



# Impact of Investor Behavior on Investment Decision Through Personality Traits in Creative Industry in Indonesia

Egabetha Amirah Yudhaputri<sup>\*1</sup> , Dwi Hartini Rahayu<sup>2</sup>, Sarfilianty Anggiani<sup>3</sup> ,  
Rosita Putri Marcellina<sup>4</sup>, Romeyn Perdana Putra<sup>5</sup>

1234 Universitas Trisakti, Jakarta, Indonesia, 5 BRIN, Indonesia  
egabetha@trisakti.ac.id, rome002@brin.go.id

**Abstract.** This research measures the herding bias and heuristic bias behavior of employee or owner in the creative economy industry in making investment decisions, through the mediation of personality traits. The objective of this research is to examine whether investment decision-making is influenced by biases triggered by investor behavior. This study focuses on heuristics and herding, with the aim of assisting stakeholders in determining the optimal course of action with regard to investment decisions and their impact on performance and company performance. The research method was quantitative analysis, and method analysis is using SEM-PLS. The results of the analysis is it can be concluded that Heuristic bias has a positive effect on decision making, and personality traits as mediation can influence decision making. However, herding bias does not have a positive effect on decision-making. This result can be concluded that decision makers in making decisions trust their point of view and the results of the analysis of information seeking from themselves rather than finding out from colleagues or imitating colleagues. Furthermore, the decision-makers in the creative economy industry have decision-making skills based on individual abilities. Therefore, in making decisions to invest based on in-depth thinking and analysis of data that has been processed independently. This makes a positive finding that actors in the creative economy have the right character in making decisions that can result in an increase in the performance of the company

**Keywords:** herding bias, investment decision making, event industry, heuristic bias

## 1 Introduction

Investment is one of the important things considered by managerial and other stakeholders. The right investment can improve the performance and performance of the company, and also provide financial benefits to the company. An investor, or financial professional, who designs his or her portfolio generally considers various factors to achieve better returns and diversify risk. Along with the general factors that influence investment decisions, there are various behavioral biases (such as heuristics and herding) that influence investment decisions when constructing investment portfolios (1). In relation to investment or stock trading, it was found in previous studies that the tourism industry is an important one in economic growth, and in the financial market this industry provides a long-term and stable source of finance, especially because the industry requires intensive capital investment. The tourism or MICE sector, within the creative economy industry, is one of the pillars of the Indonesian economy

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and a major contributor of foreign exchange. According to the Organization for Economic Co-operation and Development (OECD) in its Tourism Trends and Policies 2022 report, the tourism sector will contribute 5.0% of Indonesia's gross domestic income (GDP) in 2019 (2). However, the impact of the Covid-19 pandemic in 2020 resulted in a 56% drop in tourism's contribution to GDP to just 2.2% of the total economy. The pandemic caused a downturn that led to investment in creative industries. However, based on data on tourism's contribution to GDP in 2017, 2018, 2019 and 2020 (the beginning of the pandemic) reached 4.11%, 4.5%, 4.7% and 4.05%. Despite the decline, in 2021 there was an increase, reaching 4.20% and 3.60% in the third quarter of 2022. This shows that the creative economy contributes employment for 6-7% of the total workforce, and data shows that the creative economy sector has proven to be the most resilient during the pandemic (3).

The condition of the tourism world in Indonesia requires the right investment strategy, so that the behavioral factors of investors can be a return in the stock portfolio in the Indonesian tourism world. Various studies have found that a person's level of financial literacy increases risk-taking capacity by discussing the positive relationship between investor financial literacy and risk-taking capacity (4,5). Psychological expertise also has a major impact on the way people invest, as Phan and Zhou found (5). From previous research in Bangladesh related to investor behavior, It was found that investment amount, decision making process, market type, investor group, preferred price range, risk assessment, investment monitoring activity, investment origin., investment duration, emotional resilience, financial knowledge and inner feelings are significant factors that shape the decisions, trading practices of investors in Bangladesh capital market. (1).

In another research, it was noted that personality differences may change the ability to rely more on emotional feelings when making trading decisions(5). This study found that the personality traits of individual investors play a significant role in their behavioral biases. Even though investors are highly experienced, their tendency to follow different heuristics changes based on their personality traits. Based on those phenomena, this study will address the following issues:

- R1: Does heuristic bias affect investor decision-making in Indonesia's creative economy industry?
- Does herding bias influence investor decision-making in Indonesia's creative economy industry?
- Is Investment decision-making influenced by heuristic bias and herding bias mediated by investor personality traits?

## 2 Literature Review

Based on the theoretical basis, heuristic bias and herding bias can influence investment decisions, which are mediated by personality traits. Some previous studies show mixed results, such as the results of Chalissery's research (5) which shows that heuristic bias affects the behavior of investors where the research is directed to the experience of trading in the decision taken to invest, while the research results of Gavrillakis & Floros (6) shows that heuristic bias has a significant positive effect on a stock's portfolio performance. Research results by Ahmad & Shah (7) shows that herding bias and

heuristic bias affect decision making to invest, besides other research results state that personality trait in mediating or moderating has different results on the components in heuristic bias on investment decision making (5). In addition, other studies also suggest that herding bias positively influences investment decision-making (8).

## 2.1 Investment decision

Investment is the commitment of a certain amount of funds made today in order to obtain future profits (9). They invest their funds in physical assets (land, gold, machinery, or buildings) and financial assets (deposits, stocks, or bonds). Investment decisions refer to the assets in which investors, whether individual investors or corporate investment directors and managers, invest their funds (9). Investment decision is the process of investing with the expectation of future returns (10). Every investor wants to get the most out of their investment. All investors want to make optimal investment decisions (11). According to Merton in an article written by Sudirman, Alif, and Pratiwi (2023) in the context of financial literacy, optimal rational investment decisions depend on prior financial knowledge. The logic of financial literacy assumes that everyone is well-informed and always makes rational decisions (12). However, it is important to note that investors' thoughts and feelings have the potential to influence the decision-making process in ways that are not entirely rational. There are many factors that go into making an investment decision. These include the company's current market share and potential, the technology it uses, and value creation during the closing period (13). Behavioral finance definitively shows that investment decisions can be irrational due to imperfect information and sometimes limited rationality (12,13).

## 2.2 Heuristic Bias

Heuristic methods facilitate the process of making decisions regarding the collection and analysis of complex information. In uncertain situations, investors use the representativeness, availability, overconfidence, and anchoring and adjustment heuristics to reduce the risk of loss (7). In the context of decision-making, a heuristic can be defined as a strategy that involves the exclusion of certain information in order to facilitate a more expedient decision-making process (8). From previous research, Heuristics have been demonstrated to influence investment decision-making processes, largely due to the tendency of investors to engage in irrational behavior (5,6).

## 2.3 Herding Bias

Herd behavior can be defined as the process by which market participants imitate each other and/or base their decisions on the actions of previous decision makers (6). In instances where investors have limited time to make investment decisions, they often adhere to the decisions of others rather than engaging in independent interpretation of

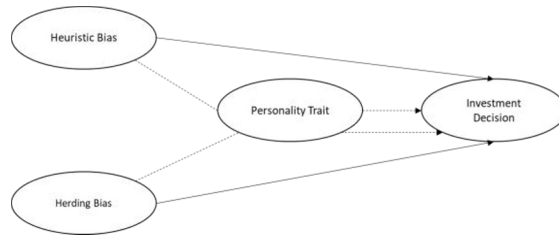
the information they receive. In situations where investors have limited time to make investment decisions, they are more likely to follow the decisions of others rather than engage in independent interpretation of the information they receive. The practice of herding is undertaken by investors for a variety of reasons. For example, individual investors may demonstrate herding behavior by emulating the investment decisions of other investors, following large groups of investors, or imitating the trades of noisy traders before making their own investment decisions. Moreover, institutional investors examine their historical experiences or prior investment decisions. In certain instances, they replicate the actions of other institutional investors to safeguard their compensation interests and reputation (12). The aforementioned conclusion was reached. It was determined that behavioral bias frequently serves as a significant motivating factor behind investors' anomalous actions. Behavioral biases are classified into two categories: cognitive and emotional. Both of these categories result in irrational decision-making (8).

## 2.4 Personality Trait & Investment Decision making

Individuals possess disparate dispositions or preferences, which result in the perception of identical circumstances through a lens of distinct interpretation. Consequently, their responses to a singular situation exhibit a divergence of outcomes. Researchers have shown how individual characteristics affect their investment behavior (5,14). The degree and extent of their influence on investment behavior and performance yield comparable results. However, some research argues that differences in the social environment can have a significant impact on economic outcomes, even if they appear insignificant at the individual level. To illustrate, shifts in societal attitudes towards the capacity to address financial challenges, discuss professional accomplishments, or engage in general discussions about personal investments can exert a considerable influence on risk-taking and active investment participation. This suggests there are other factors of behavior that cannot be generalized (15).

In previous studies, it was stated that environmental factors and economic conditions can influence, so it will be seen with heuristic behavior whether personality can be a predictor and mediate changes in investment decisions. Based on this, the hypotheses of this study are:

1. H1: Heuristics affect investment decision making
2. H2: Heuristic bias influences investment decision making
3. H3: Personality trait mediates the relationship between investment decision making and heuristic bias
4. H4: Personality trait mediates the relationship between investment decision making and herding bias.



**Fig. 1.** The research Framework

### 3 Research Method

The measurement of each variable in this study aims to determine the relationship between the independent variable and the mediating variable to the dependent variable. Investment decision variable is measured using indicators from research related previous research by Moueed, et al. (8,16), and variabel heuristic bias, psychologi trait adopted from research Chalissery et, al (5). The variable herding bias was adopted from research by Gavrilakis & Floros (6).

Data were collected using quantitative analysis, and the distribution using a questionnaire with a Likert scale adopted from previous studies. Data collection obtained directly (premier data) is the collection method used in this research. In this research, the data collection method used is probability sampling that used to collect data from active private investors in the creative economy industry including MICE and Tourism. The object of the research is entrepreneurs, managers or owner of industries in the field of MICE, creative economy, events, and other tourism fields. This study uses data analysis of the structural equation model partial least squares (SEM-PLS). The concept of PLS data analysis examines the results of modifying several research models to provide an overview of the variables under study (17,18). Analysis of reliability was measured using Cronbach's alpha and confirmatory factor analysis.

### 4 Result and Discussion

The characteristics of respondents in this study are employees who act as decision makers where there are no divided levels or levels of positions in the company. The business field taken as data is in the creative economy industry which is divided into events, exhibitions, hospitality, tourism and other creative economy fields. From the results of the questionnaire distribution data, 52 people with different age characteristics and investment experience were successfully obtained.

**Table 1.** Descriptive Analysis of investment experience

<b>TIME EXPERIENCE</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
<b>1- 3 YEARS</b>	22	42
<b>4 – 6 YEARS</b>	12	23
<b>7 – 9 YEARS</b>	6	12
<b>10 – 12 YEARS</b>	0	0
<b>&gt;12 YEARS</b>	12	23
<b>TOTAL</b>	52	100.0

In the structural model test (inner model), the Bootstrapping and Blindfolding procedures in SMART PLS were employed to facilitate the analysis. The objective of the structural model tests is to ascertain the relationship between the latent constructs. There are several tests for structural models, such as: R-Square, Model Fit Test and Individual Significance Test (19). Based on the evaluation results, the R-square value of 0.67 indicates that the model is strong. 0.33 indicates that the model is moderate and 0.19 indicates that the model is weak. In the analysis of the R-Square value in the investment decision-making model is 0.652. This number illustrates that the ability of independent and moderating variables in this study has a contribution in explaining the variable investment decision-making by 65.2% while the rest is explained by other variables outside the model.

The model fit test employs a number of statistical indicators, including the Standardized Root Mean Square Residual (SRMR), Normed Fit Index (NFI), and RMS\_theta. The model is said to meet the criteria for model fit, SMSR value 0.05 [17]. Nevertheless, according to the SMARTPLS website, the constraints or prerequisites for model fit are as follows: The RMS theta or root mean square theta value must be less than 0.102, the standardized root mean square (SRMR) value must be less than 0.10 or less than 0.08, and the NFI value must be greater than 0.9. Based on the output, it is obtained that the SRMS value is 0.159 which is more than 0.08. Furthermore, the NFI value of 0.371 is less than 0.900, indicating a weaker correlation than would be expected. The resulting RMS\_theta value is 0.258, which is in close proximity to the value of 0. The RMS theta indicator demonstrates that the model formed is suitable for use, effectively describing the relationship between variables.

Next is hypothesis testing which aims to test the proposed hypothesis. The results of this test are based on the processing of research data using Partial Least Square (PLS) analysis and Path diagrams. The results of hypothesis testing output using Smart-PLS software version 3.0 are presented below.

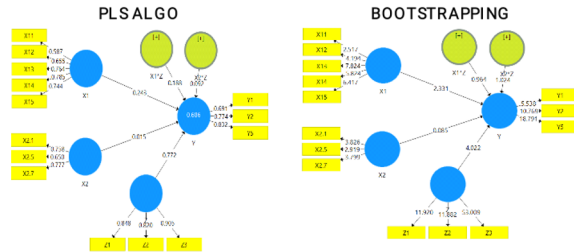


Fig. 2. Diagram Path

For the hypothesis testing the result on the table below:

Table 2. Hypothesis Testing Result

	BETA	P-VALUES	BETA
H1	0.243	0.005	H1 accept
H2	0.015	0.233	H2 Reject
H3	0.188	0.084	H3 Accept
H4	0.092	0.077	H4 Accept

As indicated in Table 2, the coefficient value of heuristic bias is 0.243, which signifies that an increase in the perception of heuristic bias will result in an analogous increase in the perception of investment decision-making. This result is in accordance with the hypothesis proposed where Heuristic bias has a positive effect on Decision Making. The P-value is  $0.005 < 0.05$  (alpha 5%) so H1 is accepted. In addition, the coefficient value of Herding Bias is 0.015, meaning that if the perception of Herding Bias increases, the perception of investment Decision Making will increase.

This result is in accordance with the hypothesis proposed where Herding Bias has a positive effect on Decision Making. The P-value is  $0.233 > 0.10$  (alpha 10%) then H1 is rejected. It is concluded that statistically there is no influence of Herding Bias on Decision Making. The coefficient value of Heuristic bias mediated by Personality Trait is 0.188, which means that if the perception of Heuristic bias mediated by Personality Trait increases, the perception of Decision Making will increase. This result is in accordance with the hypothesis proposed where Personality Trait increases the influence of Heuristic bias on Decision Making. The P-value of 0.084  $> 0.10$  (alpha 10%) then H3 is accepted. In the H4 test, it is known that the coefficient value of Herding Bias mediated by Personality Trait is 0.092, which means that if the perception of Herding Bias mediated by Personality Trait increases, the perception of Decision Making will increase. This result is in accordance with the hypothesis proposed where Personality Trait increases the influence of Herding Bias on Decision Making. The P-value is  $0.077 < 0.10$  (alpha 10%) then H4 is accepted.

The results of this study support the initial hypothesis that heuristic bias has a positive impact on decision-making processes. This finding is consistent with previous research indicating that heuristic bias has a positive impact on decision-making processes (6,7). Indeed, as stated by Chalissery et al. (5) in their research, The-heuristic has a deleterious impact, resulting in the rejection of the initial hypothesis in this analysis.

The second hypothesis was rejected, indicating that the results of this study differ from those of previous research conducted by Arie (8) The aforementioned study posits that herding bias has a beneficial impact on investment decision-making processes. In this result, if adjusted to the definition theory of herding bias which prioritizes that investors' decisions in making decisions are based on input or advice from colleagues. In this study, it states the opposite, which allows other variables in decision making to be a factor in making the investment decision. So that the main factor in making decisions is more the result of the analysis of the individual. In the results of the third and fourth hypotheses, the results are supported and in line with previous research which states that personality trait elements can strengthen the influence in making a person's decision in this study, the decision to invest (5).

## **5 Conclusion**

The findings of the analysis indicate that heuristic bias has a beneficial impact on decision-making processes. Furthermore, personality traits may act as a mediator in influencing these decision-making processes. Nevertheless, herding bias has been demonstrated to have a detrimental impact on decision-making processes. This could be due to the definition of herding bias which is stated as the process by which market participants imitate each other and/or base their decisions on the actions of previous decision makers. Therefore, it can be concluded that decision makers in making decisions trust the point of view and the results of the analysis of information seeking from themselves rather than finding out from colleagues or imitating colleagues. Thus, it can be concluded that decision-makers in the creative economy industry have decision-making skills based on individual abilities. Therefore, in making decisions to invest based on in-depth thinking and analysis of data that has been processed independently. This makes a positive finding that actors in the creative economy have the right character in making decisions that can result in an increase in the performance of the company.

## **6 Suggestion**

The managerial implication that can be conveyed is that decision makers are aware of the importance of decision-making skills, especially those related to investment, both in investing behavior that will be applied to individuals and companies. In addition, in accordance with the findings of previous research and the results of the findings, it was

found that within the scope of the tourism industry, stakeholders have understood the importance of making good investments. So that in the future the government can be more confident that the progress of the tourism industry will increase because in terms of human resources it has a good understanding of investment. The limitation in this study is the lack of research subjects which may have an impact on not being able to generalize this research data on a national scale. Suggestions for future research can be more classified research subjects per industrial field so that the data obtained can be generalized properly.

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