

ANALYSIS OF GEN Z'S GREEN INVESTMENT INTENTION: THE APPLICATION OF THEORY OF PLANNED BEHAVIOR

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ARTICLE INFORMATION

ABSTRACT

Article History:

Received:

Accepted:

Published:

Keywords:

Green Investment Intention
Attitudes Towards Green Investment
Subjective Norm
Perceived Behavioral Control

Green investment intentions have emerged in response to the challenges of climate change and the urgent need to adopt sustainable economic practices. The purpose of this study was to determine the factors that influence green investment intentions in Generation Z in Jakarta, with an age range between 17-26 years. This study used a purposive sampling technique with survey data collection methods. Data was collected using Google Forms with a total of 384 respondents. Data were analyzed using Structural Equation Model (SEM) through AMOS 24.0 software. The results showed that attitudes toward green investment had a significant effect on green investment intentions and perceived behavioral control had a significant effect on green investment intentions. In contrast, subjective norms had no significant effect on green investment intentions.

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INTRODUCTION

Total greenhouse gas emissions during 2010-2019 continued to increase compared to the previous decade. In 2019, global greenhouse gas emissions were 11% higher than in 2010. This means greenhouse gas emissions were 53% higher than in 1990 (Ritchie et al., 2020). In Indonesia, according to data from Ritchie et al. (2020), the total increase in greenhouse gas emissions during the 2010-2019 period was above the global increase. In 2019, total emissions in Indonesia increased by 73% compared to 2010.

According to research by the Swiss Re Institute, climate change will cause the world to lose around 10% of its total economic value (Swiss Re Institute, 2021). Rising external costs will affect the profitability of companies globally as well as the diversification of investment portfolios. These increases are inevitably reflected in long-term increases in insurance premiums, taxes, and prices, which in turn will have a negative effect on future cash flows and dividends in investment portfolios (Staub-Bisang, 2012). Given this, continuing to invest in environmentally unsustainable companies will increase the risks associated with climate change and hinder the transformation of society and industry toward low-emission development (Intergovernmental Panel on Climate Change, 2022).

According to Staub-Bisang (2012), companies that do not make changes to meet climate challenges may profit in the short or medium term, but will inevitably lose in the long term. On the other hand, investors can seize new challenges as opportunities. Investing in

companies that dare to address environmental challenges in their operational strategies and focus on sustainability effects will generate profits as a result of adapting working conditions.

Based on Thanki et al. (2022), investments that focus on environmental issues fall into the category of socially responsible investments (SRI) or what is known as "environmental, social, governance (ESG) investing", "sustainable investing", and "green investing". According to Shipochka (2013), green investing is an investment activity that focuses on companies or projects that are committed not only to the conservation of natural resources, but also to the discovery and production of alternative energy sources, the implementation of green water and air projects, and environmentally friendly business practices.

Investors choose environmentally-focused investments for many reasons. In general, some investors are motivated by financial concerns. In addition, private investors want to do good in their investments by realizing environmental and/or social goals (Staub-Bisang, 2012). A survey of large Swedish investment institutions that examined conventional and sustainable investors found that allocations to sustainable investments are driven by the belief that these investments will result in better long-term performance than conventional investments. Investors have financial beliefs about risk and about increasing market share that drive them to increase sustainable investments (Jansson & Biel, 2014).

According to a report from the Global Sustainable Investment Alliance (GSIA), in 2020, the global green investment market amounted to approximately \$35.3 trillion. This represents 36%, or more than a third of the value of financial assets in the world's five largest market regions. In 2020, the sustainable investment market was dominated by the United States with an investment value of \$17.08 trillion. The European market accounted for \$12.01 trillion, Japan for \$2.8 trillion, and Canada for \$2.4 trillion. Together, the sustainable investment markets in Australia and Asia generated \$906 billion. This represents a 15% increase over two years (2018-2020) and a 55% increase over four years (Global Sustainable Investment Alliance, 2020). Investors are increasingly driven by sustainability factors such as environmental, social, and governance that are not yet reflected in a company's balance sheet but can affect future profits.

In Indonesia, there is an increasing trend of public awareness to invest in sustainable investments. Based on the Global Investor Study 2022 conducted by Schroders (2022), 83% of Indonesians responded that it is "very important" to invest in funds built on personal needs and principles based on a level of knowledge of sustainable investing.

Green investment intentions have emerged as a promising solution in an era characterized by the urgent need to address climate change and achieve economic sustainability. Through a deeper understanding of the factors that influence green investment intentions made by potential future generations, such as Generation Z, sustainable

investment practices can be leveraged in driving change. Thus, this article analyzes the factors influencing Generation Z's green investment intentions to create a greener and more sustainable future..

LITERATURE REVIEW

Theory of Planned Behavior

The Theory of Planned Behavior (TPB) was introduced as a social psychological theory that explains human behavior and is an extension of the Theory of Reasoned Action (TRA) (Ajzen, 1991). According to TPB, human behavior is influenced by three things: beliefs about the possible consequences and experiences associated with behavior (behavioral beliefs), beliefs about normative expectations and the behavior of significant others (normative beliefs), and beliefs about the existence of factors that can facilitate or hinder the performance of behavior (control beliefs). Behavioral beliefs generate pleasant or unpleasant attitudes toward a behavior, normative beliefs generate perceived social pressure or subjective norms, and control beliefs give rise to perceived behavioral control (Ajzen, 2006). In TPB, attitudes toward behavior and subjective norms will provide motivation to engage in the behavior. However, the intention to perform the behavior is only formed when the perceived control over the behavior is strong enough. Thus, the higher the attitude, subjective norm, and perceived behavioral control, the stronger one's intention to perform a behavior (Ajzen, 2020).

Green Investment Intention

According to Ajzen (1991), behavioral intention indicates how hard a person will try and how much effort will be made to perform a behavior. In addition, according to Yadav & Pathak (2017), intention indicates an individual's willingness to perform certain behaviors. Intention is used to predict motivation that will influence behavior that grows due to information that provokes a person's motivation to make decisions (Masrurun & Yanto, 2015). The stronger the intention to engage in a behavior, the more likely the behavior will be carried out. In the context of stock investment, stock investment intention can be interpreted as the desire or seriousness of a person to invest in stocks (Seni & Ratnadi, 2017).

Referring to stock investment, a person's intention to invest can be measured through his persistence in learning all aspects of investment and practicing it even though he has to sacrifice time and effort. A person with a high intention to invest will tend to find out many things related to the investment itself, such as the type of investment, profits, and risks that may be obtained (Nugraha & Rahadi, 2021).

This research defines green investment intention as an individual's internal desire or tendency that will be a driving factor or inhibitor of behavior to make green investments in the future.

Ajzen (2002) argues that individual behavioral intention is formed by a combination of three constructs: attitudes toward certain behaviors, subjective norms that influence individuals, and self-perceived behavioral control.

Attitude towards Green Investment

Ajzen (1991) argues that attitude is a personal factor related to a person's evaluation of behavior and refers to the extent to which a person has a pleasant or unpleasant assessment of behavior. According to Graham-Rowe et al. (2015), Attitude reflects the extent to which a person has a view of a behavioral performance positively or negatively.

Investors' perceptions of future benefits can influence investment intentions. The greater the perceived benefits achieved, the higher the desire to invest. In addition, if individuals think that investing in the capital market is a good and right decision and can bring positive benefits to individuals, their interest in investing will be greater (Ningtyas & Istiqomah, 2021).

According to Ajzen & Driver (1992), there are two dimensions to the attitude variable towards behavior, namely:

Affective attitude is related to a person's tendency to like or dislike a behavior (pleasant/unpleasant).

Instrumental attitude is related to a person's belief about whether a behavior is beneficial or not for them.

This research defines an attitude towards green investment as the degree of positivity or negativity a person shows based on personal beliefs about green investment.

Subjective Norm

Subjective norms refer to the perceived social pressure to perform or not perform a behavior (Ajzen, 1991). According to Ham et al. (2015), subjective norms are the belief that an individual or group of

people who become a reference will approve and provide support for a person's certain behavior patterns. Subjective norms are determined by social pressure from others for a person to behave in a certain way and motivate them to conform to the beliefs of an individual or group of people who become a reference.

According to Fishbein & Ajzen (2011), there are two dimensions to the subjective norm variable, namely:

Injunctive norm reflects a person's perception of behaviors approved or disapproved by people considered important, motivating action because of the social rewards or punishments that arise from engaging or not engaging.

Descriptive norm reflects a person's perception of whether other people considered important are involved in a behavior so that it motivates action.

This research defines subjective norms as a person's belief to carry out the advice and input from the people around him who are his references (significant others), both supportive and unsupportive, to influence a person's behavior in making green investments.

Perceived Behavioral Control

Perceived behavioral control refers to the perceived ease or difficulty of performing a behavior and is assumed to reflect past experiences and anticipated obstacles and obstacles (Ajzen, 1991). In addition, Andriana (2019) revealed that perceived behavioral control is a person's level of understanding of the complexity of an action based on perceptions that arise from previous experiences and obstacles that can be resolved in carrying out an action.

According to Ajzen (2002), there are two dimensions to the perceived behavioral control variable, namely:

Perceived controllability refers to the extent to which a person feels they have access to the resources needed and their freedom in performing a behavior.

Self-efficacy refers to an individual's confidence to engage in a behavior or their perception of the ease or difficulty of performing the behavior.

This study defines perceived behavioral control as a person's beliefs about personal ability and control over obstacles in displaying behaviors that support or hinder green investment decision-making.

Relationship between attitude towards green investment and green investment intention

Osman et al. (2019) found that attitude towards behavior has a direct significant positive relationship with the intention of Malaysian Muslims to make green investments. This research is supported by Thanki et al. (2022), which shows that investors with a good attitude toward the concept of sustainability will strongly desire sustainable investment.

Research by Mahardhika & Zakiyah (2020) found that attitudes toward stock investment have a significant positive effect in increasing stock investment intentions. This is because one of the reasons investors choose to invest is because of their personal morality, so this attitude will develop into concrete actions toward investment. Therefore, an investor's attitude towards the social goals of an investment will affect their intention to invest in companies that prioritize

sustainability (Chai et al., 2019; Jansson & Biel, 2014).

However, the results of research by Paramita et al. (2018), which examines the younger generation's behavior in investing, found that attitudes do not have a significant influence on investment intentions. This is because young investors are still hesitant to make decisions to invest in stocks even though they have securities accounts. Securities account ownership is due to imitating friends or to fulfill certain subject assignments. The absence of a relationship between attitude and investment intention is in accordance with research by Jensen et al. (2016) and Low et al. (2022). This may occur because investors believe that sustainable investment has a lower rate of return, which affects their attitude.

Based on the findings of this study, the following hypothesis was developed:

H1: Attitude towards green investment has a significant positive effect on green investment intention among Generation Z in Jakarta.

Relationship between Subjective Norms and Green Investment Intention

According to research by Thanki et al. (2022), subjective norms have a significant positive influence on socially responsible investment intentions. In terms of socially responsible investment, subjective norm is the most significant predictor. This result confirms that investors lack confidence in their investment decisions, so investors are strongly influenced by the expectations and behavior of peers in their investment decision-making. This indirectly

emphasizes that there is a lack of literacy among investors so investors try to imitate the behavior of their friends and peers.

Thanki's research results support research conducted by Adam & Shauki (2014) and Jensen et al. (2016) which found that subjective norms significantly positively influence socially responsible investment intentions. The relationship illustrates that individual intentions are influenced by the beliefs of someone important to him about the actions that the individual should take.

After examining the subjective norms of young Indonesian investors to invest, Paramita et al. (2018) suggested that subjective norms do not have a significant influence on investment intentions because young investors generally do not have colleagues who are investors or are willing to become investors who can influence their perceptions of investing in stocks, so they do not have role models that they can invest in. Paramita's research is in accordance with research by Kumari et al. (2022), Nugraha & Rahadi (2021), and Osman et al. (2019), who also found that subjective norms do not have a significant influence on investors' investment intentions. This implicitly states that the younger generation will not be influenced to start stock investment despite having role models who encourage them.

Based on the findings of this study, the following hypothesis was developed:

H2: Subjective Norms have a significant positive effect on green investment intentions in generation Z in Jakarta.

Relationship between Perceived Behavioral Control and Green Investment Intention

Osman et al. (2019) found a significant positive effect between perceived behavioral control and green investment intention among Malaysian Muslims. The strong influence of perceived behavioral control on green investment intention indicates individual confidence in the importance of green investment.

According to research by Thanki et al. (2022), perceived behavioral control has a significant positive effect on socially responsible investment intentions. Perceived behavioral control has a significant positive effect on investment intentions, which indicates that individuals' belief in their capacity will encourage investment intentions.

Mahardhika & Zakiyah's (2020) research on perceived behavioral control shows that millennial investors' perceptions of their ability to invest in stocks will determine their intention to invest in stocks. Millennial investors who feel competent in investing in stocks are likely to increase their intensity in making stock transactions.

However, the results of the research by Paramita et al. (2018) on perceived behavioral control do not have a significant effect on investment intentions in the younger generation due to the fact that this group of investors is still novice investor who is just starting to become a professional investor. The lack of psychomotor skills in conducting transactions and stock analysis makes the younger generation feel that stock transactions are risky. The low level of overtrust of the younger generation as respondents makes the younger generation's perception of risk even higher. This result is in line with research conducted by Nugraha & Rahadi (2021), which found that perceived behavioral control has no significant effect on investment intention. Greater perceived behavioral control does not make the younger generation have a higher intention to invest.

Based on the findings of this study, the following hypothesis was developed:

H3: Perceived behavioral control has a significant positive effect on green investment intention among generation Z in Jakarta.

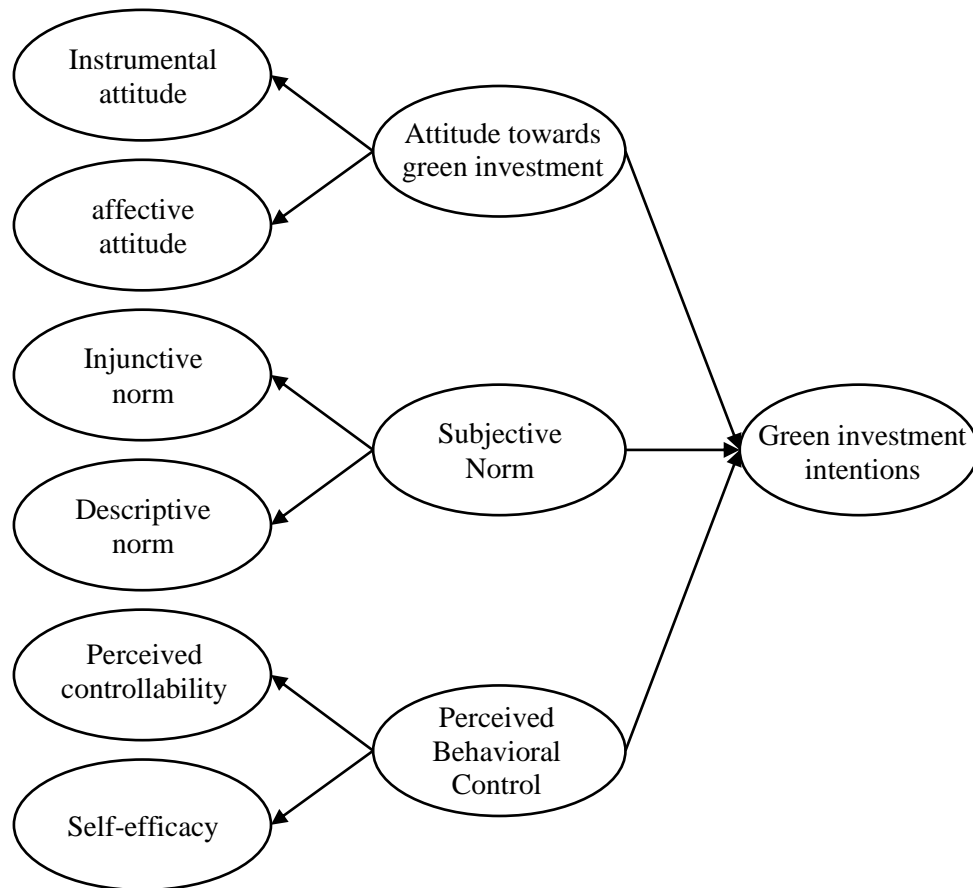


Figure 1. Hypothesized Framework

Source: Data Processed by Author (2023)

RESEARCH METHODS

Time and Place of Research

The data in this study was collected in March 2023. The research was conducted using a questionnaire distributed online through Google Forms. The questionnaire was circulated through social media to reach Generation Z in the Jakarta area.

Population and Sample

According to Swarjana & SKM (2022), the population is the whole person, case, or object on which the research results will be generalized. Based on the background that has been compiled, generation Z who lives in

Jakarta was chosen as the research population. The population in this study is always increasing, so the number cannot be known precisely so that the technique used to draw samples is non-probability sampling technique. Non-probability sampling is a procedure that involves sampling a population by providing different probabilities or opportunities for each member of the population who is then sampled (Safryani et al., 2020). The sampling method in this study is purposive sampling method, which is a sample obtained from researchers who consciously select samples with the most appropriate characteristics for research studies so that the samples taken meet the criteria in

accordance with the research (Andrade, 2021). The criteria needed are respondents who live in DKI Jakarta aged 17-26 years.

This study calculates the required sample size based on Lwanga's formula, which can be applied to infinite populations (Lwanga et al., 1991). The formula is shown as follows:

$$n = \frac{z^2 P(1 - P)}{d^2}$$

$$n = \frac{1,96^2 \times 0,5(1 - 0,5)}{0,05^2}$$

$$n = 384,16$$

From the formula above, the number of samples required is 384 samples.

Data Collection Techniques

This study uses primary data obtained through an online questionnaire distributed to respondents via Google Forms. The scale for filling out the questionnaire is a 6-point Likert scale (1=totally disagree, 2=disagree, 3=slightly disagree, 4=slightly agree, 5=agree, 6=totally agree).

Data Analysis Techniques

In this study, primary data obtained through online questionnaires will be analyzed in two stages. In the first stage, researchers will conduct exploratory factor analysis (EFA) using SPSS (Statistical Package for the Social Sciences) software. The second stage is confirmatory factor analysis (CFA) and hypothesis testing using AMOS (Analysis Moment of Structural) software. Second-order SEM is estimated to hypothesize the structural path to predict behavioral intention from the second-order latent factors of attitude towards green investment,

social norms, and perceived behavioral control.

RESULTS AND DISCUSSION

Respondents of this study are generation Z who have an age range of 17 to 26 years with birth years 1997-2012. Based on age, the majority of respondents are 17-20 years old with a total of 158 respondents or 41.1% of the total respondents. The rest, there are 125 respondents or 32.6% aged 21-23 years and 101 respondents or 26.3% aged 24-26 years.

Based on gender, women dominated filling out the questionnaire with 247 respondents (64.3%), while 137 respondents (35.7%) were men. The majority of respondents have a high school/equivalent education level with 204 respondents (53.1%) followed by respondents with an undergraduate education level of 144 respondents (37.5%). Respondents with diploma education level amounted to 30 respondents (7.8%), while the postgraduate education level was only owned by 6 respondents (1.6%).

The majority of respondents are students with a total of 252 respondents (65.6%), private employees with 86 respondents (22.4%), State Civil Apparatus/government employees with 17 respondents (4.4%), entrepreneurs with 17 respondents (4.4%), professionals (doctors, lawyers, etc.) with 4 respondents (1.0%), and investors with 8 respondents (2.1%).

Finally, the majority of respondents have investment experience of less than 1 year with a total of 272

respondents (70.8%). For investment experience for 1-3 years owned by 89 respondents (23.2%), 3-5 years by as many as 19 respondents (4.9%), and more than 5 years by as many as 4 respondents (1.0%).

The research data collected through an online questionnaire will be tested for validity through exploratory factor analysis (EFA) using SPSS 25, which is also used to find dimensions. Indicators that are retained are those with factor loading values of 0.4 or greater (Bahri & Zamzam, 2021).

The calculated results of the validity test will be continued for the reliability test. In this study, only constructs with a Cronbach's Alpha Coefficient score of 0.7 or greater were included in further analysis (Collier, 2020; Hair et al., 2019).

From Table 1, the validity test results found that all statements were valid, so no indicators were removed because the factor loadings value was above 0.4. In addition, all Cronbach's alpha values are more than 0.7, so all variables are declared reliable.

Tabel 1. Validity and Reliability Test Result

| Variables | Indicators | Factor Loadings | Cronbach's Alpha |
|--|------------|-----------------|------------------|
| Green Investment Intention (Y1) | IIH1 | .850 | 0.897 |
| | IIH2 | .763 | |
| | IIH3 | .811 | |
| | IIH4 | .763 | |
| | IIH5 | .743 | |
| | IIH6 | .698 | |
| | IIH7 | .805 | |
| | IIH8 | .740 | |
| Attitude towards Green Investment (X1) | SA1 | .744 | 0.911 |
| | SA2 | .807 | |
| | SA3 | .747 | |
| | SA4 | .766 | |
| | SA5 | .726 | |
| | SI1 | .796 | |
| | SI2 | .788 | |
| | SI3 | .774 | |
| Subjective Norm (X2) | SI4 | .738 | 0.896 |
| | NI1 | .782 | |
| | NI2 | .779 | |
| | NI3 | .796 | |
| | NI4 | .853 | |
| | ND1 | .851 | |
| Perceived Behavioral Control (X3) | ND2 | .807 | 0.914 |
| | KP1 | .741 | |
| | KP2 | .767 | |
| | KP3 | .592 | |
| | KP4 | .805 | |
| | ED1 | .790 | |
| | ED2 | .810 | |
| | ED3 | .800 | |
| | ED4 | .820 | |
| ED5 | .829 | | |

Source: Data Processed by Author (2023)

Table 2 shows the estimation results of the indicators on the green

investment intention variable. It is known that the probability value is

less than 0.05 and some Goodness of Fit Indices values state that the model does not meet the fit criteria and requires modification. To

achieve the fit, it is necessary to remove two indicators, namely IIH4 and IIH5.

Tabel 2. Goodness of Fit of Green Investment Intention Variable

| Goodness of Fit Indices | Cut of Value | Value before Modification | Explanation | Value after Modification | Explanation |
|-------------------------|--------------|---------------------------|-------------|--------------------------|-------------|
| <i>Chi-square</i> | Close to 0 | 142,837 | Not Fit | 10,474 | Fit |
| <i>Probability</i> | $\geq 0,05$ | 0,000 | Not Fit | 0,163 | Fit |
| CMIN/DF | $\leq 2,00$ | 7,142 | Not Fit | 1,496 | Fit |
| GFI | $\geq 0,90$ | 0,915 | Fit | 0,991 | Fit |
| AGFI | $\geq 0,90$ | 0,847 | Not Fit | 0,972 | Fit |
| TLI | $\geq 0,90$ | 0,895 | Not Fit | 0,993 | Fit |
| CFI | $\geq 0,90$ | 0,925 | Fit | 0,997 | Fit |
| RMSEA | $\leq 0,08$ | 0,127 | Not Fit | 0,036 | Fit |

Source: Data Processed by Author (2023)

Table 3 shows the estimation results of the indicators on the attitude towards green investment variable. It is known that the probability value is less than 0.05 and some Goodness of Fit Indices values state that the

model does not meet the fit criteria and requires modification. To achieve fit, it is necessary to remove three indicators, namely SA1, SA5, and SI4.

Tabel 3. Goodness of Fit of Attitude towards Green Investment Variable

| Goodness of Fit Indices | Cut of Value | Value before Modification | Explanation | Value after Modification | Explanation |
|-------------------------|--------------|---------------------------|-------------|--------------------------|-------------|
| <i>Chi-square</i> | Close to 0 | 167.980 | Not Fit | 12.118 | Fit |
| <i>Probability</i> | ≥ 0.05 | 0.000 | Not Fit | 0.097 | Fit |
| CMIN/DF | ≤ 2.00 | 6.461 | Not Fit | 1.731 | Fit |
| GFI | ≥ 0.90 | 0.911 | Fit | 0.990 | Fit |
| AGFI | ≥ 0.90 | 0.845 | Not Fit | 0.969 | Fit |
| TLI | ≥ 0.90 | 0.896 | Not Fit | 0.990 | Fit |
| CFI | ≥ 0.90 | 0.925 | Fit | 0.995 | Fit |
| RMSEA | ≤ 0.08 | 0.119 | Not Fit | 0.044 | Fit |

Source: Data Processed by Author (2023)

Furthermore, the path coefficient test of the attitude model towards green investment is carried out to determine what variables affect the model. Based on the results of path testing in Table 4, it is found that all variables have a significant effect on attitudes towards green investment with a significance level (α) = 0.05.

In the measurement model formed, every one-unit increase in attitude towards green investment will increase the value of affective attitude by 0.910 and every one-unit increase in attitude towards green investment will increase the value of instrumental attitude by 0.906.

Tabel 4. Path Coefficient of Structural Model of Attitude Toward Green Investment

| Variable | Coefficient | p-value | Explanation |
|---|-------------|---------|-------------|
| Attitude Toward Green Investment → Affective Attitude | 0.910 | 0.000 | Significant |
| Attitude Toward Green Investment → Instrumental Attitude | 0.906 | 0.000 | Significant |

Source: Data Processed by Author (2023)

Table 5 shows the estimation results of the indicators on the subjective norm variable. It is known that the probability value is less than 0.05 and some Goodness of Fit Indices

values state that the model does not meet the fit criteria so that it requires modification. To achieve suitability, it is necessary to remove one indicator, namely NI3.

Tabel 5. Goodness of Fit Subjective Norm Variable

| Goodness of Fit Indices | Cut of Value | Value before Modification | Explanation | Value after Modification | Explanation |
|-------------------------|--------------|---------------------------|-------------|--------------------------|-------------|
| Chi-square | Mendekati 0 | 87.898 | Not Fit | 0.577 | Fit |
| Probability | ≥ 0.05 | 0.000 | Not Fit | 0.750 | Fit |
| CMIN/DF | ≤ 2.00 | 10.987 | Not Fit | 0.288 | Fit |
| GFI | ≥ 0.90 | 0.930 | Fit | 0.999 | Fit |
| AGFI | ≥ 0.90 | 0.815 | Not Fit | 0.995 | Fit |
| TLI | ≥ 0.90 | 0.888 | Not Fit | 1.007 | Fit |
| CFI | ≥ 0.90 | 0.940 | Fit | 1.000 | Fit |
| RMSEA | ≤ 0.08 | 0.161 | Not Fit | 0.000 | Fit |

Source: Data Processed by Author (2023)

Furthermore, the path coefficient of the subjective norm model is tested to find out what variables affect the model. Based on the results of path testing in Table 6, it is found that all variables have a significant effect on subjective norms with a significance level (α) = 0.05.

In the measurement model formed, every one-unit increase in subjective norms will increase the value of injunctive norms by 0.906 and every one-unit increase in subjective norms will increase the value of descriptive norms by 1.007.

Tabel 6. Path Coefficient of Subjective Norm Structural Model

| Variable | Coefficient | p-value | Explanation |
|--|-------------|---------|-------------|
| Subjective Norms → Injunctive Norms | 0.906 | 0.000 | Significant |
| Subjective Norm → Descriptive Norm | 1.007 | 0.000 | Significant |

Source: Data Processed by Author (2023)

Table 7 shows the estimation results of the indicators on the perceived behavior control variable. It is known that the probability value is less than

0.05 and several Goodness of Fit Indices values state that the model does not meet the fit criteria so that it requires modification. To achieve

suitability, it is necessary to remove four indicators, namely KP1, KP3, ED1, and ED4.

Tabel 7. Goodness of Fit of Perceived Behavioral Control Variables

| Goodness of Fit Indices | Cut of Value | Value before Modification | Explanation | Value after Modification | Explanation |
|-------------------------|--------------|---------------------------|-------------|--------------------------|-------------|
| <i>Chi-square</i> | Close to 0 | 187.366 | Not Fit | 4.237 | Fit |
| <i>Probability</i> | ≥ 0.05 | 0.000 | Not Fit | 0.237 | Fit |
| CMIN/DF | ≤ 2.00 | 7.206 | Not Fit | 1.412 | Fit |
| GFI | ≥ 0.90 | 0.897 | Not Fit | 0.996 | Fit |
| AGFI | ≥ 0.90 | 0.822 | Not Fit | 0.978 | Fit |
| TLI | ≥ 0.90 | 0.895 | Not Fit | 0.996 | Fit |
| CFI | ≥ 0.90 | 0.924 | Fit | 0.999 | Fit |
| RMSEA | ≤ 0.08 | 0.127 | Not Fit | 0.033 | Fit |

Source: Data Processed by Author (2023)

Furthermore, the path coefficient test of the perceived behavior control model is carried out to find out what variables affect the model. Based on the results of path testing in table 8, it is found that all variables have a significant effect on perceived behavior control with a significance level (α) = 0.05.

In the measurement model formed, it can be said that every one-unit increase in perceived behavioral control will increase the value of perceived control ability by 0.846 and every one-unit increase in perceived behavioral control will increase self-efficacy by 1.037.

Tabel 8. Path Coefficient of Structural Model of Perceived Behavioral Control

| Variable | Coefficient | <i>p-value</i> | Explanation |
|---|-------------|----------------|-------------|
| Perceived Behavioral Control → Perceived Controllability | 0.846 | 0.000 | Significant |
| Perceived Behavioral Control → Self-efficacy | 1.037 | 0.000 | Significant |

Source: Data Processed by Author (2023)

The test results in Table 9 show that the full model is unsuitable. It is known that the probability value is less than 0.05 and several Goodness of Fit Indices values state that the model does not meet the fit criteria and requires modification. For model fit testing, several indicators need to be eliminated.. Three indicators on the green investment intention variable that need to be removed, namely IIH6, IIH7, and IIH8, so there are three indicators left. Then there is

one indicator on instrumental attitudes and one indicator on affective attitudes, namely S11 and SA4, which need to be deleted so that two indicators remain on each variable. In addition, the injunctive norm needs to delete one variable, namely NI2, so that the injunctive norm and descriptive norm variables each have two indicators. Finally, the self-efficacy variable needs to delete one variable, ED5, so that there are two variables in the perceived

controllability variable and self-efficacy.

Tabel 9. Goodness of Fit Full Model SEM

| Goodness of Fit Indices | Cut of Value | Value before Modification | Explanation | Value after Modification | Explanation |
|-------------------------|--------------|---------------------------|-------------|--------------------------|-------------|
| <i>Chi-square</i> | Close to 0 | 569.662 | Not Fit | 91.537 | Fit |
| <i>Probability</i> | ≥ 0.05 | 0.000 | Not Fit | 0.140 | Fit |
| CMIN/DF | ≤ 2.00 | 2.983 | Not Fit | 1.174 | Fit |
| GFI | ≥ 0.90 | 0.881 | Not Fit | 0.956 | Fit |
| AGFI | ≥ 0.90 | 0.842 | Not Fit | 0.933 | Fit |
| TLI | ≥ 0.90 | 0.912 | Fit | 0.991 | Fit |
| CFI | ≥ 0.90 | 0.927 | Fit | 0.993 | Fit |
| RMSEA | ≤ 0.08 | 0.072 | Not Fit | 0.026 | Fit |

Source: Data Processed by Author (2023)

In the measurement model formed, it can be said that every one-unit increase in green investment intention will increase the value of attitudes towards green investment by 0.622, every one-unit increase in

green investment intention will reduce subjective norms by 0.110, and every one-unit increase in green investment intention will increase perceived behavioral control by 0.240.

Tabel 10. Structural Fit Model Path Coefficient

| Variable | Coefficient |
|---|-------------|
| Attitude Toward Green Investment → Green Investment Intention | 0.622 |
| Subjective Norm → Green Investment Intention | -0.110 |
| Perceived Behavioral Control → Green Investment Intention | 0.240 |

Source: Data Processed by Author (2023)

The results of the coefficient of determination test on the green investment intention of Generation Z in Jakarta displayed in Table 11 show a squared multiple correlations value of 0.556. This shows that 56% of endogenous variables, namely

green investment intention, can be explained by exogenous variables, namely attitudes towards green investment, subjective norms, and perceived behavioral control. While the remaining 44% is explained by other factors.

Tabel 11. Coefficient of Determination

| | Estimasi |
|----------------------------|----------|
| Green Investment Intention | 0.556 |

Source: Data Processed by Author (2023)

Based on table 12, it can be concluded that the results of testing the research hypothesis are as follows:

First, in the variable attitude towards green investment towards green investment intention, it is found that this model has a critical ratio (C.R.)

value of more than 1.96 or 5.301 and is positive so it is concluded that there is a significant positive influence between the variable attitude towards green investment towards green investment intention. This means that the first hypothesis in this study, namely attitude towards green investment has a significant positive effect on green investment intention in Generation Z in Jakarta, is accepted. The results of this study are in accordance with research by Osman et al. (2019) and Thanki et al. (2022) who found that collectivism, environmental concerns, financial performance, and awareness of socially responsible investment have a significant positive effect on attitudes, which in turn also increase investment intentions. This research shows that investors who have a favorable attitude toward the concept of sustainability will have a strong desire for sustainable investment. Therefore, an investor's attitude toward the social purpose of an investment will influence their intention to invest in companies that prioritize SRI (Chai et al., 2019 dan Jansson & Biel, 2014). This research empirically proves that Generation Z in Jakarta thinks that green investing can improve their financial knowledge and is a wise, interesting choice and a good idea.

Second, on the subjective norm variable on green investment intention, it is found that this model has a critical ratio (C.R.) value of less than 1.96 or 1.444 and has a negative value, so it is concluded that there is no significant positive influence between the subjective norm variable on green investment intention. This means that the second hypothesis in this study, namely subjective norms have a

significant positive effect on green investment intentions in Generation Z in Jakarta, is rejected. This implicitly states that Generation Z is not influenced to start green investment despite having role models who encourage them or have role models who have proven successful in green investment. People who become references do not necessarily have green investment experience so it is necessary to consider including encouragement from financial advisors in Generation Z's green investment decisions. The results of this study are in accordance with research by Paramita et al. (2018), which suggests that subjective norms do not have a significant influence on investment intentions because young investors generally do not have colleagues who are investors or are willing to become investors who can influence their perceptions of investing in stocks, so they do not have role models that they can invest in. Paramita's research is in accordance with research by Kumari et al. (2022), Nugraha & Rahadi (2021), and Osman et al. (2019), who also found that subjective norms do not have a significant influence on investors' investment intentions.

Finally, on the perceived behavioral control variable on green investment intention, it is found that this model has a critical ratio (C.R.) value of more than 1.96 or 2.390 and is positive, so it is concluded that there is a significant positive influence between the perceived behavioral control variable on green investment intention. This means that the third hypothesis in this study, namely perceived behavioral control has a significant positive effect on green

investment intention in Generation Z in Jakarta, is accepted. This shows that Generation Z in Jakarta has access to the resources needed to make green investments, such as the freedom to choose investment instruments, ownership of money, and information to make green investments. Generation Z's perception of their ability to invest green will determine their intention to invest. Investors who feel competent in green investing are likely to increase their intensity to make stock transactions. The results of this study are in accordance with research by Osman et al. (2019), which found that strong perceived behavioral control over green investment

intentions shows individual confidence in the importance of green investment and ownership of access to resources in the form of information related to investment via the internet. According to research by Thanki et al. (2022), perceived behavioral control has a significant positive effect on investment intentions which indicates that individual beliefs in their capacity will encourage intentions to invest. In addition, Jensen et al. (2016) argue that perceived behavioral control indicates the ease of performing socially responsible investment actions has a correlation with their intentions.

Tabel 12. Hypothesis Test Results

| H | Path | C.R. | P | Results |
|----------------|--|--------|-------|----------|
| H ₁ | Attitude towards Green Investment → Green Investment Intention | 5.301 | *** | Accepted |
| H ₂ | Subjective Norm → Green Investment Intention | -1.444 | 0.149 | Rejected |
| H ₃ | Perceived Behavioral Control → Green Investment Intention | 2.390 | 0.017 | Accepted |

***p < 0.01. **p < 0.05. *p < 0.1

Sumber: Data Processed by Author (2023)

CONCLUSION

The attitude toward green investment has a significant positive effect on green investment intention in Generation Z in Jakarta. These results can prove that Generation Z's belief in green investment and a good attitude can increase green investment intention.

Subjective norms have an insignificant influence on green investment intentions in Generation Z in Jakarta. These results prove that the opinions of people who become references are not a reason for Generation Z in Jakarta to have green investment intentions.

The perceived behavioral control has a significant positive effect on green investment intention in Generation Z in Jakarta. These results can prove that Generation Z's perception of their ability to invest green will determine their intention to invest.

The limitation of this study is that this study only focuses on Generation Z aged 17-26 years who have varying levels of financial literacy knowledge, allowing for different conclusions. This study found that subjective norms have an insignificant influence on green investment intention. In addition, researchers only used data collection methods in the form of online questionnaires which have the

possibility of respondents filling out questionnaires less seriously or dishonestly. Lastly, this study has not asked about Generation Z's income level on the questionnaire.

This study contributes to the novelty of the research by offering a relatively new perspective on green investment intention which is still very limited, both nationally and internationally. This study concludes that the Theory of Planned Behavior model as a whole can be applied to predict green investment intention. This is reflected in the structural model and the coefficient of determination of 56%. Factors that influence green investment intention are attitude towards green investment, subjective norms, and perceived behavioral control. Generation Z in Jakarta has a good attitude toward green investment. They have a positive view of green investment and believe in the performance of green investment in generating profits. In addition, Generation Z in Jakarta believes they have control in participating in green investments and the resources needed to make green investments. Therefore, generation Z in Jakarta has a good attitude toward green investment and perceived behavioral control that can influence green investment intention.

This research can be used as a consideration for the government regarding policy making regarding green investment in the capital market. This research is expected to be a consideration for business people by providing an overview of Generation Z's green investment intentions so that companies can plan environmentally friendly company operating strategies. In

addition, this research can also be an input for the Indonesia Stock Exchange and the Kehati Foundation in developing an ESG-based index to develop sustainable investment while improving ESG practices in the Indonesian capital market.

REFERENCE

- Adam, A. A., & Shauki, E. R. (2014). Socially responsible investment in Malaysia: behavioral framework in evaluating investors' decision making process. *Journal of Cleaner Production*, 80, 224–240. <https://doi.org/10.1016/j.jclepro.2014.05.075>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior 1. *Journal of Applied Social Psychology*, 32(4), 665–683. <https://doi.org/10.1111/j.1559-1816.2002.tb00236.x>
- Ajzen, I. (2006). *Constructing a theory of planned behavior questionnaire*. Amherst, MA.
- Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4), 314–324. <https://doi.org/10.1002/hbe2.195>

- Ajzen, I., & Driver, B. L. (1992). Contingent value measurement: On the nature and meaning of willingness to pay. *Journal of Consumer Psychology*, 1(4), 297–316.
- Andrade, C. (2021). The inconvenient truth about convenience and purposive samples. *Indian Journal of Psychological Medicine*, 43(1), 86–88.
<https://doi.org/10.1177/0253717620977000>
- Andriana, N. (2019). Kepatuhan Bendahara Desa dalam memenuhi kewajiban perpajakan dalam prespektif teori planned behavior. *JURNAL PAJAK INDONESIA (Indonesian Tax Review)*, 3(2), 20–28.
<https://doi.org/10.31092/jpi.v3i2.737>
- Bahri, S., & Zamzam, F. (2021). *Model Penelitian Kuantitatif Berbasis SEM-AMOS Mengenal SEM-AMOS*. Deepublish.
- Chai, M. Y., Lee, K. N., Lee, P. S., Low, C. K., & Yeap, P. C. (2019). Factors that affect investor's intention to invest in Social Responsibility Investment (SRI). *Doctoral Dissertation, UTAR*.
- Collier, J. E. (2020). *Applied structural equation modeling using AMOS: Basic to advanced techniques*. Routledge.
<https://doi.org/10.4324/9781003018414>
- Fishbein, M., & Ajzen, I. (2011). *Predicting and changing behavior: The reasoned action approach*. Taylor & Francis.
- Global Sustainable Investment Alliance. (2020). *Global Sustainable Investment Review 2020*. <http://www.gsi-alliance.org/wp-content/uploads/2021/08/GSIR-20201.pdf>
- Graham-Rowe, E., Jessop, D. C., & Sparks, P. (2015). Predicting household food waste reduction using an extended theory of planned behaviour. *Resources, Conservation and Recycling*, 101, 194–202.
<https://doi.org/10.1016/j.resconrec.2015.05.020>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis*. Cengage Learning. Hampshire, United Kingdom.
- Ham, M., Jeger, M., & Frajman Ivković, A. (2015). The role of subjective norms in forming the intention to purchase green food. *Economic Research-Ekonomska Istraživanja*, 28(1), 738–748.
<https://doi.org/10.1080/1331677X.2015.1083875>
- Intergovernmental Panel on Climate Change. (2022). *Climate Change 2022: Mitigation of Climate Change*. https://report.ipcc.ch/ar6/wg3/IPCC_AR6_WGIII_Full_Report.pdf
- Jansson, M., & Biel, A. (2014). Investment institutions' beliefs about and attitudes toward socially responsible investment (SRI): A comparison between SRI and non-SRI management. *Sustainable Development*, 22(1), 33–41.
<https://doi.org/10.1002/sd.523>

- Jensen, C., Huynh, R., & Sandberg, P. (2016). "Doing good while doing well": An investigation of Generation Y's intention to invest socially responsibly (pp. 1–52).
- Kumari, J. S., Senani, K. G. P., & Ajward, R. (2022). Predicting investors' intention to invest in the stock market during COVID-19: can we use an extended theory of planned behavior? *Journal of Asia Business Studies*, ahead-of-print. <https://doi.org/10.1108/JABS-12-2021-0517>
- Low, C.-H., Yap, S.-H., Cheng, E. H., & Jap, K. P. (2022). Intention to invest in green stock among Malaysian working adults. *Journal of Business and Social Sciences*, 2022(15), 1–7.
- Lwanga, S. K., Lemeshow, S., & Organization, W. H. (1991). *Sample size determination in health studies: a practical manual*. World Health Organization.
- Mahardhika, A. S., & Zakiyah, T. (2020). Millennials' Intention in Stock Investment: Extended Theory of Planned Behavior. *Riset Akuntansi Dan Keuangan Indonesia*, 5(1), 83–91. <https://doi.org/10.23917/reaksi.v5i1.10268>
- Masrurun, I., & Yanto, H. (2015). Determinan perilaku investor individu dalam pengambilan keputusan investasi saham. *Accounting Analysis Journal*, 4(4), 1–9. <https://doi.org/10.15294/aaj.v4i4.9116>
- Ningtyas, M. N., & Istiqomah, D. F. (2021). Perilaku Investasi sebagai penerapan gaya hidup halal masyarakat Indonesia: tinjauan Theory of Planned Behavior. *Jurnal Ekonomi Modernisasi*, 17(2), 158–172. <https://doi.org/10.21067/jem.v17i2.5642>
- Nugraha, B. A., & Rahadi, R. A. (2021). Analysis of young generations toward stock investment intention: A preliminary study in an emerging market. *Journal of Accounting and Investment*, 22(1), 80–103. <https://doi.org/10.18196/jai.v22i1.9606>
- Osman, I., Maâ, M., Muda, R., Husni, N. S. A., Alwi, S. F. S., & Hassan, F. (2019). Determinants of Behavioural Intention Towards Green Investments: The Perspectives of Muslims. *International Journal of Islamic Business*, 4(1), 16–38.
- Paramita, R. S., Isbanah, Y., Kusumaningrum, T. M., Musdholifah, M., & Hartono, U. (2018). Young investor behavior: implementation theory of planned behavior. *International Journal of Civil Engineering and Technology*, 9(7), 733–746.
- Ritchie, H., Roser, M., & Rosado, P. (2020). *CO₂ and Greenhouse Gas Emissions*. Our World in Data. <https://ourworldindata.org/co2-and-greenhouse-gas-emissions>
- Safryani, U., Aziz, A., & Triwahyuningtyas, N. (2020). Analisis Literasi Keuangan, Perilaku Keuangan, Dan Pendapatan Terhadap Keputusan Investasi. *Jurnal Ilmiah Akuntansi Kesatuan*, 8(3),

- 319–332.
<https://doi.org/10.37641/jiakes.v8i3.384>
- Schroders. (2022). *The Global Investor Study 2022*.
<https://www.schroders.com/en/insights/global-investor-study/2022-findings/empowerment-report/>
- Seni, N. N. A., & Ratnadi, N. M. D. (2017). Theory of planned behavior untuk memprediksi niat berinvestasi. *E-Jurnal Ekonomi Dan Bisnis Universitas Udayana*, 6(12), 4043–4068.
- Shipochka, R. (2013). *Investor's Behaviour Towards Green Investments and How Ireland Invest in Sustainable Green Energy Projects - Is Green The New Bubble?* Dublin Business School.
- Staub-Bisang, M. (2012). *Sustainable investing for institutional investors: Risks, regulations and strategies*. John Wiley & Sons.
- Swarjana, I. K., & SKM, M. P. H. (2022). *Populasi-Sampel, Teknik Sampling & Bias Dalam Penelitian*. Penerbit Andi.
- Swiss Re Institute. (2021). *The economics of climate change*.
<https://www.swissre.com/institute/research/topics-and-risk-dialogues/climate-and-natural-catastrophe-risk/expertise-publication-economics-of-climate-change.html>
- Thanki, H., Shah, S., Rathod, H. S., Oza, A. D., & Burduhos-Nergis, D. D. (2022). I Am Ready to Invest in Socially Responsible Investments (SRI) Options Only If the Returns Are Not Compromised: Individual Investors' Intentions toward SRI. *Sustainability*, 14(18), 11377.
<https://doi.org/10.3390/su141811377>
- Yadav, R., & Pathak, G. S. (2017). Determinants of consumers' green purchase behavior in a developing nation: Applying and extending the theory of planned behavior. *Ecological Economics*, 134, 114–122.
<https://doi.org/10.1016/j.ecolecon.2016.12.019>