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## From Financial Literacy to Financial Capability: A Preliminary Study of Difference Generations in Informal Labor Market\*

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### Abstract

This study aims to investigate whether financial attitude links financial literacy to financial capability. To make sound financial decisions, one essentially requires a certain level of financial literacy – knowledge and skill in finance. Even more effective is when one's financial literacy could be developed into financial capability. The samples comprised 342 individuals from informal labor in the South of Thailand. The stratified multistage sampling technique was utilized to select the respondents, while the interview questionnaires were used to collect the data. By using SmartPLS 3.0, the data analysis included descriptive statistics and structural equation modeling (SEM). The result revealed that the one with the highest debt was Gen Y compared to Gen B and Gen X. Considering financial literacy, financial attitude, and financial capacity across generations, it was found that Gen Y had the highest average score in financial literacy and financial capacity, higher than that of Gen X and Gen B. The impact of financial literacy on financial capability through financial attitude, it was found that the impact on Gen B was higher than that of Gen X and Gen Y. With the right financial attitude, people of all generations would be equipped with a higher level of financial capability.

**Keywords:** Financial Literacy, Financial Attitude, Financial Capability, Generation, Thailand

**JEL Classification Code:** G40, G50, G51, G53

### 1. Introduction

Thailand's household debt in the first quarter of the year 2019 (Q1/2019), according to the report by the Office of the National Economic and Social Development Council, was 12.97 trillion baht or 78.7% of the country's GDP; it implied that on average the debt per capita was as high as

195,000 baht (about USD 6,500) (Chantararat et al., 2019). The data from the Bank for International Settlement (BIS) also showed that the growth rate of Thailand's household debt was ranked No.2 in Asia, second only to South Korea, and No.11 in the World (from 74 countries) (Chantararat et al., 2017). For household debt, if it was used to generate income, its growth could be acceptable. On the contrary, if its usage was concentrated on those unnecessary consumptions, its growth could bring financial fragility to the household. In general, the debts from personal loans such as credit cards, auto loans, and so on are what households should be aware of as well as the troubles that will follow. Chantararat et al. (2020) found that since Q4/2018 the loan for personal consumption increased by 9.2%, while the outstanding loan amount grew by 11.3%, the highest record within 4 years. Besides, the outstanding amount of car loan increased by 10.2%; the non-performing loan (NPL) for consumption in Q2/2010 was worth 127,439 million baht – a 10% rise compared to that of the same period last year; the NPL for auto loans and credit cards also grew by 32.3% and 12.5% respectively (Chantararat et al., 2020). The data on consumer loans revealed the individual's inefficient spending pattern or spending behavior.

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**Table 1:** Consumer Loan Classified by Generation Group as of Q1/2017

Generation	Birth Year	Credit Card	Personal Loans	Mortgages	Auto Loans
Baby Boomer	1946 - 1964	11%	21%	12%	14%
Gen X	1965 - 1979	33%	38%	39%	40%
Gen Y	1980 - 1996	56%	41%	49%	46%

Source: SCB, S. C. (2018). *Is it true that Gen Y has more debts than other generations?* SCB Economic Intelligence Center. Retrieved 20 May 2018 from <https://www.scb.co.th/en/personal-banking/stories/geny-more-debts.html>

According to the survey by SCB (S.C., 2018) during Q1/2017, by considering the consumer loans that was classified according to the generation of the borrowers, it was seen that the majority of those indebted in all categories of loans were Gen Y: 56% for credit card debt, 41% for personal loans, 49% for home loans, and 46% for auto loans (see Table 1). The result from this survey was consistent with the study by Chantararat et. al., (2019) who found that the highest indebted ones were those in the group aged between 25 – 35 years old and their debts mainly came from consumption loan and credit card. Consistently, the study by Chantararat et.al., (2017) also confirmed that one-half of those between 20 – 35 years old were indebted.

From the above-mentioned problems, the government sectors and those related units thus have focused on promoting financial literacy to change the people's financial behavior (Bernheim & Maki, 1997; Hilgert, Hogarth & Beverly, 2003; Lyons, 2006; Mandell, 2005; Nguyen, & Nguyen, K., 2020; Zulfaris, Mustafa et al., 2020). Johnson and Sherraden (2007) mentioned that financial literacy is helpful but not sufficient, in other words, the focus on one's financial literacy should be on one's behavior (to do a thing) in addition to one's knowledge. Furthermore, recent economic troubles around the world are a result of growth in quantity aspect as well as the level of complexity aspect in financial products (OECD, 2005). As a result, most previous studies tried to establish a relationship between financial knowledge and financial behavior (Chen & Volpe, 1998; Hilgert, Hogarth, & Beverly, 2003; Cude et. al., 2006; Robb & Sharpe, 2009).

For our study, however, the objective was to consider the linkage between financial literacy and financial capability through financial attitude among those in informal labor in the South of Thailand. Besides, our study compared the result of Gen B, Gen X, and Gen Y deemed as the three major population groups in Thailand. If the difference has been found among generation groups, then suggestions would be provided for the educators and the practitioners or the governments. Since financial literacy is important for the success of future generations (Eitel & Martin, 2009) the finding of our study would support the right plan for Gen Z. Moreover, the result would not be useful only for Thailand,

but it could be also applied to use in other countries facing similar problems.

## 2. Literature Review

### 2.1. Defining and Measuring Financial Literacy

Up to the present, there was still no universal consensus on the definition of financial literacy and it thus leads to the different measurement methods of financial literacy. From the literature review, it was found that the measurements of financial literacy were varying in accordance with the objectives of the research (Bakar & Bakar, 2020; Hung et al., 2009; Holzmann, 2010). Undoubtedly, the questionnaire by Lusardi and Mitchell (2007) has been popular and applied in various studies due to the number of questions used to measure which was limited to only 3 topics; each one tests the knowledge on compound interest, inflation, and diversification. This kind of measurement is suitable for those developed countries, however, is not possible in the Thai context. Grohmann, Kouwenberg, and Menkhoff (2015) defined how to measure financial literacy by asking the respondent to name the foreign bank operating in Thailand, in addition to those questions by Lusardi and Mitchell (2007). However, this was still not enough for measuring the level of financial literacy of Thai people within the Thai context.

Financial literacy implies knowledge and skills, whereas financial capability suggests behaviors (Kempson, Finney & Poppe, 2017). Thus for this study, we separated the measurement of financial literacy and financial capability; financial literacy refers to the knowledge and skills necessary to handle financial challenges and decisions in everyday life (Aryanti & Adhariani, 2020; Sohn et al., 2012), while financial capability can be generally defined as a person's ability to understand, analyze, manage, and communicate personal finance matters (Vitt et al., 2000.) As a result, the questionnaire on financial literacy in our study was developed from the Bank of Thailand (BOT); however, was partly adjusted to suit our objectives. The questionnaire by BOT was taken from the OECD since the latter organization was an expert on the measurement of financial literacy

(Kempson, Finney & Poppe, 2017). The 7 questions including the credit bureau, deposit protection agency, Internet banking, diversification, and compound interest, were designed to measure the respondent's level of financial literacy (See Table 2). The choices were multiple ones with "true", "false", and "unknown" choice in each question. One point was given for a "true" response while a "false" or "unknown" response was given zero. Higher percentage scores indicated a higher level of financial literacy.

## 2.2. Defining and Measuring Financial Capability

The first break from the financial capacity approach occurred in the United Kingdom in 2004 (Atkinson et al., 2007). A discussion began in earnest about whether policy-makers should focus more on what people do rather than what they know (Kempson, Finney & Poppe, 2017). To gain a true understanding of a person's financial capability, measures should include assessments, not only of financial knowledge but also financial decision making, participation in financial institutions, and level of individual savings and debt (Johnson & Sherraden, 2007). In short, financial capability was developed from financial behavior. The questionnaire employed to measure the financial capability in this study included those questions used to measure the spending behavior, for example, "Will you manage to have a personal account to check revenues and expenses?", "Will you manage to control monthly expenses?", "Will you use your extra money to make an investment?"

## 3. Methodology

### 3.1. Data

To examine the relationship between financial literacy and financial capability, samples from informal labor were selected. The survey form was applied to collect data from October to December 2019. A semi-structured interview, explaining the questions, was conducted for those informal labor who were unable to grasp related concepts. The data was analyzed using SmartPLS 3.0 to examine the hypotheses. Financial literacy and financial capability were assessed by using a questionnaire modified from BOT (2016) and OECD (2010). Also, those questionnaires were tested for reliability using Cronbach's Alpha and the result equaled 0.827. (With the result higher than 0.7, it implied the reliability of the questionnaires, which could be used for our research).

### 3.2. Participants

A total of 342 questionnaires with complete answers were collected and classified into 3 major generations: Gen

B, Gen X, and Gen Y. The classification of the generation in this study was based on the year in accordance with Van den Bergh and Behrer (2016): Gen B or Baby Boomer (born between 1946 – 1964) for 83 respondents with 34 men (40.96%) and 49 women (59.04%), Gen X or Generation X (born between 1965 – 1979) for 121 respondents with 47 men (38.84%) and 74 women (61.16%), and Gen Y or Generation Y (born between 1980 – 1996) for 138 respondents with 63 men (45.65%) and 75 women (54.35%).

### 3.3. Methodology

The SmartPLS 3.0 was firstly applied to validate the structural model. Then, following Chin (1998), the bootstrap re-sampling method was utilized to test the statistical significance of each path coefficient. Later, five hundred iterations using randomly selected sub-samples were performed to estimate the theoretical model and hypothesized relationships. As for the test of the measurement model, the estimation of the reliability coefficients (composite reliability) of the measures and the examination of the convergent and discriminate validity of the research instruments were both employed. Fornell and Larcker's (1981) criterion, an average variance extracted (AVE) should be 0.50, was applied to measure AVE for all measures. Also, the guidelines recommended by Hair et al. (1998) were applied to determine the relative importance and significance of the factor loading of each item, i.e., loadings greater than 0.30, greater than 0.40, and greater than 0.50 were considered significant, more important, and very significant respectively. Furthermore, the three criteria were utilized to evaluate the model: 1) path coefficients ( $\beta$ ); 2) path significant ( $p$ -value); and 3) variance explain ( $R^2$ ). According to Rossiter (2002), the structural model of all paths should produce t-statistic value greater than 2 and latent variable R Squares greater than 50%.

## 4. Findings

The result from our study in Table 2 revealed that the one with the highest debt was Gen Y compared to Gen B and Gen X. With regard to possessing a credit card, Gen Y was also the one with the highest possession ratio, and this was almost double more than that of Gen B. And among people holding credit cards, the ratio of those with outstanding payment was as follows: Gen Y > Gen B > Gen X. It has been observed that most of Gen B in Thailand (77.01%) did not possess a credit card, however, the outstanding payment among those holding credit card was very high (82.99%).

**Table 2:** Summary Descriptive Statistics in Percentage

Topic	Questions	Answers	Gen B	Gen X	Gen Y
Education	What is your highest educational level?	Elementary School	65.78	39.90	7.76
		High School	13.37	29.41	21.80
		Vocational School	0.53	2.56	3.35
		Diploma	3.21	7.42	4.40
		Bachelor	12.30	19.18	58.28
		Master	1.60	0.77	3.98
		Unknown	3.21	0.77	0.42
Occupation	What is your occupation?	Wage Earner	20.86	38.87	34.80
		Government Official	16.04	8.70	6.50
		Farmer/Livestock	30.48	24.30	5.87
		Business Owner	29.41	21.48	21.38
		Student	0.00	0.51	23.48
		Others/Unknown	3.21	6.14	7.97
Debt	Are you in debt?	Yes	49.20	30.69	54.93
		No	50.80	69.31	45.07
Credit card	Do you have credit cards?	Yes	22.99	36.32	42.29
		No	77.01	63.68	57.71
Outstanding balance	If you have credit cards, do you have an outstanding balance?	Yes	82.89	80.31	83.86
		No	17.11	19.69	16.14
Saving	Do you have savings?	Yes	46.52	56.01	61.64
		No	53.48	43.99	38.36
Credit Bureau	In case you default on a loan from one bank, do you think that other banks will know about this information?	Know	62.03	70.08	75.47
		Do not know	37.97	29.92	24.53
Deposit Protection Agency	In case the commercial bank that you have deposit has to be closed down, do you know how to withdraw your money?	Know	43.85	54.99	37.74
		Do not know	56.15	45.01	62.26
Internet Banking	What is Internet banking?	Correct	43.32	56.52	78.41
		Incorrect	17.11	11.25	5.45
		Do not know	39.57	32.23	16.14
Inflation	Inflation is the situation in which the price level of goods and service continuously increases	Correct	68.03	71.28	68.52
		Incorrect	15.65	10.43	15.20
		Do not know	16.33	18.30	16.27
Compound Interest	If you deposit 100 baht in the bank with a condition of a 10% interest rate, after 5 years without withdrawing how much money (principal + interest) will you have in total?	Correct	32.09	25.58	30.40
		Incorrect	45.45	47.57	47.80
		Do not know	22.46	26.85	21.80
Diversification	Between (1) and (2), which choice can offer you more security? (1) Invest all in one type of asset (2) Invest in several types of asset	Correct	28.34	29.16	36.06
		Incorrect	48.13	43.48	37.32
		Do not know	23.53	27.37	26.62

When we brought all five aspects of the financial literacy (FinLit) into consideration (see Table 3): (1) FL\_Gen – measuring the general knowledge in finance including credit bureau, as well as deposit bureau agency, (2) FL\_Techno – measuring the knowledge in financial technology such as Internet banking, (3) FL\_Inflation – measuring the knowledge about inflation that affects price level as well as power of purchasing, (4) FL\_Compound – evaluating the ability to calculate the compound interest when one decides to deposit money or to make a loan (5) FL\_Diversification – measuring the knowledge about investment and risk management, it

was found that Gen X's average score in general knowledge in finance (FL\_Gen) and in knowledge about inflation that affects price level (FL\_Inflation) was higher than that of Gen Y and Gen B, whereas Gen Y's average score in financial technology (FL\_Techno), in calculating the compound interest (FL\_Compound), and in investment and risk management (FL\_Diversification) was the highest, compared with that of Gen X and Gen B. By applying the ANOVA method to test the difference among generations, it was found that all aspects of financial knowledge, except the knowledge about inflation, were significantly different across generations.

**Table 3:** Summary of Descriptive Statistics for Financial Literacy and ANOVA Test

		Mean (SE)	SD	Anova Test				
					Sum of Squares	Mean Square	F	Sig.
FL_Gen	Gen B	1.52 (0.061)	1.037	Between Groups	10.047	5.024	4.532	**
	Gen X	1.70 (0.050)	1.074	Within Groups	1361.168	1.108		
	Gen Y	1.51 (0.048)	1.041	Total	1371.215			
FL_Techno	Gen B	0.51 (0.029)	0.501	Between Groups	21.546	10.773	54.101	**
	Gen X	0.64 (0.022)	0.482	Within Groups	244.529	0.199		
	Gen Y	0.84 (0.017)	0.366	Total	266.075			
FL_Inflation	Gen B	1.68 (0.062)	1.068	Between Groups	3.283	1.641	1.491	-
	Gen X	1.81 (0.050)	1.082	Within Groups	1352.270	1.101		
	Gen Y	1.79 (0.046)	1.003	Total	1355.553			
FL_Compound	Gen B	1.25 (0.055)	0.944	Between Groups	18.275	9.138	9.558	**
	Gen X	1.39 (0.047)	1.029	Within Groups	1174.066	0.956		
	Gen Y	1.56 (0.044)	0.946	Total	1192.341			
FL_Diversification	Gen B	0.36 (0.480)	.029	Between Groups	3.299	1.649	6.815	**
	Gen X	0.45 (0.499)	.023	Within Groups	297.197	0.242		
	Gen Y	0.47 (0.500)	.022	Total	300.496			

Note: \*\* t-value 2.58 (significance level = 1%).

From Table 4, when considering financial literacy, financial attitude, and financial capacity across generations, it was found that Gen Y had the highest average score in financial literacy and financial capacity, higher than that of Gen X and Gen B (FinLit: Gen Y > Gen X > Gen B, FinCap: Gen Y > Gen X > Gen B). However, for financial attitude, the one with the highest score was Gen X. (FinAtt: Gen X > Gen Y > Gen B). Gen B was the generation with the lowest score in all three aspects. And by considering the ANOVA test of all 3 factors, it was found that each generation was significantly different. Table 5 shows results in detail from Structural Equation Modeling (SEM). The values of internal consistency (Cronbach Alpha) should be used for measuring internal consistency because Cronbach Alpha assumes that all indicators of a construct are equally related to that

construct (Werts et al., 1974). The composite reliability value between 0.767 – 0.849 (more than 0.70) implied that there was an internal consistency of the observable variables. As for the AVE used to explain the variance in indicators of a construct, the result showed that the AVE value was between 0.508 – 0.739 (higher than 0.50). According to the criterion by Sarstedt et al. (2019), it indicated that the latent variables could explain the variance of the indicators of more than 50%. Measuring the discriminant validity by considering the Fornell-Larcker criterion, it was found that the AVE value of each latent variable was more than the relationship value between that latent variable and other latent variables in the square model. This showed that the discriminant validity of the measuring of that latent variable was sufficient (Lowry & Gaskin, 2014).

**Table 4:** Financial Literacy, Financial Attitude, and Financial Capability and Anova Test

	Baby boomer		Gen X		Gen Y		ANOVA		
	Mean (SE)	Std. Dev.	Mean (SE)	Std. Dev.	Mean (SE)	Std. Dev.	Mean Square	F	Sig.
FinLit	6.410 (0.175)	2.998	7.020 (0.142)	3.086	7.120 (0.118)	2.546	49.804	4.962	**
FinAtt	24.84 (0.211)	3.615	26.25 (0.135)	2.922	26.17 (2.848)	0.132	17.274	5.279	**
FinCap	15.22 (0.166)	2.851	16.03 (0.119)	2.590	16.31 (0.110)	2.369	121.60	17.28	**

Note: \*\* t-value 2.58 (significance level = 1%).

**Table 5:** Reliability of the Model Constructs and Discriminant Validity

Factor	Gen	Reliability of the model constructs				Fornell-Larcker Criterion				
		Cronbach's Alpha	CR	AVE	R <sup>2</sup> adj			FinLit	FinAtt	FinCap
FinLit	Gen B	0.771	0.818	0.693	0.093	Gen B	FinLit	0.832		
	Gen X	0.787	0.803	0.508	-		FinAtt	0.275	0.859	
	Gen Y	0.797	0.799	0.665	-		FinCap	0.479	0.553	0.975
FinAtt	Gen B	0.759	0.849	0.739	0.072	Gen X	FinLit	0.713		
	Gen X	0.787	0.829	0.707	0.077		FinAtt	0.280	0.841	
	Gen Y	0.694	0.767	0.623	0.045		FinCap	0.225	0.461	0.895
FinCap	Gen B	0.788	0.862	0.611	0.418	Gen Y	FinLit	0.816		
	Gen X	0.756	0.845	0.581	0.220		FinAtt	0.217	0.789	
	Gen Y	0.696	0.812	0.522	0.130		FinCap	0.254	0.311	0.980

Note: AVE = Average Variance Extracted, CR = Composite Reliability. Degree of freedom = 2 for all factors in One-Way Anova Test. Value in the main diagonal are  $\sqrt{\text{AVE}}$ .

**Table 6:** Significance Testing Results of the Structural Model Path Coefficients

Construct			Mean	Stdev	T-Stat
FinLit -> FinAtt	Gen B	TE	0.279	0.052	5.251**
	Gen X	TE	0.061	0.030	1.983**
	Gen Y	TE	0.153	0.047	3.262**
FinAtt -> FinCap	Gen B	TE	0.457	0.041	11.228**
	Gen X	TE	-0.639	0.034	18.719**
	Gen Y	TE	0.017	0.010	1.758
Construct		Specific IE	Mean	STDEV	T-stat
FinLit -> FinAtt -> FinCap	Gen B	0.125	0.127	0.026	4.913**
	Gen X	0.121	0.124	0.021	5.826**
	Gen Y	0.058	0.060	0.018	3.311**

Note: \*\* t-value 2.58 (significance level = 1%).

An individual's financial literacy can be expected to influence the individual's attitude (Bryant et al., 2006). This is consistent with our study that found the impact of financial literacy on financial attitude in Gen B with the highest score compared to that of the other groups. Moreover, it was found that the financial attitude affects the financial capability only in Gen B and Gen X, whereas in Gen Y or young adults the financial attitude tends to play a small effect on behaviors and as such has no statistical significance. In addition to this, on the impact of financial literacy on financial capability through financial attitude, it was found that the impact on Gen B was higher than that of Gen X and Gen Y. This implied that if we wish to encourage Gen B people to have a rational financial capability, we should promote a policy on providing them financial literacy. Similar to the study by Danese et al. (1999), it was found that if the respondents tested significantly higher on financial knowledge questions, it indicates some improvement in their financial capability.

The indirect effect of financial literacy on financial capability through financial attitude was the lowest in Gen Y. It also agreed with the study on financial capability by Atkinson et al. (2007) who found younger people and single people possessed low financial capability when compared to those people with higher income and couples; basically, the older one gets, the higher financial capability one possesses. This was consistent with the study in the past where it was found that the factors providing a strong correlation with financial capability were age, household structure, and employment status (Taylor, Jenkins & Sacker, 2011). The result from the study found the indirect effect of financial literacy on financial capability through financial attitude in people of all generations. The most significant factor that policy-makers should pay attention to is how to inculcate a rational financial capability for each generation. To have the

right policy for Gen B and Gen X, the provision of financial education with the aim to change their financial behavior and attitude needs to be provided.

## 5. Conclusion and Recommendations

The results of our study revealed that financial literacy influenced the financial attitude of all generations. To enhance people's financial literacy level, government agencies should provide them the financial knowledge with the support from financial attitude factor. In sum, to encourage each generation to have a rational financial capability, we need different approaches. As for Gen B, they first need to be provided with the right financial literacy until they change their financial attitude to the right one. They will later have a rational financial attitude and then possess the financial capability. However, unlike Gen X people who require both the provision of financial literacy and the adjustment of financial attitude, Gen Y people only need the right financial knowledge before improving their financial capability. As for Gen B people, even though only the provision of financial literacy is enough to help them improve their financial capability, this study showed that they would be much better in financial capability if they also have the right financial attitude. The provision of financial knowledge to help improving Gen Y's financial capability could be in various media formats ranging from newsletters, publications, television, and the Internet. It is thus very challenging for policy-makers to consider choosing the appropriate media for this group. A study by Loibi and Hira (2005) found that people could have better financial practices if they utilize some information from the media for their financial planning. Thus, if the highest target is financial well-being, to have all generations achieve this target, we first need to help them to be equipped with financial capacity

by providing financial knowledge to adjust and create the right financial attitude in all generations.

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