

THE INFLUENCE OF STOCK INFLUENCERS, DEMOGRAPHICS AND PSYCHOLOGICAL CONDITIONS ON STUDENT INVESTMENT DECISION MAKING

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Abstract. This study aims to determine and explain what factors have an influence on investment decisions. These factors include demographic factors such as; age, experience & gender on investment decision making, the influence of stock influencer factors on investment decision making, and the influence of psychological condition factors such as; overconfidence, regret aversion & gambler's fallacy on investment decision making. This research is a quantitative study using a questionnaire distributed to students studying in Malang City as a data collection tool. The number of samples used in the study were 208 respondents. Then the data that has been collected is processed using SPSS software. The results of this study found that demographic factors such as; age and investment experience, stock influencer factors, and psychological condition factors such as; overconfidence, regret aversion & gambler's fallacy have an influence on student investment decision making in Malang City. Meanwhile, demographic factors in the form of gender have no influence on student investment decision making in Malang City.

Keywords: Investment Decision, Demographics, Stock Influencers, Behavioral Psychology.

I. INTRODUCTION

The CoVid-19 pandemic that hit the world and Indonesia caused the value of the Composite Stock Price Index (JCI) to plunge. Recorded in March 2020, the Jakarta Composite Index (JCI) had touched 3,887 on March 24, 2020. The decline in the JCI has caused public interest in stock investment to increase, as of December 17, 2021 it was recorded that the total number of Indonesian SIDs had grown by 89.58% to 7.35 million SIDs, from the increase in the number of SIDs it can be seen that the interest of the Indonesian people in investing in stocks is increasing. The increasing number of Indonesian SIDs is also accompanied by the increasing participation of the millennial generation in stock investment activities in Indonesia. Based on data on the number of single investor identification (SID) recorded at KSEI on October 14, 2022, as many as 58.91% are investors aged 30 years and under with a total asset value of IDR 52.77 trillion.

The trend of stock influencers appearing on social media is one of the positive impacts on the addition of public insights related to financial literacy. However, many stock influencers only recommend an issuer without providing a complete analysis to their followers. However, nowadays it is no longer difficult to analyze an issuer. Stock influencers will usually invite their followers to buy or sell shares of an issuer and some of them also provide education related

to financial literacy and capital markets. Some of the most popular stock influencers in Indonesia include Ellen May, Rivan Kurniawan, Reynaldo Virigilius, Felicia Putri Tjiasaka and Timothy Ronald.

Prudence owned by investors requires each investor to act rationally in accordance with trusted analysis. However, it is often found that an investor takes irrational steps in his decision. Psychological factors owned by investors in making investments influence the decisions taken. Emotions in psychological factors determine investment decisions, where the higher a person's emotions, the lower the desire to invest.

Seeing the phenomenon that occurs, the author wants to discuss the influence of financial influencers, demographic factors and psychological factors in making investment decisions. The scope taken in this study is students in Malang City.

The objectives of this study are: 1. to analyze the influence of demographic factors on student investment decision making in Malang City 2. to analyze the influence of stock influencers on student investment decision making in Malang City 3. to analyze the influence of psychological condition factors on student investment decision making in Malang City

II. LITERATURE

A. *Investment Decision*

The official website of the Financial Services Authority (OJK) explains that investment is an investment activity that is usually carried out in the long term for the procurement of complete assets or the purchase of shares and other securities to obtain profits. Jones (1996) quoted from the book *Fundamental Investment Management, Technical, Behavior and Stock Returns* (Azis, Mintarti & Nadir, 2015) defines investment as an activity of placing funds in an asset over a period of years in the hope of earning income or increasing the value of the investment. Investment is often associated with investment activities in various types of assets, be it real assets (land, gold, buildings) or financial assets (stocks, bonds or mutual funds). The availability of information available in the market is often a consideration in decision making, generally investors often use accounting information in the investment decision making process. By utilizing information, investors are expected to make rational investment decisions (Singh, 2009). Investors can consider information related to fundamental and technical factors in determining their investment plans, both long-term and short-term investments

B. *Behavioral Finance*

Behavioral finance is a study of how psychological phenomena affect the financial behavior of individuals. Financial Behavior theory combines psychology with economics to explain why and how investors act and make decisions (Sisbintari, 2018). This theory is also useful for analyzing how the behavior of investors can affect capital market conditions. Behavioral Finance studies how psychology affects the financial decisions of companies and financial markets. To understand the irrational actions taken by investors, behavioral economists conduct research on human behavior or 'Human Behavioral Theories'. In human behavioral theories, there are two main theoretical components discussed, namely prospect theories and Heuristics Theories. Prospect theories originated from the results of an analysis conducted by Kahneman and Tversky in 1979, where at that time Kahneman found individual irregularities in assessing risk in uncertain circumstances (Subash, 2012). In behavioral finance, it is also learned that every investor must have made mistakes in making investment decisions. These mistakes

can be influenced by various factors. Investors have the possibility of behavioral bias (Subash, 2012).

C. Stock Influencers

According to Hariyanti and Wirapraja (2018), an influencer is someone who has a large number of followers on social media who can influence or respond to the behavior of their followers. A person is not said to be an influencer even though the number of social media followers is very large. A person can be said to be an influencer if his followers can be influenced both behavior and perspective through uploads and information displayed on his social media account (Cha et al, 2018). Influencers can be classified based on the number of followers, in his research Abdul et al (2021) classified influencers based on the number of followers into four, namely; mega influencers, macro influencers, micro influencers, nano influencers. The influence of influencers can be seen from the results of research conducted by Amalia & Sagita (2019) proving that social media influencers have a positive effect on consumer purchasing decisions from generation Z.

D. Demographic Factors

In Mahardika (2017) cited by Senda, Rahayu, and Rahmawati (2020) demography is defined as a science that studies humans based on physical, civilization, intellectual level and moral conditions. The demographic factors discussed in this study are as follows:

1. Gender

The definition of gender according to Hungu (2007) is the difference between women and men biologically since a person is born.

2. Investment Experience

Experience is a measure of the length of time or tenure that a person has taken in carrying out a task or job and has completed it properly (Ariska, 2022). Experience can be measured by events that have been experienced (Rimadhani, 2018). The more experienced managing money, the smarter it is to manage expenses, save and invest. Investment experience is identified as the duration of trading experience that investors have (Khanam, 2017).

3. Age

According to Evans, (2004) in Puspitasari (2014; 24) age is a limit or level of life size that has an influence on the physical condition of individuals.

4. Psychological Factors

Psychological factors owned by investors in making investments influence the decisions taken. Emotions in psychological factors determine investment decisions, as for the psychological factors discussed in this study are as follows:

- Overconfidence Bias

Overconfidence is a feeling where someone feels overconfident. Overconfidence is often experienced by most investors. An investor who is overconfident will overestimate the knowledge he has and will underestimate any analysis done (Nosfinger, 2005).

- Regret Aversion Bias

Another psychological factor that can be found in investors is regret aversion bias. Regret aversion is a psychological condition that arises from regret in making decisions that turn out to be detrimental (Subash, 2012). This condition arises because a person tends not to like to admit mistakes that have been made. This allows

investors to avoid making firm decisions for fear of repeating mistakes like in the first decision.

- Gamblers Fallacy Bias

Gambler's fallacy bias can be used to describe the misunderstanding of the concept of fairness of the law of chance (Kahneman & Tversky, 1971). Gambler's fallacy bias occurs when investors make mistakes in predicting market reversal trends. When a person is placed in an uncertain situation and his perception is wrong, he will quickly correct himself and make another decision based on the perception of the previous random event.

E. Research Hypothesis

1. The Effect of Age on Investment Decisions

Age has a relationship with emotional maturity in processing information and making decisions (Yunita et al., 2016). The more mature a person's age, the better it will be in making investment decisions (Safitri & Rachmansyah, 2021). Not only that, as a person gets older, the more investment experience he has, so the investment decisions made will be more profitable (Senda et al., 2020). Investors under the age of 50 will have a high level of risk tolerance, unlike investors who are over 50 years old who tend to choose safer and less risky investments (Senda et al., 2020). Based on the description above, the following hypothesis is determined:

H1: Age has a positive effect on student investment decision making in Malang City

2. The Effect of Investment Experience on Investment Decisions

Investment experience is identified as the duration of trading experience that investors have (Khanam, 2017). Experience can be used as a consideration in making investment decisions, so that the decisions taken can provide benefits in the future (Rimadhani, 2018). Investors who have experience are more confident in their abilities and from their past experiences they can find out the risks they face and how to make further investment decisions (Awais et al., 2016). The more investment experience a student has, the better the investment decisions made (Mandagie et al., 2020). Experience also affects the ability to manage emotions when making investment decisions, students who have investment experience will be better able to control their emotions when there is turmoil in the stock market (Kusumaningrum et al., 2019). Based on the description above, the following hypothesis is determined:

H2: Investment experience has a positive effect on student investment decision making in Malang City.

3. The Effect of Gender on Investment Decisions

The definition of gender according to Hungu (2007) is the difference between women and men biologically since a person is born. In investment activities, gender differences between women and men have an influence on investment decision making. Zaichkowsky (2004) in Nugraha et al., (2020) explains that female investors tend to be more conservative and prefer long-term investments, compared to male investors who tend to prefer short-term investments. Willows & West (2015). Willows & West (2015) also found differences in trading frequency influenced by gender differences between men and women, where male investors with an age group of 20 to 30 years and an age group of 40 to 50 years trade more stocks than female investors with the same age group range.

Different results were found by Putri & Hamidi (2019) who found that there was no influence from gender on investment decisions, this is in line with the results of Lathifatunnisa & Wahyuni's research (2021), namely demographic factors in the form of gender have no effect on student investment decision making in Pekalongan City. Based on the description above, the following hypothesis is determined:

H3: Gender affects student investment decision making in Malang City

4. Influence of Stock Influencers

According to Hariyanti and Wirapraja (2018), an influencer is someone who has a large number of followers on social media who can influence or respond to the behavior of their followers. The large selection of stock influencers on social media provides many choices for investors in making their investment decisions. However, it is not uncommon for investors to be unable to utilize the information provided by their influencers. Subramanian (2021) in his research found that there is a significant influence of stock influencers on social media. Based on the description above, the following hypothesis is determined:

H4: Stock influencers have a significant effect on investment decision making

5. The Effect of Overconfidence Behavior on Investment Decisions

Overconfidence will become a negative bias when a person does not understand that there are limitations to their abilities or knowledge (Chira et al., 2008). Overconfidence leads investors to sink into high-risk decisions because of the illusion of knowledge they have (Nyamute et al., 2017). The results of research from Setiawan, Atahau, & Robiyanto (2018) found that most novice investors experience overconfidence bias in making their investment decisions. This is because novice investors aged 18-25 years are bolder and more confident in the investment decisions they make. The results of research from Setiawan, Atahau, & Robiyanto (2018) found that most novice investors experience overconfidence bias in their investment decision making. This is because novice investors aged 18-25 years are bolder and more confident in the investment decisions they make. Based on the description above, the following hypothesis is determined:

H5: Overconfidence behavior negatively affects investment decision-making.

6. The Effect of Regret Aversion Behavior on Investment Decisions

Regret aversion is a psychological condition that arises from regret in making decisions that turn out to be detrimental (Subash, 2012). Shafqat & Malik (2021) in their research found that regret aversion bias can affect stock frequency on the Pakistan stock exchange, this is triggered by investors' reluctance to exit stocks that have experienced a significant decline. The level of doubt in the decision also led to the regret aversion behavior. High pessimism is also one of the factors that cause regret aversion bias in investor decisions (Shafqat & Malik, 2021). Rehan and Umer (2017) found a positive effect of regret aversion on investor decisions, this is in line with research conducted by Addinpujoartanto & Darmawan (2020), where a significant positive effect of regret aversion on decisions made by investors was found. Based on the description above, the following hypothesis is determined:

H6: Regret aversion behavior negatively influences investment decision making.

7. The influence of gambler's fallacy behavior on investment decisions

The gambler's fallacy bias explains the inaccurate understanding of a possibility and can be applied to investment. Montier (2003) in Subash (2012) provides an example of gambler's fallacy in investment, namely bullish investors' belief that the market will not decline in four consecutive years. Djojopranoto & Mahadwartha (2016) explain that investment results from the previous time will be a reference in making further investment decisions, when investors have benefited several times from previous investments, then for the next investment investors will reduce their investment portion. In research conducted by Djojopranoto & Mahadwartha (2016), it is explained that gambler's fallacy behavior tends to occur in investors when capital market conditions are experiencing an increase or uptrend. However, the opposite findings were obtained from the research of Wijayanti et al (2019), where gambler's fallacy occurs both when market conditions are uptrend and downtrend. Based on the description above, the following hypothesis is determined:

H7: Gambler's fallacy behavior has a negative effect on investment decision making

F. Research Framework

An investor needs to consider any information received to make investment decisions that generate profits. Rational nature is the main trait that must be possessed by investors, thus every decision taken is a decision that has gone through various considerations and is effective to bring benefits to the investor himself. Unfortunately, in reality, investors often make irrational decisions. The resulting decisions ultimately provide losses for investors and may traumatize investors so that they do not want to reinvest.

The influence of behavioral bias can change the decisions made by investors. One example is investors who make gambler's fallacy bias in decisions, where investors will invest with possibilities that have not yet occurred in the future. Other behavioral biases such as overconfidence and regret aversion bias also influence investor decisions. This often happens to novice investors in the capital market. Another factor that can influence investor decisions is demographic factors where the amount of student income, age, gender and semester level can influence student decisions in investing.

The large number of social media users in Indonesia makes it easy for anyone to become an influencer on social media. Influencers themselves will basically provide an assessment of a product and influence their followers. The growing number of Indonesian SIDs has given rise to the names of stock influencers on social media, such as Captain Saham 707, Raffi Ahmad and other influencers. It is not uncommon for their social media followers to be influenced and buy the stocks discussed and promoted by them. This is a consideration that stock influencers can influence investor decisions in Indonesia. Based on these things, the theoretical framework in this study can be described as follows:

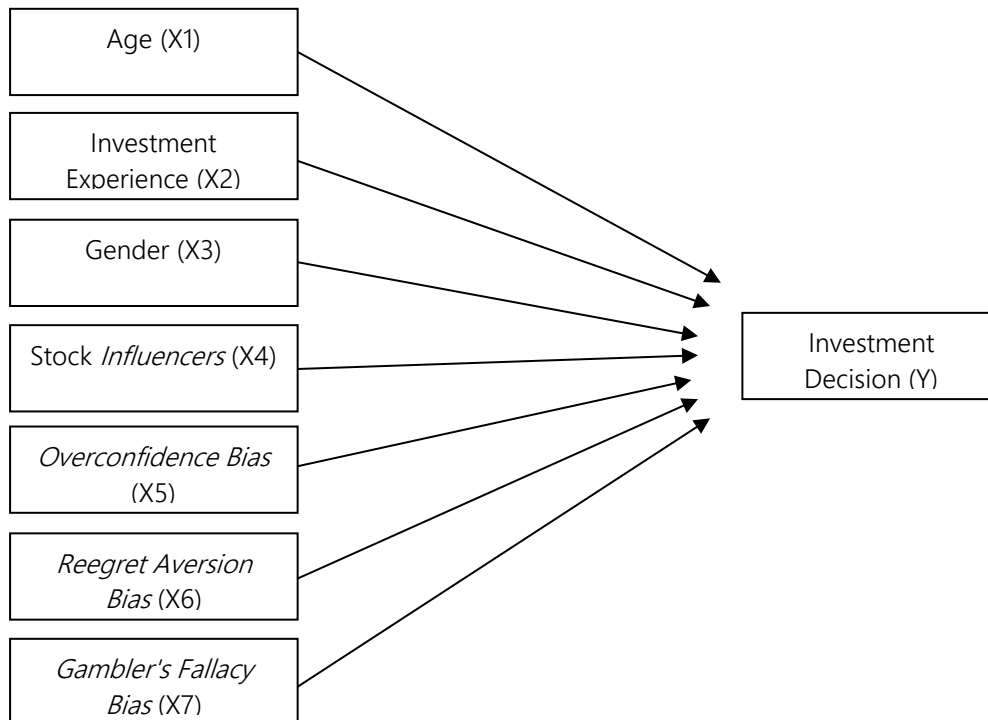


Figure 1 Research Framework

III. RESEARCH METHODOLOGY

A. *Type of Research*

This research is a descriptive study using a quantitative approach.

B. *Population and Sample*

The population in this study were active students who were studying in Malang City. The research sample consisted of 208 respondents selected based on the theory of Hair et al. (1998), where the minimum sample size is five times the number of indicators owned, with a suitable range between 100-200 respondents.

C. *Data Collection Method*

The data in this study were collected through questionnaires made using Google Form and distributed to students in Malang City.

D. *Data Analysis Method*

The data analysis method used in this research is quantitative analysis. The analysis techniques performed include descriptive analysis and multiple linear regression with the help of IBM SPSS software.

IV. RESULT AND DISCUSSION

A. Respondent Characteristics

Table 1. Characteristics of Respondents Based on Age

Age	Frequency	Percentage
18-22 years old	173	83,17%
23-27 years old	30	14,42%
28-32 years old	1	0,48%
>32 years old	4	1,92%

Source: Primary Data Processing (2022)

Table 2. Characteristics of Respondents Based on Gender

Gender	Frequency	Percentage
Male	107	51,44%
Female	101	48,56%

Source: Primary Data Processing (2022)

Table 3. Frequency Distribution of Variables

Variables	Minimum	Maximum	Mean
Age (X1)	1	4	1.212
Experience (X2)	1	4	1.753
Stock Influencers (X4)	1	5	3.308
Overconfidence (X5)	1	5	2.002
Regret Aversion (X6)	1	5	3.663
Gambler's Fallacy (X7)	1	5	2.495
Investment Decision (Y)	1	5	3.686

Source: Primary Data Processing (2022)

B. Validity Test

Table 4. Validity Test Results

Item	r Count	Sig.	r Table	Description
X2.1	0.907	0.000	0.136	Valid
X2.2	0.903	0.000	0.136	Valid
X2,3	0.868	0.000	0.136	Valid
X4.1	0.830	0.000	0.136	Valid

Item	r Count	Sig.	r Table	Description
X4.2	0.819	0.000	0.136	Valid
X4.3	0.853	0.000	0.136	Valid
X5.1	0.927	0.000	0.136	Valid
X5.2	0.920	0.000	0.136	Valid
X6.1	0.796	0.000	0.136	Valid
X6.2	0.790	0.000	0.136	Valid
X6.3	0.791	0.000	0.136	Valid
X7.1	0.877	0.000	0.136	Valid
X7.2	0.873	0.000	0.136	Valid
Y1	0.774	0.000	0.136	Valid
Y2	0.768	0.000	0.136	Valid
Y3	0.703	0.000	0.136	Valid
Y4	0.556	0.000	0.136	Valid
Y5	0.702	0.000	0.136	Valid

Source: Primary Data Processing (2022)

From the table above, it can be seen that the sig. r value of the question indicator is smaller than 0.05 ($\alpha = 0.05$), which means that each variable indicator is valid, so it can be concluded that these indicators can be used to measure the research variables.

C. Reliability Test

Table 5. Validity Test Results

No.	Variables	Reliability Coefficient	Description
1.	X2	0.912	Reliable
2.	X4	0.778	Reliable
3.	X5	0.827	Reliable
4.	X6	0.704	Reliable
5.	X7	0.694	Reliable
6.	Y	0.731	Reliable

Source: Primary Data Processing (2022)

From table 5, it is known that the value of Cronbach alpha for all variables is greater than 0.6. From the provisions previously mentioned, all variables used for research are reliable.

D. Classical Assumption Test

1. Normality Test

Table 6. Normality Test Results

One-Sample Kolmogrov-Smirnov Test		
		Unstandardized Residual
N		208
Normal Parameters	Mean	.0000000
	Std. Deviation	1.94847481
Most Extreme Differences	Absolute	0.045
	Postive	0.045
	Negative	-0.034
Test Statistic		0.045
Asymp. Sig. (2-tailed)		0.200 ^{c,d}

Source: Primary Data Processing (2022)

From the calculation results, the sig. value is 0.200 (can be seen in Table 6) or greater than 0.05; then the H0 condition is accepted, namely that the normality assumption is met.

2. Multicollinearity Test

Table 7. Multicollinearity Test Results

Free Variable	Collinearity Statistics		Description
	Tolerance	VIF	
X1	0.925	1.081	No Multicollinearity
X2	0.882	1.134	No Multicollinearity
X3	0.959	1.042	No Multicollinearity
X4	0.790	1.265	No Multicollinearity
X5	0.732	1.366	No Multicollinearity
X6	0.705	1.419	No Multicollinearity
X7	0.800	1.250	No Multicollinearity

Source: Primary Data Processing (2022)

So based on the test results, it is found that the overall tolerance value is greater than 0.1 and the VIF value is below 10 so it can be concluded that there is no multicollinearity between the independent variables.

3. Heteroscedasticity Test

Table 8. Heteroscedasticity Test Results

Coefficients						
Model			Unstandradized Coefficients	Standradized Coefficients	T	Sig.
1	Constant	B	Std. Error	Beta		
	X1	1.492	0.656		2.275	0.024
	X2	0.086	0.165	0.038	0.526	0.600
	X3	0.305	0.175	0.123	1.749	0.082
	X4	-0.054	0.038	-0.112	-1.437	0.152
	X5	0.020	0.061	0.026	0.323	0.747
	X6	-0.029	0.047	-0.051	-0.616	0.539

Coefficients						
Model			Unstandradized Coefficients	Standradized Coefficients	T	Sig.
1	Constant	B	Std. Error	Beta		
	X7	0.060	0.050	0.092	1.186	0.237
a. Dependent Variable: ABRSID						

Source: Primary Data Processing (2022)

By looking at Table 8, from the test results it is found that the sig. value of all variables is $> \alpha$ ($\alpha = 0.05$), so it can be concluded that the difference has a homogeneous (constant) variety or in other words there are no symptoms of heteroscedasticity.

E. Multiple Linear Regression Test Results

Table 8. Heteroscedasticity Test Results

Coefficients						
Model			Unstandradized Coefficients	Standradized Coefficients	t	Sig,
		B	Std. Error	Beta		
1	(Constant)	23,114	1,042		21.9200	,000
	X1	0,642	0,262	0,106	2,426	,016
	X2	0,159	0,059	0,121	2,687	,008
	X3	-0,123	0,281	-0,019	-0,439	,661
	X4	0,180	0,061	0,141	2.968	,003
	X5	-0,675	0.098	-0,340	-6,903	,000
	X6	-0,480	0,075	-0322	-6,396	,000
	X7	-0,392	0,081	-0,228	-41841	,000

Source: Primary Data Processing (2022)

F. Discussion of the Research Results

1. The Effect of Age (X1) on Investment Decisions (Y)

Based on the results of the regression test and t test, it is concluded that the age variable factor (X1) has a positive effect on Investment Decision Making. The results of testing the age variable hypothesis (X1) are in line with research conducted by Senda et al. (2020) and Safitri and Rachmansyah, (2021), namely the older a person gets, the better it will be in making investment decisions.

2. The Effect of Investment Experience (X2) on Investment Decisions (Y)

Based on the results of the regression test and t test, it is found that the variable factor of investment experience (X2) has a positive effect on Investment Decision Making. The results of this study are in line with research conducted by Mandagie et al (2020) and (Awais et al., 2016)) which in their research concluded that the experience variable has a significant effect on investment decisions

3. The Effect of Gender (X3) on Investment Decisions (Y)

Based on the results of the regression test and t test, it is found that the variable gender factor (X3) has no effect on Investment Decision Making. In line with Lathifatunnisa & Wahyuni (2021), gender has no effect on investment decisions because when making decisions to invest, both men and women can make good investment decisions because of the perception of risk

that is different and varies according to each person. The behavioral preferences of respondents who often follow stock influencers on social media can make gender differences have no effect in this study.

4. The Effect of Stock Influencers (X4) on Investment Decisions (Y)

Based on the results of the regression test and t test, it is found that the influence of the stock influencer factor (X4) on Investment Decision Making is significant. So it can be concluded that Investment Decision Making can be positively influenced significantly by stock influencers or by increasing stock influencers, Investment Decision Making will increase. The results of this study are in line with research (Subramanian 2021) which explains that there is an influence of stock influencers on social media on the investment decisions of young people in India.

5. The Effect of Overconfidence Behavior (X5) on Investment Decisions (Y)

Based on the results of the regression test and t test on variable X5, the hypothesis that overconfidence has a negative effect can be accepted. The results of this study are in line with research conducted by Supramono & Wandita (2017) which explains that most investors tend to experience overconfidence, this occurs because the level of investor knowledge is still relatively low but has a high level of confidence that the results of the decisions taken are the best.

6. The Effect of Regret Aversion Bias Behavior (X6) on Investment Decisions (Y)

Based on the results of the regression test and t test that have been carried out, it can be concluded that investment decision making can be significantly influenced by Regret aversion or by increasing Regret aversion, Investment Decision Making will experience a high decline. Thus the hypothesis that regret aversion bias (X6) has a positive effect on investment quality is rejected. The results of this study are in line with research conducted by Yuniningsih & Taufiq (2019) and Wangzhou et al., (2021).

7. The Effect of Gambler's Fallacy Bias Behavior (X7) on Investment Decisions (Y)

Based on the results of the regression test and t test, it can be concluded that Gambler's fallacy (X7) has a negative effect on investment decision making. The results of this study are in line with research conducted by Amin et al. (2009) in Djojopranoto & Mahadwartha (2016) states that gambler's fallacy affects the decision making of investors who trade on the Pakistan stock exchange.

Table 9. Hypothesis Test Results

Hypothesis	Description	Results
H1	X1 variable has a positive effect on Y	Hypothesis Accepted
H2	X2 variable has a positive effect on Y	Hypothesis Accepted
H3	X3 variable has an effect on Y	Hypothesis Not Accepted
H4	Variable X4 has a negative effect on Y	Hypothesis Accepted
H5	Variable X5 has a negative effect on Y	Hypothesis Accepted
H6	Variable X6 has a negative effect on Y	Hypothesis Accepted

Hypothesis	Description	Results
H7	Variable X7 has a negative effect on Y	Hypothesis Accepted

Source: Primary Data Processing (2022)

V. CONCLUSION

Based on the results of multiple linear regression analysis, it is known that the independent variables simultaneously have a significant influence on investment decision making, which is shown through the F-test. This indicates that the hypothesis stating that there is a joint influence between the independent variables on investment decision making can be accepted. Specifically, demographic factors such as age (X1) and experience (X2) show a significant positive influence on investment decision making, while gender factors (X3) have no significant influence. On the other hand, external factors such as stock influencers (X4) also have a significant positive influence. However, psychological conditions such as overconfidence (X5), regret aversion (X6), and gambler's fallacy (X7) tend to have a significant negative impact on investment decisions. This result reflects that in addition to demographic and external factors, investors' psychological conditions also influence their decision-making patterns in investing.

ACKNOWLEDGEMENT

The author would like to express gratitude to all the people who have helped in the completion of this study.

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