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Using Theory of Planned Behavior in Predicting Intention to Invest : Case of Indonesia

Mery Citra Sondari¹ Rahmat Sudarsono²

^{1,2}Department of Management and Business, Universitas Padjadjaran

Corresponding email: ¹mery.sondari@fe.unpad.ac.id, ²rahmat.sudarsono@fe.unpad.ac.id

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Abstract

Many studies have been conducted to apply the theory of planned behavior in the context of finance and investment, however, previous research focused on people that close related with the behavior of investment itself. This paper tested the applicability of the theory of planned behavior in predicting intention to invest using samples 359 civil servant in Indonesia. Result from data analysis using partial least square (PLS) have shown that attitudes toward investment and subjective norms have significantly influenced the intention to invest, while data of the other antecedent, self-efficacy, have failed to show significant influence.

INTRODUCTION

In 2012, Indonesia becomes one of Asian countries that have high economic growth with 6,23%, higher than world average that only 3,5 %. Implicitly, Indonesian citizens have high earning, thus potentially should related with the investment activity. However, most of Indonesian people do not actively involved in investment activity. According to East (1993), investment behavior can be predicted by investment intention. The theory of planned behavior from Ajzen (1991), becomes one of theories that be used to validated the preposition. Many studies have been conducted to apply the theory of planned behavior in the context of finance and investment, such as East (1993) that conducted research in three private company in England, Alleyne dan Broome (2011) that aimed to determine individual's factors that affect investment decision of potential investors, and Gopi dan Ramayah (2007) conducted research to identify factors that affect the intention to trade stock online among investors in Malaysia. However, previous research focused on people that close related with the behavior of investment itself, such as investors, potential investors and professional in private company, that the probability to conduct behavior of investment is relatively high. This paper aims to reveal the application of the model of the theory of planned behavior in predicting the intention to invest, among more common type of group of individual that do not have direct relation with investment behavior, which is civil servant in Indonesia.

LITERATURE REVIEW

The theory of planned behavior from dari Ajzen (1991) is the extended work of Ajzen and Fishbein who in 1969 proposed the theory of reasoned action (Southey, 2011). This theory provide model that can predict one's behavior through the intention. Intention is defined as individual perception towards probability to conduct behavior (Fishbein dan Ajzen, 1975 in Gopi and Ramayah, 2007). There are three antecedents of intention, namely attitudes, subjective norms, and perceived controlled behavior. According to Ajzen and Fishbein, attitude is defined as the degree to what extent individual have feeling that favor or unfavor toward particular pschychological object, while subjective norms is defined as individual persepision towards the probability of group or other individuals as a reference, agree or disagree with particular behavior that one intent to do, and the perceived behavior control behavior can be defined as the assumption one have confidence in one's capability to conduct particular behavior (Gopi and Ramayah, 2007). The model is illustrated in figure 1.

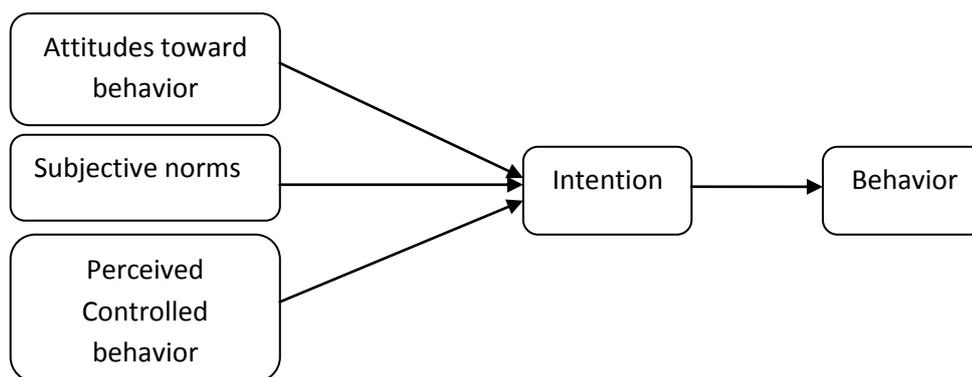


Figure 1. theory of planned behavior

This theory have been applied in many disciplines, includes finance and investment. One early research that use the theory of planned behavior in finance and have many citations, is from East (1993) focused on individual behavior in doing investment and apply the model to test the antecedents (Southey,2011). Using three cases in three private company in England, East (1993) got result that in each case, behavior to invest accurately can be predicted by the measured intention and the intention affected by attitude, subjective norms, perceived behavior control and past behavior (East,1993). East also found that influence from friends and family is very strong and also the importance access to financial information such as profit and security of the investment (East, 1993). Other research, conducted by Alleyne and Broome (2011) that aimed to determine individual's factors that affect investment decision of potential investors. They found that attitudes, subjective norms, and perceived controlled behavior are significant predictors toward the intention to invest. In the context of developing country, Gopi and Ramayah (2007) conducted research to identify factors that affect the intention to trade stock online among investors in Malaysia. Their findings also support the theory of planned behavior, where the three variables- attitudes, subjective norms and perceived controlled behavior – have positif influence towards the intention to trade stock online (Gopi and Rumayah, 2007).

METHODOLOGY

This research was verificatively test the model of theory of planned behavior from Ajzen (1991) to be applied in explaining the influence of attitude, subjective norms and controlled behavior towards intention to invest. The model was tested and analyzed using Partial Least Square (PLS).

In this research, intention to invest is operationalized as perceived probability of conduct investment activities. There are three antecedents towards intention to invest. First antecedent, attitudes toward investment is operationalized as the degree of to what extend individual favor of investment activities. Second aantecedent, subjective norms, is operationalized as the degree of perceived probability of social environment of subject would be agree or disagree with investment activities. The third antecedent, perceived controlled behavior were assumed similar to construct of self-efficacy which is operationalzed as the degree of individuals confidence in his/her capability in conduct investment activities. The complete list of items derived from each variables, can be seen in table.1.

This research used data from 359 respondents. As many as 198 (55%) respondents are and the remains 45% are female which show a balance proportion in sampling. wanita. The profile of respondents according to profesion show that 36% respondents have profesion as a teacher, while the remains 64% respondents served as civil servants other than a teacher. Majority of respondents have bachelor degree, while 19% of them have post-graduate degree, and the rest only got diploma. Only 3% of respondents have not married, and in average, they have to support (financially) three person under their responsibility.

Table 1 Item of indicators

	Attitudes toward investment	Subjective norms	Self-efficacy	Intention to invest
Item 1	Interest in investment activity	Friend towards time deposit	Time decision	Time deposit
Item 2	High return	Family towards time deposit	Instrument decision	Foreign Exchange
Item 3	Risk taking	Friend towards foreign exchange	Agent decision	Gold
Item 4	Internal or external influence toward decision	Family towards foreign exchange		Mutual Fund
Item 5	Perception towards time deposit	Friend towards gold		Stock
Item 6	Perception towards foreign exchange	Family towards gold		Property
Item 7	Perception towards gold	Friend towards mutual fund		
Item 8	Perception towards mutual fund	Family towards mutual fund		
Item 9	Perception towards stock	Friend towards stock		
Item 10	Perception towards property	Family towards stock		

Reliability and Validity of instrument

Reliability was measured by composite reliability using Cronbach's Alpha with minimum value of 0,7. Table 1 indicated that all variable have Cronbach's alpha value above 0,70, thus all variable were considered reliable to be used to test the model.

Table 1. Result of Reliability test

Variables	Cronbach's Alpha
Attitudes toward investment	0,756
Subjective norms	0,905
Self-efficacy	0,835
Intention to invest	0841

Validity test for the item of indicators using the rule-of-thumb that indicators would be consider valid if those items have loading factor above 0,3. Table 2 shows that there three items in variable attitudes toward investment that have loading factor below 0,3 which are item 1, item 2 and item 4. The rest of item of indicators are considered to fullfil the convergent validity.

Tabel 2. Result of Validity test

a. Attitudes toward investment		b. Subjective norms		c. Self-efficacy	
Item 1	0,129	Item 1	0.598	Item 1	0.746
Item 2	0,265	Item 2	0.643	Item 2	0.790
Item 3	0,345	Item 3	0.650	Item 3	0.565
Item 4	0,254	Item 4	0.609	d. Intention to invest	
Item 5	0,523	Item 5	0.743		
Item 6	0,578	Item 6	0.712		
Item 7	0,540	Item 7	0.606		
Item 8	0,598	Item 8	0.621		
Item 9	0,610	Item 9	0.716		
Item 10	0,443	Item 10	0.751		
				Item 1	0.524
				Item 2	0.713
				Item 3	0.622
				Item 4	0.724
				Item 5	0.717
				Item 6	0.498

RESULT*Measurement of Outer Model*

Outer model validity and reliability testing conducted using square root of average variance extracted (AVE), composite reliability, Cronbach's Alpha, communality and the rate of redundancy. Table 3 shows that the value of AVE is above 0,5 for all constructs, except for attitudes construct. It indicates that the model relatively have discriminant validity. While, for reliability test, the model can be considered reliable, if the value of composite reliability dan Cronbach's Alpha are above 0,7. Table 3 shows that the value of composite reliability dan Cronbach's Alpha for all constructs are above 0,7. It shows that all construct in this model fulfil the discriminant validity criteria.

Table 3. Outer model measurement

Construct	AVE	Composite Reliability	R ²	Cronbach's Alpha	Communality	Redundancy
Self-efficacy	0.712	0.8807	0	0.8332	0.712	0
Intention	0.5811	0.8917	0.3449	0.8528	0.5811	-0.0014
Norms	0.5433	0.9222	0	0.9065	0.5433	0
Attitudes	0.4684	0.8527	0	0.7921	0.4684	0

Measurement of Inner Model

After we were sure that the model that would be estimated were meet the criteria of outer model, the next things was the inner model (structural model) testing. Table 3 shows that value of R² is 0,3449 for the intention construct, which means that all antecedents can explain the varians of intention for 34,49 %. This result shows that the exogen variables' capability in explaining the endogen variable is relatively small.

Table 4 give indications that not all antecedents construct significantly affect intention to invest. Only constructs of attitudes and subjective norms that contribute significantly to construct intention to invest, since those constructs have t-value **3.2132** and **8.845** (greater than 1,96). Value of *i original sample estimate* between attitudes and subjective norms wit the intention were positive as **.1704** and **0.4251**. This results show that there are positive direction in relationship between attitudes nad norms with the intention. It means the intention to invest will be higher with as the addition of attitudes and norms. Self-efficacy was not significant to affect the

intention. With this result we can conclude that in this case, the intention to invest much more influenced by the reference from friends or relatives, and the attitudes of subject towards investment.

Table 4. Inner model measurement

Construct	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (O/STERR)
Self-efficacy -> Intention	-0.0193	-0.0078	0.0565	0.0565	0.3418
Norms -> Intention	0.4251	0.4201	0.0481	0.0481	8.845
Attitudes -> Intention	0.1704	0.1681	0.053	0.053	3.2132

This result support findings from East (1993) that claimed that in each cases, the behavior in investment, can be predicted by the intention which were affected by attitudes, subjective norms, and perceived controlled behavior. East (1993) noted that influence from friends and relatives were very strong and also emphasized the importance of information access related to profit and security of investment. This research also consistent with research that has been conducted by Gopi and Ramayah (2007) and Alleyne and Broome (2011) that found that attitudes and subjective norms were the significant predictors for intention to invest.

CONCLUSION

This paper has tested the applicability of the theory of planned behavior in predicting intention to invest. Result from data analysis using partial least square (PLS) have shown that attitudes toward investment and subjective norms have significantly influenced the intention to invest, while data of the other antecedent, self-efficacy, have failed to show significant influence.

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