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Millennials' Intention in Stock Investment: Extended Theory of Planned Behavior

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ABSTRACT

The main objective of this research was to empirically examine the interests of millennial investors in investing in stocks using the theory of planned behavior approach consisting of Attitude toward Behavior, Subjective Norms, and Perceived Behavior Control as predictors of Intention, and Actual Behavior as a consequence of Intention. In addition, this research added risk tolerance variable as a development. This research is based on the low investment interest of the Indonesian people when compared to the total population of Indonesia. Respondents in this study are investors who are in accordance with predetermined criteria, who have already invested in stock and are aged between 20-35 years in Kebumen Regency. Data collection in this study was carried out by distributing questionnaires to the respondents. The hypothesis in this research was tested using Structural Equation Modeling (SEM) through WarpPLS software version 6.0. The results of hypothesis testing in this research empirically prove that Attitude toward Behavior, Subjective Norms, and Perceived Behavior Control are predictors of Intention. In addition, this research also proves that Intention has a positive effect on millennial investors' actual behavior in investing in stocks.

INTRODUCTION

Investment alternatives offered to investors are very diverse, for example investing in the capital market, money market, and other investments both in real assets and financial assets. Based on data from the Badan Pusat Statistik (BPS), in early 2019 the population of Indonesia reached 269 million. This number has succeeded in placing Indonesia as the fourth country in the world with the most population, however, contrary to this fact, the interest of the Indonesian people to invest, especially investment in financial assets is still very low at 0.4 percent of the total population. In contrast, compared to other countries in Asia, for example, Malaysia has approximately 57 percent of the total population already investing in the capital market, Thailand at 6 percent, China at 9 percent, and India at 4 percent of the total population.

The Indonesia Stock Exchange (IDX) reports positive growth in the number of investors in the Indonesian capital market. As of May 2019, the number of investors according to the Single Investor Identification (SID) in the Indonesian capital market reached 1.9 million. This fact shows that there is a growth in the number of investors in Indonesia, as has been carried out by the IDX through the “Yuk Nabung Saham” program. When compared with achievements at the end of 2018, the number of investors increased by 19 percent. The total number of investors in 2018 was 1.6 million, growing 44 percent from 2017 of 1.1 million.

According to Badan Perencanaan Pembangunan Nasional (Bappenas) in 2019, of Indonesia's total population of 269 million, Indonesia's millennial generation or population aged 20 to 35 years will amount to 63 million people. The large number of millennials is currently a challenge and opportunity for Indonesia. Understanding the behavior of millennial generation is an important key in encouraging them to become Indonesia's economic frontliner, one of which is understanding their behavior in investing. IDN Times launched the Indonesian Millennial Report (IMR) in 2019 to map the patterns of behavior, attitudes and interests of Indonesia's millennials. One of them is about consumption and spending behavior of millennials. Based on the results of research conducted, the amount set aside from millennial generation

income to invest is not too significant, which is around 10.7 percent of total income.

Human behavior in searching, using and processing information in decision making has long been an interesting topic for research. Efforts to understand individual behavior begin with the Theory of Reasoned Action (TRA) concept [13]. The socio-psychological concept to predict human behavior, namely Theory of Planned Behavior (TPB) [2]. TPB explains the factors that influence individual behavior, which includes three concepts, namely: attitude, subjective norm, and perceived behavior control.

TPB has been applied in several studies related to investment behavior [7]. Previous studies show inconsistent results, for example Cuong and Jian [9]; Alleyne and Broome [4] proved empirically that TPB has a significant influence on investor interest in investing in the capital market, while the opposite results were found by Paramita *et al.* [24] and Luky [20]. The inconsistency of the results of previous research indicates the importance of further research in understanding antecedents in investing, especially stock investment.

Risk tolerance, namely individual behavior in accepting risk, is an important concept that has implications for financial service providers [16]. Risk tolerance is one aspect that determines a person's decision to make an investment in financial assets [11], [16]. Although it is very important for the financial industry, an understanding of the concept of risk tolerance still requires further study. Previous studies have tried to reveal the determinants of risk tolerance. The interesting things are Morin and Suarez [22]; Pålsson [25] found that risk tolerance will decrease with age. In other words, younger investors have a higher tolerance level for risk compared to older investors.

Avoidance of uncertainty occurs when individuals feel uncomfortable because of doubt, ambiguity, and insecurity. Although there are various ways to deal with uncertainty and risk, individuals tend to look for ways to minimize uncertainty [16]. Previous research found that the perceived risk by an individual will affect an individual's behavioral intention towards that risk [5]. Diverse alternative investments have a variety of risks as well. Individuals assess their tolerance level and try for the possibility to avoid unacceptable situations [13]. Investor perceptions

of the uncertainty affect their actions in investing in the stock market. Therefore further research is needed to analyze the effect of investors' perceptions on their decisions in investing, especially investors belonging to the millennial generation. Because studies that raise young investors in Indonesia are still very rare [24].

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Theroy of Planned Behavior

Theory of Planned Behavior (TPB) is a theoretical framework that explains individual decision making [1], as a development of Theory of Reasoned Action (TRA). According to TRA, an individual's intention to act depends on two variables: attitudes toward behavior and subjective norms. Attitudes toward behavior are the extent to which the performance of the behavior is evaluated positively or negatively by individuals, and subjective norms are social pressures that individuals feel to be involved or not involved in behavior [6]. Intention is an indication of someone's readiness to perform certain behaviors, and is considered as a direct antecedent of the behavior. Compared with TRA, TPB has an important third aspect that influences intention to behave: perceived behavior control, which is people's perception of an individual's ability to do something [1].

Attitude toward Behavior

Attitude toward behavior is determined by beliefs about behavior and also related to the subjective assessment of individuals in the world around them, the individual's understanding of himself and his environment, which is done by linking certain behaviors with various benefits or disadvantages that can be obtained if individuals do it or not do it [4]. Attitude is the amount of feeling (affretion) felt by an individual to support or reject an object being faced and the feeling that is measured by evaluative scale such as good or bad, agree or disagree and important or not important [2], [26].

H₁: Attitude toward behavior has a positive effect on investment intention

Subjective Norms

The TRA and TPB models state that subjective norms are a function of normative beliefs, which represent perceptions about other preferences, whether the behavior should be carried out [13]. In everyday life, relationships can be categorized into vertical relationships such as relationships between superiors; teacher-student; professor-student, or parent-child-relationship and horizontal relationships such as the relationship between individuals and friends or others who are equal [3], [13], [20].

H₂: Subjective norms has a positive effect on investment intention

Perceived Behavior Control

Perceived behavior control as a function based on beliefs, namely individual beliefs about the presence or absence of factors that support or hinder individuals in behaving [4]. This belief is based on an individual's previous experience of a behavior, information a person has about behavior obtained by observing self-ownership of knowledge and other people known by the individual, as well as by other factors that can increase or decrease individual feelings about the level of difficulty in behaving .

The more individuals feel many supporting factors and less inhibit the factors to do a behavior, the more control they feel over the behavior, then the more control they feel about the behavior and vice versa, the fewer individuals feel the supporting factors and many factors inhibitors to be able to perform an individual behavior will tend to perceive themselves difficult to do the behavior.

H₃: Perceived behavior control has a positive effect on investment intention

Risk Tolerance

Risk tolerance can be interpreted as an individual's willingness to engage in financial behavior with uncertain results [21], is an attitude, or tendency, to avoid risk [10], while risk perception is a temporary response to situation-specific stimulus [19]. Previous research has shown that risk tolerance is related to the selection of investments with high risks [14].

Croy *et al.* [8] proved that a person's tolerance level for risk is positively able to predict the intention to invest in financial assets. Their research revealed that individuals with high levels of risk tolerance tend to prefer to invest in financial assets with high risks, and refuse to invest in risk-free investments. In contrast, the research of Weber and Hsee [30];

Weber and Milliman [31] found that individuals with low levels of risk tolerance tended to look for ways that they could avoid risk.

H_4 : Risk tolerance has a positive effect on investment intention

H_5 : Investment intention has a positive effect on investment behavior

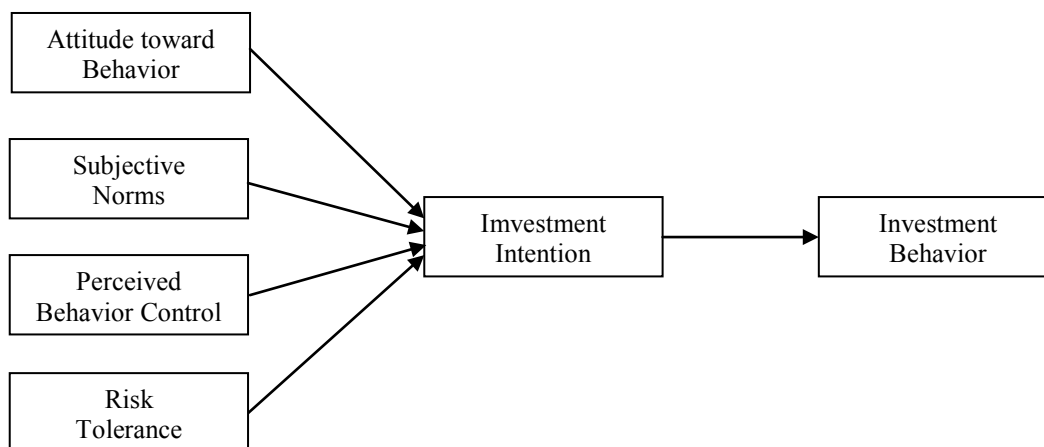


Figure 1. Research Model

RESEARCH METHODS

Population and Sample

The population of this study are investors in Kebumen Regency who have conducted stock transactions, with the consideration that this study aims to apply TPB to stock investment behavior. The sampling criteria used in this study are purposive sampling with the criteria of investors aged between 20-35 years with the consideration that respondents who fall into these criteria are respondents who can be classified as millennial generation. The type of data used in this study is primary data that is data obtained directly from respondents. Data collection techniques used through questionnaires distributed online through the help of Google forms application. The questionnaire was distributed to investors who already have a pintraco securities (Profit) account at the stock exchange galleries at Kebumen Regency. 162 responses were obtained, but 14 responses could not be used in this study because they did not meet the criteria, thus the samples that can be used in this study were 148 samples. The following tables that explain the respondent information based on age and gender.

Table 1. Description of Respondents by Age

Age	Total	Percentage
20-23	52	35,14%
24-27	32	21,62%
28-31	25	16,89%
32-35	39	26,35%
TOTAL	148	100%

Source: online questionnaires, 2019

Table 2. Description of Respondents by Gender

Gender	Total	Percentage
Male	57	38,51%
Female	91	61,49 %
TOTAL	148	100%

Source: online questionnaires,, 2019

Based on table 1 above can be explained by respondents based on age 20-23 years were 52 people (35.14%), aged 24-27 years were 32 people (21.63%), aged 28-31 years were 25 people (16.89 %) and respondents were 32-35 years were 39 people (26.35%). Most of the samples are in the range of 20-23 years. This is reasonable because the stock exchange galleries in Kebumen Regency are located

at STIE Putra Bangsa dan IAINU (Institut Agama Islam Nahdlatul Ulama), thus most phintraco securities account holders are students.

Based on table 2 it can be explained that the majority of investors are females (61.49%), while the rest are males (38.49%)

Operational Definition and the Measurement

There are six variables in this study, namely attitude toward behavior, subjective norms, perceived behavior control and risk tolerance as exogenous variables; investment behavior as an endogenous variable; and investment intention as exogenous and endogenous variables.

The measurement of variables in this study uses an instrument developed by Ajzen [3] to measure the variables included in TPB, research instruments in the form of questions using a 5-point Likert scale, while risk tolerance uses instruments developed by Hallahan *et al* [16] in the form of questions with a 5-point Likert scale.

RESULTS AND DISCUSSION

Convergent Validity

Convergent validity shows the ability of a measure to be positively correlated with the same alternative construct size [15]. There are two criterias to assess whether the measurement model meets the requirements of convergent validity for reflective constructs [29], namely loading values > 0.70 with significant p (value <0.05); or the average variance extracted (AVE) value ≥ 0.50 .

Table 1 shows the loading, p-value, and AVE values of each construct. It can be seen that the RT_1 and RT_3 indicators have been removed from the model because the loading values are below 0.04. However, we still maintain indicators that have loading values between 0.04 - 0.07. The suggested procedure states that the decision to remove the indicator with a loading value between 0.04-0.07 is based on the impact of the decision to delete the indicator on AVE and composite reliability [29]. The indicator can be removed if it has an impact on increasing AVE and composite reliability above its limit [29]. From table 1, can be seen that the AVE value is already above the specified requirements, namely ≥ 0.50 and composite reliability ≥ 0.70 (see table 3), so that the indicator with a loading value between 0.04 - 0.07 in this study still maintained.

Table 3. Convergent Validity

	item	loading	p-value	AVE
Attitude toward Behavior	ATB_1	(0.812)	<0.001	0.608
	ATB_2	(0.824)	<0.001	
	ATB_3	(0.832)	<0.001	
Subjective Norms	SN_1	(0.673)	<0.001	0.580
	SN_2	(0.809)	<0.001	
	SN_3	(0.477)	<0.001	
Perceived Behavior Control	PBC_1	(0.672)	<0.001	0.521
	PBC_2	(0.758)	<0.001	
	PBC_3	(0.750)	<0.001	
Risk Tolerance	RT_2	(0.767)	<0.001	0.527
	RT_4	(0.696)	<0.001	
	RT_5	(0.786)	<0.001	
Investment Intention	II_1	(0.629)	<0.001	0.592
	II_2	(0.767)	<0.001	
	II_3	(0.786)	<0.001	
Investment Behavior	IB_1	(0.619)	<0.001	0.513
	IB_2	(0.545)	<0.001	
	IB_3	(0.656)	<0.001	

Source: data processed, 2019

Discriminant Validity

Discriminant validity measures whether constructs are really different from other constructs based on empirical standards [15]. The criteria used to assess whether the measurement model meets the discriminant validity requirements is the average variance extracted (AVE) squared root value, which is column diagonal and given parentheses must be higher than the correlation between latent variables in the same column [29]. Based on table 2 it can be explained that the AVE square root value meets the discriminant validity requirements

Table 4. Discriminant Validity

	ATB	SN	PBC	RT	II	IB
ATB	(0.649)	0.172	0.254	-0.411	0.095	0.064
SN	0.172	(0.634)	0.242	-0.224	0.236	0.159
PBC	0.254	0.242	(0.601)	0.013	0.125	0.089
RT	-0.411	-0.224	0.013	(0.604)	-0.010	-0.189
II	0.095	0.236	0.125	-0.010	(0.641)	0.122
IB	0.064	0.159	0.089	-0.189	0.122	(0.596)

Source: data processed, 2019

Internal Consistency Reliability

Internal consistency reliability test is carried out to assess homogeneity between items that

compose a construct [15]. The criteria used to assess the reliability of internal consistency are composite reliability and Cronbach's alpha values above 0.70 [29]. From table 3 it can be seen that all constructs in this study meet the requirements for internal consistency reliability, which is indicated by the composite reliability and cronbach's alpha values of each construct above 0.70.

Table 5. Internal Consistency Reliability

	ATB	SN	PBC	RT	II	IB
Composite reliability	0.823	0.813	0.851	0.812	0.817	0.916
Cronbach's alpha	0.772	0.767	0.728	0.837	0.812	0.918

Source: data processed, 2019

Summary of Hypotheses Testing

The hypothesis in this study was tested using Structural Equation Modeling (SEM) with WarpPLS software version 6.0. The supported hypothesis in this study is seen from the significance value of the path coefficient. There are 5 (five) hypotheses tested in this study. A hypothesis is declared supported if the p-value <0.05 (significant at the 5% level). Table 4 below presents a summary of the results of testing this research hypothesis.

Based on the results of hypothesis testing, it can be concluded as follows:

1. The first hypothesis which states that attitude toward behavior has a positive effect on investment intentions, is declared supported. It can be seen in table 4 that the p-values show the results <0.001 (<0.05) and the path coefficient is 0.244. It can be concluded that the attitude of millennial investors towards stock investment will determine their intention to invest in shares. A positive view of stock investment tends to increase their interest in stock investing.
2. The second hypothesis which states that subjective norms have a positive effect on investment intention, is declared supported. It can be seen in table 4 that the p-values show the results of 0.037 (<0.05) and a path coefficient of 0.255. It can be concluded that the perception of millennial investors related to the support of the surrounding environment (relatives and colleagues) will determine their intention to invest in shares. Support from the

people closest to investing in shares, tends to increase the intention of millennial investors in trading shares.

3. The third hypothesis which states that perceived behavior control has a positive effect on investment intention, is declared supported. It can be seen in table 4 that the p-values show the results of 0.019 (<0.05) and the path coefficient of 0.226. It can be concluded that millennial investor's perception of their ability to invest in shares will determine their intention to invest in shares. Millennial investors who feel that they are capable and competent in stock investment are likely to increase their interest in carrying out stock transactions.
4. The fourth hypothesis which states that risk tolerance has a positive effect on investment intentions, otherwise can not be supported. It can be seen in table 4 that the p-value shows the result of 0.197 (<0.05). It can be concluded that millennial investors in Kebumen Regency do not consider the risks involved in investing in shares. So they tend to do stock transactions even though they know that investment has risks. However, the path coefficient value is 0.165, meaning that the relationship between risk tolerance and intention shows a positive correlation.
5. The fifth hypothesis which states that investment intention has a positive effect on investment behavior, is declared supported. It can be seen from table 4 that the p-values show the result of 0.003 (<0.05) and a path coefficient of 0.102. It can be concluded that the greater the intention of millennial investors to invest in shares is likely to increase their actualization in stock transactions.

Table 6. Summary of Hypotheses Testing

	Hypotheses	Path analysis	p-values	Result
H ₁	ATB → I	0,244	<0,001	Supported
H ₂	SN → I	0,255	0,037	Supported
H ₃	PBC → I	0,226	0,019	Supported
H ₄	RA → I	0,065	0,297	Not supported
H ₅	I → IB	0,102	0,003	Supported

Source: data processed, 2019

CONCLUSION

Based on the results of testing the hypothesis in this study, it can be concluded that the theory of planned behavior (TPB) approach can be applied empirically in explaining the behavior of millennial investors in investing in stocks. However, the results of hypothesis testing cannot prove that risk avoidance influences intention. This might be due to the preferences of millennial investors who do not consider risk in investing in stocks.

This research is inseparable from the limitations, including: 1.) This study was only conducted on millennial investors in Kebumen District, so the results of this study cannot be generalized. Therefore, further research is expected to expand the research area, 2.) further development of TPB can be done by adding other variables such as avoidance tolerance and personal financial literacy

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