

---

## Problem-solution framework of retirement planning: a Malaysian perspective

---

Nur Nadiah Salihah Mat Razali and  
Yudi Fernando\*

Faculty of Industrial Management,  
Universiti Malaysia Pahang,  
26300, Pahang, Malaysia  
Email: nadiah6493@gmail.com  
Email: yudi@ump.edu.my  
\*Corresponding author

**Abstract:** This paper aims to review the obstacles faced by individuals in planning a prosperous retirement and to suggest some improvements to encourage the individuals and governments in achieving steadfast finances during the current economic crisis. This paper has utilised a critical review technique on current and emerging systems of retirement planning in Malaysia. We found the two main factors of retirement planning, perceived financial literacy and perception of health, from the literature. Paradoxically, we found limited ways on how the retirement planning practices can assist Malaysians achieve the significance levels of retirement planning which are defined as the successful retirement planning indicators. Contributions of this study are to provide a foresight framework to solve the current Malaysian problems in managing their retirement plan: low salary, late planning, high bankruptcy cases, high household debt and low savings; and suggest a solution framework of study the retirement systems. The literature on retirement planning management has expanded. However, future research is necessary to align the volatile economic conditions and the technological changes.

**Keywords:** retirement planning; retirement challenges; retirement savings; financial literacy; foresight.

**Reference** to this paper should be made as follows: Razali, N.N.S.M. and Fernando, Y. (2022) 'Problem-solution framework of retirement planning: a Malaysian perspective', *Int. J. Management Concepts and Philosophy*, Vol. 15, No. 2, pp.97–112.

**Biographical notes:** Nur Nadiah Salihah Mat Razali is a PhD candidate at the Faculty of Industrial Management, Universiti Malaysia Pahang. Her research interest is in the area of technopreneurship specifically applied financial literacy, planning and sustainability.

Yudi Fernando is an Associate Professor and holds a PhD. He is the Vice President of the Society of Logisticians, Malaysia/Pertubuhan Pakar Logistik Malaysia (LogM). He is the Editor-in-Chief of the *International Journal of Industrial Management* and *Journal of Governance and Integrity*. He previously holds a managerial position in the electronics industry for several years. He has been appointed as an Honourable Lecturer at the Binus University and a Visiting Professor for the Doctorate Program of Management at Universitas Brawijaya. He is a research committee chair and founding member of the Malaysian Association of Business and Management Scholars (MABMS).

## 1 Introduction

People are living longer, and ageing is increasing around the world. The top five countries with the most significant percentage of older people are Japan, Italy, Finland, Portugal and Greece, with the highest rate of 28.2%. Longevity and mortality have been affected by evolution, especially in better healthcare and improved living standards, resulting in increased life expectancy. Over the past decades, the proportion of older citizens has been gradually rising. The number of individuals aged 80 and over is estimated to triple globally by 2050, from 137 million in 2017 to 425 million in 2050. It is predicted to grow to 909 million by 2100, almost seven times its value in 2017.

In Europe, 25% of the population is 60 years or older and is projected to reach 35% in 2050. In less developed countries, the population is ageing more rapidly, increasing from 8% in 2009 to over 20% in 2050, with most of the oldest old (80 years or older) in the developing region (United Nations, 2017). The World Health Organization (WHO) estimated that there would be 800 million older persons globally by 2025 and 2 billion by 2050, with more than half of them in developing countries. Like several other nations, Malaysia is facing longer life expectancy and population ageing indeed. In 2020, the life expectancy at birth was 72.6 years for men and 77.6 years for women, compared with 71.9 years for men and 76.4 years for women in 2008 (Mahidin, 2020). In Malaysia, the proportion of the elderly is also rising. According to the Malaysian Department of Statistics (2020) data, those aged 65 years or older are expected to cause up more than 7% of the population by 2020. It is estimated that in this age group, there will be 14% of the population by 2044, making Malaysia an aged society. It is expected that demographic aging will have a profound impact on communities, underlining the fiscal and political stresses of healthcare, old-age pension and social security systems.

The trend around the world has been to move forward from defined benefit (DB) plans to defined contribution (DC) plans where the individual faces the risk directly. The responsibility for managing retirement funds is transferred in DC schemes from the government or employer to the individual member of the fund. Members have decisions on how much to save and which channel to save, in line with this reform. The primary responsibility for providing ample retirement income has shifted significantly from governments and employers to the employees (Kock and Folk, 2011). Thus, the employee should plan for their finances. Planning for finances during retirement is an ongoing process that begins in childhood and culminates in adulthood. This continuous accumulation of knowledge, abilities, and practises constitutes a cumulative learning experience produced inherently by persons unaware of it (Alcaide et al., 2021).

Melbourne Mercer Global Pension Index (MMGPI) (2019) seeks valuable insights on the implementation pension system country worldwide. The rating indexes were categorised in the form of A, B+, B, C+, C and D. The MMGPI indicates that Malaysia retirement and pension index was rated C+. It was equivalent to 60.6 in 2019 from 58.5 in 2018. Malaysia pension system was ranked 16th in MMGPI 2019 (Murugiah, 2019). Malaysia retirement system was addressed as good features with some benefits to being withdrawn in the specific amount stipulated under pre-defined situations such as education, home loans and health like pandemic COVID-19. The facilities like money assistance for the low-income earner such as *Bantuan Sara Hidup* and *Bantuan Prihatin Nasional* reduce the burden of Malaysians in the short-term (Kadir et al., 2020). In the current situation, there are many parties affected. Some companies need to close down. The employee was terminated and had no income at all.

Currently, Malaysians do not have sufficient money to ad hoc retire, and special attention is needed to boost the financial readiness of people to retire in the future. Problems have been reported concerning Malaysia's private sector workers' retirement system, where no statutory pension scheme is in place. As a result, pension plans and investments are more voluntary; even though the idea is acceptable, many pensioners struggle financially during their retirement in practice (Hassan et al., 2016). However, it is hard to find the model to solve retirement planning in developing countries. Therefore, there is a need for an alternative solution to conduct a foresight study of retirement planning. Malaysia does not have a private personal pension scheme. The employee's provident fund (EPF) is the Malaysian Government body that oversees private sector workers' pension accounts and retirement planning.

In Malaysia, the majority of employees are employed by the private sector. The EPF is Malaysia's dominant social security agency, offering retirement benefits to private-sector employees and non-government pension staff in the public sector. The EPF is under the direct oversight of the Ministry of Finance and guarantees a 2.5% minimum dividend (Vaghefi et al., 2017). The EPF scheme function to ensure that, after retirement, the members of the EPF have financial protection in the form of adequate savings to maintain their livelihoods. The EPF is a compulsory and specified retirement savings contribution scheme in Malaysia. Workers and employers need to contribute to the program, where employees already contribute 9% of their contributions gross salary. In comparison, employers have to put at least 12% for salaries higher than RM5,000 and 13% for wages lower (EPF, 2020).

Under current laws concerning retirement benefits, public servants who have opted for a pension plan will receive a monthly pension of about 60% of their last earned salary after having served in public service for at least 30 years (JPA, 2009). However, studies have shown that individuals do not save enough for their retirement, despite all available public and private pension schemes to secure post-retirement age. It was supported by Park and Estrada (2013) that the pension scheme provided to civil servants in Malaysia does not sufficiently provide its beneficiaries with a secure retirement. In the Malaysian context, Haris and Said (2012) found that the public pension scheme prevents public servants from retiring early, considering that the smaller amount of early retirement pension does not secure their post-retirement. This paper aims to critically review the current issue related to the individuals to have prospered retirement planning and highlight some recommendations for improvement to encourage the individual and Governments to achieve financial steadfast in the current economic crisis.

This paper is interested in reviewing the current Malaysian perceived financial literacy and health perception systems and provides a problem-solution framework of retirement planning. Two factors related to retirement planning decisions in the Malaysian context are addressed in the following. First, the definition of perceived financial knowledge is widely discussed. In most literature, 'financial literacy' is frequently equated with 'financial knowledge' and 'financial education,' acknowledging some similarities between these three words. Financial literacy and financial knowledge are used to discuss the need for financial education and illustrate the consequences of various financial decisions, such as investment, savings and debt behaviour (Huston, 2010). Second, the lack of awareness savings and the ageing of the population cause massive obligations for pension systems, putting many retirees at risk of having insufficient financial resources to sustain them throughout their retirement (Tomar et al., 2021).

## **2 Literature review**

### *2.1 Perceived financial literacy*

Financial literacy means an understanding of economic concepts of skill, motivation, and risks. It is confidence to apply this knowledge to make sound decisions in various financial contexts to improve the financial well-being of individuals and society. Thus, it allows participation in economic life (OECD, 2017). Financial literacy measures the degree to which critical financial principles are understood and the capability and confidence to manage personal finances through relevant, short-term decision-making and sound, lengthy financial planning while being aware of life events and changing economic conditions (Remund, 2010). Allgood and Walstad (2016) argued that perceived financial literacy self-assessment is one's economic knowledge from the previous literature. In contrast, authentic financial literacy is the perfect stored fundamental analysis of the individual. In addition, perceived financial literacy is critical in deciding financial conduct, such as essential financial literacy.

Perceived financial literacy is an individual's self-confidence and belief in their financial awareness (Parker et al., 2012). The perceived financial literacy is the commonly proxy of accurate financial information, but it also tests individuals' financial trust and confidence. A person with a higher level of perceived financial knowledge and a lower level of actual financial knowledge thus, be considered overconfident (Larson et al., 2016). For best practices and good financial habits such as paying off credit card balances, getting an emergency fund, and preparing for retirement, perceived financial literacy is essential (Nguyen et al., 2017).

### *2.2 Perception of health*

From literature, Gubler and Pierce (2014) examined the connection between the decision to contribute to a retirement plan and remedial efforts to promote poor physical health. The authors observed a clear relationship between the two behaviours among those who contributed to the retirement scheme compared to those who did not participate. Furthermore, improving or retaining workability among older employees is a significant challenge in working longer in good health (Van Den Berg et al., 2010). In this new phase, the efforts of people to restore environmental consistency lead to various results, such as the increase in resources, quality of life and health, which are considered to be retirement adaptation indicators (Hurtado and Topa, 2019).

Retirement preparation is a multidimensional structure that can be described as the thoughts and behaviours of promoting good health and providing economic security, and adapting lifestyle to ensure gratifying rewards. Anxiety and depression are the two main health consequences of financial stress. However, other health issues, including heart disease/attack, stomach problems, weight gain/loss, eating disorders, diabetes, insomnia, psoriasis, cancer, high blood pressure and substance abuse, can also cause or worsen financial stress (Cambridge Credit Counseling Corp., 2020). Psychologists have discussed preparation in their different industrial, health, social and psychological sectors to cover the construct's complexity.

The influence of individual assets on well-being in retirement illustrates the significance of planning. A decrease in health and financial resources leads to a decline in well-being for retirees (Yeung, 2013). For this reason, the emphasis of retirement

planning should be on promoting resources that sustain older people in their workforce upcoming transition (Seiferling and Michel, 2017). Perception of health can be shown as a health issue, which leads the awareness of life more valuable than work. The reduction of good health in certain areas will encourage the workers to start thinking about their retirement and initiate their retirement planning well.

The topic of ageing societies is an international issue. Many governments and policymakers are addressing the topic of long-term retirement planning, and strategies are being formulated to address the increased costs of our ageing populations (Wang et al., 2016). The government needs to reduce ageing societies' burden with many retirement planning programs initiatives, especially for the DC workers. To diversify their preparation for a better future in purchasing and financing a home and preparing for retirement, each person is responsible for their own financial decisions (Ahmad and Ghazali, 2017).

### *2.3 Retirement planning*

Retirement planning can be characterised as allocating some salary money. It is ensured the allocation has been designed put to good use to represent consumers who are also disinterested and uncertain about preparing for financial retirement and the different financial products (Selvadurai et al., 2018). Failure to prepare for retirement planning would negatively affect the financial status, health, and capacity and health of cognitive thinking. For the future, retirement planning is essential, but individuals need to make an effort, particularly when nearing the retirement age. The value of retirement planning is recognised as a preparation for the changes. It is associated with retirement that has been connected to a host of affective indices of behavioural adjustment. It prepares individuals to achieve retirement with early retirement preparation effectively. From the start of the career, knowledge of retirement preparation should apply to all workers, not until reaching retirement age (Talib and Manaf, 2017).

Retirement programs in the workplace have been advertised under several different names, including retirement modification, retirement planning, retirement readiness, late-life planning, retirement education, and pre-retirement therapy. Decent outcomes associated with involvement in such services include increased retirement adaptation, positive improvements in behaviour and changes of attitudes and habits of workers (Glamser, 1981). A tripartite classification of retirement systems advanced based on the duration of workers. Usually, long-term (or continuing) services include 8–20 weekly sessions using a group-based meeting style. On the other hand, intensive programs are shorter and generally require immersion sessions on consecutive days of the week. Short programs, which are shorter in duration, involve 1 to 3 sessions (Pazzim and Marin, 2017).

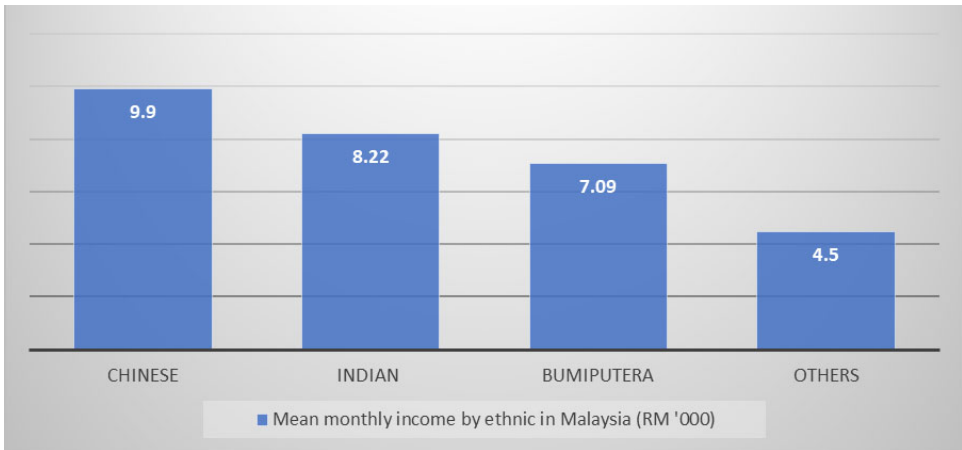
## **3 Methods**

This study has utilised the critical review of retirement planning in Malaysia. Therefore, emerging issues and the current scenario are two focus criteria to suggest the foresight solution for Malaysian retirement planning issues. Thus, the emerging issues and present scenario are discussed as follows:

### 3.1 Emerging issues

In Malaysia, living costs are pretty high, which does not match the rise in salaries, and this situation could worsen in subsequent years (Sabri and Juen, 2014). There are 2.7 million B40 households with a mean monthly household income of RM2,537 in Malaysia in 2014, reported in the Eleventh Malaysia Plan 2016–2020 speech (Economic Planning Unit, 2015). B40 represents the poorest of the population or bottom tier income, which gained 40% of the country’s overall revenue (Radzi et al., 2020). Mahidin (2020) showed that the income threshold of 2.91 million households for the B40 category in 2019 was RM4,849, with an average monthly household income of RM3,152. The income threshold of the M40 type affecting 2.91 million families ranged from RM4,850 to RM10,959, with a mean monthly household income of RM7,348. In addition, in the T20 group, there were 1.46 million households with revenues greater than RM10,960 with an average monthly household income of RM18,506. T20 means 20% of the country’s overall income is earned by the top earners (Yahya, 2018).

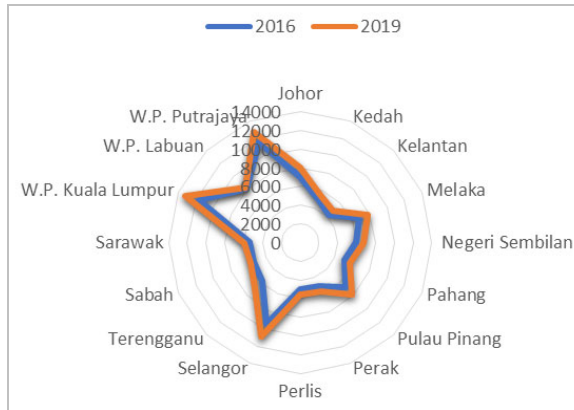
**Figure 1** Mean monthly household income in Malaysia by ethnic group in 2019 RM'000 (see online version for colours)



Source: Hirschmann (2020)

Figure 1 shows the average monthly ethnic income in Malaysia in 2019. The dominant Chinese worrying to the government that forecasts the eleventh plan is incapable of minimising the income gap among citizens in Malaysia. Figure 2 shows the mean monthly gross household income by state Malaysia in 2016 and 2020. The mean income produced by the Federal States was higher than the national average, RM7,901. In addition, Selangor and Johor have reported average salaries of RM10,827 and RM8,013, respectively, higher than the national income. The highest annual income growth reported by Terengganu is 1.3 times higher than the average national growth rate. This low income would lead to low savings and insufficient financial cash flow during retirement.

**Figure 2** Mean of monthly household gross income by state, Malaysia, 2016 and 2019 (RM) (see online version for colours)

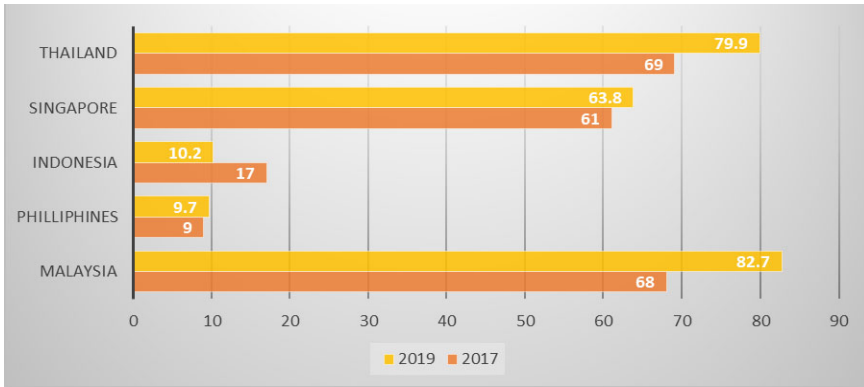


Source: Economic Planning Unit (2019)

In terms of empirical study, not much is known about the behaviour of Malaysians regarding retirement savings plans. Other particular fields that are more ‘immediately important in the lives of young Malaysian adults, such as credit card spending, internet banking, and the purchase of insurance products, have been the main focus of past empirical research on financial planning (Nga and Yeoh, 2018). Only 52% of Malaysians start saving for retirement at the age of 40, reported by Arfudi (2015), but the savings are insufficient due to late retirement preparation. The younger generation believes that, because it is long-term planning, retirement planning is a burden (Ibrahim et al., 2012). It is noted that in Asia, Malaysia has the most significant household debt to GDP. Figure 3 shows the Malaysia household debt as a percentage of GDP versus its ASEAN peers in 2017 and 2019. The high household debt will bring big impact to economy. According to Mackinsey Global Institute (MGI), the Malaysian household debt to income ratio stands high with ratio 146:100. There are 146 debts for every 100 income. The household debt to income ratio is 121:100 with the peer country Thailand. There are 121 debts for every 100 payments (Dobbs et al., 2015).

Correspondingly, the high debt may cause the non-performing loan (NPL) and Bankruptcy. The International Monetary Fund (IMF) is concerned since NPL occurs where the creditor has more than 90 days of outstanding payment. As a result, the interest has been renegotiated, postponed or promoted for more than 90 days. On the other hand, instalments are less than 90 days of outstanding payment and are never foreseen again (Zain et al., 2020). Therefore, Malaysia’s percentage of NPLs represents the stability of the banking. Figure 4.0 will show the Malaysia NPL ratio from 2005 to 2019. The highest value in 2005 was 9.39%, while the lowest value was 1.48% in 2018. The world average based on 100 countries in 2019 is 6.01%. A higher percentage of NPLs means that it is difficult for banks to earn interest and principal on their loans. That could lead to fewer profits. Bankruptcy refers to a process where a debtor is declared bankrupt, according to a court order. The Director-General of Insolvency (DGI) will vest all properties belonging to the bankrupt (Malaysian Department of Insolvency, 2017).

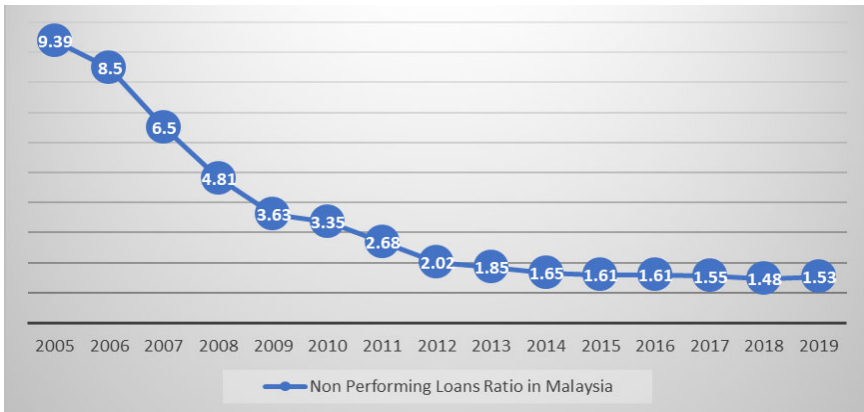
**Figure 3** ASEAN countries household debt as a percentage of GDP in year 2017 and 2019 (see online version for colours)



Source: McKinsey & Company (2019)

The severity of a recession is influenced by the rise and fall of household debt. After the recession occurred and credit depleted, the drop in demand was particularly dramatic as households could no longer borrow and had to pay for previous loans, primarily for homes where their equity was wiped out. Figure 5 shows the types of bankruptcy cases in Malaysia. The majority of cases are personal loans. In times of inflation, the decline in consumption by households will slow down the country’s economic system when consumer income does not keep up with increasing prices. To minimise their debt, households with higher debt will need to save more. So the economic system will not be circulated smoothly and will be facing a slow down economy (Theong et al., 2018). As the industry deals with the economic fallout from the coronavirus (COVID-19) outbreak, NPL growth for banks in Malaysia could be higher than their loan growth this year. In addition, the moratorium and the reduction of the overnight policy rate (OPR) could increase the demand for loans. OPR means minimum interest rate charged amongst banks in the interbank market by borrowing each other funds with target rate for day-to-day liquidity operations by Bank Negara Malaysia.

**Figure 4** NPLs ratio in Malaysia (see online version for colours)

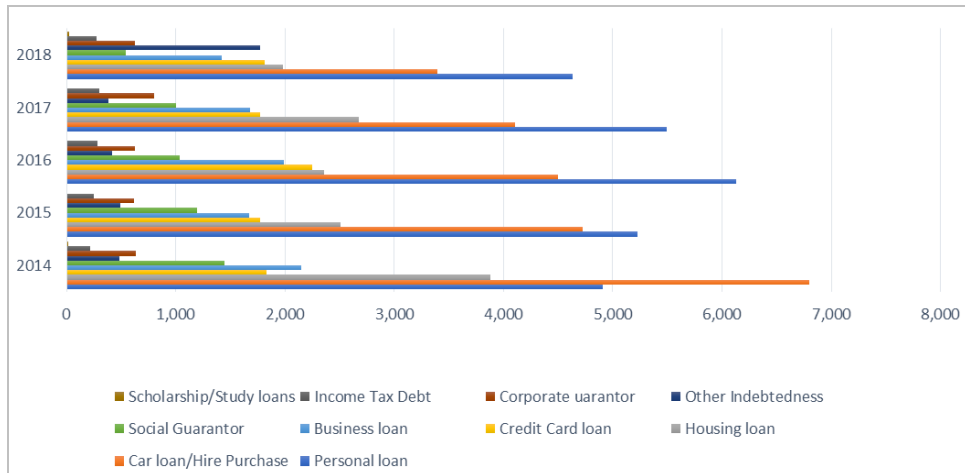


Source: The World Bank (2019)



In the financial planning arena, recent radical changes have changed the burden of financial management from DB pension plans to DC programs onto employees' shoulders. From such a theoretical viewpoint, an effective retirement plan is wherein adequate resources have been invested to achieve and sustain a desired standard of living (Hershey et al., 2007). Unfortunately, it now seems clear that society will not be able to monitor retirement programs. Unless others have specific saving programs on their behalf, including private (i.e., corporate) pensions, driving governments to pursue more aggressive strategies to include people in retirement planning (Topa et al., 2018).

**Figure 5** Types of bankruptcy cases in Malaysia (person) (see online version for colours)



### 3.2 Current systems

The Malaysian Government has promoted voluntary savings that the individuals need to plan themselves with introduced unit trust funds, prominently Amanah Saham Berhad and public mutual. Unit trust funds are investment vehicles developed by wealth management firms, which pool individual investors' capital and invest in a diversified stock portfolio to add value to their financial assets in the future (Yahaya et al., 2009). The mutual fund in Malaysia, or more generally known as the unit trust fund, is an investment product that allows investors to pool their funds to invest in an asset portfolio (Bashir and Wan Nawang, 2011). This portfolio may include divisions of assets such as capital, securities, bonds and deposits, assets, and commodities (Jamaludin et al., 2012).

## 4 Results

Figure 6 shows the challenges Malaysian facing in practising retirement planning for themselves. There are few challenges currently happen to our Malaysian people who are low saving, low salary, late planning, high household debt and several bankruptcy cases increasing. Otherwise, the economic issues, some of them have low financial literacy which practices impulsive spending style that led to bankruptcy or CCRIS.

Regarding the challenges facing future retirees, there are a few suggestions to be improved in Malaysian behaviour. The retirement plan is necessary to retain the same lifestyle after retirement shown above in Figure 7. These include investment, doing extra work to gain extra savings, taking part in making retirement planning campaign awareness, and providing government aid to assist the Malaysian in planning their retirement planning. Because of the increasingly ageing population globally, the importance of retirement planning is an urge to Malaysia. However, the retirement funds available in Malaysia, such as the employee provident fund (EPF) and the pension scheme, are currently inadequate to finance pensioners. Therefore, the initiative must be done by the individual for their comfort and sturdy retirement life.

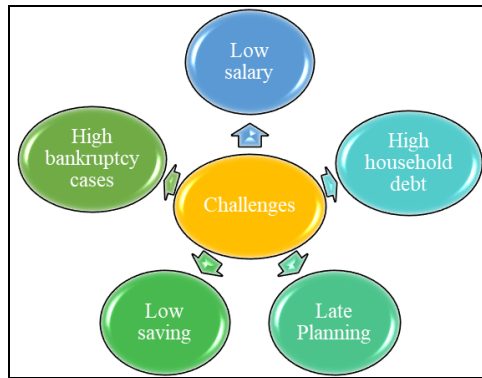
Following the issues facing by the Malaysian with the economic condition, the individuals should do two or more works at the same time. This is because individuals cannot depend on one permanent position. Meanwhile, after the husband and wife combine their income, still they unable to start saving. Hence, they should do extra work for getting extra income for their future. Based on market research, business is one of the solid anecdotes for additional income. Other than that, the spouse may find a trusted channel to grow their savings, such as investing the money in a safe place with more remarkable results. The gold investment is a good investment for the female if they want to assist their family economy.

#### *4.1 Problem-solution framework of retirement planning*

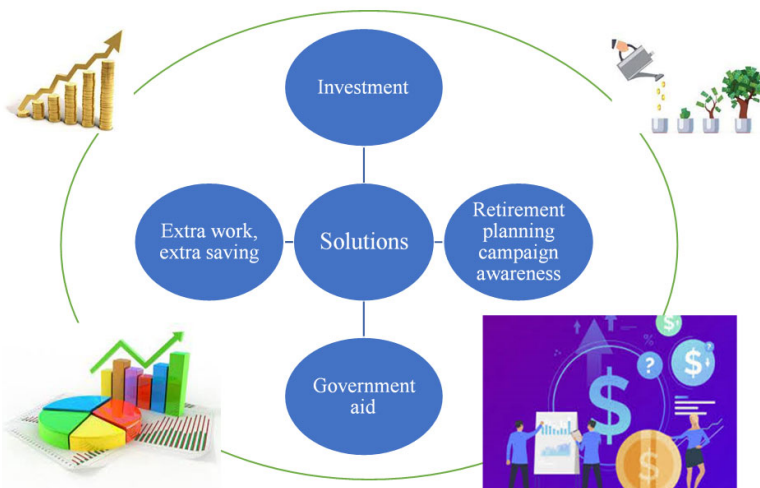
Technopreneurship and entrepreneurship are interrelated to grab immense opportunities in business. Entrepreneurial is associated with cognitive behaviour that is always eager, active, creative, empowered, and struggles to provide enormous income in activities business. The Malaysian green growth strategy is a crucial aspect of the emergence of green technologies (Fernando et al., 2019; Fernando and Wah, 2017). The Malaysian green technology was established in 1998 to uphold the national green technology policy to create innovative ways to improve new products and improve ecological to save the earth (Fernando et al., 2016). The government should provide more funds to individuals to start their businesses. It is one of the good businesses to support the government programs and policies to preserve the world and keep a sustainable life.

There are plenty of opportunities out there for anyone with a creative and brilliant idea to a start-up business. However, being a successful technopreneurship necessitates strategic decision-making in business planning and financial planning, including retirement planning, leadership skills, etc. The awareness of financial retirement plans also needs to be highlighted by the government. In several forums set up by the Government of Malaysia, financial concerns among the elderly and some adults, such as Malaysia National Strategy for Financial literacy 2019 to 2030, Financial literacy program 'My money and me', the Malaysian Social Protection Council (MySPC), the National Social Protection Blueprint and consolidated initiatives across ministries and agencies. The government should keep updating the effectiveness of programs to the people and keep making modifications that align with people preferences to encourage the people to start their retirement planning.

**Figure 6** Research model of retirement challenges (see online version for colours)



**Figure 7** Problem-solution framework of retirement planning (see online version for colours)



They were spurring the Malaysian financial literacy on ageing financial planning as soon as possible. Develop a program for financial planning for high schools and universities. Provide quick, user-friendly details on retirement savings that are easy to understand. Develop an outreach strategy that involves numerous messages that target different groups: high-risk people like the 35–44 years that dominant in bankruptcy cases, young people, high schools, universities, low-level education, people without savings, and people like to savers. It should be cultivated from the kids to ensure they have ideas and awareness about the financial planning in their life without ignorant it.

Other than that, the government should continue government funding and private retirement scheme (PRS) benefits. In 2012, the Malaysian government approved and adopted the PRS. PRS is the World Bank’s Pension Conceptual Structure Pillar III, referred to as the voluntary personal pension scheme. The focus should be given to it and improved. This program is significantly necessary because it has been shown that forced savings by EPF are inadequate, despite the employer and employee contribution plus the minimum annual dividend of 2.5%, which accumulations are insufficient. PRS

contributions in Malaysia are rising and indirectly increasing importance (Zabri et al., 2016). During the introduction of PRS, the government gave some funding to open the PRS account with RM500 freely.

## 5 Discussion

In a nutshell, the perception of health and perceived financial literacy are the main factors contributing to retirement planning in Malaysia. The longer life expectancy in Malaysia, which is almost 24 years old after retiring at the average retirement age of 55 years, will alarming the individual to have some plan for them, especially during the powerless and end of their lives. During old times, usually that time various diseases quickly get since to the immune system reducing. The new world currently reduces the currency value of money, but the medical items and basic needs are costly. Here, the paper highlighted the importance of retirement planning in our lives. However, various challenges are facing by our Malaysian nowadays. It comprises of low salary, income gap, financial debt, and bankruptcy. Most Malaysian, especially those who work in the private sector, depends solely on EPF. The EPF systems provide tap options to allocate for other matters like education, etc.

The suggestions for solving this problem through find the best channel to growing saving which trusted one. There are many vehicles in the market able to solve this issue. Still, the individual should be wise and learn about the growing savings, whether through investment or some passive income. The first suggestion is an investment. The higher the risk, high the outcome. Never go beyond our knowledge. A financial planner also can hire to manage this process. The second one is the capability to work extra. Some Malaysian who has low salaries may start two works to attempt a comfortable life in the future. Malaysian people like to have business part-time as their strategy to generate income. Being a business person also needs diligently, hardworking, and most important is knowledge to convince people.

Next, the government also needs to assist the Malaysian people in having a better financial plan for their lives, especially for the young generations who prefer spending to save due to the perception of still having time to save. The campaign awareness of financial planning has been launched like the financial education practices, financial literacy forum with the talk from people who already successfully create their financial planning from scratch. The poor people especially should get in touch with this medium. Malaysian people B40 increasing nowadays. Thus, all the government programs and government aid should be taking part in this category. Some of them never know how to save, where to save, and when to save their money.

Government programs like PRS benefits should be resumed to assist the people who never know how to save and plan they are financial. This research should keep going since money matters is one of the needy things in people life. Future research could investigate managing retirement planning among the three levels of group B40, M40 and T20. Other than that, the prospective researcher may investigate the retirement planning indicators of individuals in different sectors contributing to high gross domestic product (GDP) in our country and how the three main groups in Malaysia may achieve the significant retirement planning level. The government should identify the retirement planning programs available for the individual in Malaysia and start the enforcement. Depending on the variety of subjects addressed, retirement plans may be categorised as

either minimal or comprehensive. Future studies can incorporate the Industry 4.0 technology [blockchain (Fernando et al., 2021a) and Society 5.0 (Fernando et al., 2021b)] to extend the concept of financial technology and planning

## Acknowledgements

The authors convey their appreciation to the Division of Research & Innovation, Universiti Malaysia Pahang for funding this study (PGRS2003163).

## References

- Ahmad, Z. and Ghazali, A. (2017) 'Retirement planning: young professionals in private sector', *SHS Web of Conferences*, Vol. 1, No. 36, pp.1–24.
- Alcaide, H.T.C., Montserrat, S.H. and Topa, G. (2021) 'A model for personal financial planning towards retirement', *Journal of Business Economics and Management*, Vol. 22, No. 2, pp.482–502.
- Allgood, S. and Walstad, W.B. (2016) 'The effects of perceived and actual financial literacy on financial behaviors', *Economic Inquiry*, Vol. 54, No. 1, pp.675–697.
- Arfudi, I.Z. (2015) *50% Retirees Exhausted Their Savings Within Five Years of Retirement, How Can You Avoid This? Kenanga Investors*, 1–8 December [online] [https://www.kenangainvestors.com.my/KIB/KIB.Application.Web/KIBFundsAdmin/images/50\\_Retirees\\_Exhausted.pdf](https://www.kenangainvestors.com.my/KIB/KIB.Application.Web/KIBFundsAdmin/images/50_Retirees_Exhausted.pdf) (accessed 8 February 2021).
- Bashir, M.S. and Wan Nawang, W.R. (2011) 'Islamic and conventional unit trusts in Malaysia: a performance comparison', *Journal of Islamic Economics, Banking and Finance*, Vol. 7, No. 4, pp.9–24.
- Cambridge Credit Counseling Corp. (2020) *Financial Stress and Your Health* [online] <https://www.cambridge-credit.org/financial-stress-and-your-health.html> (accessed 11 February 2020).
- Dobbs, R., Lund, S., Woetzel, J. and Mutafchieva, M. (2015) *Debt and (Not Much) Deleveraging*, in McKinsey Global Institute [online] [https://www.mckinsey.com/~media/McKinsey/GlobalThemes/EmploymentandGrowth/Debtandnotmuchdeleveraging/MGI Debt and not much deleveragingFullreportFebruary2015.ashx](https://www.mckinsey.com/~media/McKinsey/GlobalThemes/EmploymentandGrowth/Debtandnotmuchdeleveraging/MGI%20DebtandnotmuchdeleveragingFullreportFebruary2015.ashx) (accessed 8 February 2020).
- Economic Planning Unit (2015) *Speech by the Prime Minister for the Eleventh Malaysia Plan 2016-2020*. [online] [https://www.talentcorp.com.my/clients/TalentCorp\\_2016\\_7A6571AE-D9D0-4175-B35D-99EC514F2D24/contentms/img/publication/RMKe-11 Book.pdf](https://www.talentcorp.com.my/clients/TalentCorp_2016_7A6571AE-D9D0-4175-B35D-99EC514F2D24/contentms/img/publication/RMKe-11Book.pdf) (accessed 8 February 2019).
- Economic Planning Unit (2019) *Mean of monthly household gross income by ethnic group, strata and state, Malaysia, 1970–2019* [online] <https://knoema.com/MYHIP2016/malaysia-household-income-poverty-1970-2019>.
- Employee Provident Fund (EPF) (2020) *Members and Employers Contribute* [online] <https://www.kwsp.gov.my/member/overview> (accessed 8 February 2020).
- Fernando, Y. and Saravanan, R. (2021) 'Blockchain technology: energy efficiency and ethical compliance', *Journal of Governance and Integrity*, Vol. 4, No. 2, pp.88–95.
- Fernando, Y. and Wah, W.X. (2017) 'The impact of eco-innovation drivers on environmental performance: empirical results from the green technology sector in Malaysia', *Sustainable Production and Consumption*, Vol. 12, No. 1, pp.27–43.
- Fernando, Y., Chiappetta Jabbour, C.J. and Wah, W.X. (2019) 'Pursuing green growth in technology firms through the connections between environmental innovation and sustainable business performance: does service capability matter?', *Resources, Conservation and Recycling*, Vol. 141, No. 1, pp.8–20.

- Fernando, Y., Rozuar, N.H.M. and Mergeresa, F. (2021a) 'The blockchain-enabled technology and carbon performance: insights from early adopters', *Technology in Society*, Vol. 64, No. 6, p.101507.
- Fernando, Y., Saedan, R., Shaharudin, M.S. and Mohamed, A. (2021b) 'Integrity in Halal food supply chain towards the Society 5.0', *Journal of Governance and Integrity*, Vol. 4, No. 2, pp.103–114.
- Fernando, Y., Wah, W.X. and Shaharudin, M.S. (2016) 'Does a firm's innovation category matter in practising eco-innovation? Evidence from the lens of Malaysia companies practicing green technology', *Journal of Manufacturing Technology Management*, Vol. 27, No. 2, pp.208–233.
- Glamser, F.D. (1981) 'The impact of preretirement programs on the retirement experience', *Journals of Gerontology*, Vol. 36, No. 2, pp.244–250.
- Gubler, T. and Pierce, L. (2014) 'Healthy, wealthy, and wise: retirement planning predicts employee health improvements', *Psychological Science*, Vol. 25, No. 9, pp.1822–1830.
- Haris, A. and Said, R. (2012) 'Social security wealth and early retirement in public pension scheme', *International Journal of Economics and Management*, Vol. 6, No. 2, pp.346–359.
- Hassan, K.H., Rahim, R.A., Ahmad, F., Tengku Zainuddin, T.N.A., Merican, R.R. and Bahari, S.K. (2016) 'Retirement planning behaviour of working individuals and legal proposition for new pension system in Malaysia', *Journal of Politics and Law*, Vol. 9, No. 4, pp.43–52.
- Hershey, D.A., Jacobs-Lawson, J.M., McArdle, J.J. and Hamagami, F. (2007) 'Psychological foundations of financial planning for retirement', *Journal of Adult Development*, Vol. 14, No. 2, pp.26–36.
- Hirschmann, R. (2020) *Mean Monthly Income per Household Malaysia 2019, by Ethnic Group* [online] <https://www.statista.com/statistics/856659/malaysia-average-monthly-household-income-by-ethnic-group/> (accessed 8 February 2020).
- Hurtado, M.D. and Topa, G. (2019) 'Quality of life and health: influence of preparation for retirement behaviors through the serial mediation of losses and gains', *International Journal of Environmental Research and Public Health*, Vol. 16, No. 9, p.1539.
- Huston, S.J. (2010) 'Measuring financial literacy', *Journal of Consumer Affairs*, Vol. 44, No. 2, pp.296–316.
- Ibrahim, D., Isa, Z.M. and Ali, N. (2012) 'Malaysian Savings behavior towards retirement planning', *International Conference on Economics Marketing and Management*, Vol. 28, No. 1, pp.102–105.
- Jamaludin, N., Smith, M. and Gerrans, P. (2012) 'Mutual fund selection criteria: evidence from Malaysia', *Asian Review of Accounting*, Vol. 20, No. 2, pp.140–151.
- JPA (2009) *Pension Scheme: Retirement Benefits* [online] [https://www.jpapencen.gov.my/english/new\\_policy.html](https://www.jpapencen.gov.my/english/new_policy.html) (accessed 8 February 2020).
- Kadir, J.M.A., Zainon, S., Ismail, R.F., Aziz, S.N.A., Amran, A.A.I. (2020) 'Retirement planning and its impact on working individuals', *European Journal of Molecular and Clinical Medicine*, Vol. 7, No. 6, pp.1550–1559.
- Kock, H. and Folk, J.Y. (2011) 'Expected retirement age: a determinant of financial planning preparation in Malaysia', *African Journal of Business Management*, Vol. 5, No. 22, pp.9370–9384.
- Larson, L.R.L., Eastman, J.K. and Bock, D.E. (2016) 'A multi-method exploration of the relationship between knowledge and risk: the impact on millennials retirement investment decisions', *Journal of Marketing Theory and Practice*, Vol. 24, No. 1, pp.72–90, <https://doi.org/10.1080/10696679.2016.1089765>
- Mahidin (2020) *Department of Statistics Malaysia Press Release Abridged Life Tables, Malaysia, 2018–2020* [online] <https://www.dosm.gov.my/v1/index.php?r=column/pdfPrev&id=R0VPdE1mNEdRQms2S0M4M1ZsS1VEdz09> (accessed 13 November 2020).
- Malaysian Department of Insolvency (2017) Bankruptcy meaning. Retrieved from Malaysian Department of Insolvency website: <http://www.mdi.gov.my/index.php/legislation/statistics>

- Murugiah, S. (2019) 'Malaysia scores C+ rating in 2019 Melbourne mercer global pension index', *The Edge Markets* [online] <https://www.theedgemarkets.com/article/malaysia-scores-c-rating-2019-melbourne-mercero-global-pension-index> (accessed 13 November 2020).
- Nga, K.H. and Yeoh, K.K. (2018) 'An exploratory model on retirement savings behaviour: a Malaysian study', *International Journal of Business and Society*, Vol. 19, No. 3, pp.637–659.
- Nguyen, T., Rózsa, Z., Belás, J. and Belásová, E. (2017) 'The effects of perceived and actual financial knowledge on regular personal savings: case of Vietnam', *Journal of International Studies*, Vol. 10, No. 2, pp.278–291.
- Norman, N.B., Almsafir, M.K. and Smadi, A. (2013) 'Comparative study of conventional and Shariah-based unit trust funds performance of public mutual Berhad', *Australian Journal of Basic and Applied Sciences*, Vol. 7, No. 3, pp.354–363.
- OECD (2017) *Literacy, Financial Solving, Collaborative Problem* [online] <https://www.oecd.org/education/pisa-2015-assessment-and-analytical-framework-9789264281820-en.htm> (accessed 13 November 2020).
- Park, D. and Estrada, G. (2013) 'Emerging Asia's public pension systems: challenges and reform efforts', *Designing Fiscally Sustainable and Equitable Pension Systems in Asia in the Postcrisis World*, Vol. 1, No. 1, pp.273–292.
- Parker, A.M., de Bruin, W.B., Yoong, J. and Willis, R. (2012) 'Inappropriate confidence and retirement planning: four studies with a national sample', *Journal of Behavioral Decision Making*, Vol. 25, No. 4, pp.382–389.
- Pazzim, T.A. and Marin, A.H. (2017) 'Retirement preparation program: evaluation of results: psychology: research and review', *Psicologia: Reflexao e Critica*, Vol. 30, No. 1, pp.1–11.
- Radzi, M., Mansor, A., Anwar, K., Kassim, A. and Zulhaidi, M.J. (2020) 'Willingness to purchase safer vehicles: a study base on Malaysia B40 income group', *Jurnal Kejuruteraan*, Vol. 3, No. 1, pp.71–74.
- Remund, D.L. (2010) 'Financial literacy explicated: the case for a clearer definition in an increasingly complex economy', *Journal of Consumer Affairs*, Vol. 44, No. 2, pp.276–295.
- Sabri, M.F. and Juen, T.T. (2014) 'The influence of financial literacy, saving behaviour, and financial management on retirement confidence among women working in the Malaysian public sector', *Asian Social Science*, Vol. 10, No. 14, pp.40–51.
- Seiferling, N. and Michel, A. (2017) 'Building resources for retirement transition: effects of a resource-oriented group intervention on retirement cognitions and emotions', *Work, Aging and Retirement*, Vol. 3, No. 4, pp.325–342.
- Selvadurai, V., Kenayathulla, H.B. and Siraj, S. (2018) 'Financial literacy education and retirement planning in Malaysia', *Malaysian Online Journal of Educational Management (Mojem)*, Vol. 6, No. 1, pp.41–46.
- Talib, N.F.M. and Manaf, H.A. (2017) 'Attitude towards retirement planning behaviour among employee's', *International Journal of Business and Management*, Vol. 1, No. 1, pp.12–17.
- Theong, M.J., Osman, A.F. and Yap, S.F. (2018) 'Household indebtedness: how global and domestic macro-economic factors influence credit card debt default in Malaysia', *Institutions and Economies*, Vol. 10, No. 3, pp.37–56.
- Tomar, S., Kent Baker, H., Kumar, S. and Hoffmann, A.O.I. (2021) 'Psychological determinants of retirement financial planning behavior', *Journal of Business Research*, Vol. 133, No. 10, pp.432–449.
- Topa, G., Lunceford, G. and Boyatzis, R.E. (2018) 'Financial planning for retirement: a psychosocial perspective', *Frontiers in Psychology*, Vol. 8, No. 1, pp.1–8.
- United Nations (2017) *World Population Prospects: The 2017 Revision*, in Working Paper No ESA/P/WP/248. Cover, Vol. 53 [online] <http://publications.lib.chalmers.se/records/fulltext/245180/245180.pdf%0Ahttps://hdl.handle.net/20.500.12380/245180%0Ahttp://dx.doi.org/10.1016/j.jsames.2011.03.003%0Ahttps://doi.org/10.1016/j.gr.2017.08.001%0Ahttp://dx.doi.org/10.1016/j.precamres.2014.12> (accessed 1 February 2020).

- Vaghefi, N., Kari, F. and Talib, M.A. (2017) 'Poverty and income replacement profile among EPF retiree in Malaysia', *Social Indicators Research*, Vol. 132, No. 3, pp.1065–1078.
- Van Den Berg, T.I.J., Elders, L.A.M. and Burdorf, A. (2010) 'Influence of health and work on early retirement', *Journal of Occupational and Environmental Medicine*, Vol. 52, No. 6, pp.576–583.
- Wang, H., Koo, B. and O'Hare, C. (2016) 'Retirement planning in the light of changing demographics', *Economic Modelling*, Vol. 52, No. 1, pp.749–763.
- Yahaya, A., Yahaya, N., Ramli, J., Boon, Y. and Ghaffar, M.N.A. (2009) 'Amanah Saham National Berhad's promotional strategies and its relationship with customer motivation', *Journal of Social Sciences*, Vol. 5, No. 4, pp.283–291.
- Yahya, H. (2018) *The T20, M40 and B40 Income Classifications in Malaysia* [online] <https://people.utm.my/hafizal-yahaya/the-t20-m40-and-b40-income-classifications-in-malaysia/> (accessed 28 May 2021).
- Yeung, D.Y. (2013) 'Is pre-retirement planning always good? An exploratory study of retirement adjustment among Hong Kong Chinese retirees', *Aging and Mental Health*, Vol. 17, No. 3, pp.386–393.
- Zabri, S.M., Ahmad, K. and Lian, A.A.L.H. (2016) 'The awareness of private retirement scheme and the retirement planning practices among private sector employees in Malaysia', *International Journal of Economics and Financial Issues*, Vol. 6, No. 1, pp.120–124.
- Zain, E.N.M., Ghazali, P.L. and Wan Daud, W.M.N. (2020) 'Determinants of non-performing loans: evidence from conventional banks in Malaysia', *Humanities and Social Sciences Reviews*, Vol. 8, No. 2, pp.423–430.