

DETERMINANTS OF SAVING BEHAVIOUR AMONG UNIVERSITY STUDENTS IN SELANGOR, MALAYSIA: MEDIATING ROLE OF SELF-SPENDING CONTROL

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Abstract: Uncontrolled spending behaviour among younger generations is prevalent especially when they have more freedom in spending that to a certain extent causes them to spend recklessly. This study investigates whether self-control mediates the association linking financial literacy and parental socialisation to saving behaviour among university students. Using a standardised questionnaire, the study utilised a cross-sectional design to collect data from 322 undergraduate students based in Selangor, Malaysia. The SPSS Process Macro Model 4 was used to analyse the mediation impact of self-spending control on saving behaviour. The findings show that financial literacy, parental socialization, and self-spending control are positively associated with the probability of saving money as a regular habit. In addition, the findings reveal that self-spending control has a mediation effect in the association between financial literacy and parents' social influence towards saving behaviour. Understating the factors that affect students' saving behaviour will help higher education institutes (HEIs) to develop adequate strategies for directing students' mentality and behaviour towards saving. Higher education institutes need to develop the necessary courses and curriculum to inculcate the culture of saving among students at an early age.

Keywords: Peer influence, Financial literacy, Parental socialisation, Self-control

1. Introduction

Savings behaviour is financial behaviour on the basis that individuals have certain motivations and responsibilities for the future. It is regarded as social behaviour whereby someone decides to save because considering the uncertainty in the future, to prevent this financial risk, someone has the motivation to save. It is seen as a way of reducing risks associated with the inability to foresee the future, as well as a precautionary measure (Alexandro, 2019). People who do not save and manage their money correctly may face financial difficulties and even bankruptcy. Saving behaviour is a positive action made by a person to exclude part of their income that is not spent on current expenditure for future use (Aisyah et al., 2022). According to Nguyen and Doan (2020), savings behaviour can guarantee as a combination of future needs, saving, and actions in saving, which includes self-restraint, and honesty.

Early exposure to saving behaviour is important for the younger generation especially students because they have various obligations such as paying back the loans used to finance their university education even before they graduate. Unfortunately, Alekam (2018) reported younger generations in Malaysia are seen to be spending recklessly due to the improved

Malaysian standard of living where they have more freedom in spending and consumption. Besides, according to a survey on Malaysian millennials' saving behaviour conducted in May 2019, both savers and non-savers found it difficult to save due to the rising cost of living, with 68 and 61 percent share of respondents respectively (Statista Online, 2019). Meanwhile, according to the RinggitPlus survey on Malaysian Financial Literacy in 2021, about 51% of respondents indicated that they cannot survive more than three months if they lose their job, and conversely, 28% can last six months for being unemployed (RinggitPlus, 2021). Adding to this, the economic impact of the pandemic Covid-19 still derailed the savings ability of most Malaysians where the number of individuals who cannot save at all rose to 21% in 2021 from 19% in 2020, while 31% of respondents save less than RM500 a month (RinggitPlus, 2021). In the case of millennials between 18 and 35 years old, the responses recorded were worse than the national average (Asila, 2021). Overall, many Malaysians are still susceptible to financial shocks, and a considerable amount of the citizens continue to spend more than what they earn.

The uncontrolled spending behaviour of the younger generations in Malaysia is becoming more common which makes them difficult to save money. The rise in the cost of living and spending on books affect the sustainability of cash flow among students. For instance, a study found that 60% of undergraduate students in Malaysia were stressed about financial issues (Asila, 2019). Rakow (2019) claimed that poor money management is the cause of university students' lack of financial understanding. This leads to reckless spending, bankruptcy, debt, and financial disasters. Besides, students' spending habits, continuous increases in the price level, low saving culture, and dependence of students on their parents for supporting them may also demotivate them to save (Alshebami & Seraj, 2021). Rozana (2019) reported that students' inability to manage cash flow generally stems from their inexperience in handling money as opposed to the time when their finances were mainly monitored by their parents, and hence they face difficulties in managing expenditures.

Nowadays, the young generation spends more money on online shopping, convenience, travel, socialising, and online gaming than on homes and cars compared to the previous generations (Kumar et al., 2022). This bad habit affects saving behaviour since the young generation tries to follow the trends and buy anything they want without thinking twice. When this bad habit occurs, it will cause problems such as not being able to afford enough to pay for education loans, rent, utility, and more. Therefore, this problem needs to be addressed so that the younger generation, especially students, does not develop bad habits and saves more. The main objective of this study is to identify the factors influencing students saving behaviour. Specifically, this study aims to investigate whether self-spending control can mediate the influence of financial literacy, and parental socialisation towards saving behaviour among university students in Selangor, Malaysia.

2. Literature Review

2.1 Theoretical Underpinnings

This study is based on Social Learning Theory, which states that individuals' behaviours are influenced by their surroundings (Bandura & Walters, 1977; Bandura, 1997). Social

Learning Theory explains how environmental factors influence people throughout their lives. In the present study, the theory is employed to show how the saving behaviour of university students is influenced by their surrounding social environment (parents) from birth to adulthood. Consequently, students acquire their financial values, knowledge, and attitudes from their homes and surroundings, that is, family, other agents, and institutions all play a role in shaping students' saving behaviour over time (Nurasyikin et al., 2019). In addition, this study also uses the Behavioural Life Cycle Theory, which is a Behavioural Finance Theory (Griesdom et al., 2014). This theory states that mental accounting, framing, and self-control are methods for improving the savings behaviour of individuals (Mpaata et al., 2021). In other words, without self-control, the achievement of saving behaviour is unlikely (Supanantaroek et al., 2016). In this study, self-control refers to the regulation of individuals' savings.

Figure 1 shows the research framework for this study. Building upon Social Learning Theory (Bandura & Walters, 1977; Bandura, 1997) and Behavioural Life Cycle Theory (Griesdom et al., 2014), this study attempts to extend the framework for understanding whether self-spending control can mediate the influence of financial literacy and parental socialisation towards saving behaviour among university students in Selangor, Malaysia.

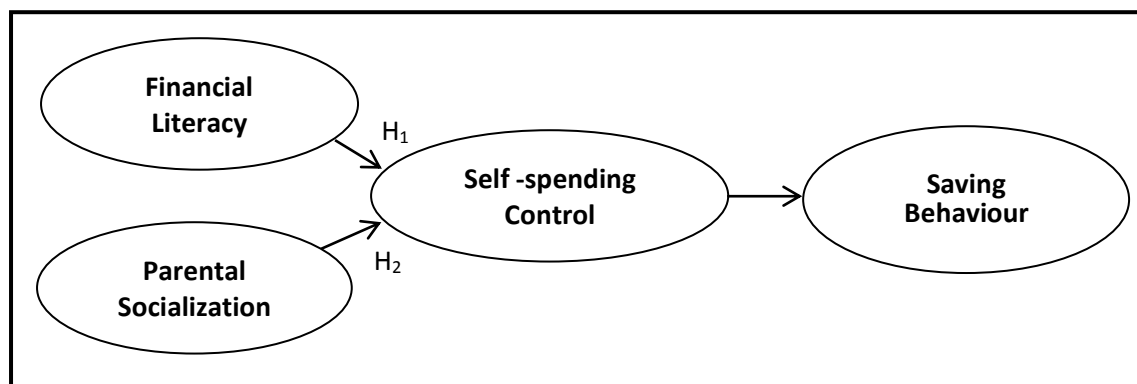


Figure 1. Conceptual Framework of University Students' Saving Behaviour

2.2 Mediation Effect of Self-spending Control on the Association between Financial Literacy and Saving Behaviour

Financial literacy is defined as an individual's ability to read, analyse, manage and communicate about the personal financial condition that affects the material well-being (Stolper & Walter, 2017). However, Alshebami and Aldhyani (2022) argued that to maximise the various benefits of financial literacy, it is necessary to exercise a certain level of self-control. Self-control is regarded as an important factor in improving an individual's behaviour (Lown et al., 2015) as it helps to sharpen and focus one's willpower, thoughts, and actions towards achieving specific goals, such as eliminating bad spending habits (Mpaata et al., 2021). In other words, self-control allows individuals to regulate their spending habits and savings (Thaler, 2017). Individuals with strong self-control can manage their finances professionally, meet their financial goals, and continually increase their savings (de Ridder et al., 2021; Mpaata et al., 2021). In contrast, individuals will face financial difficulties when self-control is weak or absent (Thaler, 2017). Since self-control has been shown to exert a direct effect on saving behaviour (Chalimah et al., 2019; de Ridder & Lensvelt-Mulders, 2018;

Nepomuceno & Laroche, 2017), it has been employed as a mediator in several studies to strengthen the relationship between various assumed constructs. For example, Ayuningtyas and Irawan (2021) revealed that self-control as a mediator, is shown to mediate the influence of financial literacy on consumers' impulsive buying behaviour. In another study by Hashmi et al. (2021), it was discovered that the presence of self-control can act as a mediator in the association between self-esteem with financial behaviour, and the financial well-being of young adults. Therefore, this study conjectures the following hypothesis.

H₁: Self-spending control mediates the association between financial literacy and saving behaviour among students

2.3 Mediation Effect of Self-spending Control on the Association between Parental Socialisation and Saving Behaviour

Parents are observed to be the main actors in a family and serve as a major influence in shaping their children's saving behaviour. Many previous studies have shown that parents played a significant role in influencing and encouraging their children to save money for a specific purpose (Aisyah et al., 2022; Angela & Pamungkas, 2022; Boto-Garcia et al., 2022; Amer Azlan et al., 2015; Siti Khadijah et al., 2018). Previous studies argue that parental saving norms promoted healthy saving behaviour by encouraging self-control (Ardiana, 2016; Amer Azlan et al., 2015; Ningsih et al., 2018; Otto, 2013). A considerable number of studies have been conducted to test the role of parents in the development of self-control. For instance, a study by Mobarake et al. (2017) found a mediation effect of self-control in the association between parents' social influence and saving behaviour in Tehran, Iran. Nepomuceno and Laroche (2017) as well as Yue (2020) revealed that expectations of parents regarding saving can motivate young adults to stick to saving plans, particularly in the Chinese community where meeting parental expectations remain socially desirable. On this basis, as a mediator, self-control is used to determine the mediation effect on the association between parental socialisation and saving behaviour, thus the following hypothesis is conjectured.

H₂: Self-spending control mediates the association between parental socialisation and saving behaviour among students

3. Methodology

3.1 Design, Population, and Sample

Quantitative analysis with a cross-sectional design was employed because data were collected at one point in time. The questionnaires were distributed to students pursuing their studies in three universities located in Selangor, Malaysia. Stratified random sampling was used to ensure the presence of the key subgroup within the sample. A sample of 350 questionnaires was distributed, and 325 were returned; three (3) were not fully completed and thus eliminated from the study, leaving a total of 322 respondents who were used for further analysis. This resulted in a 92% response rate, which, as suggested by most researchers is appropriate as it is above the 50% threshold.

3.2 Measurement of the Constructs

The measures employed in the study along with their sources are listed in Table 1. The measures were scored on a 5-point Likert scale ranging from 'strongly disagree' to 'strongly agree'.

Table 1. Measurement of the Constructs and Its Sources

Constructs	No. of Items	Source(s)
Saving Behaviour	10	Mohd Rahim et al. (2017); Dangol & Maharjan (2018)
Financial Literacy	10	Brau et al. (2019); Cude et al. (2006)
Parental Socialisation	10	Dangol & Maharjan (2018); Yue (2020)
Self-spending Control	10	Mohd Rahim et al. (2017); Strömbäck et al. (2017)

3.3 Data Analysis Method: Mediation Testing

Mediation testing is used to investigate whether self-spending control can mediate the influence of financial literacy and parental socialisation towards saving behaviour among university students in Selangor, Malaysia. The SPSS Process Macro Model 4 add-on function in SPSS is used in the present study to test the direct and indirect effects among all the constructs in a model whether it is a single or multiple mediators or a moderator model (Hayes & Rockwood, 2016). Mediation in statistics is a hypothesised model in which the first variable influences a second variable then the second variable influences a third variable. M is a mediating variable (also called a mediator) that mediates the relationship between a predictor variable, X, and an outcome variable, Y as shown in the simple mediation model below (Figure 2). Based on Figure 2, X leads to M through path a, and M leads to Y through path b. Therefore, both paths a and b have a direct effect. In the mediational effect, X leads to Y through M demonstrating an indirect effect.



Figure 2. Simple Mediation Model

The current study proposes a research framework where the mediating variable, self-spending control (M) mediates the association of predictor variables, which are financial literacy (X1) and parental socialisation (X2) on the outcome variable, saving behaviour (Y). The 'Model 4' in the model templates for SPSS and SAS Process is chosen for the current study to get the results shown in Figure 3.

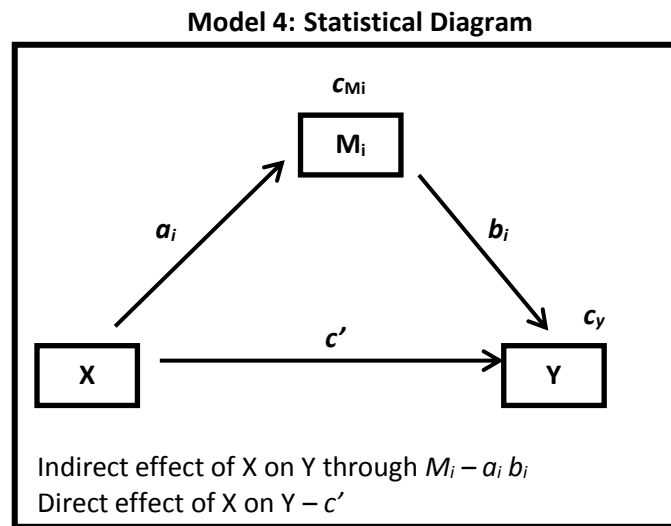


Figure 3. Model Template for SPSS and SAS Process (Model 4)

3.4 Preliminary Assessment

A preliminary analysis of the data was conducted and a reliability assessment of the scales was carried out by calculating the values of Cronbach’s alpha for each construct separately. According to Bougie and Sekaran (2019), the reliability coefficient test indicates how well the items in a set positively correlated with one another. Variables can be considered reliable if Cronbach’s alpha value is set to 0.7 and above (Pallant, 2020). Table 3 depicts that all variables measuring saving behaviour (financial literacy, parental socialisation, and self-spending control) are ranging from values 0.776 to 0.813. Hence, the internal consistencies of all constructs are considered acceptable since each reliability test exceeds the suggested threshold.

Table 3. Reliability and Normality Assessment Results

Constructs	Cronbach's Alpha	Skewness	Kurtosis	No. of Items
Saving Behaviour	0.793	-0.394	1.783	10
Financial Literacy	0.776	-0.733	2.358	10
Parental Socialisation	0.813	-0.775	2.671	10
Self-spending Control	0.806	-0.848	2.169	10

Further, the assessment of the normality of the metric variables in this study involves empirical measures of a distribution’s shape characteristics (skewness and kurtosis). Table 3 shows that the normality assessment values for saving behaviour, financial literacy, parental socialisation, and self-spending control are between ± 3.00 as suggested by Hair et al. (2019). Therefore, this assessment confirms that the data of this study is normally distributed. Next, multicollinearity testing was done to examine the relationship among the independent variables. Multicollinearity exists when the independent variables are highly correlated, with an r value of more than 0.9 (Pallant, 2020). The correlation coefficient results between the variables are indicated in Table 4. All the independent variables show at least some positive

relationship with the dependent variable, and the correlations between independent variables are less than 0.7.

Table 4. Pearson Correlation Coefficient and Collinearity Diagnostics Results

	Saving Behaviour	Financial Literacy	Parental Socialisation	Self-spend Control	Tolerance	VIF
Saving Behaviour	1	.643***	.661***	.628***		
Financial Literacy		1	.612***	.675***	0.503	1.987
Parental Socialisation			1	.689***	0.486	2.059
Self-spending Control				1	0.423	2.365

Note: Correlation is significant at *** 1% level, ** 5% level and * 10% level, respectively, using two-tailed tests.

To further check for multicollinearity, a collinearity diagnostics test (tolerance and VIF values) was conducted. As shown in Table 4, the tolerance values are greater than 0.10 and the VIF values are lower than 10; hence, no multicollinearity problem exists (Pallant, 2020).

4. Results and Discussion

Figure 4a depicts unsurprisingly that female (57%) is more than male (43%), which reflects the gender gap issues in institutions of higher learning enrolment in Malaysia. Further, Figure 4b shows that the majority of respondents are between 19 and 22 years old. They make up more than half (73%) of the total responses to the survey given.

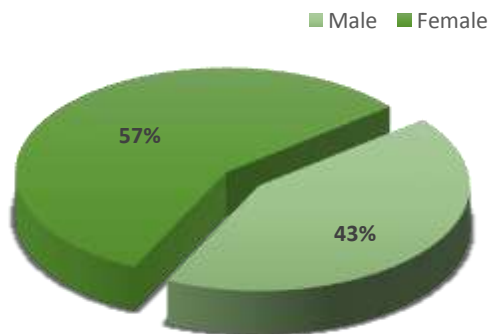


Figure 4a. Respondents' Gender

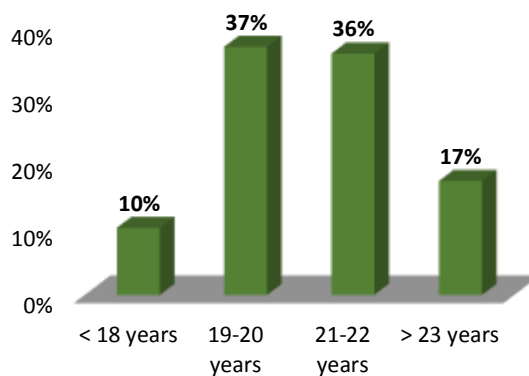


Figure 4b. Respondents' Age Group

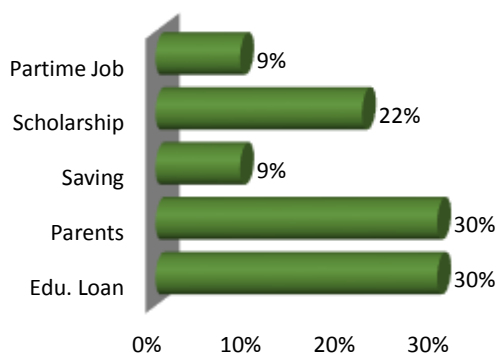


Figure 4c. Respondents' Source of Income

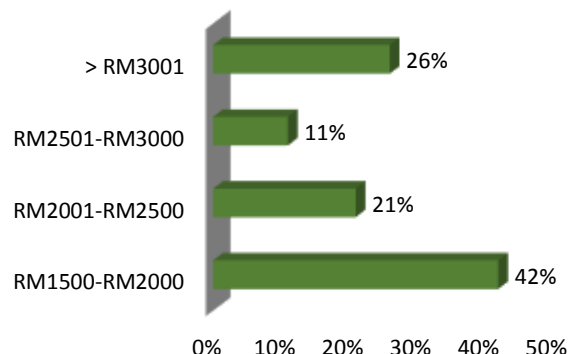


Figure 4d. Total Money Received per Semester

4.1 The Extent of Saving Behaviour

This section reports the finding which relates to the extent of the saving behaviour of the university students in Selangor, Malaysia. One sample t-test was conducted to test whether the mean of overall saving behaviour is significantly equal to or different from a specified constant. Table 5 shows the mean result of 3.436 for saving behaviour which indicates that respondents have moderate behaviour in saving their money, and it is statistically significant at a 1% level. Overall, the majority of respondents reveal that they save money because it is a good thing to do and to achieve certain goals in the future. Besides, the respondents also revealed that they plan to reduce their expenditures to save more so that they will always have money available in the event of an emergency. This result is consistent with a finding by Dangol and Maharjan (2018) that found the most important motives for the saving of the Nepalese youth were savings for emergencies and fulfilling their daily needs.

Table 5. The Extent of Saving Behaviour Perceived by Respondents

	n	Mean	One Sample T-Test	
			t-statistic	p value
Saving Behaviour	322	3.4360	56.334	.000***

Note: Result is significantly different at *** 1% level and ** 5% level, respectively, using two-tailed tests.

An independent sample t-test was conducted to compare the extent of saving behaviour among respondents based on their gender. The result in Table 6 shows that there is a statistically significant difference in the scores of saving behaviour among respondents based on different gender (t-statistic = -5.771***), and it is significant at a 1% level. This finding is in tandem with Bashir et al. (2013) and Boto-García et al. (2022) which shows males and females had significantly different saving behaviour. Further, the result in Table 6 indicates that females saved more than males. Unfortunately, this result is contradicted by both studies of Bashir et al. (2013) and Boto-García et al. (2022) as they concluded that men saved more than females because males are having extra responsibilities in charge of household finances than females. In the context of this study, gender differences in financial literacy were performed and it shows that female students (mean = 3.8088) are more likely to show an acceptable level of financial literacy than male students (mean = 3.3721). Therefore, female students saved more than males as they are more financially literate. Perhaps, female students were more likely than male students to have observed their parents managing expenses and avoiding overspending, paying bills on time, saving and investing money. Exposure to environments where the parents are role models of financial management gives female students a more positive attitude toward saving than male students.

Table 6. The Extent of Saving Behaviour Perceived by Respondents based on Gender

Gender	n	Saving Behaviour		Independent Sample t-Test	
		Mean	SD	t-statistic	p value
Male	138	3.3953	0.6451	-5.771	.005***
Female	184	3.4667	0.5859		

Note: Results significantly different at the *** 1 percent level and ** 5 percent level, respectively, using two-tailed tests

4.2 Mediating Role of Self-spending Control on Saving Behaviour

This section discusses the results of mediating testing to examine whether self-spending control can mediate the influence of financial literacy and parental socialisation towards saving behaviour among university students in Selangor. Since this study consists of two independent variables (financial literacy and parental socialisation), therefore the model testing was divided into two parts, which are Model Testing 1 and Model Testing 2.

Hypothesis H_1 conjectures that self-spending control is a potential mediator in the relationship between financial literacy towards saving behaviour. Figure 5 depicts the outcome of Model Testing 1 whereby the R^2 value of 0.4829^{***} which means that both financial literacy and self-spending control explain about 48.29% of the variance in the saving behaviour. The mediation testing result reveals that financial literacy has a positive effect on self-spending control ($\beta = 0.2755, p < .05^{**}$). Next, self-spending control does significantly predict saving behaviour ($\beta = 0.4562, p < .05^{**}$). Further, the result shows that the direct effect of financial literacy is significant and it influences saving behaviour ($\beta = 0.5081, p < .05^{**}$). Finally, the β -value of the indirect effect of financial literacy on saving behaviour through self-spending control is 0.0229 ($p < .05^{***}$) and the 95% confidence interval (CI) falls between 0.0739 and 0.1281. Since the 95% CI does not include 0, the indirect effect is statistically significant (mediation is supported). This result indicates that there is a mediation role of self-spending control on the association between financial literacy and saving behaviour, hence H_1 is supported.

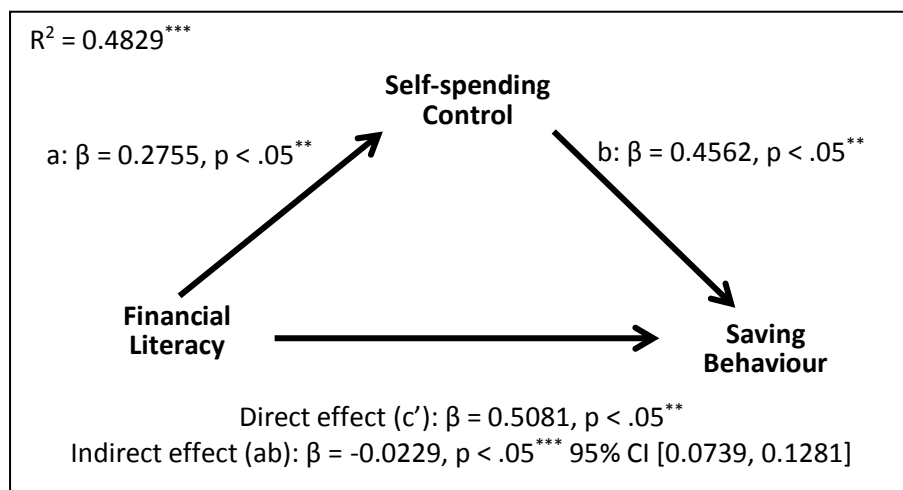


Figure 5. Model Testing 1 (IV is Financial Literacy, MV is Self-spending Control)

According to the findings in Figure 5, financial literacy has a positive and significant impact on students' saving behaviour. It can be interpreted that if a student has a high level of financial literacy, that student tends to perform a highly saving behaviour. Conversely, the lower students' financial literacy, the lower the level of saving. The finding of this study is comparable to Mpaata et al. (2021), who found that saving behaviour of the individual is influenced by financial literacy. In addition, this study discloses a significant positive moderation effect of self-spending control, indicating that the greater a student's self-control, the stronger the association between financial literacy and saving behaviour. This could be

interpreted as students with financial knowledge can certainly control their spending and will use their money carefully to avoid deficits. This result is consistent with Ayuningtyas and Irawan (2021) as well as Hashmi et al. (2021) that revealed self-control can mediate the influence of financial literacy on consumers' impulsive buying behaviour.

Hypothesis H₂ assumes self-spending control is a potential mediator in the association between parental socialisation and saving behaviour. Figure 6 depicts the result of Model Testing 2 whereby the R² value 0.05001^{***} means that both parental socialisation and self-spending control explains about 50.01% of the variance in the saving behaviour. The result reveals that parental socialisation has a positive effect on self-spending control ($\beta = 0.7548, p < .05^{**}$), and it is significant at a 5% level. Next, it is observed that self-spending control does significantly predict saving behaviour ($\beta = 0.6013, p < .05^{**}$). On the other hand, there is a significant direct positive effect of parental socialisation on saving behaviour ($\beta = 0.7083, p < .05^{***}$). Finally, the β -value of an indirect effect of parental socialisation on saving behaviour via self-spending control is $-0.0765 (p < .05)$ and the 95% confidence interval (CI) falls between -0.0210 and $0.057q$. Since the 95% CI does not include 0, the indirect effect is statistically significant (i.e. mediation is supported). This result indicates that there is a mediation role of self-spending control on the association between parental socialisation and saving behaviour, hence H₂ is supported.

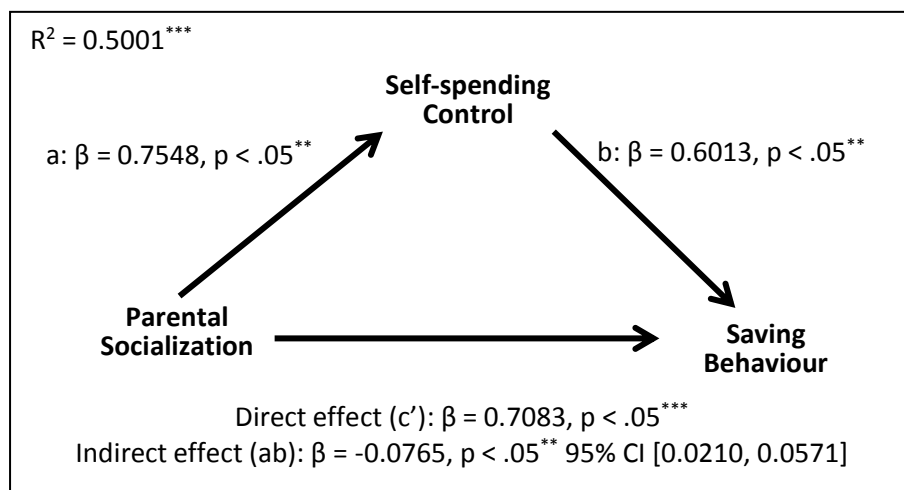


Figure 7. Model Testing 2 (IV is Parental Socialization, MV is Self-spending Control)

The finding indicates that parents' encouragement to save money highly affects the saving behaviour of students. Perhaps, students appreciate when their parents give advice about what to do with their money and it is the main reason for them to save money. However, embedding awareness of a child towards the importance of saving is not enough to be conducted simply by ordering and commanding. The process that is needed is a role model, it is practiced and implemented directly so that the child can feel saving behaviour and it will become a habit later. Besides, students who have high self-spending control tend to restrain from getting involved with negative things, for example, consumptive behaviour, while the family environment has been given direction and role models. In addition, students can control themselves because the saving habits that the family encourage is well embedded and they are strongly supported internally within the family environment. This result is

consistent with Ningsih et al. (2018) that found family environment influences saving behaviour through self-control. Furthermore, this result is also following several other studies such as Ardiana (2016), Nepomuceno and Laroche (2017), and Yue (2020) that revealed family financial habit has a positive and significant effect on students' saving behaviour. This means that the family environment will be able to form students' self-spending control and influence them to improve their saving behaviour.

5. Conclusion

This study contributes to the growing empirical literature on the determinants of saving behaviour by exploring the role of self-spending control on the association between financial literacy and parental socialisation on saving behaviour. Using empirical data among university students in Selangor, the results show that financial literacy, parental socialisation, and self-spending control are positively associated with the probability of saving money as a regular habit. This result is consistent with the Social Learning Theory (Bandura & Walters, 1977; Bandura, 1997) that argue the saving behaviour of university students is shaped by their surrounding environment. In addition, the finding of this study also supports Behavioural Life Cycle Theory (Griesdom et al., 2014) because self-spending control has a mediation effect in the association between financial literacy and parents' social influence towards saving behaviour.

This study contributes to the literature review by offering insight into the status of saving culture among youths or students in Malaysia. It demonstrates key factors that influence the saving behaviour of university students. The key factors include financial literacy, parents' effect, and self-spending control on the saving behaviour of the university students' community in the selected area of the study. Understating the factors that affect students' saving behaviour will help HEIs to develop adequate strategies for directing students' mentality and behaviour towards saving. Higher education institutes need to develop the necessary courses and curriculum to inculcate a culture of saving among students at an early age. The study also recommends that financial institutions should emphasise the need to develop necessary financial training courses that are capable of enriching students with essential skills that can assist them in dealing with financial products and services. The government also needs to focus on providing an attractive environment for both financial institutions and students by supplying the necessary infrastructures and regulations to regulate the saving process in the country. Parents also need to act as role models for their children from an early age.

This research is not without its limitations since the variables undertaken in this study are still limited, such as financial literacy, parental socialisation, self-spending control, and saving behaviour. Future research is expected to study other variables such as motivation for saving, financial management behaviour, and saving attitudes. In addition, there are limitations to the sample size because the respondents are only students in one state. Thus, future research is expected to cover respondents from several other states. Next, the self-reported behaviour on which this study relied is vulnerable to response bias. There is uncertainty regarding the accuracy of responses because self-reports of saving behaviour may be less accurate. To reduce response bias, it is suggested for future research use in-depth

techniques applied to secondary data sources such as interviews or observations. This might help the researcher to explore certain aspects that cannot be discovered using a survey questionnaire.

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