An empirical study on the determinants of retirement savings attitude in Malaysia

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Abstract. The awareness among working individuals in Malaysia to do extra savings for older life is still minimal. This situation involved the younger generation. They think that retirement planning is a burden for them because it involves long-term planning. Nevertheless, the uncertainty and unaware about future risks (inflation, critical illness, etc) may lead to this behavior. Due to such problems, this study aims in discussing the behavior among working individuals on retirement savings at different age of group, education levels, income levels, factors affecting this behavior and the relationship of these factors towards retirement savings attitude. This study will use survey strategy through questionnaire to collect the primary data (qualitative study). More than 200 individuals participate in this study and each of them is asked to response the questionnaire form to represent population in Malaysia. As such, this study employs several statistical procedures such as factor analysis, t-test, analysis of variance and regression models. The findings of this study reveal that income levels, attitudes towards retirement and future expectation provide significant impact on the retirement savings behavior among adults in Malaysia.

1. Introduction

The lack of awareness among Malaysians especially young workers to have savings for living after retirement raises concerns in a recent study. On 12 January 2017, Malaysian Digest magazine stated that almost thirty to forty per cent of Malaysians do not have sufficient savings to cover the cost of unexpected expenses. Younger generations nowadays still do not have adequate knowledge about the importance of having sufficient savings for the retirement. They believe that retirement is too far away from their current age and the preparation and planning is a burden for them because it involves long-term planning. This situation could be worsening if they do not have better plan and preparation for retirement life. The statement was supported by a survey conducted by Federation of Malaysian Consumer Associations (FOMCA). Based on these two studies, it can be illustrated that almost half of Malaysians are still not ready financially for their retirement days.

As we all know with the shrinking of purchasing power nowadays, the needs and expense after retirement could be very high especially for those who are living in the big city. They need to ensure the savings for retirement are enough to at least can support their life after retire. Many factors may affect the retirement savings attitude (see [1] to [8]). Some of them are demographics factors such as age, gender, education level; and other factors that are; attitude towards retirement, income level, social influences and future expectations.

Talib and Manaf [1] examined the relationship between the determinants that affect the retirement planning behaviour among Employees Provident Fund (EPF)’s employees in North Zone which included Penang, Kedah and Perlis. Based on their findings on Analysis of Variance (ANOVA) results, the study showed that age was statistically insignificant towards retirement planning behaviour. Mahdzan and Tabiani [2] in their study found that the gender has a significant impact on
the retirement savings attitude in Malaysia based on the Probit regression method. The result was not in line with the study conducted by Mansor et al. [3] where they obtained insignificant result of gender towards savings attitude. They however found that other factor such as education level affect the savings attitude. Moorthy and Kai [4] investigated the relationship between income level and retirement planning attitude by using several statistical techniques such as descriptive analysis, normality test, reliability test, Pearson correlation, ANOVA and Multiple Linear Regression (MLR). The findings revealed that the income level was significant seems to be an important factor to savings behaviour as it can motivate people to save more for their retirement. Individuals can allocate more money in savings if they earned more income.

As such, due to the interest of investigating the determinants of affecting retirement savings attitude in Malaysia, some factors that have been discussed in the literatures are considered in this study. The factors are socio demographic: age, gender, education level and other factors that are believed important such as attitude towards retirement, income level, social influence and future expectations are also included. Some statistical procedures are employed to achieve the objective of finding the relationship between the factors of interest and the retirement savings attitude among Malaysians and it is hoped that everyone get benefits from the output of the study.

2. Data and methodology

2.1. Sampling technique and data collection

This study uses convenience sampling method to collect the data and where it is in the form of survey with the questions is constructed based on the previous study (see [3] and [5]). The questions consist of several variables (demographic profile such as age, gender, education level and income level, and other factors which are social influences, attitudes towards retirement and future expectation) (see table 1) that believe might affect retirement savings attitude. These variables of attitudes towards retirement, future expectation and retirement savings attitude are in Likert Scale format of 0, 1, 2, 3, 4. The number represents the response given by participants in the survey form of “strongly disagree”, “disagree”, ”neutral”, ”agree” and “strongly agree”, respectively. Variable of social influences comprises the person who encourage them to do savings for retirement (such as family, colleague, friends and environment) and it is in the form of dummy variables.

A total of 200 surveys were distributed with 148 (74%) of the total survey were returned and the age of the participants has been specified from below 25 years old up to above 56 years old. Thus, only 148 numbers of respondents are used for further analysis in this study.

| Table 1. The summary of variables |
|----------------------------------|
| **Variable**                   | **Type of variable** | **Section in survey Form** | **Number of survey items** | **Measurement**          |
|--------------------------------|----------------------|-----------------------------|----------------------------|-------------------------|
| Gender                         | Independent          | A                           | 1                         | Dummy, nominal and interval |
| Age                            | Independent          |                             | 1                         |                         |
| Education level                |                      |                             | 1                         |                         |
| Income level                   |                      |                             | 1                         |                         |
| Retirement Saving Attitude     | Dependent            | B                           | 5                         | Five point Likert Scale |
| Future Expectation             |                      |                             | 6                         |                         |
| Attitudes towards Retirement  | Independent          |                             | 4                         |                         |
2.2 Methodology

The study employs some statistical techniques such as descriptive statistics, the Variance Inflation Factor (VIF) test, Analysis of Variance (ANOVA) and the Ordered Probit Model to investigate the relationship the variable of interest in study. The brief explanation on the test is given as follows:

(i) The descriptive analysis involves measuring the frequency of the variable according their category.
(ii) The VIF test measures the presence of high dependency among variables.
(iii) The ANOVA investigates the differences of retirement savings attitude among group of ages in Malaysia.
(iv) The Ordered Probit Model determines the impact of independent variables \( (x_i) \) towards retirement savings attitude \( (y_i) \) (see Table 1) and the model is given as follows:

\[
y_i^* = x_i\beta + e_i, \quad e_i \sim N(0,1) \text{ for } i = 1,2,...,n
\]

where \( y_i^* \) is the unobserved variable under the threshold of \( \mu_{j-1} < y_i^* < \mu_j \) and \( j \) is the order of the ordinal variable \( (j = 1,2,...,m) \). Each ordinal outcome can be obtained via the following probabilities:

\[
P(y_i = j) = \Phi(\mu_j - x_i\beta) - \Phi(\mu_{j-1} - x_i\beta)
\]

and for \( j = m \), the general form of (2) is reduced to

\[
P(y_i = m) = \Phi(\mu_m - x_i\beta) - \Phi(\mu_{m-1} - x_i\beta)
\]

\[
= 1 - \Phi(\mu_{m-1} - x_i\beta)
\]

The model of (1) can be estimated using Maximum Likelihood Estimator (MLE) and is given as follows:

\[
L = \sum_{i=1}^{n} \sum_{j=1}^{m} \log[\Phi(\mu_j - x_i\beta) - \Phi(\mu_{j-1} - x_i\beta)]
\]

3. Results and discussions

Table 2 represents the summary of socio demographic profile of the data collection. The findings show that most of the respondents were female (68.2%) compared to male (31.8%). Majority of the respondents are from the age group 25 years and below with the frequency of 28.4% and 64.2% of the respondents were married. As for the ethnicity perspectives, 98% are Malay and 2% are others. 56.8% of the respondents are living in urban areas while the remaining of them live in rural areas. It is also found that most of the respondents from this study work in the government sector and possess a Bachelor’s Degree or Professional as their educational background. Despite that, the results also reveal that 33.8% of the respondents earn approximately RM5001-10000 as their gross monthly income. The majority of the respondents have RM200001 and above and RM10001-30000 for the estimated total net assets and the estimated total liabilities respectively.

Table 3 presents the result of multicollinearity test. It is said that the multicollinearity exists if the variance inflation factor (VIF) value is greater than 10 and the next model of estimation cannot be employed. The results however show the absence of multicollinearity problem among independent variables and thus, the estimation result of Ordered Probit Model is given in Table 5.
The results of savings attitude however provide significance difference between groups of age of the respondents with the P-value is less than 0.05 (see table 4). The result of this study shows those younger and older age groups have different ways of retirement savings attitude. It does not mean that only adults with the age group of 56 years and above will have a good attitude while the adults with age group below 25 years old have not and vice versa. All of them might have both good and bad savings virtues in their life regardless their age. The result of estimation (see table 5) then reveals that income level, attitudes towards retirement and future expectations provide significant impacts to retirement savings attitude. The relationships are positive for income level and future expectation indicates that the increase in retirement savings attitudes affected by the increase of education levels and social influences whereas attitudes towards retirement provide the opposite direction.

| Variables          | Categories                        | Frequency | Percentage |
|--------------------|-----------------------------------|-----------|------------|
| Gender             | Male                              | 47        | 31.8%      |
|                    | Female                            | 101       | 68.2%      |
| Marital Status     | Single                            | 49        | 33.1%      |
|                    | Married                           | 95        | 64.2%      |
|                    | Others                            | 4         | 2.7%       |
| Age                | 25 years and below                | 42        | 28.4%      |
|                    | 26-35                             | 28        | 18.9%      |
|                    | 36-45                             | 28        | 18.9%      |
|                    | 46-55                             | 32        | 21.6%      |
|                    | 56 years and above                | 18        | 12.2%      |
| Education level    | SPM                               | 9         | 6.1%       |
|                    | STPM/ Matriculation/Diploma       | 22        | 14.9%      |
|                    | Bachelor's Degree/Professional    | 59        | 39.9%      |
|                    | Master's Degree                   | 46        | 31.1%      |
|                    | PhD or Doctorate                  | 12        | 8.1%       |
| Occupation         | Government                        | 73        | 49.3%      |
|                    | Private                           | 42        | 28.4%      |
|                    | Self-employed                     | 6         | 4.1%       |
|                    | No-employed                       | 12        | 8.1%       |
|                    | Others                            | 15        | 10.1%      |
| Nationality        | Malaysians                        | 148       | 100.0%     |
|                    | Others                            | 0         | 0.0%       |
| Ethnicity          | Malay                             | 145       | 98.0%      |
|                    | Chinese                           | 0         | 0.0%       |
|                    | Indian                            | 0         | 0.0%       |
|                    | Others                            | 3         | 2.0%       |
| Region             | Rural                             | 64        | 43.2%      |
|                    | Urban                             | 84        | 56.8%      |
| Gross monthly      | 2000 and below                    | 42        | 28.4%      |
| income             | 2001-5000                         | 43        | 29.1%      |
|                    | 5001-10000                        | 50        | 33.8%      |
|                    | above 10000                       | 13        | 8.8%       |
| Estimated total    | I do not know                     | 31        | 20.9%      |
| net assets         | RM 0 or less                      | 7         | 4.7%       |
|                    | RM 1-10,000                       | 20        | 13.5%      |
|                    | RM 10 001 - 30 000                | 11        | 7.4%       |
|                    | RM 30 001 - 50 000                | 4         | 2.7%       |
|                    | RM 50 001-80 000                  | 8         | 5.4%       |
| Estimated total liabilities |  |
|-----------------------------|--|---|
| RM 80 001 - 200 000         | 23 | 15.5% |
| Above RM 200 001            | 44 | 29.7% |
| I do not know               | 18 | 12.2% |
| RM 0 or less                | 10 | 6.8%  |
| RM 1-10,000                 | 25 | 16.9% |
| RM 10 001 - 30 000          | 29 | 19.6% |
| RM 30 001 - 50 000          | 15 | 10.1% |
| RM 50 001-80 000            | 11 | 7.4%  |
| RM 80 001 - 200 000         | 19 | 12.8% |
| Above RM 200 001            | 21 | 14.2% |

Table 3. The VIF result

| Variable                        | VIF   |
|---------------------------------|-------|
| Age                             | 2.3220|
| Gender                          | 1.0490|
| Attitudes towards retirement    | 1.3250|
| Income                          | 2.3550|
| Future Expectation              | 1.1810|
| Social Influence                | 1.1300|
| Education Level                 | 1.2380|

Table 4. ANOVA of age group towards retirement savings attitude

| Source of Variation     | SS     | df  | MS    | F       | P-value  |
|-------------------------|--------|-----|-------|---------|----------|
| Between Groups          | 3009.5952 | 4   | 752.3988 | 2.5601  | 0.0411** |
| Within Groups           | 42026.4251 | 143 | 293.8911 |  |        |
| Total                   | 45036.0203 | 147 |        |         |          |

Note: **, significant at any level of 5% level of significance.

Table 5. Ordered probit model results

| Variable                        | Coefficients | Standard Error | z-stats | P-value  |
|---------------------------------|--------------|----------------|---------|----------|
| Gender                          | -0.1533      | 0.1779         | -0.86   | 0.389    |
| Age                             | 0.0149       | 0.0996         | 0.15    | 0.881    |
| Education Level                 | 0.1486       | 0.1087         | 1.37    | 0.171    |
| Income Level                    | 0.5587       | 0.1511         | 3.70    | 0.000**  |
| Attitude towards retirement    | -0.9348      | 0.2708         | -3.45   | 0.001**  |
| Future Expectations            | 0.9355       | 0.2522         | 3.71    | 0.000**  |
| Social Influence                | 0.1860       | 0.1189         | 1.56    | 0.118    |

Note: ***, significant at any level of 5% level of significance.
4. Conclusion

This study investigates the factors that affect retirement savings behaviour among adults in Malaysia. All analyses are done using MATLAB and EXCEL. Based on the results, income level seems to be an important determinant. It is believed that respondent with a higher income level tends to save more compared to those who earn slightly lower. This is relevant because nowadays people are surviving to settle their loan such as educational loan and personal loan. They need to allocate some of their salary for their daily expenses and loans and just do savings if they have the balance. Attitude towards retirement is also found as significant factor. Most of the respondents agree that retirement does not make them feel useless and even more they are looking forward for their retirement days. Generally, people tend to imitate their circles behaviour. If someone is raised in a frugal environment, there is a possibility for him or her to keep money in the future.

In a nutshell, Malaysians employees and even youngsters should be more concerned and proactive when it comes to the topic of saving for retirement. Everyone should play their roles in promoting the benefits of saving for retirement hoping that changes can be made in the retirement issues in Malaysia.

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