

PREDICTING INDIVIDUAL INVESTOR'S INTENTION TO INVEST: A COMPARISON BETWEEN ACTUAL AND PERCEIVED FINANCIAL KNOWLEDGE

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ABSTRACT

This paper aimed to empirically check and evaluate statistically significant differences in structural relationships of actual and perceived financial knowledge, risk tolerance, and risky investment intention, via in total of 995 questionnaires sent to a sample group of the informal laborers in southern Thailand. Partial least squares structural equation modelling was used to analyze the results. It is worth noting that even though both actual and perceived financial knowledge affected each individual's risk tolerance, still perceived knowledge affected more the individual's risk tolerance. The actual and perceived financial knowledge that the individuals possess would enable them to make sound investments. Our study added the multi-group analyses in order to investigate if gender affected each individual's decision-making on investment. The results revealed that in the case of men, both actual and perceived financial knowledge positively correlated with risky investment intention, whereas in the case of women only actual financial knowledge did. The key point from our study indicated that confidence or self-perceived knowledge was a significant factor affecting individual decision-making on investments. Hence, the educators and policymakers should provide effective lessons on financial knowledge by creating actual knowledge in order to help avoid overconfidence.

Keywords: Actual financial knowledge, perceived financial knowledge, investment intention, individual investor, risky investment.

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1. INTRODUCTION

Two decades after the financial crisis, a.k.a. "Tom Yam Kung Crisis", memories of this hardship are still vivid for many Thai people. Financial knowledge has, thus, become essential; not only enabling each individual to understand the causes and effects of the economic crisis in the past, but it also helps one cope with the aftermath of the current ongoing crisis around the world. The recent COVID-19 crisis has created havoc in the World economy, and the Thai economy is no exception. The IMF and the World Bank emphasize that the impact of this pandemic could result in a contraction of the global economy by about -3%, and of Thai GDP by approximately -6.7% in

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2020. The Bank of Thailand proposed that Thailand's economy might contract by 8.1 percent in 2020, while a major local bank predicts an 8.8 percent drop. In comparison, the GDP dropped by 10.5 percent in 1998, the worst year of the Asian Financial Crisis (Parks et al., 2020). The second wave's shock caused the economy to contract by -2.6 percent year-on-year in Q1 2021 (World Bank, 2020). Lockdown measures to stop the pandemic from spreading have reduced corporate operations, temporarily reduced working hours or days, and reduced labor staff (Li et al., 2021).

The informal sector accounts for 43 percent of Thailand's non-agricultural workforce (International Labor Organization, 2016); potentially up to 54 percent (Thailand National Statistics Office, 2019). Even in good times, workers in the informal sector are particularly exposed to the negative effects of economic downturns (Doane et al., 2003; Finnegan & Singh, 2004; Mehrotra, 2009). Because social insurance is linked to conventional employment, workers in the informal sector are frequently excluded from programs such as those providing support during unemployment, disability, and retirement (International Labor Organization, 2016). Workers in the informal sector were not provided the same social protection as government and official sector employees. Workers in the informal sector have low levels of educational attainment, income, and economic opportunity (Senanuch & Suntonanantachai, 2018; YimYam et al., 2000), and have limited access to low-interest private financing through traditional lending institutions like banks (Fernquest, 2012). In practice, employees in the informal sector face many forms of social exclusion that hinder them from engaging in normal social processes and exercising their rights (Popay, 2010). This study surveyed laborers in the informal sector in Thailand due to a sizable informal economy contributing significantly to the Thai economy. Among the most vulnerable in the labor market, almost 1.6 million informal economy workers are significantly impacted by lockdown measures and/or working in the hardest-hit sectors (Komin et al., 2021). The informal laborers in Southern Thailand were chosen since the proportion between informal and formal labor in the southern is close to that in the whole country. Thailand expanded the scope and eligibility for official social insurance programs in the 1990s and 2000s, but these policy reforms left the informal workers mainly unprotected.

Since the global financial crisis elevated the importance of financial knowledge, people have been more active and responsible in their financial planning (Mandell & Klein, 2009; Robb & Woodyard, 2011; Shahrabani, 2012). Financial knowledge is essential for managing personal finances and also for making investment decisions. Both of these individual activities can also suffer failures, as Jureviciene and Jermakova (2012) have identified if one lacks financial knowledge. Normally, people will make investment decisions based on what they think they know, not what they actually know. Allgood and Walstad (2016) mentioned that an investor's decision could not be correctly measured if financial knowledge in both these dimensions is not included in that measurement. This study, thus, aimed to fulfill this gap by measuring financial knowledge in both dimensions. The first type measured the actual financial knowledge from a correct test score in the questionnaire; the second type measured the perceived financial knowledge by allowing each individual to self-rate his/her level of financial knowledge. As a result of this knowledge gap, our study focused on the following research question: What role does financial knowledge play in an individual investor's decision to invest based on their risk tolerance?

In this work, a new theoretical framework was developed based on a behavioral perspective linking investor decision-making with financial knowledge and risk tolerance in the context. We use behavioral finance axioms such as restricted rationality to explain the study outcomes. This

research investigates whether subjective financial knowledge can play a role in forecasting risky investment intentions. In defining the likelihood of behavior occurrence through behavioral intention, the theories of reasoned action and planned behavior refer to attitudes and subjective norms (Ajzen, 1991). Sitkin and Weingart (1995) used behavioral finance to investigate the relationship between problem framing and risky investment decisions. On the one hand, risk aversion behavior has been linked to experience by Byrne (2005). Financial knowledge has an impact on risky investment behavior, according to Vlaev et al. (2009). Risky investment intentions in general can be defined as an attitude that reflects an individual's general aversion to taking risks in his or her life. This study analyzes its indirect effect that Financial Knowledge, as a moderator variable, may modify for associations between individual variables and hazardous investment behavior. Because an individual's financial knowledge changes over time, we may be able to use this likely indirect effect in manipulating his or her investment decisions (De Bortoli et al., 2019). As a result, risky investment intention as a term describes how much money people plan to put into each risky investment option. The results from this study are expected to benefit not only informal laborers but also ordinary people, investors, investment consultants, and especially those agencies responsible for making policies in both the public and private sectors. Actual financial knowledge should be promoted in order to decrease the financial bias known as overconfidence that resulted in estimating one's financial knowledge to be better than it actually is. Once an individual possesses a higher level of financial knowledge, their financial risk tolerance as well as their intentions to invest in risky assets would be adjusted accordingly.

2. LITERATURE REVIEW

2.1. *Actual Financial Knowledge and Perceived Financial Knowledge*

A challenging aspect is studying financial literacy is the determination of the measurement, or the question “*how to appropriately measure financial literacy*” (Zahra & Anoraga, 2021; Amonhaemanon & Vora-Sitta, 2020; Huston, 2010; Remund, 2010 & Hung et al., 2009). The Organisation for Economic Co-operation and Development (OECD) is among those organizations that conduct surveys measuring the financial literacy of people in several countries around the world, and rates the financial literacy of people in each nation. According to the OECD, “*Financial literacy can be defined as: A combination of awareness, knowledge, skills, attitude, and behaviors necessary to make sound financial decisions and ultimately achieve individual financial well-being*” (Atkinson & Messy, 2012). From this definition, financial knowledge is a crucial factor in financial literacy.

In several past studies, multiple-choice questionnaires or right/wrong quizzes have been commonly applied when ones wished to measure an individual's level of financial knowledge. This implied that most of the study on financial knowledge focused on the cognitive dimensions derived from the construction of a tool or a method to measure what the people know or understand about the financial concepts. One popular question that has been referred to and employed in several studies is that of Lusardi and Michell (2007). Convenient and easily applied, this question tests one's understanding about the fundamental principles of financial knowledge merely in three issues: compound interest, risk diversification, and inflation. To measure the individual's level of financial knowledge, they would be asked various questions, given scores for correct answers, and finally the total summed score would be considered as measure of “actual” financial knowledge of that

person. In this study, the questions employed to measure the actual financial knowledge were newly constructed and the other ones were those that the Bank of Thailand utilized to survey the level of financial literacy – opted for only the financial knowledge part. This study classified the questions into four groups: (1) FK_General (about the National Saving Fund, the Credit Bureau, Saving Insurance Institute, and the calculation/ division) (2) FK_Compound (3) FK_Inflation and (4) FK_Investment. The correct answer would be given 1 score, and 0 for the wrong answer. The total full score is 10. Another method is called a self-assessment of one's financial knowledge. This allows one to evaluate the level of one's financial knowledge. The scores derived would be considered the “perceived” financial knowledge (same as in the study of Hung et al., 2009). For this study, we allow the participants to choose from 0 (no financial knowledge at all) to 10 (very high level of financial knowledge).

2.2. Financial Risk Tolerance

Risk tolerance helps us understand how one behaves and responds to different situations. Risk tolerance also affects each individual's thinking and decision-making in investments. In this study, we applied financial risk tolerance assessment that allows one to assess the level of risk acceptance. Thus, in order for one to be able to determine or define the level of financial risk tolerance, at the beginning the definition of financial risk tolerance should be mutually understood. This study defined risk tolerance as the maximum level of risk one could accept. This basically implied the maximum amount of uncertainty that one fully agrees or consents to when making a financial decision (Van de Venter et al., 2012; Prabhakaran & Karthika, 2011 & Grable & Roszkowski, 2008) . Risk tolerance is, thus, a significant factor in making decisions on financial issues, ranging from saving to making investments (Grable & Lytton, 2003). Grable (2016) also remarked that at present to understand how financial risk tolerance affects financial behavior has been increasingly in focus.

2.3. Risky Investment Intention

Aren and Aydemir (2015) mentioned that in general people will avoid risks. The more one tries to avoid a risk, the less one intends to invest in risky investments (Schoemaker, 1993). Furthermore, when one's level of financial knowledge is high, his/her level of risk averseness will be in the opposite direction while his/her risky investment intention will become stronger. In general, the individuals would avoid taking risks in their daily life, but when he/she gains more financial knowledge, his/her intention to avoid making a risky investment will become less. It could be said that, one with higher financial knowledge dares make more risky investment than those with lower financial knowledge (Chong et al., 2021; Diacon, 2004) . It has also been found that the perceptions about financial risk by those with a low level of finance knowledge vary from one person to another (Yang et al., 2021). For this study, in order to obtain the indicators for risky investment behavior, we measured the risky investment intention from 4 questions (Dodds et al., 1991) as an indication of actual risky investment activity, based on the notion of planned behavior (Ajzen, 1991). The responses apply the 5-point scale, ranging from 1-Strongly disagree to 5-Strongly agree. A higher total score indicates stronger intention of risky investments

2.4. *The Relationships between Financial Knowledge, Risk Tolerance, and Risky Investment Intentions*

According to the study by Grable and Joo (1999), financial knowledge is a significant factor influencing the financial risk tolerance. Most of the studies, such as Grable (2000), Beal and Delpachitra (2003), Frijns et al. (2008), and Gibson et al. (2012), revealed that individuals with financial knowledge possessed higher risk tolerance. The study by Guiso et al. (2009) found that the investors' financial knowledge affected their behavior in portfolio diversification. The study by De Dreu and Bikker (2012) that analyzed the fund managers of Dutch pension funds, comprising more than 857 funds from 1999 to 2006. The results of this study indicate that the less knowledgeable fund managers (those with a low level of financial knowledge) were likely to opt for less risky investments; basically, the less knowledgeable fund managers were usually risk-averse types. In addition to its relationship with the investment behavior, the financial knowledge is also related to the investment decisions of each individual, especially those of adults (Allgood & Walstad, 2013). The studies by Hassan Al-Tamimi and Anood Bin Kalli (2009) also confirmed this finding: if the individuals possess sufficient actual financial knowledge, they can make the right financial decisions. In contrast, if the individual possesses insufficient financial knowledge, he/she becomes less confident in making risky investment decisions. The studies by Hariharan et al. (2000) found that each individual's level of risk tolerance resulted in investment decisions with matching risk levels. The study by Cardak and Wilkins (2009) found that the individuals with high risk tolerance were inclined to invest less in risk free assets. Thus, the risk-averse households were likely to allocate less of their investments to risky asset.

3. METHODOLOGY

3.1. *The Questionnaire*

The semi-structured questionnaire applied in this study had been examined by specialists for content validity and relevancy to the objective or definition of the study. The result from the examination was then used to calculate the Item Objective Congruence Index before selecting only those questionnaires with the average score range from 0.67 to 1.00. Also, the reliabilities were analyzed by trying out 40 questionnaires with the sample group before calculating the Cronbach's alpha coefficient; here, the calculated value was 0.837. Thus, the questionnaires used in this study were practically reliable for collecting the data.

3.2. *Variables Description*

Like in the study by Huzdik et al. (2014), the descriptive statistics were transformed into various indexes as follows.

3.2.1. *Financial Knowledge Index (FKI)*

The Financial Knowledge Index was derived from the scores that one earned from answering the questionnaire about the actual financial knowledge. There were totally 10 questions; the correct answer earned 1 score, while the incorrect one got 0. Thus, if the questions were answered all

correctly, the full score would be 10. The derived scores were then brought to calculate an average score. Those with score higher than the average were considered to have high financial knowledge.

3.2.2. *Self-perception Index (SPI)*

The Self-Perception Index was used to measure the individual's awareness of his/her own financial knowledge. This SPI was derived from the difference between the perceived financial knowledge from one's self-assessment, and the actual financial knowledge from the test score.

$$\begin{aligned} & \textit{Self perception Index} \\ & = \textit{Perceived Financial Knowledge} - \textit{Actual Financial Knowledge} \end{aligned} \quad (1)$$

If the SPI value is close to zero, it means that the person is realistic. However, a positive value of SPI implies that the person is overrating self, while a negative SPI implies self-underrating.

3.2.3. *Risk Tolerance Index (RTI)*

Risk Tolerance Index is a ratio that shows an individual's risk tolerance for the level of financial knowledge. Since the financial knowledge comprises both actual and perceived financial knowledge, the RTI then comprises two ratios as well: $RTI_{perceived}$ and RTI_{actual} . See their equations below.

$$RTI_{perceived} = \frac{\textit{Risk taking level based on self - assessment}}{\textit{Perceived Financial knowledge}} \quad (2)$$

$$RTI_{actual} = \frac{\textit{Risk taking level based on self - assessment}}{\textit{Actual Financial knowledge}} \quad (3)$$

From the above equations, the RTI is calculated by comparing the risk-taking level based on self-assessment with the level of financial knowledge. The calculated value could range from zero to infinity. Wanyana (2011) classified the investors risk tolerance attitude into three groups: "low risk" (risk averse), "medium-risk" (risk manager) and "high-risk" (risk taker). In case the value is less than one, that person is considered risk averse, while if the value is more than one, a risk taker. For value close to one, the person is a risk manager.

4. RESULTS AND DISCUSSION

4.1. *Descriptive Analysis*

From the total of 995 sets of questionnaires, it was found that 72.96% of respondents were women. The majority (57.89%) was single. In the age range, those 15-22 years old were the major group (46.63%), and the rests were about the same in group size: 174 respondents were between 23-39 years old (17.49%), 190 respondents were between 40-54 years old (19.20%), and 166 respondents were between 55-73 years old (16.68%). As for educational background, most of the respondents (51.86%) holding below bachelor degree. More than 60% of the respondents got income less than

USD 500 per month, while the rests 31.36% got less than USD 300 per month and 35.48% got income between USD 300 - 500 per month.

4.2. Analysis Result: Self-Perception Index (SPI) and Risk Tolerance Index (RTI)

Financial Knowledge Index (FKI) could identify both low and high estimates of one’s financial knowledge; if one’s actual financial knowledge is higher than that of the average FKI then knowledge level would be high, otherwise it was low. Results from our study revealed that the respondents possessed low financial knowledge; the proportion of those with low FKI was larger among women (67.5%) than among men (56.1%). This finding is consistent with the studies by Filipiak and Walle (2015), Lusardi and Mitchell (2014), Chen and Volpe (2002), and Goldsmith et al. (1997). Some of these studies reasoned that woman usually had lower level of financial knowledge than men because the females usually participated in financial decision-making in the household less than the males (Hsu, 2011). Even Lusardi and Mitchel (2008) proposed that women might be less interested in financial issues than men.

As for the Self-Perception Index (SPI) among the sample from the informal sector in southern Thailand, it was found that most men (71.0%) and women (75.9%) overrated their financial knowledge higher than their actual one. Barber and Odean (2001) mentioned that it was normal to find most people overestimate their level of financial knowledge instead of underestimating it. The Pearson’s Chi-Square test reveals that the Financial Knowledge Index and self-perception of respondents has a relationship with their gender (Table1).

Table 1: Cross Tabulation Between Gender and Other Factors

		Gender				Pearson's Chi-Square
		Male		Female		
FKI	Low	151	56.1%	490	67.5%	11.05 ***
	High	118	43.9%	236	32.5%	
SPI	underrated	44	16.4%	77	10.6%	6.077 **
	realistically	34	12.6%	98	13.5%	
	overrated	191	71.0%	551	75.9%	
RTI on perceived knowledge	Risk averse	135	50.2%	377	51.9%	5.661 **
	Risk manager	76	28.3%	157	21.6%	
	Risk taker	58	21.6%	192	26.4%	
RTI on actual knowledge	Risk averse	166	61.7%	486	66.9%	6.436 **
	Risk manager	31	11.5%	99	13.6%	
	Risk taker	72	26.8%	141	19.4%	

Note: FKI (Financial Knowledge Index), SPI (Self-Perception Index), RTI (Risk Tolerance Index). ** $p < 0.05$, *** $p < 0.001$.

For Risk Tolerance Index (RTI), both $RTI_{perceived}$ and RTI_{actual} , it was found that most of the respondents were risk averse with no difference between men and women, while the $RTI_{perceived}$ of women and men were 51.9% and 50.2% respectively, and the RTI_{actual} were 66.9% for women and 61.7% for men. The significance of association Chi-Square test was performed with values 5.661 on self-assessment and 6.436 on actual knowledge, with $p < 0.01$. This means that the risk tolerance of the respondents has a relation to gender. It is worth a note that when the actual knowledge has been applied, one’s Risk Tolerance Index (RTI) was higher compared with the case when the perceived knowledge was used. In short, the better the financial knowledge, the higher the risk

tolerance. The study by Huzdik et al. (2014) found that self-perception of financial knowledge affected the individual's level of financial risk tolerance. The result of our study found that the laborers in informal sector were dominantly risk averse. This was exactly the same as Dyer and Sarin (1982) had found most of the subjects were classified as risk averse.

4.3. Assessment of Measurement Model

To analyze the structural equation model (Figure 1), the forecasting components need to be tested for multicollinearity to make sure they are not significantly linearly related. Considering Table2, the forecasting components had variance inflation factors in the range 1.338-2.051 (lower than 5.00), which is consistent with the criteria no multicollinearity of those external factors in the structural equation model. As for the analysis of indicator reliability, it was found that the outer loading value of every observable variable was more than 0.70. Thus, it could be concluded that all observable variables in the model were reliable (Hair et al., 2014). For the analysis of the internal consistency reliability, it was found that the values of latent variables were 0.834 and 0.852, while the values of Cronbach's alpha were 0.736, 0.790 (larger than 0.70). It could be concluded that the test for all latent variables in the model was reliable, and the analysis of convergent validity found that the AVE value of latent variable was 0.557 and 0.591 (both exceeding 0.50). In summary, there was convergent validity between observable variables under the same latent variable in every latent variable of the model (Hair et al., 2014). From Table3, it was found that (\sqrt{AVE}) of each latent variable in this study was more than the square of the relationship value of that latent variable and other latent variable in the model. It showed that, in this study, the discriminant validity of the indicator of each latent variable was sufficient and was correctly measured by the correct observable variables (Fornell & Larcker, 1981).

Figure 1: Model Expressing the Relationships Between Factors Affecting the Risky Investment Intentions

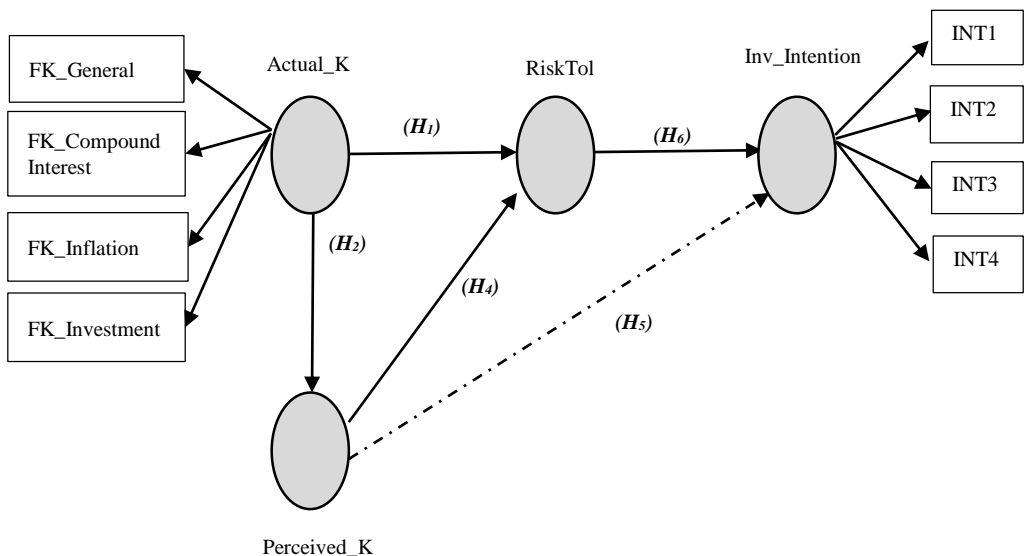


Table 2: Analysis Result of Measurement Model

Construct	Indicator	Outer Loadings	VIF	CR	Cronbach's Alpha	AVE
Actual_K	FK_General	0.768**	1.421	0.834	0.736	0.557
	FK_Compound	0.750**	1.338			
	FK_Inflation	0.745**	1.472			
	FK_Investment	0.723**	1.429			
Risky Investment Intention	INT_1	0.700**	1.416	0.852	0.790	0.591
	INT_2	0.860**	1.453			
	INT_3	0.767**	2.051			
	INT_4	0.749**	1.811			

Note: * *t*-value ≥ 1.96 (significance level = 5%), ** *t*-value ≥ 2.58 (significance level = 1%), CR: Composite reliability.

Table 3: Discriminant Validity and Correlation between Latent Variables

	Discriminant Validity			
	Actual_K	Perceived_K	RiskTol	Inv_Intention
Actual_K	0.746	0.000	0.000	0.000
Perceived_K	0.211	1.000	0.000	0.186
RiskTol	0.206	0.440	1.000	0.118
Inv_Intention	0.312	0.000	0.000	0.769

Note: The numbers on the main diagonal are (\sqrt{AVE}).

4.4. Assessment of Structural Model

Table 4: The Assessment of Coefficient Effects of Various Factors

Hypothesis	Parameters		DE	IE	TE
<i>H</i> ₁	Actual_K	→ RiskTol	0.119**	0.087**	0.206**
<i>H</i> ₂	Actual_K	→ Perceived_K	0.211**	-	0.211**
<i>H</i> ₃	Actual_K	→ Inv_Int	-	0.025	0.025**
<i>H</i> ₄	Perceived_K	→ RiskTol	0.415**	-	0.415**
<i>H</i> ₅	Perceived_K	→ Inv_Int	-	0.051	0.051**
<i>H</i> ₆	RiskTol	→ Inv_Int	0.123**	-	0.123**
Specific Indirect Effects					TE
<i>H</i> ₇	Actual_K	→ Perceived_K → RiskTol			0.087**
<i>H</i> ₈	Actual_K	→ RiskTol → Inv_Int			0.015**
<i>H</i> ₉	Perceived_K	→ RiskTol → Inv_Int			0.051**
<i>H</i> ₁₀	Actual_K	→ Perceived_K → RiskTol → Inv_Int			0.011**

Note: DE = Direct effect, IE = Indirect effect, Actual_K = Actual financial knowledge, Perceived_K = Perceived financial knowledge, Inv_Int = Investment intention, RiskTol = Risk tolerance, * *p* < 0.05, ** *p* < 0.001.

High Financial literacy results in better financial decision-making (Tokar, 2015). Benjamin et al. (2013) and Dohmen et al. (2010) both demonstrated that knowledge and cognitive capacity influence risk aversion preferences, which has an effect on financial decisions. This means that people who are less financially savvy are less willing to take risks. It was clearly shown that the total effect of Perceived_K on RiskTol was also more than doubled when comparing to the total effect of Actual_K. When considering the specific indirect effects of various factors on Inv_Intention in Table4, it was found that mostly the Perceived_K affected Inv_Intention through

the RiskTol with the statistical significance level of 0.001; this was higher than the effect of the Actual_K to Inv_Intention through RiskTol. Moreover, if Actual_K affected Perceived_K and RiskTol respectively, it would be the least effect on Inv_Intention. There is an association between perceived financial knowledge and financial behavior (Glova & Gavurova, 2012). Parker et al. (2012) found that confidence was positively associated with sound financial decisions. Financial confidence, or perceived financial knowledge, plays an important role in making financial decisions (Nguyen et al., 2017). However, from the analysis of the Coefficient of Determination (R^2), it was found that the model had a low level of precision in forecasting the Perceived_K, RiskTol and Inv_Intention with the statistical significance levels 0.044, 0.207 and 0.015. Thus, besides Financial Knowledge and Risk Tolerance, there could be other factors affecting risky investment intentions. Courchane et al. (2008) state that inaccurate optimistic self-assessments led to better financial results. People tend to have unrealistic self-awareness, but this positive illusion can be beneficial (Sedikides, 1993). This self-efficacy gives individuals the confidence to act (Perrig & Grob, 2013).

4.5. Robustness Check: Multigroup Structural Model Estimation

Table 5: Multi Group Structural Model Analysis (Male-Female)

Hypothesis	Path Analysis		Path Coeff. Mean (Male)	Path Coeff. Mean (Female)	Path Coeff. (Male- Female)	p-Value (Male- Female)
H_1	Actual_K → RiskTol	DE	0.189** (0.060)	0.099** (0.036)	0.088	0.211
		IE	0.080** (0.032)	0.094** (0.020)	-0.016	0.637
H_2	Actual_K → Perceived_K	DE	0.240** (0.063)	0.212** (0.037)	0.023	0.742
		TE	0.270** (0.053)	0.193** (0.035)	0.071	0.259
H_3	Actual_K → Inv_Intention	TE	0.039 (0.031)	0.027** (0.010)	0.010	0.527
		IE	0.039 (0.031)	0.027** (0.010)	0.010	0.527
H_4	Perceived_K → RiskTol	DE	0.330** (0.083)	0.444** (0.045)	-0.115	0.226
		TE	0.143 (0.107)	0.136** (0.037)	0.004	0.726
H_5	Perceived_K → Inv_Intention	TE	0.048 (0.036)	0.061** (0.018)	-0.013	0.762
		IE	0.048 (0.036)	0.061** (0.018)	-0.013	0.762
H_6	RiskTol → Inv_Intention	TE	0.143 (0.107)	0.136** (0.037)	0.004	0.726
		DE	0.143 (0.107)	0.136** (0.037)	0.004	0.726
H_7	Actual K → Perceived K → RiskTol		0.080* (0.080)	0.094** (0.020)	-0.016	0.637
H_8			0.027	0.014*	0.012	0.438

	Actual_K → RiskTol → Inv Inten	(0.027)	(0.007)		
<i>H₉</i>	Perceived K → RiskTol → Inv Int	0.048 (0.048)	0.06**1 (0.018)	-0.013	0.762
<i>H₁₀</i>	Actual_K → Perceived_K → Risk Tol → Inv_Int	0.012 0.012	0.013** 0.005	-0.002	0.870

Note: * $p < 0.05$, ** $p < 0.001$, in parentheses is standard deviation.

This study further performed multi-group analyses in order to test the difference in the study’s conceptual model between women and men. They are shown in Table5, and the test of effect revealed no significant differences between men and women in our model’s relationship. This implies that the model analyzing the relationships between financial knowledge, risk tolerance, and risky investment intentions could be applied to the sample group regardless of gender. In this study, it was found that Actual_K affected Perceived_K in both males (0.240) and females (0.212). As a result, Actual_K and Perceived_K also affected RiskTol in both men and women, as well. It was interesting to note that Actual_K affected on RiskTol in men (0.270) more than in women (0.193), while Perceived_K affected on RiskTol in women (0.444) more than in men (0.330). This indicates that what women think they know affected more their level of risk tolerance, on the other hand what men actually know affected more their level of risk tolerance. Our findings agree with Bannier and Neubert (2016) in that the impact of financial literacy on investment decisions differs between females and males. For men, both real financial literacy and perceived financial literacy are positively associated with a standard investment. For women, it's only real literacy. On the other hand, for sophisticated investments, perceived financial knowledge plays an important role for both men and women. According to the results of the multi-group partial least squares analysis, it was found that there was an effect path between the Actual_K and Inv_Intention and between the Perceived_K and Inv_Intention. Moreover, an effect of RiskTol on Inv_Intention was found; there was a level of statistical significance in women, but not in men. Therefore, well-founded real financial knowledge seems to be a prerequisite for women's willingness to take financial risks. This is positively associated with standard investment and helps to compensate for the restraining effect of women's willingness to take relatively weak risks. In contrast, riskier, more sophisticated investments are driven by a strong awareness of financial literacy. For females, this makes risk tolerance irrelevant, but for males, it is still an important covariate.

5. CONCLUDING COMMENTS

Financial knowledge, financial risk tolerance, and financial decision-making have become attractive research issues in recent years (Huzdik et al., 2014; Shahrabani, 2013; Sjöberg & Engelberg, 2009). This study classified the financial knowledge into two types: the actual financial knowledge (as judged by correct answers to testing knowledge in the questionnaires) and perceived financial knowledge (the level of knowledge one thinks that they possess). Regarding the actual financial knowledge, it was found that the respondents had a low level of Financial Knowledge Index. Specifically, compared to men the proportion of females with a low level of financial knowledge was larger. This suggests that the difference in knowledge between women and men might be rooted in social norms. Like in Thailand, it was found that women usually received lower levels of education than men, especially in the low-income group. The motivation to learn about finance among women was also lower than that among men (Lusardi & Mitchell, 2014). Next,

when considering the perceived financial knowledge, this study utilized the Self-perception Index. For the sample of laborers in the informal sector in the South of Thailand, it was found that both men and women assessed their level of financial knowledge as higher than their true level of actual knowledge (overrating).

Interestingly, the results from this study indicated that women were more confident in their level of knowledge than men, and it was this confidence that became the significant predictor of one's financial behavior. In case the confidence exceeds the actual knowledge, there would be a higher chance of risky financial behavior. Williams and Gilovich (2008) mentioned that under one's financial decision-making, self-confidence was essential since it helped one to act confidently. According to Parker et al. (2012), once equipped with confidence, one would have less hesitation and would dare take more risks. However, in some cases, the miscalculation of risk could lead one to make bad decisions. It was not a surprise that one with high actual and perceived financial knowledge was more likely to have a "good" financial decision-making process than one with less actual and perceived financial knowledge. Furthermore, it was found that both $RTI_{perceived}$ and RTI_{actual} of women were higher than those of men. This finding was consistent with most studies that indicated that women are more risk-averse than men (Ryack, 2011; Sjöberg & Engelberg, 2009; Roszkowski & Grable, 2005; Grable, 2000; Jianakoplos & Bernasek, 1998 & Hawley & Fujii, 1993). Hallahan et al. (2004) reasoned that the female demands higher stability from the motherhood instinct that needs safety. Also, women are more conservative than men (Powell & Ansic, 1997).

According to modern financial theory, behavioral finance proposed that humans are not always rational (e.g., Barber & Odean, 2001; Kahneman, 1994) as a result of psychological factors that influence financial decision-making (Firat & Fettahoglu, 2011), and it could be stated that perceived knowledge affected risk tolerance more than the actual knowledge, and also affected risky investment intentions; it makes one dare invest more in risky assets. Like the studies by Tokar (2015), Allgood and Walstad (2016) proposed that the individual's perceived knowledge could be considered as one of the measurements for one's level of confidence. Besides, OECD (2016) also found that ones with perceived knowledge higher than the average were in general overconfident. Similarly in our study, it was found that those laborers in informal sector had a low financial knowledge index but overrated their actual knowledge. This finding was also consistent with the study by Cordell et al. (2011) who found that those with low financial planning skills usually had a higher level of confidence. In the analysis of the structural equation model and the total effect, it was found that actual financial knowledge positively affected perceived financial knowledge. This was consistent with the study by Agnew and Szykman (2005) both actual and perceived financial knowledge affected risky investment intention. It is worth noting that the perceived knowledge affected the individual's financial behavior more than the actual knowledge. This article makes noteworthy contributions showing that confidence or self-perceived knowledge is not only an important component of financial knowledge but also a significant factor affecting individual decision-making on investments. Hence, the educators and policymakers should provide efficient lessons on financial knowledge by creating actual knowledge in order to help avoid overconfidence. And also, hopefully, the actual and perceived financial knowledge that the individuals possess would enable them to make sound investments. Carpena et al. (2011) mentioned that the government sector should support the education on financial topics more, in order to increase the level of awareness on the significance of financial knowledge. After all, this will positively affect daily financial decision-making.

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Statement of Ethics

Research complied with the ethical standards. Participants, all of whom were aged over 15, gave oral consent at the time of interview, in line with normal procedures for on-street interviews. The study protocol was approved by the ethics committee (Prince of Songkla University Research Committee).

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