An Empirical Analysis of The Impact of Money Attitudes on Retirement Savings Behaviour in Malaysia

N.S.M. Shariff[1*], A.H. Azhar[2] and M.S. Ibrahim[3]

[1,2,3]*Faculty of Science and Technology, Universiti Sains Islam Malaysia, 71800 Nilai, Negeri Sembilan, Malaysia*

[1,3]*Risk and Analytics Research Group, Faculty of Science and Technology, Universiti Sains Islam Malaysia, 71800 Nilai, Negeri Sembilan, Malaysia*

Saving for the future, especially for life after retirement, is a critical issue often debated. Early savings planning needs to be paid serious attention to ensure a good and comfortable life after retirement. However, behaviour towards savings for retirement is related to money attitude as it is how an individual behaves or reacts to money. Each person is believed to have different views and behaviours towards money and income, especially regarding retirement savings. As such, this study aims to investigate the effect of money attitudes on retirement savings behaviour. The survey approach was employed and conducted using questionnaires developed by adopting several studies and then randomly distributed via an online platform. A total of 160 respondents from 250 targeted respondents successfully answered the questionnaire and were used for further analysis. The collected sample suggested a successful response rate of 64%, more than enough to allow for population-wide generalisation of the findings. The analyses conducted were the pilot test for the initial screening of the items in the questionnaire, descriptive statistics, multicollinearity test, and the ordered Probit model. This study revealed mixed findings on the relationship between the type of money attitudes and retirement savings behaviour, indicating that people with different attitudes towards money will have different perceptions of savings for retirement.

Keywords: Money Attitude; Retirement; Savings Behaviour; Ordered Probit Model

I. INTRODUCTION

The Qur'an emphasises the importance of planning for the future of the family and being prudent in managing finance and wealth (Qur'an, 67:15). Despite this Qur'an verse stating the importance of having proper wealth and financial planning for future life, Malaysians' decisions towards retirement savings are still uncertain. While most Malaysians have retirement savings in the Employees Provident Fund (EPF), they believe money itself is enough to cover their daily expenses after retirement. They hope the EPF money can guarantee their lives after retirement without imagining the economic situation and power at that time. Moreover, Malaysians are unaware of the changes in inflation rates and shrinking purchasing power that might occur in the future.

This situation may have arisen due to the lack of awareness about saving for the future, especially for retirement and low financial knowledge of the importance of having adequate retirement money. Therefore, proper planning to save for retirement is vital among Malaysians to fully prepare for living costs after retirement.

The decision to plan for retirement savings relies on an individual's financial and money attitude. Financial and money attitude is vital in determining individuals' attitudes and behaviour in deciding on their finances (Yogasnumurti, 2019). Although several economic or financial factors influence the incentive for savings, less attention has been highlighted on the economic psychology issue. This includes different types of attitudes towards money and how people

decide to have retirement savings (Shariff & Ishak, 2021). As such, money attitude can be interpreted as an individual's perception of money (Qamar *et al.*, 2016; Syafitri & Santi, 2017). Klontz (2011), in another study, described money attitude by distinguishing it into types such as money lover, money status, money worship, and money avoidance.

II.   LITERATURE REVIEWS

In recent years, several studies in economic psychology have focused on people's attitudes or beliefs about money. For example, Gasiorowska (2015) examined the impact of money attitudes on the relationship between income and financial satisfaction in Poland. The study discovered that income significantly yet modestly impacts people's beliefs about money. For instance, Chatterjee *et al.* (2018) developed a scale for measuring money attitudes and the nature of financial behaviour among Indians. The results of the study yielded several factors for the scale based on approaches of factor and cluster analysis. Meanwhile, Lay and Furnham (2019) also employed similar methodologies to determine the measure of money attitudes and beliefs. The study also applied regression analysis to investigate the factors of money attitudes using demographic profiles, ideology, biographical information, and subjective well-being. The findings of the study indicated that gender, age, education level, ideology, and subjective well-being were significant in the relationship to the attitudes towards money.

In another study by Bunyamin (2018), the researcher discovered that Malaysians with a money-avoider perception would avoid planning for their future. This is based on the findings of her study on the relationship between money attitudes and financial satisfaction on family takaful demand. The study also concluded that people who practise money status and money worship attitudes might have the habit of poor financial management. In contrast, those with money vigilance attitudes tend to keep silent and not consult others about their financial situation.

More studies have been conducted on the issue of retirement recently. This is due to the emergence of interest and awareness among researchers in solving retirement-related problems, which can eventually serve as solutions for the community. Talib and Manaf (2017) discovered no significant difference between age, retirement behaviour and self-awareness among EPF members in Malaysia. A recent study by Shariff and Isah (2019) discovered that income level is an important determinant of retirement behaviour in Malaysia. Note that people's amount of savings depends on their level of income. Hence, people with higher incomes will have more savings compared to those with lower incomes. Meanwhile, in another study by Shariff and Ishak (2021), the results revealed that financial knowledge is a crucial element in planning for retirement. In addition, family and friends' influence attracts people to plan better for their retirement due to the perception of having adequate savings to live a better life after retirement. Moreover, Nardi *et al.* (2016) studied the saving patterns of retired US households. Using a life cycle model, they observed that the pattern for out-of-pocket medical expenses rose quickly with age and income during retirement. A heterogeneous life span risk illustrates a significant percentage of US households' savings during retirement.

In a nutshell, attitudes and beliefs about money reflect how individuals manage it. In addition, there are numerous factors associated with the decision to save. Most of the previous findings revealed a relationship between factors such as demographic profile and savings behaviour. Furthermore, indirect effects such as money attitude can be investigated to determine their impact on achieving sustainable retirement. This study was conducted due to the researcher's interest in exploring the relationship between money attitude and retirement savings behaviour, a link different from the previous studies. It is hoped that the findings of this study will benefit all Malaysians in planning their retirement savings based on their attitude towards money.

III.   DATA COLLECTION

A. The Framework of The Study

The framework of the study is assumed as follows:

In Figure 1, it is assumed that demographic characteristics such as age, gender, income level, educational level, and other socioeconomic conditions may affect retirement savings behaviour (Shariff & Isah, 2019).
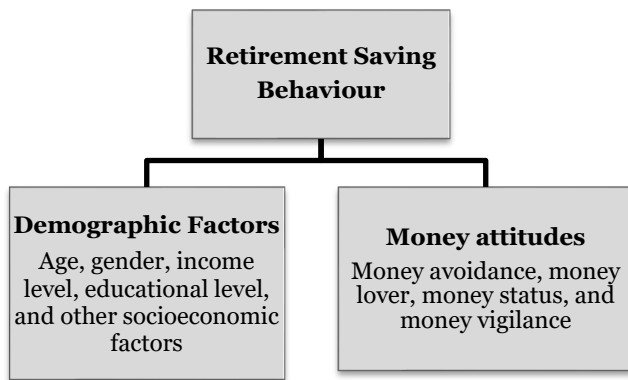
Figure 1. Study Framework.

In addition, other factors may contribute to this behaviour, such as money attitude. Every variable involving money matters, such as an individual's adolescent experiences, education, and economic as well as societal status, could affect a person's perspective on money (Qamar *et al.*, 2016). For these reasons, people's perceptions of money are believed to be related to a source of power and money obsessions are incorporated into the symbolic meaning of money (Gasiorowska, 2014). This statement supports the idea of the study, which is to investigate the relationship between money attitude and retirement savings behaviour.

B. Sampling Technique and Data Collection

Data were collected using the survey procedure via the purposive sampling technique. Due to the time and financial constraints of probability sampling, a non-probability purposive sampling method was adopted (O'Muircheartaigh & Hedges, 2014). The survey consisted of questionnaires randomly distributed to targeted respondents based on Malaysian citizens via an online platform throughout Malaysia. The questionnaire was adapted from previous related studies and constructed into two sections. The first section comprises questions related to demographic profiles such as age, gender, income level, educational level, and other socioeconomic factors. In contrast, the second section consisted of questions on five variables (see Table 1) of savings behaviour (12 items): money attitude comprises 13 questions for money avoidance, 10 questions for money lover, 12 questions for money status, and 14 questions for money vigilance. The answers in the second section were formatted in the form of the Likert scale ranging from 1 to 5, with 1 referring to the response of "strongly disagree," 2 for

"disagree," 3 for "neutral," 4 for "agree," and 5 for "strongly agree."

Table 1. The definition of the variable.

Retirement Savings Behaviour	Individuals with this attitude will avoid spending money for any purpose as they believe money does not denote any meaning. Thus, this individual can be described as having financial denial, financial rejection, and self-sabotage of financial progress (Bunyamin, 2018).
Money Avoidance	Individuals with this attitude will be attracted to money as they love money so much and believe money is everything in their lives.
Money Lover	Individuals with this attitude tend to classify people according to their socioeconomic status. As such, this person would like to show off their wealth as a sign of social status.
Money Status	Individuals with this attitude are more secretive about their financial status and may develop unhealthy financial behaviour in the future.
Money Vigilance	Individuals with this attitude will avoid spending money for any purpose as they believe money does not denote any meaning. Thus, this individual can be described as having financial denial, financial rejection, and self-sabotage of financial progress (Bunyamin, 2018).

IV. METHODOLOGY

The study employed several statistical procedures, such as the pilot test, descriptive statistics, multicollinearity test, and the ordered Probit model. A brief description of the procedures is as follows:

i. The pilot test was applied to investigate the questions' reliability and is based on Cronbach's alpha values. To save space, Cronbach's alpha for each variable will be

presented after considering the value of each question in each variable of interest. Questions were considered acceptable when their Cronbach's alpha value was at least 0.7.

ii. Descriptive statistics were employed to provide information on the overall sample. In this analysis, the frequency and percentage of each demographic profile category were calculated.

iii. The multicollinearity test is required to investigate the assumption of the absence of multicollinearity among the independent variables. As such, the Variance Inflation Factor (VIF) was computed with the rule of thumb of ten as the measure of the presence of multicollinearity.

iv. Since the responses to retirement savings behaviour questions are in the form of an ordered Likert scale, the ordered Probit model was deemed the most reliable method to be applied. As such, details of the model are indicated as follows (Hosmer & Lemeshow, 2000):

$$y^* = \beta \mathbf{X} + \epsilon, \qquad (1)$$

where y^* is the unobserved variable of savings behaviour (y) with the threshold of y^* is given by $\mu_{j-1} < y^* < \mu_j$ as j is the order of ordered variable y. In (1), $\mathbf{X}$ is defined as the matrix of the independent variables, with the variables of interest being money avoidance, money lover, money status, and money vigilance. Note that β and ϵ are parameter estimates for the corresponding independent variables X and error, respectively.

The estimation for ordered variable y^* is conditioned on variable $\mathbf{X}$ and is computed using the following probabilities:

$$P(y = j|\mathbf{X}) = P(Z < \mu_j - \mathbf{X}\beta) - P(Z < \mu_{j-1} - \mathbf{X}\beta),$$
$$\text{for } j = 1,2,3,4 \text{ ; and}$$
$$P(y = 5|\mathbf{X}) = 1 - P(Z < \mu_4 - \mathbf{X}\beta), for\ j = 5, \qquad (2)$$

where Z is the standard normal distribution for the given value (.). The probabilities in (2) must be valued from 0 to 1 and as such, the threshold must be in the range of $\mu_0 < \mu_1 < \mu_2 < \mu_3 < \mu_4$. The changes in y for a unit in $\mathbf{X}$ (marginal effect) can be obtained by taking the partial derivative of the probabilities in (2) with respect to $\mathbf{X}$.

The parameters μ and β were then estimated using the following log-likelihood function:

$$L = \sum_{j=1}^{5} log\left[P(Z < \mu_j - \mathbf{X}\beta) - P(Z < \mu_{j-1} - \mathbf{X}\beta)\right] . \quad (3)$$

V. RESULT AND DISCUSSION

At the early analysis stage, a pilot test was conducted on 30 respondents. Table 2 summarises each variable's Cronbach's alpha value, proving the item's consistency for each variable. The Cronbach's alpha values for all variables were above 0.7. Therefore, all items in each category were considered acceptable and can be used for the next data collection step.

Table 2. The pilot test result of the variable.

Variable of interest	Cronbach's Alpha Value
Retirement saving behaviour	0.911
Money Avoidance	0.785
Money Lover	0.841
Money Status	0.707
Money Vigilance	0.812

Table 3 illustrates a summary of 160 respondents' socio-demographic profiles. This number of respondents is also in line with Sekaran and Bougie (2009), who, in determining the sample size, lie between 30 to 500 samples that are actually discovered to be appropriate in most research. A comparison of gender reveals that about 63.13% of respondents are female, while 36.88% are male. In terms of marital status, 47.50% of the respondents are single, 50.63% are married, and 1.88% are classified as others. The summary demonstrates that almost 46% of respondents are aged 25 years and below, and most respondents have a bachelor's degree or are professional certificate holders (48.13%). Regarding ethnicity, nearly 78% of the respondents are Malay. Meanwhile, for the occupation, most of the respondents are working in the government sector (33.75%), and about 23.75% are in the private sector, while the rest are either self-employed (7.50%), unemployed (27.50%), and others (7.50%). The highest percentage for the gross monthly income of respondents is RM2,000 and below (50.00%). Based on this summary, it can be concluded that respondents

are various across diverse backgrounds of Malaysian citizens and fairly enough to represent the study population.

The VIF values of each variable in the multicollinearity test are displayed in Table 4. The findings indicate the absence of multicollinearity among variables, with all VIF values being less than 10.

Table 3. Socio-demographic profile of collected respondents.

Profile	Category	Percentage (%)
Gender	Male	36.88
	Female	63.13
Marital Status	Single	47.50
	Married	50.63
	Others	1.88
Age	25 years and below	45.63
	26 to 35	21.88
	36 to 45	16.88
	46 to 55	13.75
	56 years and above	1.88
Educational Level	SPM	13.13
	STPM/Matriculation/ Diploma	27.50
	Bachelor's Degree/ professional	48.13
	Master's Degree	6.88
	PhD/doctorate	2.5
	Others	1.88
Occupation	Government Sector	33.75
	Private Sector	23.75
	Self Employed	7.50
	Not employed	27.50
	Others	7.50
Region	Rural	56.25
	Urban	43.75
Gross Income (Monthly)	Below RM2,000	50.00
	RM2,001 – 5,000	31.25
	RM5,001– RM10,000	16.88
	RM10,001 and above	1.88

Table 4. Multicollinearity test result.

Variable of interest	VIF value
Money Avoidance	1.222
Money Lover	1.472
Money Status	1.625
Money Vigilance	1.381

Results on the relationship between types of money attitude and retirement saving behaviour are presented in Table 5. The parameter estimate for money avoidance is negative, indicating that money avoiders tend to have bad retirement savings behaviour. This is proven by the probability values, which increased by 8.1% for the response of "disagree" and 10.9% for "neutral," and the decreased probabilities for responses of "agree" and "strongly agree" by 13.4% and 5.5%, respectively. Both estimates of money status and money vigilance provided positive significant estimates. The z-values are 0.422 and 0.329, respectively. The probability of responses for "disagree" and "neutral" decreased for both money status and vigilance variables, while the responses of "agree" and "strongly agree" for retirement savings increased.

These results revealed that individuals with money status and money vigilance attitudes are keen to have more savings for retirement; in other words, they have better retirement savings behaviour. In terms of model fit, the p-value of 0.0011, which is less than 0.05, suggests that the two variables are significant to that model fit, which illustrates that the model is reliable and provides accurate results for this study.

Table 5. The ordered probit model result.

Variables of interest	Coefficients		Marginal Effects			
	Estimates	95% Confidence Intervals	$P(y=2\|X)$	$P(y=3\|X)$	$P(y=4\|X)$	$P(y=5\|X)$
Money Avoidance	-0.481* (0.005)	[-0.81, -0.15]	0.081* (0.005)	0.109* (0.017)	-0.134* (0.008)	-0.055* (0.016)
Money Lover	0.122 (0.371)	[-0.14, 0.39]	-0.020 (0.375)	-0.027 (0.377)	0.034 (0.377)	0.014 (0.371)
Money Status	0.422* (0.017)	[0.07, 0.77]	-0.071* (0.016)	-0.095* (0.038)	0.118* (0.021)	0.048* (0.041)
Money Vigilance	0.329* (0.020)	[0.02, 0.64]	-0.055* (0.052)	-0.074* (0.047)	0.092* (0.046)	0.037* (0.049)
Wald Chi-squared	18.21					
p-value	0.0011*					
Log-likelihood	-168.3975					

Note: Values in parentheses are the p-values. * Significant at 5% level of significance

VI. CONCLUSION

It is believed that each person has different views and behaviours towards money and income, especially regarding retirement savings. Therefore, the study investigated the relationship between the type of money attitudes and retirement savings behaviour among Malaysians. The findings of the ordered Probit model indicated that the variables of money avoidance, money status, and money vigilance were statistically significant and could be considered factors of retirement savings decisions. In conclusion, this study provides a good indicator to enhance awareness about money and retirement. Malaysians should at least realise the importance of saving for retirement. For that, it is hoped that the study's findings could be a breakthrough for Malaysians by providing knowledge of their money attitude. This will prepare them to secure their future and enjoy a comfortable retirement.

VII. ACKNOWLEDGEMENT

VIII. REFERENCES

Bunyamin, M 2018, 'The effect of money attitudes and financial satisfaction among Malaysians on demand for family takaful', Master thesis, Universiti Sains Islam Malaysia.

Chatterjee, D, Keswani & Gupta, S 2018, 'Money attitudes of Indian adults: an exploratory study, < https://ssrn.com/abstract=3683299 or http://dx.doi.org/10.2139/ssrn.3683299>

Gasiorowska, A 2015, 'The impact of money attitudes on the relationship between income and financial satisfaction', Polish Psychological Bulletin, vol. 46, no. 2, pp. 198-207.

Gasiorowska, A 2014, 'The relationship between objective and subjective wealth is moderated by financial control and mediated by money anxiety', Journal of Economic Psychology, vol. 43, pp. 64-74.

Hosmer, DW & Lemeshow, S 2000, Applied Logistic Regression, 2 edn, Edition Wiley.

Klontz, BL, Britt, S, Mentzer, J & Klontz, T 2011, 'Money beliefs and financial behaviours: Development of the Klontz money script inventory', The Journal of Financial Therapy, vol. 2, no. 1, pp. 1-22.

Lay, A & Furnham, A 2018, 'A new money attitudes questionnaire', European Journal of Psychological Assessment,

<http://dx.doi.org/10.1027/10155759/a000474>.

Nardi, MD, French, E & Jones, JB 2016, 'Saving after retirement: A Survey', Annual Review of Economics, vol. 8, pp. 177-204.

Qamar, MAJ, Khemta, MAN & Jamil, H 2016, 'How knowledge and financial self-efficacy moderate the relationship between money attitudes and personal financial management behaviour', European Online Journal of Natural and Social Science, vol. 5, no. 2, pp. 296-308.

Qur'an, 67:15, <https://quran.com/surah-al-mulk>.

Shariff, NSM & Isah, NAM 2019, 'An empirical study on the determinants of retirement savings attitude in Malaysia', Journal of Physics: Conference Series, no. 1366, p. 012110. doi:10.1088/1742-6596/1366/1/012110

Shariff, NSM & Ishak, WWM 2021, 'Statistical analyses on factors affecting retirement savings decision in Malaysia', Mathematics and Statistics, vol. 9, no. 3, pp. 243-248.

Sekaran, U & Bougie, R 2009, Research Method for Business, A skill Building Approach, 5 edn, Wiley.

Syafitri, TM & Santi, F 2017, 'The impact of money attitude on personal financial management behaviour, and self-control as moderation variables', Journal of Personal Finances, vol. 1, no. 1, pp. 1–11.

Talib, NFM & Manaf, HA 2017, 'Attitude towards retirement planning behaviour among employees', International Journal of Business and Management, vol. 1, no. 1, pp. 12-17.

Yogasnumurti, R, Sadalia, I & Irawati, N 2019, 'The effect of financial, attitude, and financial knowledge on the personal finance management of college collage students', Proceedings of the 2nd Economics and Business International Conference (EBIC 2019) - Economics and Business in Industrial Revolution 4.0, pp. 649-657. doi: 10.5220/0009329206490657.

O'Muircheartaigh, C & Hedges, LV 2014, 'Generalizing from unrepresentative experiments: a stratified propensity score approach', Journal of the Royal Statistical Society, Series C (Applied Statistics), vol. 63, no. 2, pp. 195-210.