2022. [Online]. Available: <https://wartakota.tribunnews.com>. [Accessed: Jun. 28, 2022].
- [2] Otoritas Jasa Keuangan (OJK), "Resolusi Tahun Baru: Punya Passive Income," Jakarta, Indonesia, 2019. [Online]. Available: <https://sikapiuangmu.ojk.go.id>. [Accessed: Jun. 28, 2022].
- [3] Royda and D. Riana, *Investasi dan Pasar Modal*. Pekalongan, Indonesia: PT Nasya Expanding Management, 2022.
- [4] G. Fadillah, "Jumlah Investor Pasar Modal Melampaui 9 Juta, Generasi Muda Dominan," *Investor.id*, Jun. 2022. [Online]. Available: <https://investor.id>.
- [5] I. Herdiana, "Investasi di Kalangan Muda Meningkat, Apa Dampaknya bagi Ekonomi Indonesia?," *Bandung Bergerak*, 2022. [Online]. Available: <https://bandungbergerak.id>.
- [6] A. Syaekhu and Suprianto, *Teori Pengambilan Keputusan*. Yogyakarta, Indonesia: Zahir Publishing, 2021.
- [7] D. Afriani and Halmawati, "Pengaruh Cognitive Dissonance Bias, Overconfidence Bias dan Herding Bias terhadap Pengambilan Keputusan Investasi," *Jurnal Eksplorasi Akuntansi*, vol. 1, no. 4, pp. 1650–1665, 2019.
- [8] B. Fitriarianti, "Pengaruh Literasi Keuangan, Perilaku Keuangan dan Pendapatan terhadap Keputusan Berinvestasi," *Prosiding Seminar Nasional Akuntansi*, vol. 1, no. 1, pp. 1–15, 2018.
- [9] M. Asri, *Keuangan Keperilakuan*. Yogyakarta, Indonesia: BPFE, 2015.

- [10] J. R. Nofsinger, *The Psychology of Investing*, 6th ed. New York, NY, USA: Routledge, 2016.
- [11] S. Suriani, *Financial Behavior*. Medan, Indonesia: Yayasan Kita Menulis, 2022.
- [12] M. T. I. Khan, S. H. Tan, and L. L. Chong, "The Effect of Stated Preference for Firm Characteristics, Optimism and Overconfidence on Trading Activities," *Faculty of Management Research Journal*, 2016.
- [13] H. K. Baker and J. R. Nofsinger, "Psychological Biases of Investors," *Financial Services Review*, vol. 11, no. 2, pp. 97–116, 2002.
- [14] S. Pompian, *Behavioral Finance and Wealth Management*. Hoboken, NJ, USA: John Wiley & Sons, 2006.
- [15] D. A. Wulandari and Iramani, "Studi Experienced Regret, Risk Tolerance, Overconfidence dan Risk Perception pada Pengambilan Keputusan Investasi Dosen Ekonomi," *Journal of Business and Banking*, vol. 4, no. 1, pp. 55–66, 2014.
- [16] F. N. Ramdani, "Analisis Pengaruh Representativeness Bias dan Herding Behavior terhadap Keputusan Investasi," Undergraduate Thesis, Universitas Islam Indonesia, Yogyakarta, Indonesia, 2018.
- [17] N. A. Addinpujoartanto and S. Darmawan, "Pengaruh Overconfidence, Regret Aversion, Loss Aversion, dan Herding Bias terhadap Keputusan Investasi di Indonesia," *Jurnal Riset Ekonomi dan Bisnis*, vol. 13, no. 3, pp. 175–187, 2020.
- [18] Kartini and N. F. Nugraha, "Pengaruh Illusions of Control, Overconfidence dan Emotion terhadap Pengambilan Keputusan Investasi pada Investor di Yogyakarta," *Jurnal Inovasi dan Kewirausahaan*, vol. 4, no. 2, pp. 115–123, 2015.
- [19] A. Budiarto and Susanti, "Pengaruh Financial Literacy, Overconfidence, Regret Aversion Bias, dan Risk Tolerance terhadap Keputusan Investasi," *Jurnal Ilmu Manajemen*, vol. 5, no. 2, 2017.
- [20] J. F. Hair Jr., W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate Data Analysis*, 8th ed. Andover, U.K.: Cengage Learning, 2019.
- [21] I. Ghazali, *Aplikasi Analisis Multivariate dengan Program IBM SPSS*. Semarang, Indonesia: Badan Penerbit Universitas Diponegoro, 2021.