

MODELLING THE BEHAVIOUR OF HOUSEHOLD'S INVESTMENT

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Abstract

Household investment has become more important in modern economies. This research builds a behavioural model of investment using a quantitative approach. It tests the effect of socioeconomic condition, financial literacy, and attitudes toward intention and investment decision. The data are collected from 400 heads of household through a structured interview. A sample is selected by a multistage technique. It applies a Structural Equation Modelling to answer the research problem. This paper is successful in constructing a good structural and measurement model to explain the behaviour of the dependent variables in the model.

Keyword: Behavioural model of investment, investment, quantitative, household

JEL classification numbers: D1, D14

Abstrak

Investasi rumah tangga menjadi semakin penting dalam perekonomian modern. Penelitian ini membangun sebuah model perilaku investasi menggunakan pendekatan kuantitatif. Penelitian ini menguji pengaruh dari kondisi sosial ekonomi, kesadaran tentang keuangan, dan sikap terhadap niat dan keputusan investasi. Data dikumpulkan dari 400 kepala rumah tangga melalui wawancara terstruktur. Sampel dipilih dengan teknik *multistage*. Penelitian ini menerapkan *Structural Equation Modelling* untuk menjawab masalah penelitian. Penelitian ini berhasil membangun sebuah model struktural dan pengukuran yang baik untuk menjelaskan perilaku variabel-variabel dependen di dalam model.

Keyword: Model perilaku atas investasi, investasi, kuantitatif, rumah tangga

JEL classification numbers: D1, D14

INTRODUCTION

The behaviour of household investment is interesting to be investigated because households have different characteristics

compared to individual or organizational unit of analysis. Anderson et al. (2005) mention that household structure is a complex set of interrelationship between and among a variety of internal and external factors involving consumption, investment, and income-earning activities. Another rea-

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son is the existence of differences in viewing investing behaviour. The first view states that the investment behaviour is rational, while the other view states that investing behaviour is not rational. The second view assumes that the rational assumption in behavioural studies is a bad assumption (Frijns et al., 2008; and Ding, 2003).

An argument that supports that rational assumption is a bad assumption is that investment decisions are the result of interaction between social, environmental, and cultural. Therefore, behaviour of investing might be irrational (see Gumanti, 2009). Conditions that occur in the field prove so. This unconformity between the assumption and finding in this field invites a debate leads to a further review. Allegedly lack of harmonic findings in the field is influenced by aspects of the methodology, explanatory variables used, and grounding his theory.

A theory that is often used as the basis for assessing the behaviour is the theory of planned behaviour (*TPB*). This theory explains that the behaviour is influenced by attitudes toward the object behaviour. In this relationship, there exists a variable between attitudes and intentions. According to the *TPB*, intention is the closest determinant of behaviour. However, the relationship between intention and behaviour are not always consistent. The relationship between intentions and behaviour will be consistent only in a very limited condition (Sheeran, 2002).

Various studies have applied and developed the *TPB* and examine the relationship between the variables. However, these studies produced inconsistent findings. Sheppard et al., (In Joanna and Marilyn, 2000) conducted a meta-analysis that gives significant results in assessing the relationship between intentions to behaviour. Empirically, there is a consistent relationship between attitudes and behaviour. Behaviour is influenced by psychological factors, namely attitude (Bailey and

Kinerson, 2005; Pierce and Geyer, 2002; and Sevdalis and Harvey, 2007) as well as intention. But relations with behavioural attitude is not a direct relationship (Ajzen, 1991).

Alumira (2002) investigates the investment strategies of rural households in Zimbabwe, suggested that investing behaviour is influenced by attitudes and values. Attitudes and values have a direct relationship with behavioural intention as a variable without going through between. In another study, Harvey and Sevdalis (2007) found that personal variables were significantly associated with attitudes toward investment, and investment decisions are influenced by the outlook, attitude to investment, as well as the expected goals. He also found that the investment is not just investing their money, but to achieve certain goals.

Several other studies have shown somewhat different results. Danner et al. (2008) examine the role of intentions in predicting the behaviour of habit as a moderator variable. They found that relationships between behaviour and intentions are stable in a particular context. Intention-behaviour relationship moderated by past behaviour will not occur in cases where the behaviour has become a strong habit. De Bruijn et al. (2007) and Ji and Wood (2007) found that the relationship with behavioural intentions are weak and not significant when the behaviour has become a habit, and vice versa.

The theory of planned behaviour also explains that behaviour is not only determined by intentions and attitudes, but also by environmental aspects. In the context of household investment behaviour, it is found that the allocation of the investment portfolio is determined by the preferences and the environment. A household investment decision is influenced by the trend towards investment and the environment (Stephanie et al., 2004). In many other studies, it is found that investment decisions are influenced by

individual difference factors, namely age, gender, ethnicity marital status, education, income, environmental and psychological aspects (Curcuro, 2003; Korniotis and Kumar, 2005; Gerrans et al., 2010; and Janice and Maire, 2007).

Financial literacy factor was allegedly also affected the behaviour and intentions to invest. Knowledge is positively related to financial behaviour, including decisions to invest and the establishment of an investment portfolio. Households with good financial aspects tend to invest more efficiently (Abreu and Mendes, 2007; Calvet et al. (2007); and Kimball and Shumway, 2006). Those with good knowledge and financial skills tend to behave well in compiling a portfolio of investments. Those with good financial literacy and will intend to and behave well in investment (Areetey, 2004; Chambell, 2006; and Ardrye, 2005). Intention to invest is significantly affected by the financial literacy (Aryeetey, 2004, and Chambell, 2006).

In addition to the above factors, the paper also finds that socioeconomic factors have a significant effect on psychological factors (attitudes). Socioeconomic and demographic conditions affect a person's attitude as part of a psychological construct variables (Schroder, 2006; Kinershonchris, 2005; Nataliya et al., 2008; and Miyata, 2003). Socioeconomic and demographic factors such as age, occupation, and the environment has a significant influence on intention to invest (Goesetzmann et al., 2004; Douglas et al., 2003; Ricarelli, 2006; Tooth, 2006; Stephani 2003; Christiansen et al., 2005). Household characteristics such as education level, age and wealth contribute to determine the selection of investment types (Calvet et al., 2007).

From the aforementioned description, it appears that investment behaviour is determined by many variables. The influence of certain variables on investment decisions tend to vary from one study to another. This prompted the need for further

study or research in order to strengthen the relationship variables that determine the pattern of investment behaviour. Therefore,, it is interesting to reexamine the influence of the antecedent variables behaviour. The general problem is formulated as how to build a model of household investment behaviour. Some specific problems can be formulated, namely what is the influence of socioeconomic factors, attitudes, intentions, and financial literacy to decision to invest.

METHODS

This study built a model of investment behaviour, especially testing the ability of antecedent latent variables in explaining the behaviours of investment. The research is conducted in two rural areas in the sub-districts namely Kembiritan village (in Genteng district), and Bagorejo (in Srono district, Banyuwangi). This study uses a quantitative analysis, employing a sample of 400 households (200 respondents per region), which were selected using a multi-stage sampling method. The sample size was determined using Cochran's formula, namely at the level of error (d) 5%, 95% confidence level and statistical values (t) of 1.96 (See Cochran, 1963).

This paper applies survey technique using a structured interview. The respondents are the household head, based on a questionnaire that has been tested regarding its validity and reliability. However, not all of the data obtained through the interviews can be used. From the data collected, only 365 (91.25%) of the total sample were administratively qualified. The Investing behaviour model is built with a Structural Equation Modelling (SEM) using LISREL 8.3 software package. The data used in the model has passed the tests of the presence of outliers, normality and other conditions. After running the tests, only 330 cases that can be used in the model estimation.

Table 1: Details on Variables and the Indicators

Variables	Indicators
Decision to Invest	1. Frequency of doing investment (<i>PI01</i>) 2. Percentage of income which is invested (<i>PI02</i>) 3. Choices of investment (<i>PI03</i>)
Attitude	1. Expectation towards future (<i>SKB02</i>) 2. Appreciation from the environment (<i>SKB07</i>) 3. Attitude towards risk (<i>SKB08</i>)
Intention to Invest	1. Intention to invest in a certain period (<i>IINV01</i>) 2. Intention to invest in technology for business and development (<i>IINV02</i>) 3. Intention to invest in financial assets (<i>IINV03</i>) 4. Intention to invest to expand the business (<i>IINV07</i>) 5. Intention to invest in precious metals (<i>IINV08</i>)
Socioeconomic Condition	1. Monthly average income (<i>PDPTRMTG</i>) 2. Education of the head of the household (<i>PNDDKK</i>), 3. Asset or land occupation (<i>LLAHAN</i>) 4. Education of the wife (<i>PKPSG</i>)
Financial Literacy	1. Plan for income budget (<i>LF01</i>) 2. Plan for cost budget (<i>LF02</i>) 3. Obedience to the budget (<i>LF03</i>)

This study uses latent variables of decision to invest, intention of investing, socioeconomic, attitudes toward investment, and financial literacy. The indicators of latent variables are derived based on a detailed empirical study as in Table 1.

RESULTS DISCUSSION

As Mentioned, this study used 400 households as a sample, but only 365 observations that pass the test. From these samples, two important characteristics, namely the head of the family and education its main job, will be explained further.

From the level of education, it can be informed that 60.3% of respondents graduated elementary school, 11% did not graduate elementary school, and 4.1% graduated from college. From the aspect of employment, 71.8% worked in agriculture, 19 respondents who worked as a Civil Servant. More details are in Table 2.

In terms of intensity and time to invest, it is known that 83.4% of respondents are able to invest every 3-4 months. Only 21.9% of them invest once a year.

From the magnitude of investment, most of them invest a maximum of 5% of their income. There are 10.4% of the total respondents capable of removing more than 20% of his income and the remainder, 86.4% of respondents, spend less than 20%.

Table 2: Distribution of Types of Jobs of the Household Head

Types of Jobs	Frequency	Percentage
Public servant	19	5.2
Trade	41	11.2
Craft mean	9	2.5
Entrepreneur	34	9.3
Agriculture	262	71.8
Total	365	100.0

Source: Data calculation.

There are various types of investment conducted by the respondent. As much as 47.1% of respondents invest in agriculture, and the remainder invested in real assets, and in the banking sector in the form of savings or deposits. Investing in banks is represents 40.8% of investment, indicating that in addition to the agricultural sector, bank sector remains attractive as a place to invest.

The results also suggest that 38.1% (31.8%) are agree (disagree) to make a joint business with other agents. In addition, 76.7% of the respondents have the intention to invest in agricultural sector.

Estimation results also show that 52% of respondents intend to invest in financial assets. Intention to invest in real assets (land) reached 63.3% of respondents, and 33.4% had a very high intentions. Intention to develop agriculture sector reached 76.7%, and 18.6% of which are very high.

Intention to invest in gold or other precious metals is not very high, namely 53.5%. This indicates that even though gold or precious metal is a type of investment with good return, but not all people love this type of investment. The intention to invest on land is very high, reaching 81.9% of the respondents.

Regarding financial literacy, 35.6% of households have already construct a financial plan or budget. Among the household, 23.6% write budget planning. In terms of adherence to the budget, the 34% of them did not comply. Overall, these show that their financial literacy levels are not low.

Modelling Investment Behaviour

The first model provides the RMSEA value for 0134 (see table 2), which has not qualified *GOF* (cut-off 0.08). Furthermore, if it is viewed from the criteria of *AGFI*, *GFI*, *TLI* and *CFI*, the model is still far below the cut-off value (0.9). This indicates that the initial model is a model that has not been acceptable and need to be modified.

After doing a modification based on the *MI* value, it obtained a model with *GOF*

as in Table 3. From Table 3, it can be inferred that there are some measures of *GOF* which already meet the requirements, ie, *RMSEA* ($0.080 \leq$ cut-off), and *CFI* (≥ 0.93 cut-off), while the *GFI* (0.89) and *AGFI* (0.83) are still lower than 0.9, the cut-off. Overall, it can be concluded That model was built already qualified.

The latent variable of investment decision in this paper consists of four indicators, namely *PI01*, *PI02*, *PI03* and *PI04*. The *t*-statistic of these indicators are greater than 1.96, with the standardized coefficients higher than 0.4. The reliability coefficient is 0.88, which is higher than the threshold of 0.7, and the extracted variance of 0.66, which is greater than the threshold of 0.5. Thus, it can be said that the four indicators is a measure of behavioural investing a valid variable. Furthermore, a unidimensional, variable investment behaviour can be explained by four indicators. This indicates that the latent variable is a variable that investing behaviour fit for use in modeling. More complete statistics for the indicator variables investing behaviours contained in table 5.

The valid indicators to measure the latent variable of intention to invest (*ATD*) are *SKPB02*, *SKP07*, and *SKPB08*. The *t*-statistics of these indicators are greater than 1.96, while the value of the standardized coefficient are greater than 0.4. The paper also finds that reliability coefficient is 0.85 with the extracted coefficient of 0.67. This indicates that the three indicators are good measures for attitude towards intestment. The validation for the attitude construct is on Table 6.

Table 3: Goodness of Fit: Early Step Model

No	Measures for <i>GOF</i>	Value
1	Degrees of Freedom	163
2	Minimum Fit Function Chi-Square	1362.33 ($P=0.0$)
5	Root Mean Square Error of Approximation (<i>RMSEA</i>)	0.134
6	Goodness of Fit Index (<i>GFI</i>)	0.73
7	Adjusted Goodness of Fit Index (<i>AGFI</i>)	0.65
8	Comparative Fit Index (<i>CFI</i>)	0.65

Source: LISREL software package estimation.

Table 4: Goodness of Fit: Respecification Model

No	Size of <i>GOF</i>	Value
1	Degrees of Freedom	125
2	Minimum Fit Function Chi-Square	366.05 ($P=0.0$)
5	Root Mean Square Error of Approximation (<i>RMSEA</i>)	0.080
6	Goodness of Fit Index (<i>GFI</i>)	0.89
7	Adjusted Goodness of Fit Index (<i>AGFI</i>)	0.83
8	Comparative Fit Index (<i>CFI</i>)	0.93

Source: LISREL software package estimation.

Table 5: Validation of Behaviour for Investment Construct (*PRLKINVE*)

No	Code of Indicators	<i>t</i>	Standardized Loading	Validity	Reliability Coefficient (Extracted Variance)
1	<i>PI01</i>	6.24	0.61	Valid	0.88 (0.66)
2	<i>PI02</i>	7.40	0.98	Valid	
3	<i>PI03</i>	7.43	0.98	Valid	

Source: LISREL software package estimation.

Table 6: Validation for Attitude (*ATD*)

No	Indicators	<i>t</i>	Standardized Loading	Validity	Reliability Coefficient and Extracted Variance
1	<i>SKPB02</i>	17.65	0.95	Valid	0.85 and 0.67
2	<i>SKPB07</i>	12.02	0.65	Valid	
3	<i>SKPB08</i>	7.21	0.40	Valid	

Source: LISREL software package estimation.

Analysis on the latent variable of intention to invest (*INTINVES*), it can be shown that there are five valid indicators with t-statistic greater than 1.96, namely *IINV01*, *IINV02*, *IINV03*, *IINV07*, and *IINV08*, and their standardized coefficient of greater than 0.4 (cut-off). It also finds that the reliability coefficient is 0.87, which is greater than 0.7. Meanwhile, the extracted variance is 0.57, which is greater than the threshold of 0.5. This indicates that the latent variable of intention to invest is an appropriate variable in this model. More detail about *t* statistics, standardized load-

ing (standardized coefficient) on indicators of intention variable is on Table 7.

The construction of latent variable of financial literacy in the model is constructed of valid indicators with t statistic greater than 1.96, namely *LF01*, *LF02* and *LF03*. Each of the variables has standardized loading greater than its cut-off. This indicates that the three indicators are the valid ones, as also shown by the reliability coefficients, namely 0.85 and the extracted variance of 0.67, which is greater than 0.5. More detail on the *t* statistics, standardized coefficient of these indicators is in Table 8.

Table 7: Validation for Intention to Invest Construct (*INTINVES*)

No	Indicators	<i>t</i>	Standardized Loading	Validity	Reliability Coefficient and Extracted Variance
1	<i>IINV01</i>	5.80	0.56	Valid	0.8 and 0.57
2	<i>IINV02</i>	10.67	0.86	Valid	
3	<i>IINV03</i>	9.94	0.81	Valid	
4	<i>IINV07</i>	11.66	0.86	Valid	
5	<i>IINV08</i>	6.87	0.56	Valid	

Source: LISREL software package estimation.

Table 8: Validation for Financial Literacy Construct (*LITFIN*)

No	Indicators	<i>t</i>	Standardized Loading	Validity	Reliability Coefficient and Extracted Variance
1	<i>LF01</i>	17.50	0.91	Valid	0.85 and 0.67
2	<i>LF02</i>	15.53	0.82	Valid	
3	<i>LF03</i>	12.69	0.69	Valid	

Source: LISREL software package estimation.

Table 9: Validation for Socioeconomic Condition Construction (*SOSEC*)

No	Indicators	<i>t</i>	Standardized Loading	Validity	Reliability Coefficient and Extracted Variance
1	<i>PNDDKK</i>	8.32	0.82	Valid	0.88 and 0.65
2	<i>PKPSG</i>	7.93	0.70	Valid	
3	<i>LLAHAN</i>	13.09	0.69	Valid	
4	<i>PDPTRMTG</i>	20.43	0.99	Valid	

Source: LISREL software package estimation.

Another variable that is used in this research is socio-economy, which is constructed by indicators of education of the family head, (*PNDDKK*), the education of the spouse (*PKPSG*), the land volume as the proxy of asset (*LLAHAN*), and monthly average of income (*PDPTRMTG*). The *t*-statistic of each of indicator is greater than 1.96, with reliability coefficient of 0.88 and extracted variance of 0.65. Since the reliability coefficient and extracted variance are higher than their cut-off, it can be inferred that latent variable of socioeconomic condition with its indicators can be used in the model. Detail results are in Table 9.

Hypothesis Testing

As has been stated, this research generally aims to build a model of investment behaviour. Specifically, this study tested several hypotheses about the influence of a variable on the other latent variables, as depicted in a model (Figure 1). From the model, it can be explained that the decision to invest significantly influenced by the intention to invest. This is evident from the *t* value of 4.95, which is greater than *t*-critical of 1.96. The standardized value of coefficient on the relationship between the variables intention to invest with an investment decision is -0.56.

Models constructed in this study examine the relationship between attitudes with decision to invest. The estimated model which relates the two variables provides the *t* value of -3, indicating that the relations between the two variables is significant.

The estimated standardized coefficient on the relationship between attitudes towards investment and decision to invest is -0.25. The negative sign implies that there is a negative relationship between both variables.

The *t*-statistic of the relationship between attitude towards investment (*ATD*) and the intention of investing is 8.87, indicating a significant relationship between both variables. The coefficient value of 0.77 indicates that the relationship between both variables is directly proportional.

The *t*-statistic on the relationship between financial literacy with the intention of investing is +0.57, indicating a non-significantly positive relationship between both variables.

The *t*-statistic of the relationship between financial literacy to investing behaviour is -0.92, indicating non-significant negative relationship between both variables.

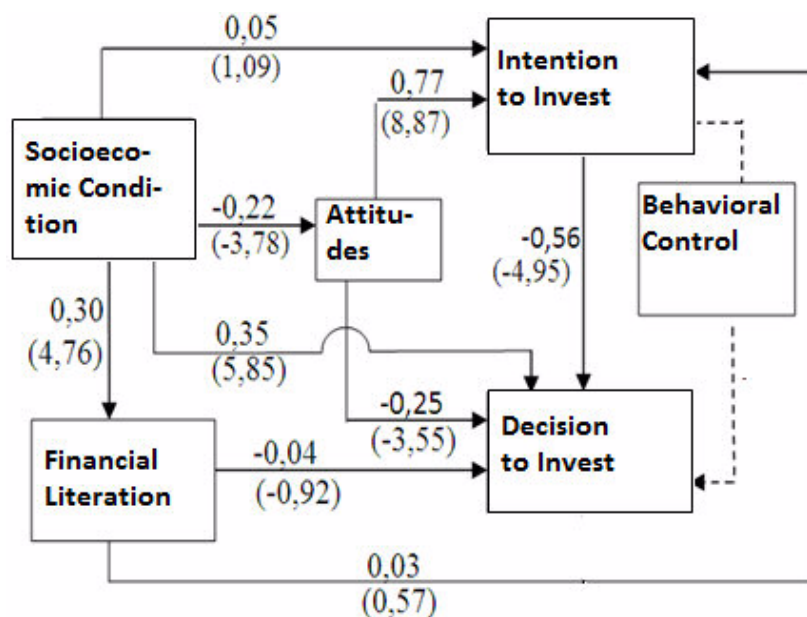
The estimation also finds That socioeconomic condition significantly influences the attitude towards investment

(*ATD*), with the *t*-statistic of 3.78, while the sign is negative.

The analysis finds that socioeconomic condition does not significantly influence the intention to invest (*t*-statistic = 1,09). Socioeconomic condition significantly influences decision to invest (*PRLKINVE*) with *t*-statistic of 5.85, with positive sign. Socioeconomic condition significantly influences financial literacy

with *t*-statistic of 4.76, with positive sign.

The hypothesis testing reject the following hypothesis of significant influences, namely financial literacy (*LITFIN*) on intention to invest, financial literacy on the decision to invest (*PRLKINVE*), and socioeconomic condition on the intention to invest (*INTINVES*). The summary of the hypothesis is in Table 10.



Notes: Numbers on arrow-path are standardized coefficients. Entries in parentheses are the *t*-statistic.

Figure 1: Model for Behaviour to Invest

Table 10: Hypothesis Testing Summary

Path	<i>t</i>	Standardized Coefficients	Non-standardized Coefficients	Decision on <i>H</i> ₀
<i>INTINVES</i> → <i>PRLKINVE</i>	-4.95	-0.56	-0.81	Reject
<i>ATD</i> → <i>PRLKINVE</i>	-3.55	-0.25	-0.40	Reject
<i>ATD</i> → <i>INTINVES</i>	8.87	0.77	0.85	Reject
<i>LITFIN</i> → <i>INTINVES</i>	0.57	0.03	0.03	Do not Reject
<i>LITFIN</i> → <i>PRLKINVE</i>	-0.92	-0.04	-0.06	Do not Reject
<i>SOSEC</i> → <i>ATD</i>	-3.78	-0.22	-0.22	Reject
<i>SOSEC</i> → <i>INTINVES</i>	1.09	0.05	0.06	Do not Reject
<i>SOSEC</i> → <i>PRLKINVE</i>	5.85	0.35	0.55	Reject
<i>SOSEC</i> → <i>LITFIN</i>	4.76	0.30	0.30	Reject

Notes: *LITFIN* is financial literacy, *SOSEC* is socioeconomic condition, *INTINVES* is intention to invest, *PRLKINVE* is decision to invest, *ATD* is attitude to invest.

Source: Data estimation.

From the previous analysis of data, it is known that there is a significant relationship between intention in investing in investing behaviour, with a negative sign.

Some papers have investigated the relationship between intention to invest and investing behaviour. Smith et al. (2008) investigated the relationship between attitudes, intentions and investing behaviour. They found that intention is more influenced by norm than attitude.

The finding that there was a significant relationship between the intention to invest and the decision to invest is in line with the findings of Smith et al. (2008) and Theory of Planned Behaviour (*TPB*). Harmonious relationship between intentions and behaviour will be corrected by the behaviour. If the household has a positive intention towards certain types of investments, the investment decision on the investment will also be positive.

This study found a negative relationship between intention and decision, which seems contradicts some previous findings. According to Ajzen (1991), bias in studies on both variables is likely to occur. This is due to the complexity, and multidimensionality in measuring the variables.

Overall, the intention of households to invest into non-agricultural sector is quite high, amounting to 60%, higher than that of farming sectors. This is caused by the lack of agricultural land, the low yield, high risk and high dependence on natural conditions in the agricultural sector.

Farmers' inability to invest are caused by numerous variables, such as unpredictable spending, and the spending on social needs such as contributing to some one's wedding parties, which are common for villagers. Another reason for this is their status as agriculture micro enterprise, which means that they use result from the previous crops to funds the next production. This will leave them with not much choice to invest. The situation gets worst with the ever-increasing of land's price.

The estimation finds that intention is not related to the decision to invest in the household. Mendola (2007) explains that the neoclassical economic theory can not explain this behaviour. Rural communities, especially farmers, do not always looking for the best option. This happens because their behaviour is constrained by the psychological aspects and social norms. In addition, the individual decision making are based on bounded rationality, and not purely because of personal interests.

The estimation finds that *ATD* significantly influences intention to invest (*t*-ratio of 3.55), with a negative sign. At the beginning, it has been argued that the attitude has no direct relationship with the decision to invest. Variables that are closer to the decision to invest is the intention to invest. In certain conditions, attitude influences and intention of investing, which eventually leads to decision to invest. This relationship will occur in conditions where there is a grace period (lag). Such behaviour is more directed to conduct a planned (planned behaviour). In certain conditions, a person might behave spontaneously (impulse). For example, in the harvest season, the prices of the crops increases, the farmers usually set aside some of the money to invest.

The estimation finds that attitude (*ATD*) significantly influences investment, with the *t*-statistic of 8.87, with a positive sign. The estimation also finds that financial literacy does not significantly influence the intention to invest, with the *t*-statistic of 0.57, with a positive sign. This seems contradict with the finding of previous researches. The argument is that the indicators of the latent variable measuring financial literacy, namely financial planning, have no affinity with the investment aspects. Financial planning is more appropriate to be applied to the behaviour of long-term investments, such as children's education investment or retirement preparation. In the agricultural, the determining aspect

is the area of arable land that is uncontrollable.

As stated in previous section, socioeconomic condition significantly influences the attitude towards investment with a negative direction. From the empirical research, it is found that socioeconomic factors significantly influence the attitude of psychological factors. Socioeconomic and demographic conditions affect a person's attitude as part of a psychological construct variable (see Schroder, 2006; Kinershon-chris, 2005; Klos et al., 2005; Nataliya et al., 2008; Miyata, 2003). Thus, these results support the previous empirical findings.

The relationship between attitude and socioeconomic condition can be explained the proxy for socioeconomic condition used in the model, namely an area of arable land, household income and education of head of family and partner. Area of arable land is one factor of production agriculture business that is closely related with household income.

Attitude has a structure, one of which is a descriptive belief, which can be broken down into a belief about object, beliefs about the relationship or relationships between objects in question, and beliefs about the characteristics and quality or attribute of an object. Productive land one's occupied is a measure of socioeconomic variables, which can be parsed based on its characteristics and relation to other objects and attributes attached to it.

Agricultural land controlled by a positive effect on income. However, land is a factor of production that has unique properties and characteristics. These nature and characteristics of attitude is the attitude object as a component of descriptive beliefs.

The properties and characteristics are: (a) the ownership is relatively fixed over a certain period, so it is uncontrollable, which makes it difficult for a farmer to expand their farm. (b) Agricultural land prices are high and almost unattainable by these lower income farmers. (c) The results

of farming depend on the condition of the land, the position of land and unpredictable.

Meanwhile, level of education is a precondition of thinking. People with higher education are expected to have a better mindset. The difference in level of education influences the perception towards physical objects or behaviour, which eventually form different attitudes. Positive perceptions towards the characteristics or properties of the object will form a positive attitude as well. The high socioeconomic condition will reduce the *ATD* towards the object.

Standardized coefficients on the relationship between socioeconomic condition with the intention to invest is 0.05, with a *t*-statistic of 1.09, which is smaller than the *t*-critical of 1.96, indicating that there was no significant relationship between socioeconomic condition and intentions to invest. The increase in intention to invest is mainly caused by the future orientation.

Some previous studies found factors that influence the intention to invest such as socioeconomic condition and demography, occupation (occupancy) and the environment in which the investor lives (Christiansen et al., 2005). Ricarelli (2006), Tooth (2006), and Stephani (2003) also found that socioeconomic factors have a significant influence on investment intentions. Calvet et al. (2007) explains that the characteristics of households which include education level, age and wealth, contribute to determine the choice of investments.

Thus, this study did not support some of the previous studies. This is because intention is a readiness to make investment that does not arise from socioeconomic factors. Intention is a function of attitude, while attitude is a function of socioeconomic conditions, so that socioeconomic conditions have no direct relationship with intention to invest.

In addition, there are behavioural

variables that have direct relationships with intentions and behaviour, namely social pressure and the ability to access source of power.

Socioeconomic variables (*SOSEC*) indicators are composed of family head education (*PNDDKK*), educational partner (*PDKPSG*), the area of arable land (*LLAHAN*) and average monthly family income (*PDPTMTG*). The biggest standardized loading on socioeconomic latent variable is the household income, namely 0.99.

This research suggests a significant relationship between socioeconomic variables (*SOSEC*) with the decision to invest (*PRLKINVE*). Standardized path coefficient value on the relationships with socioeconomic variables such investment decisions is 0.35, with a positive sign.

Socioeconomic status has a relationship with the investment decision because the people in a group or have similar social and economic characteristics, tend to have similar thoughts. The similarity in thinking makes them have the same attitude toward certain physical object or behavioural objects. Socio-economic status can be measured normatively or subjectively. The normative measure of socioeconomic is the level of education, income and employment. People with higher education tend to be treated to have a higher status and revenue. However, income does not go inline with status.

Subjective measures are dependent on the way people look it. People work in offices tends to be treated with higher respect, even though the income might not be as high as other people with other jobs. Another measure of socioeconomic status is wealth.

This study uses three indicators for socioeconomic condition, namely education, area of arable land as a proxy of household wealth, and income. These three indicators are interrelated. Households with high education tend to have better mindset, making it more capable of accessing infor-

mation, knowledge and able to manage the resources, or to be able to earn higher incomes. Households with higher incomes have more opportunities to save and invest. Household with this capability will, at the end, collect wealth, including those in the form of land or arable land.

Variations in the mindset as well as the ability to manage information and resources influence the patterns of behaviour, so that socioeconomic status affects the behaviour. In investment terms, variations of socioeconomic status affect or relate to variations in investment behaviour.

From the various empirical findings on the relationship between socioeconomic conditions and the decision to invest, it can be concluded that this study is in line with some of empirical findings from the previous researches. It could be argued that household socioeconomic variables affect the behaviour of the formation of investment portfolios.

Area of arable land and average income are interrelated. The majority of household income comes from agriculture. With more arable lands, the households have higher probability to have higher income. Level of education makes it easier to absorb knowledge, which makes the household to be more creative, encourages them to find new sources of income, from agricultural or non-agriculture sectors.

This study found a standardized coefficient on the relationship between socioeconomic with financial literacy of 0.30. The negative sign on the coefficient indicates that if socioeconomic increasing the financial literacy increased, and vice versa. Thus, a significant relationship between socioeconomic conditions in financial literacy is reasonable.

CONCLUSION

Based on data analysis and discussion of research results that have been raised, it can be inferred that variables of socioeconomic, attitudes, and intentions significantly influ-

ence the decision to invest. Meanwhile, financial literacy had no effect on the attitude variables, intentions or decisions to invest.

The paper also found that trend in investing in the society varied, which can be seen from the decision to invest that vary from one society to another. The variation is related directly or indirectly to the intention, attitude toward the investments of farming, socioeconomic conditions, and financial literacy levels. Variables of intentions, attitudes, and socioeconomic conditions have a direct relationship with the decision to invest, while aspects of financial literacy have no significant direct relationship with the decision to invest.

Variables in the estimated model are constructed using first order construction. The insignificance of financial literacy, attitudes, and socioeconomic variables might be due to this construction. Estima-

tion results support the theory of planned behaviour, but the theory still requires justification, so that the resulting model would be better.

This study uses cross section data to uncover what has been done on the socioeconomic and cultural context of a particular ethnic community, so this study did not reveal a more complete information about investing behaviour from time to time. Therefore, subsequent investigators are expected to design better studies using coherent design time or in longitudinal studies with a longer duration.

Studies about behaviour usually involve intentional aspect. To uncover phenomena and behaviour in a more appropriate way, the appropriate methods are in demand. Future researchers are expected to analyze using better approaches.

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