

# **THE INFLUENCE OF FINANCIAL LITERACY TOWARDS RISK TOLERANCE**

**Hui-Nee Au Yong\***

*Universiti Tunku Abdul Rahman*

**Kock-Lim Tan**

*Universiti Tunku Abdul Rahman*

## **ABSTRACT**

The importance of financial literacy in promoting good financial behaviour has been established in Malaysia. Nonetheless, a study that specifically analyses youth is still needed. This study focuses on Malaysian youths' financial literacy and financial behaviour. It is also expected that financial behaviour and financial literacy significantly among those from different parental, gender and income backgrounds. A quantitative approach was adopted, utilising questionnaire survey as the research instrument. The male respondents were more financially literate. Findings indicated that parent backgrounds, predicted students' financial behaviour. This study provides valuable results reflecting parental influence had a significant influence on financial behaviour. This study suggests awareness programmes to enhance the general financial literacy especially among youths.

**Keywords:** Financial Behaviour; Financial Capacity; Financial Literacy; Risk Tolerance; Spending Behaviour.

## **1. INTRODUCTION**

In the aftermath of the Asian Financial Crisis 1998, Global Financial Crisis 2008 and Europe Sovereign Debt Crisis 2012, financial literacy has been increasingly recognised as an important individual life skill and various part of the world.

Financial literacy refers to a basic understanding of investing, insurance, credit management and other personal finance topics (Hill & Perdue, 2008). Financial literacy is linked to saving behaviour and portfolio choice (Lusardi & Mitchell 2011). Lusardi and Mitchell (2006) devised three questions of fundamental concepts relating to financial literacy, such as the working of interest rates, the effects of inflation and the concept of risk diversification. They further reveal that basic economic concepts (financial literacy) related to savings and investment decisions could be alien to many, and this phenomenon poses serious implications for retirement planning, savings, loans, mortgages and other financial decisions.

Another concept is advanced literacy, which is to competently make saving and investment decisions, individuals need knowledge beyond the fundamental financial concepts discussed above, including understanding the relationship between risk and return; how bonds, stocks and mutual funds work and basic asset pricing.

---

\*Corresponding author: Au Yong Hui Nee, Faculty of Business and Finance, Universiti Tunku Abdul Rahman. Tel: (605) 46-88 888. Fax: (605) 466-7407. E-mail: auyonghn@utar.edu.my; ayhn@yahoo.com

Liberalisation of financial markets increased complexity of financial markets causes financial decisions to become more challenging as a large number of financial products are promoted to consumers. According to Standard & Poor's (S&P), Malaysia has the highest personal debt among 14 Asian economies, with the rate jumping to 88 percent of gross domestic product from around 60 percent in 2008 (Chow, 2015). Malaysia, one of the developing countries in the ASEAN region, also faces a grave issue relevant to financial behaviours in terms of 89.9%, high debt to GDP ratio (BNM, 2016). This will limit personal disposable income and consumption, and eventually hold the economic growth as stake.

Millennials' increasing preference for online shopping also led to a 26 per cent rise in credit card spending among card members aged between 26 and 35. Based on the Asian Institute of Finance (AIF)'s study, the majority of Gen-Y respondents relied on high-cost borrowing, with 38 per cent taking personal loans and 47 per cent engaging in expensive credit card borrowing. The volume of credit card spending among millennials was five times higher than that of customers above the age of 35 in the first six months of 2016, compared with 2015. Referring to the AIF study, only 28 per cent of respondents were aware of financial risks, 36 per cent had knowledge of financial products, 37 per cent sought financial advice from a professional planner and only 26 per cent dealt with a financial adviser; in other words, this draws a bleak picture of high-cost borrowing segment's overall financial literacy (Vijandren, 2017).

Improper financial decisions among the public has caused various problems such as bankruptcy, harassment from loan sharks, and even suicide. Malaysian bankruptcy statistics are on the rise trend (Malaysia Department of Insolvency, 2006). According to the Malaysia Department of Insolvency (MDI), there had been 169,927 cases of bankruptcy from 2008 (The Star, "Fairer system for guarantors", 30 March 2017). According to the Insolvency Department, the total number of bankrupts as of December 2013 was 253,635. The department's records showed that the number of bankruptcy cases was consistently increasing from 13,238 in 2007 to 13,855 in 2008, 16,228 in 2009 and 18,119 in 2010. Even though the number decreased to 16,167 in 2011, it rose again to 19,525 in 2012 and 21,987 in 2013 (Yuen, 2014). Insolvency Department handled 101,537 cases in the period of five years (2011 to 2015); while there was a rise in cases between 2011 and 2014, from 19,167 cases to 22,351 cases, the figure dropped to only 18,547 cases in 2015 (Cheah, 2016).

An average of 53 Malaysians are declared bankrupt everyday. According to the Asian Institute of Finance, some 40% of Malaysian young adults are spending more than they can afford (Credit Counseling and Debt Management Agency, AKPK, 4 November 2015). According to Insolvency Department, 27.94%, or about 28,374 bankruptcy cases (or over one of four bankruptcy cases) between 2011 and 2015, fall into purchase of vehicles category; other reasons were housing loans (with 21,697 cases or 21.36%), personal loans (20,727 cases or 20.41%), and business loans (11,899 cases or 11.71%) (Cheah, 2016).

Malaysia recorded an uprising trend of bankruptcy cases involving the youth though the youth cohort attains higher education in recent years. In the period of 2011 to 2015, bankrupt cases involving individuals aged between 25 and 34 years old comprised of 22.52% of the cases, while 1.25% are below 25 years of age (Cheah, 2016). 22,663 Malaysians under the age of 35 being declared bankrupt between 2011 and Sept 2015 (or about 11 youths everyday), according to the Malaysian Financial Planning Council, MFPC (New Straits Times, 22,663 young Malaysians declared bankrupt since 2011, says financial planning council, 8 October 2016). Malaysia's Department of Insolvency says 5,547 individuals under age 35 were declared bankrupt in 2014, more than double the number in 2005, the first year for which it has published such data (Chow, 2015). From 2007 until June 2014, a total of 1,940

youth below the age of 25 years old had been declared bankrupt. Of the total, 579 youths were declared bankrupt in the first half of 2014 alone. Financial management among youths below 25 years old is poor and that many are at the brink of bankruptcy as many of them are debt-laden. Majority of youths facing a lot financial debt were male who account for about 70 per cent of the total number. Hence, Bankruptcy among youths below the age of 25 is increasing at an alarming rate (Said, 2014).

The related government agencies such as the Credit Management and Counselling Agency (Agensi Kounseling dan Pengurusan Kredit, AKPK) of the Central Bank of Malaysia (Bank Negara Malaysia, BNM) implement financial awareness programmes in enhancing financial literacy on top of promoting good financial practices.

The Credit Counselling and Debt Management Agency (AKPK) has successfully assisted 11,935 individuals to fully settle their debts totalling RM488 million through its debt management programme (DMP) as at Nov 30, 2016. A total of 505,069 individuals had attended AKPK's counselling services from 2006 to November 2016, and out of this number, 167,060 individuals had enrolled for the DMP. AKPK's statistics show that poor financial planning is the major financial difficulty faced by its clients, making up 49.3 per cent of the cases received, followed by failure or slowdown in business (15.2 per cent), high cost of living (12.3 per cent), high medical expenses (10.9 per cent), among others (The Borneo Post, "AKPK resolves 11,935 cases totalling RM488 million". 6 January 2017).

15 per cent of the clients seeking advice from the agency were individuals aged between 20 and 30. About 52 per cent had no clue about how to manage their own finances. Of those attended the credit management programme, about 80 per cent repaid their debts after it was restructured by the agency, while the others failed due to a "lack of discipline and resolve." Credit card debts consist about 70 per cent of the cases, followed by personal loans at 15 per cent and car and housing loans at 6 per cent (Free Malaysia Today, "More grads bankrupt due to lavish lifestyles", 1 June 2016).

In order to curb the level of indebtedness among young people and to avoid bankruptcy, the government had taken initiatives to provide comprehensive financial education in schools and institutions of higher learning; Bank Negara Malaysia (BNM) had collaborated with the Education Ministry to integrate financial education into the new school curriculum, while the Credit Counselling and Debt Management Agency (AKPK) in cooperation with in 52 IPTs and 30 polytechnics implemented financial education (Astrowani, Over 107,000 individuals declared bankrupt from 2010 to April 2015, 26 June 2015).

In view of this background, this study examines the relationships between financial literacy and spending behaviour among Malaysian university students, and the inhibitors of financial literacy. Specifically, this study carries the following objectives: (i) to study the relationship between financial literacy and spending behaviour; and (ii) to determine the impact of parental, gender and income levels on financial literacy and spending behaviour. This study is expected to shed light on the current financial literacy among Malaysian youths and measures that could be taken in order to increase financial literacy and promotes good spending behaviours.

## **2. LITERATURE REVIEW**

OECD (2005) definition of financial education as "the process by which financial consumers/investors improve their understanding of financial products, concepts and risks and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial

risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being.” Financial practices are such as cash flow management, financial planning and goal setting.

Atkinson and Messy (2011) define financial literacy as a combination of awareness, knowledge, skills and attitude and behaviours necessary to make sound financial decisions and ultimately achieve individual financial wellbeing, and financial literacy is an important component of sound financial decision making. In contrast, the lack of financial literacy or knowing of economic concepts leads to difficulties people face when making financial decisions (Lusardi, 2009).

Other studies have linked financial knowledge and investment behaviours (Morrin et al., 2008), risk taking behaviour (Dulebohn & Murray, 2007), and responsible financial behaviours (Grable et al., 2009). In Lusardi and Mitchell (2007), those have low levels of financial literacy and have done little planning for retirement.

Studies suggest financial behaviours and financial literacy have produced inconsistent results. For example, in Hilgert and Hogarth (2003), Perry and Morris (2005), Howlett et al. (2008), Robb and Sharpe (2009), Mandell and Klein (2009). On the other hand, other authors such as Delafrooz and Paim (2011) indicated significant differences of financial behavior according to age, education, income and financial literacy. Mitchell and Utkus (2006) use the life-cycle theory to explain financial behaviours, that savings rises with income and age; though they further argue that there are other factors that could be associated with saving behaviours.

Other studies show that the amount of financial education received may contribute to an overall improvement in financial behaviours. Similar results are recorded in Hershey et al. (2003), Varcoe and Fitch (2003), Lyons et al. (2006), O’Neil et al. (2005), Zhan and Scott (2006), Lusardi and Mitchell (2006), Borden et al. (2008) and Chang and Lyons (2008), Xiao et al. (2009). Loke (2015) found that financial behaviour is significantly affected by financial knowledge. In contrast, Mu’at, Julina and Triandani (2015) found no differences education course on financial literacy.

Shim et al (2009) link financial socialisation to students’ financial learning and financial attitudes. Falahati and Paim (2011) found that the primary socialisation agents were the strongest predictor of financial well-being among male students. Hira (1997) found that friends are an important source of influence, while Lusardi and Mitchell (2013) showed that family and friends are often called upon for financial advice, before making a financial decision. Sabri, and Zakaria (2015) found significant relationships between financial well-being and financial attitude.

The effect of demographic and socioeconomic background on financial literacy is documented in Mitchell (1998), Grable (2000), Anderson et al. (2005), Valentine and Khayum (2005), Lachance et al. (2006), Worthington (2006), Zhan et al., 2006), Anderson et al. (2007), Gonyea (2007), Gough and Nurullah (2009), For instance, Falahati and Paim (2011), Lim et al. (2013) and Shaari et al. (2013). Sabri and Zakaria (2015) found significant relationships between financial well-being and financial literacy. Results from Hasni (2014) show Parental Socialisation play the most influential factors of saving habits among Generation Nga, Yong and Sellappan (2010) found that the level of education and majors influence financial awareness among youths. Also, males were found to have higher levels of financial awareness compared to females (HSR, 1993). On the other hand, Salikin et al. (2012) found that higher level of parents’ education background and higher household income did not contribute for students in

fund savings. Mu'at, Julina and Triandani (2015) found no differences between gender on financial literacy.

The effect of demographic and socioeconomic background on bankruptcy is also documented. For example, results from Diana-Rose and Mohd Ashhari (2015) show that six variables (Gender Race, Education Level, Occupation, Working experience, and Types of loan) are significant to bankruptcy of the youth, while Zamzamid, Jaini and Zaib (2015) found compulsive spending influenced bankruptcy among young credit card users. Nevertheless, Noordin et al. (2012) found negative relationship between knowledge about credit card and bankruptcy due to credit card debt.

The previous studies have recorded two predictors of financial literacy and financial behaviours, i.e. family background and income levels. Hence, the current study hypothesised that university students who have higher educated parents are more exposed to personal finance and are more resourceful. More educated people exhibit better financial behaviour and financial literacy. Secondly, individuals with higher income level may exhibit higher financial literacy and better financial behaviours.

### **3. METHODOLOGY**

The study applies a quantitative research approach in achieving its objectives. The goals are to test whether parents were perceived to influence adults' financial knowledge, financial attitudes and financial behaviours, and and perceived parental influence on students' financial behaviours.

A research questionnaire was designed as the main instrument for this study. The instrument elicits data on respondents' financial / advance literacy, financial behaviours and demographics.

This study uses five financial literacy questions on various financial matters including investments, credit card usage, interest rates, insurance and personal taxation to evaluate the financial knowledge of individuals and to construct a proxy for financial literacy.

Financial behaviours items use eight questions from the survey that concern individuals financial choices in relation with budgeting, savings, spending monitoring, credit, loan repayments, insurance and financial advice.

The selected University has a student population of about 26,000 while the business faculty selected has a student population of about 6,500.

Research questionnaires were distributed to students attending undergraduate degree programmes in the Perak Campus of the University in April 2016. 123 completed questionnaires were returned and subsequently screened for errors and later transferred for data analysis purposes.

The study tested a model using SPSS software. Data analyses including descriptive analysis, correlations, t-test and Analysis of Variance were executed on the collected data.

#### 4. RESULT AND DISCUSSION

The Cronbach's alpha in the study on financial behaviour recorded 0.661, which is below 0.7 but above 0.6, therefore, the reliability could be acceptable (Loewenthal, 2004). Responses were received from various fields of study of students. The majority of the respondents are female (68%). As this selected private university is a not-for-profit university offers affordable higher education with quality, unsurprisingly, a majority of the respondents are from the lower income bracket, i.e. below RM3,000 (65%). Father's education-wise, the father's highest qualification of most respondents is SPM (46%), followed by a primary education (41%). In another words, it seems the household income is in correspondence to father's education, i.e. 87% of the respondents' parents have received education up to secondary level, while 85% of the respondents reported household income up to RM4,000. Most of the respondent's age is from 21 to 25 years old at 79%. In terms of ethnic group, they are 95% Chinese, while 83% of the respondents obtain financial aid via PTPTN education loan. Table 1 shows the profile of the respondents.

**Table 1:** Respondents Demographic Profiles

Attributes	Description	Percentage (%)
Gender	47	32
	34	68
Ethnic	Chinese	95
	Malay	4
	Indian	1
Sponsor/Financial Aid	Loan/PTPTN	83
	Parents	15
	Scholarship	2
Father's Education	Primary	41
	SPM	46
	Higher Education & Above	13
Age	18-20	21
	21-25	79
Family Income	<RM1,000	14
	RM1,000~RM3,000	51
	RM3,000~RM4,000	20
	>RM4,000	15
Programme	BF	63
	FE	27
	AC/BA/EN/FN/MK	10

##### 4.1. Financial Behaviour

Ten items were constructed to test respondents' financial behaviours. These items focus on good spending and saving habits such as comparing prices when shopping, having life/insurance coverage, maintaining financial records and savings/investment programme. Respondents were required to state the level of their agreement with each statement, ranging from "1", not at all true for me to "4, very true for me. Table 2 presents the mean and standard deviation related to respondents' financial behaviours.

The *mean* for "I compare prices when shopping for purchases" was 3.36 with a Standard Deviation (*SD*) of 0.679, the *mean* for "I spend less than income" was 3.02 with a *SD* of 0.789 and the *mean* for "I budget and track my spending" was 2.94 with a *SD* of 0.669 (Table 2).

**Table 2:** Financial Behaviour Components Mean and Standard Deviation Values

Statements	Mean	Standard Deviation
I budget and track my spending.	2.94	0.669
I contribute to a bank saving account regularly.	2.54	0.749
I compare prices when shopping for purchases.	3.36	0.679
I have a life insurance policy.	2.49	1.119
I invest in the shares under Initial Public Offering (IPO).	1.44	0.679
I read to increase my financial knowledge.	2.62	0.864
I maintain adequate financial records.	2.58	0.800
I spend less than income.	3.02	0.789
I maintain adequate insurance coverage.	2.23	0.787
I plan and implement a regular savings/investment programme.	2.58	0.887

In addition, respondents rather agree with their economical oriented that on financial behaviour “Statement 1: How economical/spending oriented are you?”, slightly more than half of the respondents, 50.4 percent selected that they are economical oriented.

Respondents agree maintaining financial records is important that on financial statement “Statement 2: In what manner do you maintain financial records?”, 68.3 percent of the respondents maintain minimal to detailed records.

Respondents agree money left is kept that on financial statement “Statement 3: If you (your family) have/has any money left right before the next income arrives, what would you usually do with it?”, majority of the respondents, 57.7 percent deposit it into bank account and 22.8 percent keep it in cash.

Respondents agree to adjust spending if money is running out that on financial statement “Statement 4: What do you usually do when you (your family) run(s) out of money before the next income arrives?”, 65.0 percent of the respondents are willing to cut down expenses and save.

Respondents agree savings for future contingency use is important that on financial statement “Statement 5: Let’s assume that in addition to your regular income your family got some money in the amount of RM 5,000- RM 20,000”, 72.8 percent of the respondents save this amount as fixed deposit for future, and for meeting contingency.

#### 4.2. Financial Literacy

Refer Appendix 1: Financial Literacy Questions. Financial literacy measures respondents’ knowledge on various personal finance issues. Respondents were required to show whether the statement given was correct or incorrect. Respondents were also given an “uncertain” (“don’t know”) choice in order to avoid respondents from estimating the answers. In order to determine respondents’ financial literacy, their correct responses were added to become a total score. The higher score indicates higher literacy level. Responses therefore range between 0, where all responses are incorrect, to 11, where all responses are correct.

Table 3 summarises their response on each statement. For each statement, correct answers were counted, while incorrect answers or uncertain answers were summed. A majority of the respondents responded correctly to statement 8, i.e. the regulator of banks and financial institutions, whereby more than 95.1% of them responded to this statement correctly. Respondents also seemed to be well versed on matters related to compounded interest rate (statements 1, 91.1%) and inflation (statements 3, 78.0%).

On the other hand, a majority of respondents (65.9%) could not provide correct responses to corporate taxation (statement 10, 65.9%), networth (statement 6, 57.7%), reason for insurance coverage (statement 9, 52.8%) and time value of money (statement 4, 51.2%). This indicates the lack of respondents' knowledge on insurance protection, investments and taxation.

**Table 3:** Financial Literacy Statements Percent of Correct

Statements	% Correct	% Incorrect or Uncertain
1. Suppose you had RM 100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?	91.1	8.9
2. Suppose you had RM 100 in a savings account and the interest rate is 20% per year and you never withdraw money or interest payments. 3. After 5 years, how much would you have on this account in total?	56.9	43.1
3. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?	78.0	22.0
4. Assume a friend inherits RM 10,000 today and his sibling inherits RM 10,000 three years from now. Who is richer because of the inheritance?	48.8	51.2
5. Suppose that in the year 2017, your income has doubled and prices of all goods have doubled too. In 2017, how much will you be able to buy with your income?	65.0	35.0
6. Net worth is:	42.3	57.7
7. A company issues shares in the:	57.7	42.3
8. Who regulates the banks and financial institutions in Malaysia?	95.1	4.9
9. The main reason to purchase insurance is to	47.2	52.8
10. What is the general corporate tax rate in Malaysia?	34.1	65.9
11. What do you think deserves primary attention when one has to compare between the banks to choose the one where to take a loan from?	55.3	44.7

On Financial Literacy of the Youth, respondents are also more likely to record their expenses (68.3%). Financial literacy score was computed by summing the average scores for all 13 statements, t-tests and ANOVA were conducted on selected demographic characteristics to determine the differences in financial literacy among students. Significant differences were found in the level of financial literacy components between gender at 0.05 level of significance: I spend less than income (Statement 8, Sig. T = 0.028); and I plan and implement a regular savings/investment program (Statement 10, Sig. T = 0.012). Significant difference found in the level of financial products currently owned between gender (Statement for bonds, stocks, and unit trust / mutual funds, Sig. T = 0.002).

#### 4.3. Financial literacy components by Gender and Ethnic

Significant differences were found in the level of financial literacy between gender and among ethnics. Chi-Square Test using financial literacy grade explains a statistically significant portion (Pearson Chi-Square value = 3.097, Sig. = 0.078) for financial literacy by gender at 0.10 level of significance.

**Table 4:** Mean, F-value and Sig. F for Financial Literacy by Gender

Gender	Fail	Pass	Pearson Chi-Square	Asymp. Sig. (2-sided)
Male	7	32	3.097	0.078
Female	28	56		

ANOVA Test using financial literacy explains a statistically significant portion (F-value = 3.229, Sig. F=0.043) for financial literacy by ethnics at 0.05 level of significance.

**Table 5:** Mean, F-value and Sig. F for Financial Literacy by Ethnics

Ethnics	Mean	F-Value	Sig. (p-Value)
Malay	72.7280	3.229	.043
Chinese	60.8403		
Indian	27.2700		

#### 4.4. Regression on Financial Behaviour

Enter multiple regression using financial behaviour of expense record keeping explains a statistically significant portion of variance (R Square = 0.108, F-value = 2.841, Sig. F=0.019) for financial behaviour at 0.05 level of significance. Among independent variables father's education level, field of studies, gender and income, gender ( $p=0.025$ ) and father's education ( $p=0.027$ ) is considered as the effective factor in predicting variance of the dependent variable financial behaviour. Upbringing of different gender and father's education level helped shape financial behaviours of these students. Table 6 shows the results of multiple regression.

**Table 6:** Results of Multiple Regression for Financial Behaviour

Items	<i>b</i>	Beta	t-value	<i>p</i>
Constant	0.696	-	1.750	0.083
Gender	0.279	0.199	2.268	0.025
Father's Education	0.196	0.204	2.244	0.027
Family Income	0.011	0.015	0.164	0.870
Financial Literacy Correct %	0.001	0.033	0.372	0.711
Field of Studies	0.118	0.105	1.158	0.249
F = 2.841				
Sig-F =0.019				

Hence, there is significant difference in financial behaviour among respondents of different gender and father's education level.

#### 4.5. Regression on Financial Literacy

A financial literacy score was computed by summing the average scores for all 11 statements, t-tests and ANOVA were conducted on selected demographic characteristics to determine the differences in financial literacy among students. Significant differences were found in the level of three financial literacy components between gender at 0.10 level of significance: Assume a friend inherits RM 10,000 today and his sibling inherits RM 10,000 three years from now. Who is richer because of the inheritance? (Statement 4, Sig. T = 0.052); Suppose that in the year 2017, your income has doubled and prices of all goods have doubled too. In 2017, how much will you be able to buy with your income? (Statement 5, Sig. T = 0.060); and Suppose you had RM 100 in a savings account and the interest rate is 20% per year and you never withdraw money or interest payments. After 5 years, how much would you have on this account in total? (Statement 2, Sig. T = 0.061).

Contrast with previous studies, the low income earners (<RM1,000) were found to have highest financial knowledge (about 82 percent passes). This result further supports the notion that financial

literacy is enhanced as individuals have resources to manage. Those who are low income earners may learn about financial knowledge through their life experience.

Over to 70 percent of respondents correctly answer half of the financial literacy questions and close to 30 percent state they answer correctly half of these questions. The lowest income group of below RM1,000 has the higher passing percentage at 82%.

Enter multiple regression using financial literacy explains a statistically insignificant portion of variance (R Square = 0.048, F-value = 1.496, Sig. F=0.208) for financial literacy at 0.05 level of significance. Among independent variables father's education level, field of studies, gender and income, income is considered as the effective factor in predicting variance of the dependent variable ( $p=0.078$ ). Explicit teaching and implicit examples of parents helped shape financial literacy of these students. Table 7 shows the results of multiple regression.

**Table 7: Results of Multiple Regression for Financial Literacy**

Items	<i>b</i>	Beta	t-value	<i>p</i>
Constant	64.208	-	7.172	.000
Father's EduGroup	-1.356	-.054	-.577	.565
Income GroupT	3.111	.163	1.775	.078
FieldT	-3.352	-.114	-1.230	.221
Gender	-1.202	-.033	-.363	.718
<i>F</i> = 1.496				
<i>Sig-F</i> = 0.208 <sup>a</sup>				

Hence, there is significant difference in financial literacy among respondents of different family income level.

## 5. CONCLUSION

Financial illiteracy could let the youth to choose the unsuitable financial products and save less than they should. However, the government agencies e.g. AKPK under BNM faces challenges in increasing financial literacy and promoting good financial behaviour.

Overall, the university students present responsible attitude towards the financial management. The majority of university students possess sufficient financial literacy / knowledge, with 72% of the respondents passed the financial literacy components. This study has reflected that focus should be given to the female. The study has also indicated that monetary concepts as simple as compound interest are foreign to this group of respondents.

Those who do not understand the basic financial concept can cause them weak in debt management. The educational programmes should focus on the financial products and services for the youth. One of the methods to impart financial knowledge is via financial education. Financial management awareness programme should be conducted for the youth, as financial management habits are formed early in life. Government agencies should organise financial literacy events to make public aware on the importance of better financial management. These topics are such as retirement planning, investment planning, and debt management, etc. One of the examples of efforts taken by the government is by PNB Investment Quiz (PNBIQ) event.

One limitation of this study is that only data of students from one university was gathered.

## REFERENCES

- Anderson, S. G., Zhan, M., & Scott, J. (2005). Developing Financial Management Training In Low-Income Communities: Assessing Needs and Community Practice Implications. *Journal of Community Practice, 13*(4), 31-49.
- Anderson, S. G., Zhan, M., & Scott, J. (2007). Improving the Knowledge and Attitudes of Low-Income Families about Banking and Predatory Financial Practices, Families in Society. *The Journal of Contemporary Social Services, 88*(3), 443-452.
- Astrowani (2015, June 26). Over 107,000 individuals declared bankrupt from 2010 to April 2015. *Borneo Post*. Retrieved from <http://english.astroawani.com/business-news/over-107-000-individuals-declared-bankrupt-2010-april-2015-63718>
- Atkinson, A., & Messy, F. A. (2011). *Assessing financial literacy in 12 countries: An OECD Pilot Exercise*. Netspar Discussion Paper 01/2011-014.
- Bank Negara Malaysia (BNM) (2016). *Financial Stability and Payment Systems Report 2015*. Malaysia; BNM.
- Bernama. (2016, October 8). 22,663 young Malaysians declared bankrupt since 2011, says financial planning council. *New Straits Times*. Retrieved from <https://www.nst.com.my/news/2016/10/178983/22663-young-malaysians-declared-bankrupt-2011-says-financial-planning-council>
- Borden, L. M., Lee, S. A., Serido, J., & Collins, D. (2008). Changing College Students' Financially Disadvantaged Consumers? *Journal of Personal Finance, 7*(2), 84-109.
- Cheah, B. (2016, April 20). Majority of bankruptcy cases in the country caused by vehicle purchases. *The Sun Daily*. Retrieved from <http://www.thesundaily.my/news/1773050>
- Chow, E. (2015, September 7). Bankruptcy among the young in Malaysia crimps consumption. *Reuters*. Retrieved from <http://www.reuters.com/article/malaysia-economy-debt-idUSL3N1003QR20150906>
- Credit Counseling and Debt Management Agency. (2015, November 4). *Debt and Bankruptcy among Youths*. Retrieved from <https://www.youtube.com/watch?v=2BJj2TwsJZw>
- Delafrooz, N., & Paim, L. (2011). Personal Saving Behavior among Malaysian Employees: Socio Demographic Comparison. *Proceedings of 2011 International Conference on Social Science and Humanity (V2-361-V2-363)*. Singapore: IACSIT Press.
- Diana-Rose, F., & Mohd Ashhari, Z. (2015). Factors affecting youth bankruptcy in Malaysia. In: *UPM - SAGE Publications Young Writer's Award 2015 Papers* (pp. 18-34). Serdang, Selangor: Perpustakaan Sultan Abdul Samad, Universiti Putra Malaysia.
- Dulebohn, J. H., & Murray, B. (2007). Retirement Savings Behaviour of Higher Education Employees. *Research in Higher Education, 48*(5), 545-582.
- Falahati, L., & Paim, L. H. (2011). Gender Differences In Financial Well-Being Among College Students. *Australian Journal of Basic and Applied Sciences, 5*(9), 1765-1776.
- Financial Knowledge, Attitudes, and Behaviour Through Seminar Participation. *Journal of Family and Economic Issues, 29*(1), 23-40.
- Free Malaysia Today. (2016, June 1). *More grads bankrupt due to lavish lifestyles*. Retrieved from <http://www.freemalaysiatoday.com/category/nation/2016/06/01/more-grads-bankrupt-due-to-lavish-lifestyles/>

- Gonyea, J. G. (2007), Improving the Retirement Prospects of Lower-Wage Workers In A Defined-Contribution World, Families in Society. *The Journal of Contemporary Social Services*, 88(3), 453-462.
- Gough, O., & Nurullah, M. (2009). Understanding What Drives the Purchase Decision In Pension and Investment Products. *Journal of Financial Services Marketing*, 14(2), 152-172.
- Grable, J. E. (2000), Financial Risk Tolerance and Additional Factors That Affect Risk Taking In Everyday Money Matters. *Journal of Business and Psychology*, 14(4), 625-631.
- Grable, J. E., Park, J. Y., & Joo. S. H. (2009). Explaining Financial Management Behaviour for Koreans Living In the United States. *Journal of Consumer Affairs*, 43(1), 80-107.
- Harris/Scholastic Research (HSR). (1993). *Liberty Financial Young Investor Survey*. New York, NY.
- Hasni, H. (2014). *Factors That Influence Saving Habits Among Gen Y: Case Study on Students of Politeknik Sultan Azlan Shah*. (Unpublished master thesis). Universiti Utara Malaysia, Kedah, Malaysia.
- Hershey, D. A., Mowen, J. C., & Jacob-Lawson, J. M. (2003). An Experimental Comparison of Retirement Planning Intervention Seminars. *Educational Gerontology*, 29(4), 339-390.
- Hilgert, M. A., & Hogarth, J. M. (2003). Household Financial Management: The Connection between Knowledge and Behaviour. *Federal Reserve Bulletin*, 89(7), 309-322.
- Hill, R. R., & Perdue, G. (2008). A Methodological Issue In the Measurement of Financial Literacy. *Journal of Economics and Economic Education Research*, 9(2), 43-57.
- Hira, T. K. (1993). *Financial Management Knowledge and Practices: Implications for Financial Health*. Paper presented at the Personal Economics Summit '93, Washington, D.C.
- Hira, T. K. (1997). Financial attitudes, beliefs and behaviours: differences by age. *Journal of Consumer Studies and Home Economics*, 21, 271-290.
- Howlett, E., Kees, J., & Kemp, E. (2008). The Role of Self-Regulation, Future Orientation, and Financial Knowledge In Long-Term Financial Decisions. *Journal of Consumer Affairs*, 42(2), 223-242.
- Lanchance, M. J., Beaudoin, P., & Robitaille, J. (2006). Quebec's Young Adults' Use of and Knowledge Of Credit. *International Journal of Consumer Studies*, 30(4), 347-359.
- Lim, T. S., Osman, Z., ZatulKaramah, A. B. U., Jamal, A. A. A., Mohidin, R. A., & Mail, R. (2013). Financial Literacy in Southeast Coast of Sabah. *Proceedings of the 6th International Conference of the Asian Academy of Applied Business (AAAB) 2013*.
- Loewenthal, K. M. (2004). *An introduction to psychological tests and scales* (2<sup>nd</sup> ed.). Hove, UK: Psychology Press.
- Loke, Y. J. (2015). Financial Knowledge and Behaviour of Working Adults in Malaysia. *Margin: The Journal of Applied Economic Research*, 9(1), 18-38.
- Lusardi, A & Mitchell, O. S. (2013). *The Economic Importance of Financial Literacy: Theory and Evidence*. Cambridge, MA: National Bureau of Economic Research.
- Lusardi, A. (2009). The Importance of Financial Literacy. *NBER Reporter*, (2), 13-16.
- Lusardi, A., & Mitchell, O. S. (2011). *Financial Literacy around the World: An Overview*. National Bureau of Economic Research Working Paper No. 17107.
- Lusardi, A., & Mitchell, O.S. (2006). Financial Literacy and Retirement Preparedness: Evidence and Implications for Financial Education. *Business Economics*, 42(1), 35-44.
- Lusardi, A., & Mitchell, O.S. (2007). Planning and Financial Literacy: How Do Women Fare? *American Economic Review*, 98(2), 413-417.
- Lyons, A. C., Chang, Y., & Scherpf, E. M. (2006). Translating Financial Education into Behaviour Change for Low-Income People. *Journal of Financial Counseling and Planning*, 17(2), 27-44.

- Malaysia Department of Insolvency. (2006). *Bankruptcy Statistics*. Retrieved from <http://www.mdi.gov.my/index.php/about-us/resources/statistics/bankruptcy/217-bankruptcy-statistic>
- Mandell, L., & Klein, L. S. (2009). The Impact of Financial Literacy Education on Subsequent Financial Behaviour. *Journal of Financial Counseling and Planning*, 20(1), 15-24.
- Mitchell, O. S. (1998). Worker Knowledge of Pension Provisions. *Journal of Labor Economics*, 6(1), 21-39.
- Mitchell, O. S., & Utkus, S. P. (2006). How Behavioural Finance Can Inform Retirement Plan Design. *Journal of Applied Corporate Finance*, 18(1), 82-94.
- Morrin, M., Broniarczyk, S., Inman, J. J., & Broussard, J. (2008). Saving for Retirement: The Effects of Fund Assortment Size and Investor Knowledge on Asset Allocation Strategies. *Journal of Consumer Affairs*, 42(2), 206-222.
- Mu'at, J., & Triandani, T. (2015). *Analysis of financial literacy level among college students and its determinants: A case of State Islamic University of Sultan Syarif Kasim Riau, Indonesia*. Paper presented at the *International Conference on Accounting Studies 2015*, Bahru, Johor, Malaysia.
- Nga, J. K. H., Yong, L. H. L., & Sellappan, R. D. (2010). A study of financial awareness among youths. *Young Consumers*, 11(4), 277-290.
- Noordin, N., Zakaria, Z., Sawal, M. Z. H. M., Ngah, K., & Hussin, Z. (2012). Bankruptcy among Young Executives in Malaysia. *Proceedings of 2012 International Conference on Economics Marketing and Management* (pp. 132-136). Singapore: IACSIT Press.
- O'Neill, B., Sorhaindo, B., Xiao, J. J., & Garman, E. T. (2005). Financially Distressed Consumers: Their Financial Practices, Financial Well-Being, and Health. *Journal of Financial Counseling and Planning*, 16(1), 73-87.
- Organisation for Economic Co-Operation and Development (OECD). (2005). *Recommendation of the Council on Principles and Good Practices for Financial Education and Awareness*. Retrieved from <http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=77&InstrumentPID=74&Lang=en&Book=>
- Perry, V. G., & Morris, M. D. (2005). Who Is in Control? The Role of Self-Perception, Knowledge, and Income in Explaining Consumer Financial Behaviour. *The Journal of Consumer Affairs*, 39(2), 299-313.
- Robb, C. A., & Sharpe, D. L. (2009). Effects of Personal Financial Knowledge on College Students' Credit Card Behaviour. *Journal of Financial Counselling and Planning*, 20(1), 25-38.
- Sabri, M. F., & Zakaria, N. F. (2015). The Influence of Financial Literacy, Money Attitude, Financial Strain and Financial Capability on Young Employees' Financial Well-being. *Pertanika J. Social Science & Humanities*, 23(4), 827 – 848.
- Said, H. (2014, October 22). Bankruptcy among youth alarming: Nancy. *New Straits Times*. Retrieved from <https://www.nst.com.my/news/2015/09/bankruptcy-among-youth-alarming-nancy>
- Salikin, N., Wahab, N. A., Zakaria, N., Masruki, R., & Nordin, S. N. (2012). Students' Saving Attitude: Does Parents' Background Matter? *International Journal of Trade, Economics and Finance*, 3(6), 479-484.
- Shaari, N. A., Hasan, N. A., Mohamed, R. K. M. H., & Sabri, M. A. J. M. (2013). Financial Literacy: A Study among the University Students. *Interdisciplinary Journal of Contemporary Research in Business*, 5(2), 279-299.
- Shim, S., Baber, B. L., Card, N. A., Xiao, J. J., & Serido, J. (2009). Financial Socialization of First-year College Students: The Roles of Parents, Work, and Education. *Journal of Youth and Adolescence*, 39(12), 1457–1470.

- The Borneo Post. (2017, January 6). *AKPK resolves 11,935 cases totalling RM488 million*. <http://www.theborneopost.com/2017/01/06/akpk-resolves-11935-cases-totalling-rm488-million/>
- The Star. (2017, March 30). *Fairer system for guarantors*. Retrieved from <http://www.thestar.com.my/news/nation/2017/03/30/fairer-system-for-guarantors-they-wont-be-declared-bankrupt-if-borrowers-fail-to-repay-debts/#1EZhfDjptwlgUSkO.99>
- Valentine, G. P., & Khayum, M. (2005). Financial Literacy Skills of Students in Urban and Rural High Schools. *Delta Pi Epsilon Journal*, 47(1), 1-10.
- Varcoe, K. P., & Fitch, P. R. (2003). Money Talks – A Programme to Improve Financial Literacy of Teens. *International Journal of Consumer Studies*, 27(3), 225-226.
- Vijaindren, A. (2017, July 9). *Impulse buying: Gen-Y face online shopping debt trap*. Retrieved from <https://www.nst.com.my/news/exclusive/2017/07/255745/impulse-buying-gen-y-face-online-shopping-debt-trap>
- Worthington, A. C. (2006). Predicting Financial Literacy in Australia. *Financial Services Review*, 15(1), 59-79.
- Xiao, J., Tang, C., & Shim, S. (2009). Acting for Happiness: Financial Behaviour and Life Satisfaction of College Students. *Social Indicators Research*, 92(1), 53-68.
- Yuen, M. K. (2014, April 9). Bankruptcy cases on the rise in Malaysia. *The Star*. Retrieved from <http://www.thestar.com.my/news/nation/2014/04/09/bankruptcy-on-the-rise-in-malaysia/#gFxmzwVWDM0GBhYe.99>
- Zamzmir, Z., Jaini, A., & Zaib, S. Z. M. (2015). Bankruptcy among young users of credit card in Malaysia: a case study of RHB Islamic (Menara Yayasan Tun Razak) bank customers. In: *The Proceedings of the 4th International Seminar on Entrepreneurship and Business* (pp. 628-636). Kelantan: Faculty of Entrepreneurship and Business, UMK.
- Zhan, M., Anderson, J., & Scott, J. (2006). Financial Management Knowledge of The Low-Income Population: Characteristics and Needs. *Journal of Social Service Research*, 33(1), 93-106.

## APPENDIX

### Financial Literacy Questions

1. Suppose you had RM 100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?
  - a. More than RM 100
  - b. Exactly RM 102
  - c. Less than RM 102
  - d. Do not know
  
2. Suppose you had RM 100 in a savings account and the interest rate is 20% per year and you never withdraw money or interest payments. After 5 years, how much would you have on this account in total?
  - a. More than RM 200
  - b. Exactly RM 200
  - c. Less than RM 200
  - d. Do not know

3. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?
  - a. More than today
  - b. Exactly the same
  - c. Less than today
  - d. Do not know
  
4. Assume a friend inherits RM 10,000 today and his sibling inherits RM 10,000 three years from now. Who is richer because of the inheritance?
  - a. My friend
  - b. His sibling
  - c. They are equally rich
  - d. Do not know
  
5. Suppose that in the year 2017, your income has doubled and prices of all goods have doubled too. In 2017, how much will you be able to buy with your income?
  - a. More than today
  - b. The same
  - c. Less than today
  - d. Do not know
  
6. Net worth is:
  - a. The difference between expenditures and income
  - b. The difference between outsiders' liabilities and assets
  - c. The difference between cash inflow and outflow
  - d. None of the above
  
7. A company issues shares in the:
  - a. Secondary markets
  - b. Primary markets
  - c. Stock exchange
  - d. Derivative markets
  
8. Who regulates the banks and financial institutions in Malaysia?
  - a. Securities Board
  - b. Securities Commission
  - c. Insurance Board
  - d. Bank Negara Malaysia

9. The main reason to purchase insurance is to
- Protect you from a loss recently incurred
  - Provide you with excellent investment returns
  - Protect you from sustaining a severe loss
  - Protect you from small incidental losses
  - Improve your standard of living by filing fraudulent claims
10. What is the general corporate tax rate in Malaysia?
- 20%
  - 22%
  - 24%
  - 26%
11. What do you think deserves primary attention when one has to compare between the banks to choose the one where to take a loan from?
- Bank's reputation and its reliability
  - View of the bank office and qualifications of its personnel
  - Interest rate and the other costs
  - Gifts and advertising campaigns