



Paper 88

Cryptocurrency as an Investment Instrument for
Generation Z in Indonesia

Faris Murtadha Fatahillah

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Abstract - This research was conducted to find whether cryptocurrency is a suitable investment instrument for Generation Z in Indonesia by analyzing factors that could affect investment decisions in Generation Z to find the causes and effects of Generation Z's readiness to start investing in cryptocurrency. The investment decision factors that are examined in this research are financial literacy, herding behavior, risk averse, and risk perception. Data collected during a survey aimed at Generation Z in Indonesia was processed using path analysis methods with the help of SPSS software. The result showed that financial literacy, risk averse and risk perception had a significant effect on Indonesian Generation Z investment decisions. While herding behavior does not significantly affect the decision-making of Indonesian Generation Z to make an investment in cryptocurrency, the result led to the conclusion that cryptocurrency is a suitable investment instrument for Generation Z in Indonesia, with some recommendations that could be implied on investing in cryptocurrency based on this research result by improving the shortcoming of each investment decision-making factor.

Keywords – Cryptocurrency, Generation Z, Investment Decisions.

I. INTRODUCTION

A. Research Background

Day after day, technology evolves alongside the growth of knowledge. People are starting to follow this trend. In the Industry 4.0 era, technologies started to shift into digitalization, improving automation and connectivity to a higher level. The introduction of new digitised money known as cryptocurrency became one of the highlights of this industrial revolution. The first-ever invented cryptocurrency known as bitcoin was founded by a group of people who called themselves Satoshi Nakamoto in late (2008).

Bitcoin was introduced as a digital currency that implements blockchain technology. Contains transaction logs from computers' participation across the network, making Bitcoin able to adapt to the peer-to-peer form for its transactions. With this foundation, a slew of alternative digital currencies based on the same principles as bitcoin began to emerge during the last decade. Based on the data

from Statista and Bloomberg by the mid-quarter of 2021, there are more than 6000 coins in the cryptocurrency market (Best, 2021) with a market value of around \$45 billion (Kharif, 2021).

People began to perceive cryptocurrencies as an acceptable transaction commodity and profitable investment due to their large number of varieties and value. According to a survey on CNBC, at least one out of every ten persons in the world uses and invests in cryptocurrencies. According to the poll results, cryptocurrencies are presently the fourth most popular investment commodity behind real estate, stocks, mutual funds, and bonds (Reinicke, 2021). In addition, (Ilham, et. al, 2022) stated the number of cryptocurrency investors has been increasing along with the emergence of local cryptocurrencies exchange markets in early 2021. Data shown by Investor.id shows that the number of cryptocurrency investors in Indonesia is increasing by 180%, and surprisingly that 66% of the investors are in the age of 18 - 35 years old (Olavia, 2022).

In comparison to other investment commodities, cryptocurrency is well renowned for its high return and profitability in very short time periods. Consider the case of one of the cryptocurrencies known as dogecoin. In reference to Statista, the price and value of dogecoin increased by 216 percent overnight in early 2021, and the market worth increased six-fold in a short period of time. However, the price continues to fall in a brief amount of time before returning to its regular level by the end of May 2021 (Best, 2021).

B. Problem Statement

Dogecoin demonstrated that cryptocurrencies have a high return with a significant risk in a very short period. During the same time, the number of cryptocurrencies in Indonesia significantly increased specifically among the Generation Z. Looking at the situation, researchers want to examine if cryptocurrencies have the potential to become a viable investment instrument for Generation Z in Indonesia, or if it is better to invest in other commodities.

C. Research Questions

To arrive at a conclusion, researchers compile the data into research questions that will be utilised to guide the investigation. As a result, the research question is:

1. How Does the Investment Decision Factor affect the Generation Z Investment on Cryptocurrency?
2. How prepared Generation Z in Indonesia to Invest in Cryptocurrency?

D. Research Objectives

1. To find the causes and effects relation between several factors that could affect the investment decision Generation Z on investing in cryptocurrency.
2. To analyse whether Generation Z in Indonesia is prepared to invest in cryptocurrency
3. To recommend what possibly could be improved by Generation z in Indonesia before or during deciding in investing in cryptocurrency.

E. Research Limitation

This research is focusing on Generation Z in Indonesia; therefore, the scope is limited to only Indonesian with considered as Generation Z. Variable that will be analysed are also limited to variables that are going to be explained in the literature review. This research was conducted between December 2021 – May 2022.

F. Literature Review

a. Cryptocurrency

Cryptocurrencies are digital financial assets that rely on cryptography decentralised technology to ensure ownership and transfer of ownership (Giudici, Milne, and Vinogradov, 2019). Cryptography decentralised technology that has been used to create a cryptocurrency is called blockchain technology (Wright and De Filippi, 2015). Blockchain technology comes from an automated peer-to-peer network system (Stefan, 2018). Automated peer-to-peer network systems enable the owner to make online transactions with the other party without passing through a financial institution (Nakamoto, 2008).

Cryptocurrency is founded on two concepts: cryptography-based asset disposal and distributed ledger technology. The cryptographic key is used to sign transactions and authenticate ownership in cryptography-based asset disposal (Soehartono and Pati, 2019). Distributed ledger technology (DLT) has emerged as an overarching concept for multi-party systems that operate without a central operator or authority (Rauschs et al, 2018).

b. Investment

Investment is a medium or long-term allocation of resources with the goal of recouping investment expenses and generating a significant profit (Virlics, 2013).

Investment involves putting money into an investment instrument for the purpose of earning more money (Gill, S et al. 2018). Rising investments is an effective approach to enhance output and profits (Reinikka, and Svensson, 2001). Because of increased consumption levels, people are no longer restricted to earning income from personal savings, and they are developing an interest in personal investment and financial management (Yang, 2022).

c. Cryptocurrency Investment

Cryptocurrencies can be applied as a payment method as well as a form of investment (Giudici, Milne, and Vinogradov, 2019). In addition to traditional financial equity markets, the cryptocurrency market provides new investment instruments for investors (Chowdhury and Mendelson, 2013). Individuals and institutional investors have concentrated on development of cryptocurrency as cryptocurrency rising in recognition (Kristoufek, 2015; Khan et al, 2020). One motive for purchasing a cryptocurrency, at least in the case of Bitcoin, is to make a speculative investment (Glaser et al. 2014).

Cryptocurrency is different from other investment instruments, the price of cryptocurrency is very unstable (Martin et al, 2022) and considered as high-risk trading that has similarity with gambling (Delfabbro, King and Williams, 2021; Mills and Nower, 2019). Soehartono and Pati (2019) stated define cryptocurrency as an asset that has high volatility which may cause short term problems, unpredictable risks even for medium- and long-term investment.

d. Generation Z

Generation Z is a group of people born between 1996 to 2012 (Schweinger, and Ladwig, 2018). In comparison to the previous generation, Generation Z has evolved distinct characteristics (Khalid, 2019). Generation Z are known as well-educated, technologically aware, imaginative, and creative generations (Priporas, Stylos and Fotiadis, 2017). This generation is at ease with the fact that there is more than one way to be itself. Its desire towards authenticity leads to more freedom of expression and a greater willingness to comprehend people from various backgrounds (Francis and Hoefel, 2018).

e. Generation Z Investment Behaviour

According to Fadilah et al, (2022) quoted from Anggarini, Putri, Lina (2021) Generation Z is also known as sandwich generation, which means that generation that has responsibility to fund themselves, parents, and its family. This condition motivates generation Z to be more aware about personal finance. Rising personal finance awareness will lead the person to be more aware of financial products and services including investment (Magron, 2012).

According to previous research conducted by Rosdiana in (2020), investment behaviour of Generation Z could be determined by four main factors, thus factors are a) Financial Literacy, b) Herding Behaviour, c) Risk Averse, and d) Risk Perception. Therefore, this research will be focusing on the four main factors with addition of cryptocurrency as the main object of investment instruments.

Financial Literacy

Financial literacy is described as the ability to make reasonable, well-informed decisions about money management (Worthington, 2006). This involves a broad knowledge of budgeting, a conceptual awareness of financial products offered by financial institutions, and the knowledge to make sensible investments to achieve one's financial goals (Nga, Yong and Sellappan, 2010).

Herding Behaviour

Herding behaviour is a kind of follow-up action in which one person follows another for a variety of motives and circumstances (Liem and Sukamulja, 2017). An investor's herding behaviour mostly happens due to the influence of the investors around them. A person with herding behaviour is easily convinced by the judgments of others, and this has an impact on investment decisions (Rosdiana, 2020).

Risk Averse

Risk aversion is a mindset owned by investors to avoid risk, alternatively it may be said that the investor will only invest if the predicted return would be higher than the risk (Sudana and Sallama, 2015). The purpose is to avoid losses to make good investment decisions (Irlayanti, 2017). Risk Averse can be measured by some indicators such as individual rationality, courage to reject risk, and performance to maximise wealth under limited alternatives of investment (Farooq and Sajid, 2015).

Risk Perception

Risk precipitation is a method of perception, evaluations, and analysis of an investment instrument's risk in relation to investment decisions by investors (Irlayanti, 2017). Terms of psychological considerations, every investor evaluates a risk in a unique way. (Rosdiana, 2020). According to research by Ullah (2015), Risk perception can be measured by the fear of investing in the stock with guaranteed profit, caution about unexpected market changes, concern about investing in stocks with a negative performance, and fear of investing in stocks with a favourable performance, to mention a few. However, the main object of this research is cryptocurrency, therefore the measurement will be improved a little bit by changing

the stocks market to cryptocurrency market (Ullah, 2015).

Investment Decision

Investment decision is a judgement to invest in an investment instrument that will result in the most utility or projected profit (Fachrudin and Fachrudin, 2016). After a thorough examination of the investment instrument, investment decisions are made (Virlics, 2013). Rosdiana (2020) mentioned that understanding the investment objective and estimating the return on investment can help to measure the investment decisions.

Prepared to Invest

Koonce (2011) stated that the effect of being prepared before investing is to prevent the unwanted result and achieve the investment objectives, the paper is also mentioned that before starting investment, person should know about their investment objectives or financial objectives, adequacy of investment funds, investment instrument, managing risk, and eliminate debt (Koonce, 2011).

G. Research Framework

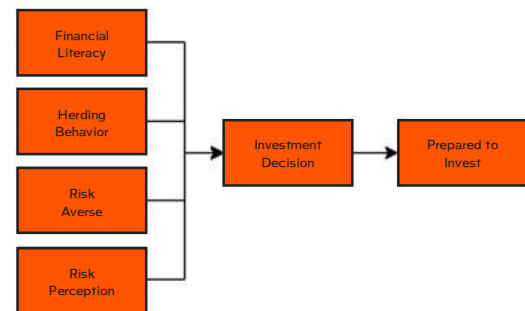


Figure 1: Research Framework

H. Hypothesis

- H1 : Financial literacy affect Generation Z in Indonesia to make investment decisions on cryptocurrency
- H2 : Herding Behaviour affect Generation Z in Indonesia to make investment decisions on cryptocurrency
- H3 : Risk Averse affect Generation Z in Indonesia to make investment decisions on cryptocurrency
- H4 : Risk Perception affect Generation Z in Indonesia to make investment decisions on cryptocurrency
- H5 : Generation Z in Indonesia is prepared to start or make an investment in Cryptocurrency based on evaluation of Investment Decision Factor

II. METHODOLOGY

Saunders, Lewis, and Thornhill (2009), present research onion model to explain several steps to create a better organized research methodology. Applying the research onions theory, this research will be adapting positivism philosophy to investigate this research. Supported with deduction theory development. Therefore, this research will be conducted using quantitative methods to test the developed hypothesis in order to reach the conclusion. Data that are needed will be collected using surveys to respondents who meet the criteria in accordance with this research.

Data will be collected using a survey method. Specifically, through online questionnaires methods, so target respondents could easily fill out the survey. The data acquired by conducting a survey is trustworthy because it is confined to the options offered, and it has an advantage in data analysis because it is relatively straightforward in coding, processing, and interpretation (Malhotra, 2010). To achieve expected results, the questionnaire is given with a short explanation about the research, filling guide, and brief explanation on each part according to the research problems and variables.

This research is conducted on specific demographics such as Generation Z and Indonesia citizens. According to literature review, Generation Z are people born from 1996 until 2012, therefore the targeted samples are Indonesians aged 11 – 26 years old. However, not all the Generation Z is eligible to do or perform cryptocurrency trading in Indonesia therefore, this research is more focused on Generation Z with age over 17. The number of samples needed are 200 samples. Yet the gathered data is 219, therefore the researcher used all of the data and the sample size became 219.

The survey questions will consist of designed questions to measure each of the variables that will be tested in this research. Start with the consent form, personal identity to match up the data with respondent requirements, and each variable questions in the form of statements or conditions that might be related with the respondents. The respondents are expected to evaluate whether the statements or conditions are related to them or not by using the Likert scale from 1 to 5. Where 1 means totally disagree with the questions and 5 means strongly agree with the questions. The questions are made based on the table below (Table 1) of questionnaire guidelines.

Table 1 : Questionnaire Guideline

Variable	Indicator Label	Measurement Indicator	Scale
Financial Literacy	FL1	Understanding of personal finance situation	Likert Scale from 1 to 5
	FL2	Personal financial budgeting	
	FL3	Setting financial priorities	
	FL4	Knowledge of financial products / instruments and services.	
Herdng Behaviour	HB1	Influence of others to start investing	Likert Scale from 1 to 5
	HB2	Influence of other investors' decision to decide commodity (coins).	
	HB3	Reaction towards other investors decisions	
	HB4	Source of Information	
Risk Averse	RA1	Individual rationality toward risk	Likert Scale from 1 to 5
	RA2	Courage to prevent risk	
	RA3	Maximise profit under limited alternative	
Risk Perception	RP1	Caution of high risk investment	Likert Scale from 1 to 5
	RP2	Caution about unexpected market changes	
	RP3	Concern on negative performance market	
Investment Decisions	ID1	Knowing investment objectives	Likert Scale from 1 to 5
	ID2	Having an understanding about investment market and capital growth and how to measure it.	
	ID3	Planing before starting investment	
Prepared to Invest	P1	Understanding investment risk	Likert Scale from 1 to 5
	P2	Availability of Investment Funds	
	P3	Readiness to accept risk and profitability	
	P4	Understanding of cryptocurrency characteristics	

From the questionnaire guideline, online surveys are made. Surveys are conducted through google form platform. The survey itself is made in two versions to prevent language barrier from the respondents.

Aikern, West and Pitts (2003) stated that the method to analyse the relationship between a set of independent variables with a single variable (or criteria) is multiple regression analysis. There is an extension version regression model that is used to examine the validity of the correlation matrix against two or even more causal hypotheses that the researcher is investigating called path analysis. Regression path analysis is performed for each variable in the model as a dependent on others that the model suggests are causes (Garson, 2013). Therefore, data analysis that will be used in this research is path analysis. In addition, the data is analysed using SPSS programs with following stages.

A. Descriptive Analysis

Descriptive analysis is a statistic that is used to evaluate data by summarising data that has been acquired as it is without the intention of drawing generalizable conclusions or generalisations (Sugiyono, 2013).

B. Data Quality Test

a. Data Validity Test

Data validity test is a measurement to test whether

the data that has been collected is valid to be used for research (Rosdiana, 2020). Measuring validity can be accomplished by comparing the value of r arithmetic with r tables for degree of freedom (df) = $n-2$, where (n) is the number of study samples. If r arithmetic is greater than r table and the value is positive, the item, query, or indicator is judged valid (Ghozali, 2009).

b. Data Reliability Test

Data reliability test is a measurement to test the consistency of variable questions from the survey that was conducted. Consistency can be seen through Cronbach alpha calculation and can be declared as a consistent variable if the result of Cronbach alpha is bigger than 0.6 (Rosdiana, 2020).

C. Classic Assumption Test

a. Normality Test

Objective of the normality test is to test whether the independent and dependent variables from the conceptual framework are both normally distributed or not. The Kolmogorov-Smirnov test is the traditional assumption test for normality; with this test, data can be known to be regularly distributed or not. If the assumption sig. (2-tailed) is greater than 0.05, the data is normally distributed, and if the assumption sig. (2-tailed) is less than 0.05, the data is not normally distributed (Santoso, 2002).

b. Multicollinearity Test

The multicollinearity test seeks to determine whether there is a relationship between independent variables (independent). A good model should not have any independent variables. Detection of multicollinearity by assessing tolerance values and Variance Inflation Factors (VIF) less than 10 and tolerance values more than 0.1 (Ghozali, 2009).

c. Heteroscedasticity Test

The heteroscedasticity test determines whether there is unequal variance between the residuals of one observation and the residuals of another in the regression model. If the variance between one observation's residual and another's constant, this is referred to as homoscedasticity; if the variance varies, this is referred to as heteroscedasticity. A decent regression model is one in which homoscedasticity or heteroscedasticity does not arise (Rosdiana, 2020).

D. Path Analysis

Garson (2013) explained that Path analysis necessitates the standard regression assumptions. It is particularly sensitive to model specification because the absence of relevant causal variables or the inclusion of extraneous variables frequently has a significant impact on the

path coefficients, which are used to assess the relative importance of various direct and indirect causal paths to the dependent variable.

a. Hypothesis Testing

Determination of the Coefficient Test (R^2)

Rosdiana (2020), quoted on her research from Ghozali (2009) that the magnitude of the coefficient of total determination is used to determine how much the ability of the independent variables to explain the dependent variable is (R^2). A close to one value indicates that the independent variables supply nearly all of the information required to forecast variations in the dependent variable.

Statistical T-Test

Statistical analysis, the statistical t-test determines how much influence one independent variable has on the variation of the dependent variable (Rosdiana, 2020). Based on research from Priyanto (2014), The probability of its relevance can be used as the basis for decision making with condition if the significance probability value of variable is lower than the maximum value of significance of confident level, then the hypothesis is accepted, in other words, if the significance probability value of variable is higher than the the maximum value of significance of confident level, then the hypothesis is rejected.

Statistical F-Test

The F-test is used to show whether all the independent or independent variables contained in the model have a joint effect on the dependent or dependent variable (Ghozali, 2006). Amal, Kusnadi, and Nugraha (2022), mentioned that the hypothesis will be rejected if f arithmetic is greater than f table, in the other word, hypothesis is accepted if f arithmetic is less than f table.

III. RESULTS

A. Descriptive Analysis

a. Respondents' Demographic

Age

Table 2 : Age Descriptive Statistic

Criteria	Frequency	Percentage
17 - 21 Years Old	183	83.56%
22 - 27 Years Old	36	16.44%
Total	219	100%

Gender

Table 3 : Gender Descriptive Statistic

Criteria	Frequency	Percentage
Male	63	28,77%
Female	151	68.95%
Prefer not to say	5	2.28%
Total	219	100%

Investment or Interest on Cryptocurrency

Table 4 : Investment or Interest on Cryptocurrency Descriptive Statistic

Criteria	Frequency	Percentage
Yes	189	86.30%
Maybe	30	13.70%
No	0	0%
Total	219	100%

b. Variables

Financial Literacy

Table 5 : Financial Literacy Descriptive Statistic

Variable	Mean	Median	Mode	Std. Dev
FL1	4.52	5.00	5.00	0.69
FL2	4.40	5.00	5.00	0.70
FL3	4.37	4.00	5.00	0.68
FL4	4.11	4.00	4.00	0.76

Herding Behavior

Table 6 : Herding Behaviour Descriptive Statistic

Variable	Mean	Median	Mode	Std. Dev
HB1	3.78	4.00	5.00	1.13
HB2	3.68	4.00	4.00	1.08
HB3	3.53	4.00	4.00	1.06
HB4	3.53	4.00	4.00	1.07

Risk Averse

Table 7 : Risk Averse Descriptive Statistic

Variable	Mean	Median	Mode	Std. Dev
RA1	4.42	5.00	5.00	0.76
RA2	4.24	4.00	5.00	0.78
RA3	4.18	4.00	4.00	0.81

Risk Perception

Table 8 : Risk Perception Descriptive Statistic

Variable	Mean	Median	Mode	Std. Dev
RP1	4.41	5.00	5.00	0.77
RP2	4.28	4.00	4.00	0.77
RP3	4.17	4.00	4.00	0.80

Investment Decisions

Table 9 : Investment Decisions Descriptive Statistic

Variable	Mean	Median	Mode	Std. Dev
ID1	4.49	5.00	5.00	0.74
ID2	4.31	4.00	4.00	0.74
ID3	4.28	4.00	4.00	0.72

Prepared to Invest

Table 10 : Prepared to Invest Descriptive Statistic

Variable	Mean	Median	Mode	Std. Dev
PI1	4.23	5.00	5.00	0.97
PI2	4.15	4.00	4.00	0.93
PI3	4.05	4.00	4.00	0.84
PI4	4.15	4.00	4.00	0.76

B. Data Quality Test

a. Data Validity Test

Financial Literacy

Table 11 : Financial Literacy Data Validity Test

Correlations:		FL1	FL2	FL3	FL4	TOTAL
FL1	Pearson Correlation	1	0.651**	0.400**	0.376**	0.800**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	219	219	219	219	219
FL2	Pearson Correlation	0.651**	1	0.388**	0.428**	0.817**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	219	219	219	219	219
FL3	Pearson Correlation	0.400**	0.388**	1	0.287**	0.680**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000
	N	219	219	219	219	219
FL4	Pearson Correlation	0.376**	0.428**	0.287**	1	0.712**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	219	219	219	219	219
TOTAL	Pearson Correlation	0.800**	0.817**	0.680**	0.712**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	219	219	219	219	219

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

Herding Behavior

Table 12 : Herding Behavior Data Validity Test

Correlations

		HB1	HB2	HB3	HB4	TOTAL
HB1	Pearson Correlation	1	0.651**	0.577**	0.596**	0.830**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	219	219	219	219	219
HB2	Pearson Correlation	0.651**	1	0.670**	0.646**	0.866**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	219	219	219	219	219
HB3	Pearson Correlation	0.577**	0.670**	1	0.724**	0.865**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000
	N	219	219	219	219	219
HB4	Pearson Correlation	0.596**	0.646**	0.724**	1	0.864**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	219	219	219	219	219
TOTAL	Pearson Correlation	0.830**	0.866**	0.865**	0.864**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	219	219	219	219	219

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

Risk Averse

Table 13: Risk Averse Data Validity Test

Correlations

		RA1	RA2	RA3	TOTAL
RA1	Pearson Correlation	1	.576**	.451**	.809**
	Sig. (2-tailed)		.000	.000	.000
	N	219	219	219	219
RA2	Pearson Correlation	.576**	1	.558**	.859**
	Sig. (2-tailed)	.000		.000	.000
	N	219	219	219	219
RA3	Pearson Correlation	.451**	.558**	1	.817**
	Sig. (2-tailed)	.000	.000		.000
	N	219	219	219	219
TOTAL	Pearson Correlation	.809**	.859**	.817**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	219	219	219	219

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

Risk Perception

Table 14 : Risk Perception Data Validity Test

Correlations

		RP1	RP2	RP3	TOTAL
RP1	Pearson Correlation	1	.661**	.473**	.844**
	Sig. (2-tailed)		.000	.000	.000
	N	219	219	219	219
RP2	Pearson Correlation	.661**	1	.534**	.869**
	Sig. (2-tailed)	.000		.000	.000
	N	219	219	219	219
RP3	Pearson Correlation	.473**	.534**	1	.804**
	Sig. (2-tailed)	.000	.000		.000
	N	219	219	219	219
TOTAL	Pearson Correlation	.844**	.869**	.804**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	219	219	219	219

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

Investment Decision

Table 15 : Investment Decision Data Validity Test

Correlations

		ID1	ID2	ID3	TOTAL
ID1	Pearson Correlation	1	.418**	.434**	.800**
	Sig. (2-tailed)		.000	.000	.000
	N	219	219	219	219
ID2	Pearson Correlation	.418**	1	.347**	.761**
	Sig. (2-tailed)	.000		.000	.000
	N	219	219	219	219
ID3	Pearson Correlation	.434**	.347**	1	.762**
	Sig. (2-tailed)	.000	.000		.000
	N	219	219	219	219
TOTAL	Pearson Correlation	.800**	.761**	.762**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	219	219	219	219

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

Prepared to Invest

Table 16 : Prepared to Invest Data Validity Test

Correlations		PI1	PI2	PI3	PI4	TOTAL
PI1	Pearson Correlation	1	.700 ^{**}	.518 ^{**}	.489 ^{**}	.850 ^{**}
	Sig. (2-tailed)		.000	.000	.000	.000
	N	219	219	219	219	219
PI2	Pearson Correlation	.700 ^{**}	1	.690 ^{**}	.426 ^{**}	.879 ^{**}
	Sig. (2-tailed)	.000		.000	.000	.000
	N	219	219	219	219	219
PI3	Pearson Correlation	.518 ^{**}	.690 ^{**}	1	.441 ^{**}	.812 ^{**}
	Sig. (2-tailed)	.000	.000		.000	.000
	N	219	219	219	219	219
PI4	Pearson Correlation	.489 ^{**}	.426 ^{**}	.441 ^{**}	1	.700 ^{**}
	Sig. (2-tailed)	.000	.000	.000		.000
	N	219	219	219	219	219
TOTAL	Pearson Correlation	.850 ^{**}	.879 ^{**}	.812 ^{**}	.700 ^{**}	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	219	219	219	219	219

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

b. Data Reliability Test

Table 17 : Reliability Analysis

Variable	Cronbach Alpha	Reliability Test
FL	0.742	Reliable
HB	0.878	Reliable
RA	0.770	Reliable
RP	0.789	Reliable
ID	0.666	Reliable
PI	0.829	Reliable

C. Classic Assumption Test

a. Normality Test

Table 18 : Normality Analysis

		Unstandardized Residual
N		219
Normal Parameters ^a	Mean	.0000000
	Std. Deviation	1.30039956
Most Extreme Differences	Absolute	.035
	Positive	.031
	Negative	-.035
Test Statistic		.035
Asymp. Sig. (2-tailed)		.200 ^a

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

Statistical Test	P-value (Asymp. Sig. 2-tailed)	Normality
0.035	0.2	Normally Distributed

b. Multicollinearity Test

Table 19 : Multicollinearity Analysis

Coefficients ^a		Unstandardized Coefficients		Standardised Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	4.384	0.827		5.301	0.000		
	FL	0.198	0.056	0.247	3.525	0.001	0.556	1.799
	HB	-0.056	0.025	-0.122	-2.228	0.027	0.906	1.104
	RA	0.088	0.061	0.100	1.447	0.149	0.568	1.762
	RP	0.219	0.062	0.251	3.552	0.000	0.544	1.839
	PI	0.128	0.041	0.214	3.085	0.002	0.568	1.762

a. Dependent Variable: ID

c. c. Heteroscedastic Test

Table 20 : Heteroscedastic Analysis

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	2.707	0.472		0.000
	FL	-0.044	0.032	-0.117	0.178
	HB	0.002	0.015	0.008	0.910
	RA	-0.172	0.073	-0.157	0.068
	RP	-0.048	0.033	-0.120	0.146
	PI	-0.019	0.023	-0.068	0.421

a. Dependent Variable: ABS_RES

D. Path Analysis

Path analysis in this research will be divided into two models. The first one will analyse the first model where the independent variables are financial literacy (FL), herding behaviour (HB), risk averse (RA), risk perception (RP) and the dependent variable is investment decision (ID). The second model will be using investment decision (ID) as the independent variable and Prepared to Invest (PI) as the dependent variable.

a. Path Analysis Model I

Formulation of First Model

Table 21 : Path Analysis Model I

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	4.299	0.843		0.000
	Financial Literacy	0.261	0.054	0.324	0.000
	Herding Behaviour	-0.036	0.025	-0.079	0.146
	Risk Averse	0.131	0.060	0.150	0.031
	Risk Perception	0.240	0.062	0.276	0.000

a. Dependent Variable: Investment Decision

According to the conceptual framework of this research, the independent variable (X) for model I are Financial Literacy (X1), Herding Behaviour (X2), Risk Averse (X3), Risk Perception (X4) and the dependent variable (Y) is Investment Decision. Therefore, the formulation for model I will be:

$$ID = \beta_0 + \beta_1 FL + \beta_2 HB + \beta_3 RA + \beta_4 RP + \epsilon$$

From the table above (Table 21), the formula obtained from this research is:

$$ID = 4.299 + 0.261FL - 0.036HB + 0.131RA + 0.24RP$$

Statistical T-Test

Table 22 : Statistical T-Test Model I

Variable	Sig.
FL	0.000
HB	0.146
RA	0.031
RP	0.000

Referring to table above (Table 22), There are three independent variables (Financial Literacy, Risk Averse, Risk Perception) are partially influence dependent variable (Investment Decision) because of the significance value of all of three independent variables are less than 0.005 (FL = 0.000, RA = 0.031, RP = 0.000). Herding behaviour does not partially influence Investment Decisions, because the significance value of Herding behaviour is equal to 0.146 (greater than 0.05).

Statistical F-Test Model 1

Table 23 : Statistical F-Test Model I

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	250.560	4	62.640	34.807	.000 ^b
	Residual	385.121	214	1.800		
	Total	635.680	218			

a. Dependent Variable: Investment Decision

b. Predictors: (Constant), Risk Perception, Herding Behaviour, Financial Literacy, Risk Averse

Referring to table above (Table 23), The significance value of model I regression is 0.000, meaning that are a joint influence between a set of independent variables (Financial Literacy, Herding Behaviour, Risk Averse, Risk Perception) towards dependent variables (Investment Decisions).

Coefficient of Determination (R2)

Table 24 : Coefficient of Determination Model I

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.628 ^a	0.394	0.383	1.342

a. Predictors: (Constant), Risk Perception, Herding Behaviour, Financial Literacy, Risk Averse

Referring to table above (Table 24), the adjusted R square of model I is 0.383, meaning that the contribution of independent variables of the first model (Financial Literacy, Herding Behaviour, Risk Averse, Risk Perception) toward the dependent variable (Investment Decisions) that is tested in this research is 0.383 or 38.3%.

b. Path Analysis Model II

Formulation of second model

Table 25 : Path Analysis Model II

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	5.805	1.304		-4.451	0.000
	Investment Decision	0.823	0.099	0.492	8.325	0.000

a. Dependent Variable: Prepared to Invest

According to the conceptual framework of this research, there is only one independent variable (X) for model II which is Investment decision, and the dependent variable (Y) is Prepared to Invest. Therefore, the formulation for model I will be:

$$PI = \beta_0 + \beta_1 ID + \epsilon$$

From the table above (Table 25), the formula obtained from this research is:

$$PI = 5.805 + 0.823ID$$

To determine the influence of independent variable (Investment Decision) to dependent variable (Prepared to Invest) statistical test will be done. But it will be different from the first model because in this model there is only one independent variable to be tested through the dependent variable, meaning there will be no difference between partial and joint influence toward each variable.

Statistical T-Test

Table 26: Model II Statistical T- Test

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	430.782	1	430.782	69.302	0.000 ^b
	Residual	1348.871	217	6.216		
	Total	1779.653	218			

a. Dependent Variable: Prepared to Invest

b. Predictors: (Constant), Investment Decision

Referring to table above (Table 26), The significance value of model I regression is 0.000, meaning that the independent variable (investment decision) has influence on the dependent variable (prepared to investment). It happens due to the significance value of investment decisions being less than 0.05 (0.00).

Coefficient of Determination (R2)

Table 27 : Coefficient of Determination Model II

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.492 ^a	0.242	0.239	2.493

a. Predictors: (Constant), Investment Decision

Referring to table above (Table 27), the adjusted R square of model II is 0.239, meaning that the contribution of independent variables of the second model (Investment Decisions) toward the dependent variable (Prepared to Invest) that is tested in this research is 0.239 or 23.9%.

c. Path Analysis Diagram

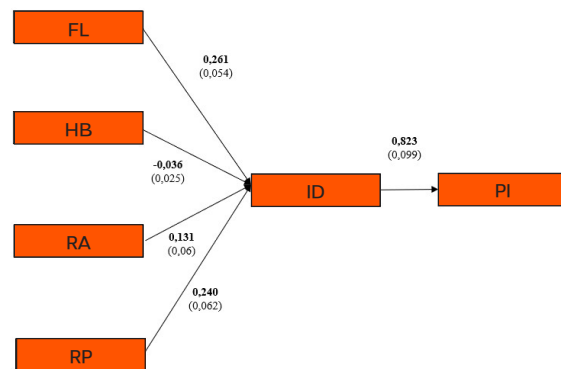


Figure 2 : Path Analysis Diagram

Hypothesis Testing

Table 28 : Hypothesis Testing

Hypothesis	Structural Path	T-Statistics	P-Value	Result
H1	Financial Literacy → Investment Decisions	4.862	0.000	Accepted
H2	Herding Behaviour → Investment Decisions	-1.459	0.146	Rejected
H3	Risk Averse → Investment Decisions	2.177	0.031	Accepted
H4	Risk Perception → Investment Decisions	3.851	0.000	Accepted
H5	Investment Decisions → Prepared to Invest	8.325	0.000	Accepted

Hypothesis will be accepted if T-Statistics of the hypothesis in question is higher than 1.96 and the P-Value or the significance level of the variable is less than 0.05 for 95% confidence level.

IV. DISCUSSION

Based on the data analysis result, all variables used in this research can be determined as valid and reliable data to be carried further for the research, therefore the accuracy

of relationships measurement either directly or indirectly affected between variables is accurate. According to path analysis results from the first and the second models, each independent variable is partially and jointly affecting the dependent variable, except for herding behaviour that has significance value above the maximum value ($0.146 > 0.05$) which implementing that Herding Behaviour is not partially influence Generation Z in Indonesia in making decisions on investing in cryptocurrency.

$$ID = 4.299 + 0.261FL - 0.036HB + 0.131RA + 0.240RP$$

According to path analysis of the first and second model which produce each own path analysis formulation, can be concluded that from the first model with formulation:

This path analysis formulation shown that,

- o O is equal to 4.299, therefore investment decision is also equal to 4.299 if the value of all independent variables is zero or constant.
- o FL is equal to 0.261, meaning that for every increase of one Financial Literacy unit, Investment Decisions will increase by 0.261 with the assumption that other variables have a fixed value.
- o HB is equal to -0.036, meaning that for every increase of one Herding Behaviour unit, Investment Decisions will decrease by 0.036 with the assumption that other variables have a fixed value.
- o RA is equal to 0.131, meaning that for every increase of one Risk Averse unit, Investment Decisions will increase by 0.131 with the assumption that other variables have a fixed value.
- o RP is equal to 0.240, meaning that for every increase of one Risk Perception unit, Investment Decisions will increase by 0.240 with the assumption that other variables have a fixed value.

From the second model formulation,

$$PI = 5.805 + 0.823ID$$

Can be concluded that the path analysis formulation shows,

- o O is equal to 5.805, therefore prepared to invest is also equal to 5.805. If the value of independent variable or investment decisions is either zero or constant.
- o ID is equal to 0.823, meaning that for every increase of one Investment Decisions unit, Prepared to Invest will increase by 0.823.

V. CONCLUSION

From the path analysis, can be concluded that all the hypotheses that exist in this research are accepted except for the Hypothesis 2, meaning that the factors that could affect the investment decision making process of Generation Z in Indonesia to invest in cryptocurrency are financial literacy, risk aversion, and risk perception. Herding behaviour is considered to have no partially direct effect on Generation Z in Indonesia's decision-making process for investment in cryptocurrency. Investment decisions later will affect the preparation of Generation Z in Indonesia before making an investment in cryptocurrency. This argument is strengthened by the calculation results of the coefficient of determination from both path analysis models. The first coefficient of determination showed that the contribution of the independent variables toward the dependent variable is 38.3%, meaning that 38.3% of Generation z investment decisions on making investments in cryptocurrency are affected by financial literacy, herding behaviour, risk aversion, and risk perception. The second coefficient of determination showed that the contribution of the investment decision variable toward the prepared to invest variable was 23.9%, meaning that the measurement of preparation Generation Z in making an investment on cryptocurrency is affected by 23.9% by investment decision making.

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