



# **Profile of Employees Provident Fund (EPF) Contributors and Their Views towards the EPF Scheme**

**Sallahuddin Hassan<sup>1\*</sup>, Zalila Othman<sup>1</sup> and Mohamad Syafiqi Hashim<sup>1</sup>**

<sup>1</sup>*School of Economics, Finance and Banking, Universiti Utara Malaysia, 06010 Sintok, Kedah, Malaysia.*

## **Authors' contributions**

*This work was carried out in collaboration between all authors. All authors read and approved the final manuscript.*

## **Article Information**

DOI: 10.9734/JEMT/2018/41931

### Editor(s):

(1) John M. Polimeni, Associate Professor of Economics, Albany College of Pharmacy & Health Sciences, New York, USA.

### Reviewers:

(1) Mohamad Fazli Sabri, Universiti Putra Malaysia, Malaysia.

(2) Hsinking Chi, Nanhua University, Taiwan.

Complete Peer review History: <http://www.sciedomain.org/review-history/24831>

**Original Research Article**

**Received 16<sup>th</sup> March 2018**

**Accepted 24<sup>th</sup> May 2018**

**Published 28<sup>th</sup> May 2018**

## **ABSTRACT**

**Aim:** The objectives of this explanatory study are to investigate the profile of EPF contributors; existing and past employees demographically and analyze their established views towards the Malaysia's EPF scheme covering the social aspects.

**Methodology:** In this study, primary data were collected using a self-reported survey. A quantitative method was accordingly employed given a total sample of 300 existing and past employee respondents under a snowball sampling procedure.

**Results:** Among others, this study reveals that there are greater tendencies by employees to overuse available access to making various pre-retirement withdrawals during employment not specifically meant for retirement purposes.

**Conclusion:** Large past employees and incremental numbers of existing employees, who utilized different types of pre-retirement withdrawals of EPF scheme, respectively, are found to be exposed to the risk of not having adequate incomes at retirement. Therefore, the government and policy makers are recommended to increase the eligibility requirement levels in making pre-retirement withdrawals among the employees with necessary supervisions so that the pressing issue on the fast depletion of funds available at retirement can be mitigated.

*Keywords: Demographic; employees; retirement; social.*

## 1. INTRODUCTION

The Employees Provident Fund (EPF), which is the main retirement scheme in Malaysia, provides the financial security to the elderly population in retirement especially among the private and non-pensionable public sector employees in Malaysia. Intentionally, the EPF is established by a shared contribution between employers and employees albeit with different contribution shares in accordance with the yielded wages. Particularly, in the case of averaged employees that yield their monthly wages of RM5,000 and less, they are likely to contribute 11 percent whereas respective employers are obliged to contribute 13 percent that are based on the employees' monthly wages. Under the provision of the 1951's EPF Act, all private employees have to contribute to the scheme during the employment. However, public employees are compulsory to contribute to the scheme for only three years starting from their first day of working. After that, they may have the flexibility to opt for the government pension scheme. Notwithstanding, considerably large public employees who opt for the government pension plan have no worries on covering the retirement expenses since each pensioner will receive a considerable amount of money in a month that represents half of his or her last drawn salary [1]. Since there is no specific pension scheme for the private employees, it is important for them to set aside a minimal portion of each monthly salary to be allocated in the EPF. By channeling certain amount of income into the EPF scheme, private employees can accumulate certain amount of wealth for their retirement expenses. This is similar to the developed countries such as the United States (U.S) with the evidence of millions people actively accumulate their retirement wealth via channelling incomes into the Individual Retirement Accounts (IRAs) and 401(k) plans.

In this regard, the employees are assured to some extent that they will have adequate incomes at retirement. However, the EPF scheme is currently more flexible than it was in a decade ago with the EPF enabled various pre-retirement withdrawals notably for house purchases in 1994 and both higher education financing and personal computer purchases in 2000 [2]. Due to rising pre-retirement withdrawals, the EPF initiated its first reform in 1994 to separate a contributor's account into

three accounts; Account I, II and III via holding 60 percent, 30 percent and 10 percent of a contributor's balance, respectively, thus ensuring the major portion that is meant for retirement goes into Account I. However, the EPF contributors' accounts were subsequently restructured from three to two accounts in 2006 as part of the reform toward enhancing the overall efficiency and effectiveness of the EPF governance. Specifically, from Account II, contributors have been permitted to make withdrawals for education, housing and health purposes during employment and the full amount can be withdrawn upon reaching the age of 50 [3]. Thus, this implies that too many pre-retirement withdrawals may distract the main objective of a retirement fund in providing adequate incomes for the elderly workers at retirement. As a result, the total savings of EPF contributors will foreseeably less than the expected amount that it should be at retirement.

In addition, some macroeconomic effects are foreseen to pose considerable pressures on contributors. In the view of increased living costs in Malaysia, the contributors, either public or private employees, are found to have insufficient incomes to be saved as an additional wealth for the future needs. Empirically, the results of a survey conducted by Professor Mokhtar Abdullah in 1995 showed that the majority of retirees were found to be financially inadequate to sustain life in retirement due to rising costs since the EPF lump-sum funds were completely exhausted within three years of receipt at the retirement age of 55 years old [4]. As the elderly population usually requires greater attention in terms of health care and financial support, women and the elderly in particular were classified as members of poverty-prone groups and are likely to retain in this severe economic condition over the remaining years [5].

Based on these issues, some questions can be raised with regards to the availability and eligibility of pre-retirement withdrawals during employment. Among others, does the EPF successfully manage to help current and past employees to have sufficient financial resources for covering their living standards in retirement relative to the pre-retirement living standards?

By studying the profile of EPF's contributors and their view towards EPF scheme, the status of

financial adequacy among contributors can be eventually justified. It is important to know their actual situation in managing daily lives and maintaining existing welfare using the minimum amount of pension funds. Due to some economic and social commitments, some of them might not be able to maintain their status quo before retirement.

The rest of this paper is organized as follow. Section 2 discusses on the literature review that is related to the topic. Section 3 discusses on the used methodology. While Section 4 reports on the results, Section 5 wraps up with the conclusion of the study.

## 2. LITERATURE REVIEW

In general, the government's intention to establish a retirement scheme, i.e. including the EPF, is to assist elderly workers with ample financial security in retirement. To maximize the benefits of the scheme to the contributors, the Malaysian government and the EPF in particular have implemented certain strategies in the system such as extending the mandatory contribution period, providing an option for members to invest in unit trust funds under the Members Investment Scheme (MIS) with certified external fund managers and allowing pre-retirement withdrawals for specific purposes. Among others, by allowing employees to make various pre-retirement withdrawals during employment, this helps to reduce the burden of purchasing a house or due to other possible reasons [3]. Also, the basic levels of savings were recently increased from 2014 and are age-based [6]. Yet, the result of a survey administered to 2,000 Malaysian retirees unveiled that the EPF benefits were inadequate to sustain their retirement lifestyles for considerably large retirees [7]. Consequently, it was turned out that contributions from children (who were already in the workforce) were regarded as a key component of their retirement incomes.

Nonetheless, the perceptions of contributors tend to vary on financial retirement schemes such as Social Security, the EPF and others. To some degree, their perceptions will influence and shape their commitments in planning for the retirement savings. On the choice of retirement savings, Gerrans and Clark-Murphy [8] referred to the option to participate in either a defined benefit or defined contribution fund towards determining the best preference to the asset mix

of members' portfolios and to channel the contributions of retirement savings. In the context of Malaysia, one pertinent factor to the retirement savings decisions is religion due to its effect that has on the attitudes, habits and values of an individual. Wan Ahmad et al. [9] investigated the impact of religion on the Malaysian consumer's choice of banking and discovered that devout and moderate religious consumers favoured the use of Islamic banking over conventional banking. Also, Wan Ahmad et al. [9] reported that formal religious education and age are positively related to an index of religiosity. On the contrary, Muhamad, Susela Devi and Abdul Mu'min [10] disclosed that no significant difference on the preference for different investment types was prevailed between the groups of devout and casually religious Malay Muslim investors. Possibly, one reason is that the EPF members have the option to invest part of their savings either in conventional or Islamic unit trust funds [11].

The saving decisions for retirement vary greatly by demographic features such as age, gender, education, income, marital status and other socio-economic conditions in various stages of an individual's life [12,13]. Thus far, there is very few studies in-place on the influence of demographic factors over the retirement saving decisions in Malaysia. For example, Ong, Kitchen and Jama [14] analyzed the expenditure patterns of elder consumers (aged 55 and above years) in terms of age, income, gender and ethnicity. To ensure a good representation of the three Malaysia's ethnic groups; Malays, Chinese and Indians, a quota sampling method was accordingly employed in the study. Among others, the results of Ong et al. [14] showed that there were few significant differences in terms of monthly expenditure patterns among the elderly consumers in Malaysia, albeit the unfeasibility to generalize the findings to be fit in within the context of retirement saving decisions. Furthermore, by socializing with others, people may have the opportunities to receive and digest information on the retirement saving decisions. Apart from that, the socially active people tend to invest in the stock market and 401(k) plan for their future savings more than those of socially inactive persons [13]. Also, the peers' effect can represent an important factor that influences other people's saving decisions for retirement. Moreover, the availability of financial education programmes can contribute to inducing individuals' commitment realistically plan for their retirement savings. For example, an in-house

survey of 607 urban working adults in Malaysia revealed that there was relatively low awareness level on the offered schemes to the EPF members [6]. While only three percent of respondents aware of the MIS without the help of unit trust consultants, there are 36 percent of respondents have become aware of the MIS with the help of unit trust consultants and other information sources such as seminars. Undeniably, those EPF members who perceived higher importance of unit trust consultants will likely to invest part of their savings in the unit trust funds [11]. In the absence of sufficient knowledge on the retirement savings process, it is expected that the individuals are less likely to be able to make the retirement saving decisions in an optimal manner [15].

### 3. METHODOLOGY

#### 3.1 Instrumentation

This is an exploratory paper. In this paper, a descriptive evaluation on the profile of EPF contributors and their views towards EPF scheme were presented. Specifically, some demographic factors have been chosen in the evaluation such as gender, ethnicity, marital status, educational status, number of dependent persons and occupational status. In addition, a descriptive evaluation of the EPF contributors based on their views towards the EPF scheme covering the social aspects was presented as well. In regard to the Malaysia's perspective, there is very limited study that done exploration on both issues. The limitations were mainly due to the difficulties of getting cooperation among the respondents and inevitably involved with the long-awaited government legal procedures.

#### 3.2 Data and Sampling Method

In this paper, a typical individual level analysis was undertaken. Primary data were collected using a self-reported survey. The self-administered questionnaires were individually distributed to the respondents. In the questionnaire, the questions to be asked among potential respondents related to their demographic features and respective views towards the EPF scheme covering the social aspects.

As suggested by Babbie [16], a snowball sampling was employed in this study because

the respondents are considered as special populations which are difficult to locate due to secrecy of individual information. Using this method, the data was collected based on the selected respondents of the target population that can be located. Those individuals were asked to provide information needed to locate other respondents of the population whom they happen to know. Initially, there were 700 hundred questionnaires forms have been distributed to potential respondents. Of which, the study managed to gather feedbacks from 300 respondents; 250 retirees (or interchangeably known as past employees) and 50 existing employees who are currently working in the private sector.

#### 3.3 Method of Analysis

The data were analyzed using a descriptive analysis which involves frequency and percentage values. It was employed to collect numerical data, which are measured in the forms of nominal and ordinal scales, in the demographic and social aspects of the respondents. For the checking purpose, the Cronbach's Alpha Reliability Test was accordingly performed to verify the validity and reliability of various data being collected from the questionnaires.

### 4. DISCUSSION OF RESULTS

A survey was administered to a total sample of 300 existing and past employee respondents. Statistically, the reliability test score shows the Cronbach's Alpha is 0.82. Thus, the gathered data is constructive and valid to be used in the analysis. Pertaining to the respondents, they are found to come from four different categories namely services, manufacturing, construction and others. Hence, associated results are shown in Table 1.

Pertaining to year of birth, the elderly respondents with their years of birth lie within 1950 - 1959 are found to be the highest group, thus representing about 73 percent of the total sample. In term of gender, female respondents are disclosed to be greater than male respondents with about 55 percent of the total sample. From the table, Malay respondents constitute as the highest ethnic group followed by Chinese and Hindu, accordingly. Further, there are considerably large married respondents over the bachelor respondents in the total sample.

**Table 1. Demographic features of existing and past employee respondents**

<b>Demography</b>	<b>Characteristics</b>	<b>Frequency</b>	<b>Percentage</b>
Year of Birth	1950 - 1959	220	73.3
	1960 - 1969	30	10.0
	1970 - 1979	8	2.7
	1980 - 1989	28	9.4
	1990 - 1999	14	4.6
Gender	Male	136	45.3
	Female	164	54.7
Ethnicity	Malay	282	94.0
	Chinese	12	4.0
	Hindu	6	2.0
Marital Status	Bachelor	36	12.0
	Married	264	88.0
Educational Status	Primary School	30	10.0
	Lower High School	156	52.0
	Upper High School	55	18.3
	Diploma/Certificate	38	12.7
	Degree	12	4.0
	Extended Degree	9	3.0
Dependent Persons	1 – 3 Persons	149	49.7
	4 – 6 Persons	151	50.3
Occupational Status	Still Working	50	16.7
	Still Working in Retirement	160	53.3
	Not Working in Retirement	90	30.0

On the educational status, over half of the respondents are turned out to be the lower high school graduates (i.e. SRP/PMR/LCE candidates) within the third year of study in the secondary level. Additionally, it is revealed that there is a close tie between the respondents with 1 – 3 dependent persons and those with 4 – 6 dependent persons. While Clark and Pitts [17] and Gunderson and Luchak [18] unveiled marital status, number of dependent persons, gender, education level and other demographic characteristics to be associated with certain plan features, the findings of this study align with Dulebohn, Murray and Sun [19] who discovered that an employee's age, marital status and number of dependent persons to be not related to any type of selected savings plan. One reason is due to the inaccessibility of detailed data that is foreseen to constitute as a hindrance in establishing potential relationships between those variables.

In addition, many respondents are found to belong in the elderly and retiree-typed respondents. Despite that, over half of the past employee respondents, i.e. 160 of 250 individuals, decided with various reasons to resume working in retirement via rejoining in the

labour force. In this regard, one feasible reason is that inadequate financial resources may result in decreasing the retirement living standards relative to the pre-retirement living standards, thus necessitating him or her to make a re-entry move to the labour force [20].

Separately, the analysis on 250 past employee respondents was duly performed. Statistically, the reliability test score indicates the Cronbach's Alpha is 0.78, thus meaning that the data gathered in Table 2 is acceptable to be used in the analysis. Correspondingly, associated results are shown in Table 2.

As far as the compulsory retirement age options are concerned, the majority of respondents, i.e. 34 percent of the total sample, who have already reached at the peak of their careers and must go into retirement when finally reaching 60 years old. With respect to the total EPF savings, many of the respondents are unfolded to have less than RM50,000 notably for covering the retirement expenses being measured at the compulsory retirement. In terms of the pre-retirement withdrawals, many of respondents are revealed to make flexible withdrawals when they were 55 years old (76 percent) and 50 years old

**Table 2. Demographic features of past employee respondents**

<b>Demography</b>	<b>Characteristics</b>	<b>Frequency</b>	<b>Percentage</b>
Compulsory Retirement Age	55 Years Old	45	18.0
	56 Years Old	55	22.0
Opted	58 Years Old	65	26.0
	60 Years Old	85	34.0
Total EPF Savings at the Compulsory Retirement	< RM50,000	160	64.0
	RM50,000 – RM100,000	30	12.0
	> RM500,000	60	24.0
Pre-Retirement Withdrawals	55-Years (Flexible) Withdrawal	190	76.0
	50-Years Withdrawal	65	26.0
Opted (in term of 'Yes')	Housing Withdrawal	60	24.0
	Health Withdrawal	30	12.0
	Education Withdrawal	60	24.0
Total Savings Other Than EPF on 31 Dec 2014	< RM20,000	100	40.0
	RM40,001 – RM60,000	90	36.0
	> RM140,000	60	24.0
Still Working in Retirement	Yes	160	64.0
	No	90	36.0
Job Sub-sector	Service	100	62.5
	Others	60	37.5
Job Category	Supporting Staff	100	62.5
	Professional Staff	60	37.5
Monthly Gross Income	RM1,001 – RM3,000	100	62.5
	> RM10,000	60	37.5

(26 percent), respectively, followed by various other withdrawals such as housing (24 percent), health (12 percent) and education (24 percent). Because of the relatively easy access to various pre-retirement withdrawals during the employment, this would divert the main objective of a retirement savings fund that is to provide adequate retirement incomes to elderly workers [21]. By making pre-retirement withdrawals, this would render an elderly worker to being exposed to the risk of having an inadequate income at retirement if the amount saved in the fund is carelessly managed [3]. To financially support the retirement with non-EPF savings, many respondents are found to possess total savings of less RM20,000 and within RM40,001 – RM60,000 level, respectively, in the conventional banks, Tabung Haji and insurance-related schemes. Apart from that, it is turned out that 160 of 250 elderly respondents are still working in retirement to cover their daily expenses and living needs. In specific, 160 elderly respondents in total are associated with the private employees both in the service and other commercial types of organizations, accordingly. In term of the job category, many of elderly respondents are found to assume the roles of supporting personnel and

earnestly yield the incomes of within RM1,001 – RM3,000 level in a month, respectively.

Furthermore, Table 3 reports the results of 50 existing employee respondents who currently render their services in respective organizations from the private sector. Statistically, the reliability test score reports that the Cronbach's Alpha is 0.76, thus suggesting that the data gathered in Table 3 is acceptable to be used in the analysis. On the job sub-sector, 60 percent of the respondents are revealed to be working in the service-related companies whereas the rest of respondents are seen to be working in manufacturing and construction-typed companies, accordingly. In particular, over half of the respondents are attributed to the groups of supporting staff greater than those of labour and professional staff in private companies, respectively. In term of the monthly gross income, over half of respondents are found to earn less than RM1,000 in a month. In the table, many respondents are disclosed to recently become the EPF members between 2000 and 2009. Thus, this implies that the EPF member respondents are mainly comprised of young working persons.

**Table 3. Demographic features of existing employee respondents**

<b>Demography</b>	<b>Characteristics</b>	<b>Frequency</b>	<b>Percentage</b>
Job	Service	30	60.0
Sub-sector	Manufacturing	15	30.0
	Construction	5	10.0
Job Category	Labour	20	40.0
	Supporting Staff	26	52.0
	Professional Staff	4	8.0
Monthly Gross Income	< RM1,000	28	56.0
	RM1,001 – RM3,000	10	20.0
	RM3,001 – RM5,000	10	20.0
	RM5,001 – RM7,000	2	4.0
Year to become EPF Member	1990 - 1999	4	8.0
	2000 - 2009	29	58.0
	2010 - 2015	17	34.0
Compulsory Retirement Year Options	55 Years Old	45	90.0
	56 Years Old	2	4.0
	60 Years Old	3	6.0
Total EPF	< RM50,000	42	84.0
Savings on 31 Dec 2014	RM50,001 – RM100,000	2	4.0
	RM250,001 – RM300,000	6	12.0
Pre-Retirement Withdrawals Opted (in term of 'Yes')	Health Withdrawal	6	12.0
	Investment Withdrawal	5	10.0
	Housing Withdrawal	3	6.0
Total Savings	< RM20,000	40	80.0
Other Than EPF on 31 Dec 2014	RM20,001 – RM40,000	4	8.0
	RM60,001 – RM80,000	6	12.0

On the compulsory retirement year options, 90 percent of the total sample chose 55 years old as the preferable age to declare their official exit from the labour force. Further, over 80 percent of the respondents are unveiled to earn less than RM50,000 in the total EPF savings as of December 2014. On the pre-retirement withdrawals as can be seen in Table 3, many of them are found to make health withdrawal (12 percent) followed by other withdrawals such as investment (10 percent) and housing (six percent). In this respect, there prevails the evidence on the relationship between asset allocation decisions and an employee's age. Younger employees are likely to allocate some portions of their accounts and contributions to unit trust investment funds whereas older employees tend to allocate more portions of their accounts and contributions to fixed-income assets (e.g. housing), securities and bonds [22]. To financially support the post-retirement with non-EPF savings, 80 percent of the respondents are found to have total savings of less than RM20,000 being invested in various banks, i.e. both conventional and Tabung Haji and insurance-related schemes, respectively.

Moreover, various views were gathered thereafter from 300 existing and past employee respondents on the social aspects and financial education programmes associated with the EPF scheme during the survey. Statistically, the reliability test score indicates that the Cronbach's Alpha is 0.80, thus implying that the data gathered in Table 4 is acceptable to be used in the analysis. The results are duly shown in Table 4.

Concerning on the overall performance of EPF savings scheme, a major proportion of respondents, i.e. about half of the total sample, are found to reach the consensus that their total EPF savings were relatively small to financially support their retirement expenses. This is followed by about 38 percent of the respondents who claimed that they have ample EPF savings in possession to sufficiently cover their post-retirement expenses. Yet, the remaining share with about 14 percent from the respondents is still unsure on the amount saved in the fund is adequately cover them for living in retirement. On the yearly payout of EPF dividends, many respondents, i.e. about 72 percent of the total sample, are found to be satisfied with the

**Table 4. Views from respondents on the EPF scheme**

<b>Statement</b>	<b>Choices</b>	<b>Frequency</b>	<b>Percentage</b>
The Financial Standing of One's EPF Savings Scheme?	At the Right Amount	113	37.7
	Too Small	146	48.7
	Not Sure	41	13.6
Satisfied with the Payout of EPF Dividends?	Yes	217	72.3
	No	43	14.3
	Not Sure	40	13.4
Is the EPF Contribution Important?	Yes	294	98.0
	No	6	2.0
The Effectiveness of Various EPF Pre-Retirement Withdrawals?	Yes	261	87.0
	No	36	12.0
	Not Sure	3	1.0
Is the EPF Alone Sufficient to Cover the Retirement Expenses?	Yes	5	1.7
	No	251	83.7
	Not Sure	44	14.6
Are the Total Savings (Including the EPF) Sufficient to Cover the Retirement Expenses?	Yes	71	23.7
	No	155	51.6
	Not Sure	74	24.7
What are the Estimated Total Savings that Adequate to Cover the Retirement Expenses?	RM10,000 – RM50,000	38	12.7
	RM50,001 – RM100,000	58	19.3
	RM100,001 – RM500,000	142	47.3
	> RM1,000,000	62	20.7

earnings on the annual basis since it is commonly considered as a 'safe' investment. While the EPF has been blamed for generating unattractive returns in recent years, there is very low percentage of members who make the investment withdrawal during the employment albeit many of them remain to be fearful of losing the EPF contributions if they were to divert to unit trust investment in hoping to get more competitive returns elsewhere [1]. Further, 98 percent of the respondents are found to be in the position to support for the importance of EPF contribution for an elderly retired person to cover his or her expenses throughout the golden years. In addition, 87 percent of the respondents are seen to be in favour of the availability of various EPF pre-retirement withdrawals in-place. Although the availability of pre-retirement withdrawals help to reduce the burden of purchasing a house and due to other feasible reasons, this would lead to reducing the total accumulation amount saved in the fund upon reaching the retirement age [3]. When examining funds to cover the post-retirement expenses, considerably low respondents are turned out to assert that both the EPF alone and total savings (including the EPF) are adequate to cover those

expenses. On the contrary, the majority of the respondents are found to strongly oppose those two statements. As a whole, many respondents are seen to believe that the estimated total savings of RM100,001 – RM500,000 were conceivably adequate to cover the retirement expenses.

## 5. CONCLUSION

Despite there have been substantial developments in the EPF since its establishment in 1951, the reality remains unchanged with the EPF is not capable of providing adequate financial security to most of its contributors notably at the old age. Here, one key reason is that too many pre-retirement withdrawals during employment not meant for retirement purposes can eventually lower the total accumulated balance in their retirement funds. As evidenced from both Table 2 and Table 3, considerably large past employees and incremental numbers of existing employees, who utilized different types of pre-retirement withdrawals, respectively, are found to be exposed to the risk of not having adequate incomes at retirement if improperly managed especially in the absence of support



from reliable external sources; funds saved in the conventional banks, Tabung Haji and insurance-related schemes.

On the policy implication, the government and policy makers are therefore recommended to increase the eligibility requirement levels in making pre-retirement withdrawals among the employees with necessary supervisions so that the pressing issue on the fast depletion of funds available at retirement can be mitigated. Also, it is suggested that the government and policy makers to develop policy responses either via increasing the retirement age or increasing the contribution rates notably from the part of employers. In turn, this would induce the employees to have individual financial strategies aimed at equating between a comfortable living during employment and living in retirement.

## ACKNOWLEDGEMENTS

The authors wish to thank the Ministry of Higher Education Malaysia in funding this study under the High Impact Group Research Grant (PBIT), S/O Code 12620, and Research and Innovation Management Centre, Universiti Utara Malaysia, Kedah for the administration of this study.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. Ibrahim D, Isa ZM, Ali N. Malaysian savings behaviour towards retirement planning. Paper Presented at the 2012 International Conference on Economics Marketing and Management. International Proceedings of Economics Development and Research. 2012;28:102-105.
2. Narayana S. Old age support for private sector employees in Malaysia: Can the employees provident fund do better? Hitotsubashi Journal of Economics. 2002;43:119-134.
3. Yusuf M, Ali MYB, Yusoff YS. Pre-retirement withdrawal in EPF: An exploratory study of employees in Malaysia. Australian Journal of Basic and Applied Sciences. 2014;8(3):439-444.
4. Beattie R. Pension systems and prospects in Asia and the Pacific. International Social Security Review. 1998;51(3):63-87.
5. Masud J, Haron SA, Hamid TAA, Zainaluddin Z. Economic well being of the elderly: Gender differences. Consumer Interest Annual. 2006;52:456-461.
6. Employees Provident Fund. EPF new basic savings effective; 2014. Available:<http://www.kwsp.gov.my>
7. Samad FA, Kari F. Adequacy of retirement income: A study of pension fund in Malaysia. Asian Profile. 2007;35:413-428.
8. Gerrans P, Clark-Murphy M. Gender differences in retirement savings decisions. Journal of Pension Economics and Finance. 2004;3(1):145-164.
9. Wan Ahmad WM, Rahman AA, Ali NA, Che Seman A. Religiosity and banking selection criteria among Malays in Lembah Klang. Jurnal Syariah. 2008;16(2):279-304.
10. Muhamad R, Susela Devi S, Abdul Mu'min AG. Religiosity and the Malaysian Malay Muslim investors: Some aspects of investment decision. Advances in Global Business Research. 2006;3(1):197-206.
11. Jamaludin N, Gerrans P. Retirement savings investment decisions: Evidence from Malaysia. Journal of the Asia Pacific Economy. 2015;1-14.
12. Tin J. Life-cycle hypothesis, propensities to save and demand for financial asset. Journal of Economics and Finance. 2000;24(2):110-121.
13. Bailey JJ, Nofsinger JR, O'Neill M. A review of major influences on employee retirement investment decisions. Journal of Financial Services Research. 2003;23(2): 149-165.
14. Ong FS, Kitchen JP, Jama AT. Consumption patterns and silver marketing: An analysis of older consumers in Malaysia. Marketing Intelligence and Planning. 2008;26(7):682-698.
15. Clark RL, D'Ambrosio MB. Financial education and retirement savings. Paper Presented at the Retirement Implications of Demographic and Family Change Symposium, Society of Actuaries, San Francisco, United States; 2002.
16. Babbie E. Introduction to social research (5th ed). California: Cengage Learning; 2011.
17. Clark RL, Pitts MM. Faculty choice of a pension plan: Defined benefit versus defined contribution. Industrial Relations. 1999;38:18-45.

18. Gunderson M, Luchak A. Employee preferences for pension plan features. *Journal of Labor Research*. 2001;22:795-808.
19. Dulebohn JH, Murray B, Sun M. Selection among employer-sponsored pension plans: The role of individual differences. *Personnel Psychology*. 2000;53:405-432.
20. Li J, Montalto CP, Geistfeld LV. Determinants of financial adequacy for retirement. *Journal of Financial Counseling and Planning Education*. 1996;7:39-48.
21. Asher MG. Pension reform, capital markets and corporate governance in Malaysia. *Journal of Financial Regulation and Compliance*. 2001;9(1):30-37.
22. Holden S, VanDerhei J. 401(k) plan asset allocation, account balances and loan activity in 2000. *ICI Perspective*. 2001;7:1-27.

© 2018 Hassan et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

*Peer-review history:*

*The peer review history for this paper can be accessed here:*  
<http://www.sciencedomain.org/review-history/24831>