



KWSP[®]
EPF



VOL. 9 | 2026

SOCIAL PROTECTION INSIGHT

ISWC2026 INTERNATIONAL SOCIAL WELLBEING
CONFERENCE 2026

THE LONG HORIZON



VOL. 9 | 2026

SOCIAL PROTECTION INSIGHT

ISWC2026 INTERNATIONAL SOCIAL WELLBEING
CONFERENCE 2026

THE LONG HORIZON

Employees Provident Fund
Malaysia
2026

Copyright Reserved

All rights reserved. No part of this publication may be reproduced, stored in retrieval system or transmitted in any form or by any means electronic, mechanical, photocopying, recording and/or otherwise without the prior permission of:

Employees Provident Fund (EPF)
No. 1, Persiaran Kwasa Utama,
Kwasa Damansara, Seksyen U4,
40150, Shah Alam,
Selangor Darul Ehsan
E-mail: corporate@epf.gov.my

Social Protection Insight is an annual publication produced in conjunction with the International Social Well-Being Conference (ISWC).

The 9th volume was published on 29 September 2026

This publication is also available digitally at:
<https://www.kwsp.gov.my/publications>

Editorial Committee

SOCIAL PROTECTION INSIGHT | VOL. 9/2026

Advisor

Balqais Yusoff

Chief Editor

Hawati Abdul Hamid

Editors

Adibah Abdulhadi

Nor Iskandar Md Nor

Shahnaz Kamaruzaman

Puteri Marjan Megat Muzafar

Nur Thuraya Sazali

Elena Zafrul

Umar Abdul Aziz

Design & Production

Mohammad Faizal Bin Saharudin

Abdul Razak Abdul Rahim

Wan Reza Fahmi Bin Wan Hazani

Mohd Mukhlis Mustapha

Disclaimer

This publication features articles by various authors. Editorial work has been undertaken by staff of the Employees Provident Fund (EPF) for clarity, consistency and style. Responsibility for the accuracy and completeness of the content remains solely with the respective authors. The findings, interpretations and conclusions presented herein are those of the authors and do not necessarily reflect the official views of EPF or imply its endorsement of any policy recommendations put forward by the contributing authors.

Content

CEO Foreword	8
Editorial Note	10

Section 1 Fostering Wellbeing in Later Life

1	Will the Homes You Buy Be Ready for Your Old Age?	14
	<i>Adibah Amira Binti Nazarudin & Farhana Binti Roslan</i>	
2	Assistive Technology as a Critical Enabler of Ageing-in-Place: Summary Findings from a Malaysian Policy Study	24
	<i>Haniza Khalid, Maya Puspa Abd. Rahman & Nasnin Toh-arlim</i>	
3	Designing Effective Entrepreneurship Training Programmes for Senior Entrepreneurs: Insights for Inclusive Programme Development	33
	<i>Fatimah Zahra Ros'azam & Mary Rose Sankaran</i>	
4	Islamic Choice Architecture for Retirement Decisions: Applying the Hukum Framework to Overcome Behavioural Barriers Among Muslim Retirees in Malaysia	40
	<i>Aminath Sharahath & Ziyaad Mahomed</i>	

Section 2 Enhancing the Ecosystem for Retirement Wellbeing

5	Flexible Access, Different Realities: Insights from Akaun Fleksibel Withdrawals	48
	<i>Hawati Abdul Hamid & Puteri Marjan Megat Muzafar</i>	
6	Rebalancing Malaysia's Social Protection System Amid Rising Cost-of-Living Pressures	57
	<i>Muhammad Aizat Zainal Alam, Norma Mansor & Zulkiply Omar</i>	
7	From Savings to Care: Rethinking Retirement Preparedness in an Ageing Malaysia	64
	<i>Siti Nurazira Mohd Daud & Abd Halim Ahmad</i>	
8	Preparing Today's Youth for Tomorrow's Seniors: Are Malaysians Financially Ready for Elderly Care?	75
	<i>Mohammad Mafrukhin Mokhtar & Nur Rusyda Jamali</i>	
9	From Vocation to Profession: Statutory Regulation for Social Work in Malaysia	85
	<i>Haniza Khalid & Norma Mansor</i>	

Section 3**Strengthening Institutions for Retirement Security**

- | | | |
|-----------|--|------------|
| 10 | Working Longer, Living Longer? Retirement Age and Longevity Among Public Service Pensioners in Malaysia
<i>Raja Abdul Azim Raja Abdullah & Amirul Hamza Abdullah</i> | 94 |
| 11 | From Burden to Engine: The Economic Case for Universal Pensions in Malaysia
<i>Mohammad Ikmal Kadir & Muhammad Aizat Zainal Alam</i> | 102 |
| 12 | Artificial Intelligence, Longevity Risk, and Retirement Adequacy: Evidence from Malaysia
<i>Turalay Kenc, Nurfarahin Mazlan & Nurhuda Othman</i> | 113 |
| 13 | Retirement Savings Sukuk: A Shariah-compliant Pathway to Long-term Pension Adequacy in Malaysia
<i>Ziyaad Mahomed, Maya Puspa Rahman, Amelia Nur Natasha Nazeri, Gopi Krishnan a/l K.K. Vijayaraghavan, Azleen Osman Rani & Shamimi Mohd Zulkarnaini</i> | 120 |

CEO FOREWORD

Social Protection Insight 2026

The Long Horizon

Ahmad Zulqarnain Onn

Chief Executive Officer,
Employees Provident Fund

As Malaysia moves steadily towards becoming an aged nation, the question before us is no longer whether demographic change will reshape our society, but how we choose to respond to it. Longer lives are among Malaysia's greatest development achievements, reflecting decades of progress in healthcare, education, and living standards. The challenge now is to ensure that longevity is accompanied by financial security, dignity, and opportunity throughout later life.

The theme of the International Social Wellbeing Conference 2026, "The Long Horizon", invites us to look beyond the immediate challenges of population ageing towards the opportunities that longer lives present. It calls for a collective reimagining of how individuals, families, communities, the private sector, and governments can work together to build a society where longevity is not merely managed but embraced as an opportunity for economic and social progress.

Preparing for longer lives requires a whole-of-nation approach. It demands policies and institutions that strengthen the foundations of wellbeing in later life, including financial security, healthcare, and work opportunities. More fundamentally, it challenges us to rethink long-held assumptions about ageing, retirement, and intergenerational responsibility. Shaping a future of dignity and purpose for all generations is therefore a shared responsibility. No single institution, sector, or individual can meet this challenge alone.

Against this backdrop, Social Protection Insight 2026 reflects the Employees Provident Fund's (EPF) commitment to contributing evidence and ideas that inform Malaysia's evolving social protection agenda. As the nation's retirement savings institution, EPF recognises that strengthening retirement security requires not only effective savings mechanisms, but also rigorous research and constructive dialogue on the broader wellbeing ecosystem.

The articles in this edition explore a broad range of issues, beginning with wellbeing in later life, broadening to the ecosystem that supports it, and concluding with reforms that can strengthen social protection for generations to come. Collectively, they reflect the breadth and complexity of preparing for an ageing society and invite readers to adopt a long-term perspective in building sustainable systems that enable every member of society to thrive.

My sincere appreciation goes to all contributing authors for their scholarship, and to the editorial and production team for their dedication in bringing this publication to life. It is my hope that this edition will contribute meaningfully to advancing the nation's social protection agenda and inspire all segments of society to work together to build a future where longer lives are underpinned by security, resilience, and opportunity.

EDITORIAL NOTE

Securing wellbeing in older age requires a long view. Retirement is not shaped only by decisions made at the end of working life, but by the choices, opportunities, and support systems that accumulate across the life course. Individual preparation matters, but so do families, communities, institutions, markets, and public policies. Together, they shape whether people can age with financial security, dignity, independence, and purpose.

This 9th edition of Social Protection Insight explores the theme of “The Long Horizon” from the International Social Wellbeing Conference 2026. It brings together 13 articles organised around three complementary perspectives. The first looks at how individuals prepare for and experience ageing. The second considers the wider ecosystem that supports wellbeing throughout life. The third looks ahead to the reforms and innovations needed to strengthen social protection for an ageing society.

Section I: Fostering Wellbeing in Later Life

Longer life expectancy means retirement is no longer simply the end of working life. It can now represent a significant phase of life in its own right. This makes it increasingly important to ask how people can maintain independence, agency, financial security, and social participation as they age.

The first four articles examine different dimensions of ageing well at the individual and household level. They discuss age-friendly housing that allows people to remain safely in their homes, assistive technologies that support independent living, entrepreneurship as a pathway for continued economic and social participation, and the role of faith in helping individuals balance their own financial security with family obligations. Together, these articles show that ageing well is not only about having enough savings. It is also shaped by the environment people live in, the opportunities available to remain active, and the values that guide decisions in later life.

Section II: Enhancing the Ecosystem for Retirement Wellbeing

Wellbeing in older age is not determined by individual effort alone. It also depends on the services, social systems, and institutions that support people throughout their lives, helping them manage financial pressure, access care, and receive support when they are vulnerable.

The next five articles highlight this broader ecosystem. They examine the case for wider social protection reforms in the context of rising cost of living, the role of EPF's Akaun Fleksibel in helping members manage financial needs at different stages of life, financial preparedness among younger generations for retirement and long-term care, and the importance of legislation in strengthening the social work profession. Collectively, these articles underline that retirement security depends on more than personal efforts. Responsive policies, effective institutions, and strong social support systems are essential to enabling people to age with dignity.

Section III: Strengthening Institutions for Retirement Security

Preparing for an ageing society also requires difficult but necessary conversations about reform. Structural changes often involve negotiations over how risks, responsibilities, and resources are shared across society. Yet these reforms can have lasting effects on the wellbeing of current and future generations.

The final four articles look beyond current arrangements to consider how retirement systems need to evolve in response to demographic, technological, and economic changes. They examine the implications of extending the retirement age, assess the feasibility of introducing a universal basic pension, explore how advances in artificial intelligence and medical innovation could reshape retirement adequacy if healthy lifespans are extended, and propose a shariah-compliant retirement savings instrument that additionally incorporate Islamic social finance mechanisms, including *waqf* and *sadaqah*, to support vulnerable groups.

SPI 2026 invites readers to think about how social protection systems can remain equitable, sustainable, and responsive in an uncertain future. While the articles address different aspects of ageing, they share a common premise: securing wellbeing in older age requires planning, collective commitment, and sustained action over a long horizon. We hope this edition enriches the national conversation on ageing and strengthens Social Protection Insight as a platform for rigorous research and thoughtful policy insights.

SECTION 1

FOSTERING WELLBEING IN LATER LIFE



ARTICLE 1

WILL THE HOMES YOU BUY BE READY FOR YOUR OLD AGE?

Adibah Amira Binti Nazarudin
Farhana Binti Roslan

PNB Research Institute

ABSTRACT

Given that most individuals can afford only one home (if any) over their lifetimes, that home should accommodate changing functional needs with age, as proposed by the concept of Ageing-in-Place. As Malaysia is projected to become an aged nation by 2048, with a rising prevalence of moderate-to-severe disability with age (2040e: 74%), the need for housing compliant with Universal Design (UD) becomes increasingly critical. This micro case study examines a purposive sample of upcoming serviced apartment launches in the Central Region, based on National Property Information Centre (NAPIC) data for 2025, against five UD provisions in the Malaysian Standard (MS)1184:2014. Findings show that only 2% of new housing supply in the sample (5% of design layouts) can be considered age-friendly, exposing households to potential retrofitting or relocation costs. Possible policy interventions include non-financial incentives, standardised pre-occupancy assessment protocols, and mandating standards through licensing requirements.

INTRODUCTION

Malaysia is projected to become an aged nation in 2048¹(Department of Statistics Malaysia, 2025). When it comes to housing preferences, 83% of respondents of the Malaysia Ageing and Retirement Survey (MARS) in 2021-2022 indicated that they wished to age-in-place² (Asian Development Bank, 2023). Of these, 27% do not wish to move out of their homes, suggesting a shared preference to maintain independence, control, and autonomy in their lives (Coleman & Kearns, 2015).

Despite this obvious preference, there are limitations to age-in-place. The MARS 2021-2022 also indicated that older persons struggle with some activities of daily living (ADLs), particularly climbing stairs, getting in and out of bed, and mobility within the home, not to mention gaps in financial assistance for either home renovation or purchase (Chang et al., 2022)³. While public and commercial buildings are increasingly designed to be disability- and age-friendly, the design of private residences had traditionally lagged behind (Mansor, 2008).

OBJECTIVES

Amid this backdrop, this study attempts **to assess the feasibility of ageing in place, given prevailing design trends observed among selected upcoming residential developments**. UD principles underpin this micro case study, which evaluates the readiness of upcoming housing launches to support ageing-in-place. Homes under development, rather than existing stock of housing, are examined to assess whether private residential developments are catching up with public and commercial buildings in terms of disability- and age-friendliness.

The motivation for adopting this framework is to move away from a simplistic categorisation of users. Earlier research tended to bifurcate consumers into a “healthy and able-bodied” typology and a “special” group, typically the elderly and disabled (Mansor, 2008). The problem with this approach is that there is no one “average” person across one’s lifetime (Imrie, 2006). Some slowly lose their ability to conduct ADLs as they age, while others are only temporarily disabled, such as due to pregnancy or athletic injuries. As a result, recommendations tended to be in the form of temporary, costly and stigmatising modifications suited only for such “special” groups (Mansor, 2008). There is a need to ensure that standards are “universal” enough to serve all stages of one’s life. As the prospect of owning a home becomes an increasingly distant reality for many Malaysians (Yeap, 2022), making home purchases is now only a once-in-a-lifetime endeavour, if at all.

¹An aged country is when 14% of its population is aged 65 and above.

²Ageing-in-Place is defined as the ability to live safely, independently, and comfortably in one's home and community as needs evolve.

³The study examines gap within the Eight domains of World Health Organization (WHO) age-friendly framework, which are (1) housing, (2) outdoor spaces and buildings, (3) transportation, (4) health and wellness, (5) social participation, (6) volunteering and civic engagement, (7) job opportunities, and (8) communication and information.

In this regard, the UD principles become highly useful. It refers to built environments designed to be usable by the widest possible range of people without the need for later adaptation (Mansor, 2008; Yusof & Jones, 2014). Currently in Malaysia, there are no specific legal requirements for private housing to be made universally accessible. However, there are at least three guideline documents or codes of practice that govern the requirement for UD and accessibility in the built design environment:

- (i) Persons with Disabilities Act (Act 685),
- (ii) Uniform Building By-Law (UBBL) Section 34 A, and;
- (iii) MS1184:2014 Universal Design and Accessibility in the Built Environment – Code of Practice (Second Revision).

Act 685⁴ outlines the requirement for access to public facilities, amenities, services, and buildings, while UBBL (34(A)) specifies that this by-law is satisfied by compliance with MS 1183 and MS 1184. This case study references MS1184:2014 as its primary guiding standard. It outlines requirements and recommendations for the construction aspects of building access, as well as for circulation, egress, and evacuation. The standard establishes minimum provisions to ensure that buildings are accessible and usable for most users.

Admittedly, this is not a novel approach. Existing studies, such as by Mansor (2008); Mohamed Yusof (2016); Yusof & Jones (2014); and S. M. Zaid et al. (2019) acknowledged the presence of UD principles in these standards in Malaysia and have even conducted similar compliance assessments or access audits of interiors and common facilities of residential buildings. The common finding is that compliance in Malaysia is weak, as they remain guidelines rather than legal requirements. In addition, there is a lack of an operationally viable and widely used UD-based tool to assess whether new homes support ageing in place (Mansor, 2008; Mohamed Yusof, 2016; Yusof & Jones, 2014; S. M. Zaid et al., 2019).

METHODS & DATA

This study proposes an alternative, qualitative approach to assessing the readiness of these upcoming private homes. It was conducted on a sample of upcoming 13 serviced apartments and 11 landed housing projects, slated for completion between 2025 and 2028, as reported in the NAPIC Central Region Market Report 2025⁵. This sample comprises 84 design layouts (i.e., the number of floor plans observed) affecting an expected total of 18,033 housing units. The respective floor plans for each design layout were extracted from various public online sources and were subsequently assessed for compliance with five (5) selected standards, namely for having:

⁴Part IV, Chapter 1, No 26, 27, and 28

⁵As reported in Section 3.2 Mega Projects, Pages 28 to 42. The report is available at <https://napic.jpoh.gov.my>

- (i) ramps in at least one of the bathrooms or a step height below 10 mm,
- (ii) grab rails in the toilets,
- (iii) a minimum size for toilets,
- (iv) a minimum clearance for toilet doors, and;
- (v) a minimum size for bedrooms⁶.

Although MS1184:2014 contains additional UD-related provisions, these five (5) criteria were selected based on the limited information available from architectural floor plans (including a 3D VR tour⁷) (Table 1). These criteria were also chosen as they directly address mobility challenges faced by older persons, as identified in MARS 2021-2022. The criteria ensured adequate space for movement throughout the house, with or without mobility aids, and the provision of essential accessibility features in high-risk areas such as toilets, which would represent the bare minimum requirements for an elderly-ready home. **In this case study, compliance with these five (5) assessment metrics will be referred to as “UD-compliance”.**

Table 1: Extract from the MS1184:2014 Universal Design and Accessibility in the Built Environment – Code of Practice (Second Revision)

Section Name	Section	Sub-Section	Description	Assessment Metric
Doors and windows	18	18.1.1 (d)	Where raised threshold is provided (vis-à-vis level threshold), the maximum height is 10mm	There is at least a ramp, or a step height that is below 10 mm
Toilet	25	25.2 (d)	The WC compartments must have grab rails on the side of the toilet	There is a grab rail in at least one toilet
		25.4.1	The minimum dimension for an accessible toilet is 1700 mm width and 2200 mm depth	The toilet size is at least 1700 mm x 2200 mm
		25.5	The door shall have an unobstructed clear width of at least 800mm and it shall be easy to open and close. The door all is opened outwards.	At least one toilet door has a clearance of above 800 mm
Accessible bedrooms in non-residential buildings	26	N/A	Rooms accessible for wheelchair users shall be designed for two beds. Free space on at least one of the long sides of the bed shall not be less than 1200 mm. At the foot of the bed, at least 1200 mm is required.	The bedroom size is at least 2700 mm x 3200 mm

Source: Authors' summary

⁶Because the standard does not prescribe accessibility requirements specific to residential units, this study uses relevant criteria from comparable building typologies, such as hotel rooms and sanitary facilities, as proxies.

⁷A 3D VR (Virtual Reality) tour is an interactive, digital replica of a real-world space that allows users to freely navigate and explore an environment as if they were physically there. These tours combine panoramic imagery with 3D spatial data, and can be viewed on a standard screen, accessible on some of the developer's website.

FINDINGS

Finding 1: Overall Rate of UD-Compliance Is Low

The overall rate of UD-compliance is low across all 84 design layouts (approximately 18,033 units). Only 4% of the sample, affecting 196 units, met all five criteria, and these were found only within the high-rise sample. In contrast, 15% of layouts (13 layouts, representing 4,289 units) did not meet any, indicating a substantial likelihood that dwellers will need to relocate in the future. **Most developments exhibit partial compliance**, with one or two accessibility features present (Table 2). This highlights that even where some UD elements exist, they may not translate into meaningful usability for older persons.

Table 2: Summary of Assessment Findings

Level of UD-compliance	Served Residences/ High-rise		Landed	
	Number of Design Layouts	Number of Units	Number of Design Layouts	Number of Units
Observed all five (5) criteria	3	196	0	0
Observed at least four (4) criteria	4	242	0	0
Observed at least three (3) criteria	5	295	10	953
Observed at least two (2) criteria	9	548	19	2,419
Observed at least one (1) criteria	44	8,136	27	5,608
Observed none	13	4,289	0	0

Source: Authors' analysis

Finding 2: Spatial Criteria Are More Often Met Than Accessibility Criteria

Compliance varies significantly across the five criteria, with the highest compliance being in the 'minimum bedroom size' requirement and the lowest being in 'grab rails' and 'low threshold' access (Table 3). Bathroom-related standards were less consistently achieved, and of the four criteria assessed, the minimum toilet size requirement was the most commonly met.

Table 3: Ranking of Criteria by Number of Compliant Units (in the sample)

Assessment Criteria	Number of Compliant Units (Serviced Residences/ High-rise)		Number of Compliant Units (Landed)	
Meeting of a minimum size for bedrooms	8,136	65%	5,608	100%
Meeting of a minimum clearance for toilet doors	548	4%	1,825	33%
Meeting of a minimum size for toilets	295	2%	1,495	27%
Presence of ramps in at least one of the bathrooms or a step height below 10 mm	242	2%	52	1%
Presence of grab rails in the toilets	196	2%	0	0%

Source: Authors' analysis

Correlation analysis⁸ further indicates that compliance with spatial requirements, such as bedroom size, has only a weak relationship with compliance with other UD criteria (Table 4). In contrast, accessibility-related criteria tended to be met together, suggesting that layouts incorporating one age-friendly feature are more likely to include other age-friendly features. This implies that accessibility measures are often adopted as part of a deliberate design package, rather than being systematically incorporated into mainstream housing design.

Table 4: Correlation Table Between Criteria

Assessment Criteria	Bedroom Size	Toilet Size	Door Clearance	Ramp	Grab Rails
Bedroom Size		0.2511	0.2357	0.0813	0.1062
Toilet Size	0.2511		0.5587	0.3237	0.4231
Door Clearance	0.2357	0.5587		0.3448	0.3328
Ramp	0.0813	0.3237	0.3448		0.7651
Grab Rails	0.1062	0.4231	0.3328	0.7651	

Source: Authors' estimates

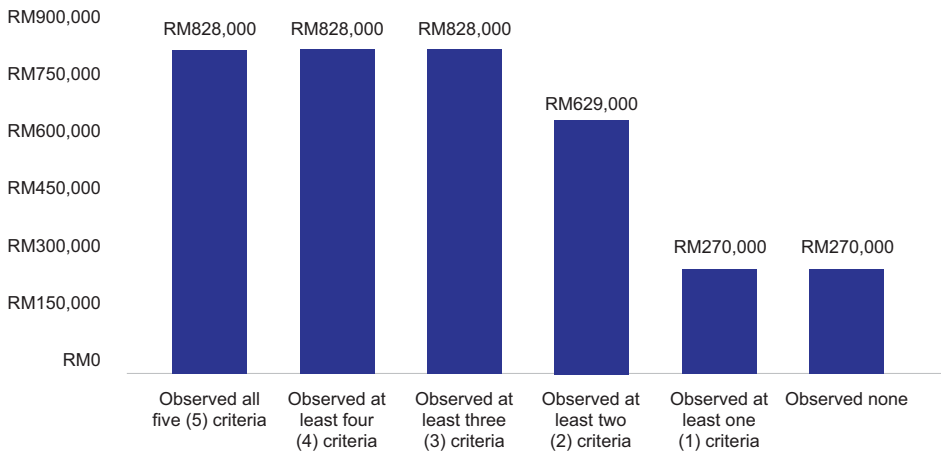
⁸Correlation coefficients measure the strength of association between criteria. Values closer to 1 indicate stronger relationships, while values closer to 0 indicate weaker relationships. Correlation does not imply causation.

Finding 3: Size and Price May Partially Support Compliance, but Do Not Guarantee Ageing-Friendliness

When assessing launch prices alongside UD compliance for high-rises, there was a clear association between higher price points and greater compliance with accessibility standards (Figure 1). **Units that met the minimum criteria for bedroom size and all bathroom-related criteria tended to have larger layouts** (i.e. having 3 to 4 bedrooms). These typically also come at higher price points. In this case study, the minimum purchase price for units that meet at least three UD standards starts at RM828,000. In contrast, lower-priced housing segments, including affordable housing schemes which start retailing at RM270,000, consistently exhibited lower compliance across most criteria.

The landed houses, however, present a different story. Although landed homes are generally larger and higher-priced, none of the landed layouts in this sample achieved full UD compliance. This is despite their relatively higher price points; in our sample, the average selling price of one unit is RM1.12 million. This shows that a larger space alone does not automatically translate into accessible and ageing-friendly design, which is a crucial finding, because size typically dictates the price.

Figure 1: The Minimum Selling Price for Residential Units (RM), by the Number of Criteria with which They Comply



Source: Authors' analysis

DISCUSSION

The low UD compliance observed in this case study is consistent with findings from earlier access audit studies of housing schemes in Malaysia (S. M. Zaid et al., 2019). This may reflect the absence of residential-specific UD standards (Sufian, 2012), with adoption being largely shaped by developers' cost–benefit considerations. The limited emphasis on accessibility is also evident in marketing materials, project websites, and even sales galleries (including Virtual Reality (VR) tours), where accessibility features, if mentioned at all, are typically communicated only minimally.

Compliance with the minimum bedroom size requirement is notably higher across the sample, suggesting that developers are more likely to meet UD requirements when these can already be achieved within current cost structures. Bedrooms are generally less constrained by waterproofing requirements and fixed fittings that reduce usable space.

In contrast, bathrooms present greater design challenges and are less likely to be compliant. In several instances, configurations that conceal plumbing within or behind fixtures reduce effective circulation space, thereby constraining UD compliance. Non-spatial features, such as ramps and grab rails, are typically treated as specialised provisions rather than standard design elements. Within the sample, units marketed as “elderly-friendly” are more likely to comply with most, if not all, of the criteria, suggesting that such features are deliberately incorporated rather than systematically embedded.

Overall, the findings suggest that UD elements continue to be treated as add-on features rather than baseline requirements. Importantly, non-compliance with spatial requirements, particularly bedroom and toilet dimensions, may be more difficult to address post-construction, especially in houses without hackable wall configurations, and may therefore necessitate future relocation. By contrast, fitting-related deficiencies, such as the absence of ramps and grab rails, can generally be addressed through less extensive retrofitting.

POLICY DIRECTIONS

The findings indicate that at least 4,289 homebuyers of upcoming developments in the Central Region between 2025 and 2028 may be at risk of relocation in older age. This provides evidence that standards alone are insufficient to ensure consistent compliance with UD principles, particularly in the absence of enforcement and market-based incentives. In this regard, the following policy directions are proposed for the consideration of policymakers:

1. Encouraging compliance through non-financial incentives, such as public developer ratings being “age-friendly” and “responsible”.
2. Introducing a standardised pre-occupancy protocol that includes UD assessment for new house launches to promote transparency, familiarise buyers with age-friendly features, and encourage stronger market demand for accessible housing.
3. Mandate minimum UD standards in residential design through licensing requirements and local authority approvals.

CONCLUSION

In summary, this case study evaluated selected upcoming housing stock for UD compliance using five criteria. A total of 4,289 housing units (representing 15% of design layouts and 2% of sampled units) are completely at risk of future relocation in old age, while overall compliance is low and uneven. However, this study acknowledges that ageing-in-place requires more than just UD-compliant houses. Elderly satisfaction also depends on factors such as the availability of social networks, communal spaces, and easy access to healthcare. Nevertheless, the study provides evidence that the mismatch between Malaysians’ aspirations to age-in-place and the feasibility of doing so persists. In addition, even large and expensive homes may not be compliant. The policy directions should move towards preparing for ageing-in-place among new homes, through non-financial incentives, standardised protocols for assessments, and mandating compliance.

REFERENCES

- Asian Development Bank. (2023). Malaysia Ageing and Retirement Survey Wave 2 (2021–2022) Survey Report. <https://doi.org/10.22617/TCS230314-2>
- Chang, C.-T., Lim, X.-J., Supramaniam, P., Chew, C.-C., Ding, L.-M., & Rajan, P. (2022). Perceived Gap of Age-Friendliness among Community-Dwelling Older Adults: Findings from Malaysia, a Middle-Income Country. *International Journal of Environmental Research and Public Health*, 19(12), 7171. <https://doi.org/10.3390/ijerph19127171>
- Coleman, T., & Kearns, R. (2015). The role of bluespaces in experiencing place, aging and wellbeing: Insights from Waiheke Island, New Zealand. *Health & Place*, 35, 206–217. <https://doi.org/10.1016/j.healthplace.2014.09.016>
- Department of Statistics Malaysia. (2025). POPULATION PROJECTIONS 2020-2060.
- Imrie, R. (2006). Independent lives and the relevance of lifetime homes. *Disability & Society*, 21(4), 359–374. <https://doi.org/10.1080/09687590600680152>
- Mansor, N. (2008). USABLE AND ACCESSIBLE DESIGN FEATURES IN MALAYSIAN HOUSES FOR THE INDEPENDENT AGED. Universiti Putra Malaysia (UPM).
- Mohamed Yusof, L. (2016). Universal design and professional practice obligations in Malaysian domestic. https://dro.deakin.edu.au/articles/thesis/Universal_design_and_professional_practice_obligations_in_Malaysian_domestic_housing_/21108973/1/files/37451725.pdf
- Sufian, A. (2012). THE ACCESSIBILITY OF BUILDINGS AND HOUSES FOR DISABLED PERSONS: THE LAW AND PRACTICE IN MALAYSIA. *IJUM Law Journal*, 15(1). <https://doi.org/10.31436/ijumlj.v15i1.60>
- Yeap, C. (2022, May 2). The State of the Nation: Solving housing (un)affordability issue good for households and the economy. *TheEdge Malaysia Weekly*. <https://theedgemalaysia.com/article/state-nation-solving-housing-unaffordability-issue-good-households-and-economy>
- Yusof, M., & Jones, D. (2014). Universal Design Practice in Malaysia: Architect's Perceptions of its Terminology. <https://doi.org/10.3233/978-1-61499-403-9-347>
- Zaid, S. M., Abu Yamin, A., Mohd Yaacob, N., & Kuala Lumpur, P. (2019). The Environmental Study on Ageing in Place: The Design Practice Compliance to Accessibility Legislation and Standards in Malaysia for Elderly Home Environment. In *Ekoloji* (Vol. 28, Number 107). <https://www.semanticscholar.org/paper/The-Environmental-Study-on-Ageing-in-Place%3A-The-to-Zaid-Yamin/ce7d8f3eb8658feb6beb2e6e3146a585d32dbf6c>

ARTICLE 2

ASSISTIVE TECHNOLOGY AS A CRITICAL ENABLER OF AGEING-IN- PLACE: SUMMARY FINDINGS FROM A MALAYSIAN POLICY STUDY

Haniza Khalid
Maya Puspa Abd. Rahman
Nasnin Toh-arlim

*Centre of Excellence for Research and Innovation in Islamic Economics (i-RISE),
INCEIF University*

ABSTRACT

Malaysia's rapidly ageing population is increasing demand for safe, affordable home-based care. Assistive technology (AT) enables older people to age in place with dignity and independence, yet adoption remains low due to high costs, fragmented government assistance, weak regulatory oversight, and low awareness. This study addresses three research questions: identifying the types of AT most useful for ageing at home and the challenges to affordability; mapping existing policies that promote the use of AT at home; and proposing policy recommendations to incentivise consumers and manufacturers to enhance accessibility and affordability. Recommendations include a national Assistive Products List, a one-stop platform for government care-related assistance programmes, long-term care insurance, and market incentives for home-based care services. Without coordinated action, AT will remain inaccessible to low-income older Malaysians, undermining ageing-in-place goals.

INTRODUCTION

Malaysia is undergoing a rapid demographic transition towards an ageing society. By 2040, an estimated 14.5% of the population will be aged 65 years and over (Department of Statistics Malaysia [DOSM], 2016), and the old-age dependency ratio will rise correspondingly.

Ageing in place, remaining at home rather than entering institutional care, is preferred by most older Malaysians for cultural, social and financial reasons (Owusu et al., 2023; Campbell & Herge, 2000). Home-based care remains the dominant model (Goh et al., 2013; Samsudin et al., 2019), with family members serving as primary caregivers under prevailing filial norms (Jawahir et al., 2021). For frail or ill older adults, home care also allows continuity with familiar medical providers and potentially faster recovery (Wong et al., 2025).

However, the cost of home care, direct and indirect, can be high, and in the face of limited old-age savings, the rise of sandwich families, and limited fiscal room to subsidise social care, the option to age at home appears not without its challenges. The realisation of this preference is increasingly constrained by shifts in family structure, labour migration, the financial burden of care, and the physical limitations associated with age-related functional decline. The traditional model of home-based care is heavily dependent on paid and unpaid carers, mainly women, who in turn face significant physical, emotional, and financial stress from the care responsibilities they carry (Goh et al., 2013; Jawahir et al., 2021).

In this context, assistive technology (AT) emerges not as an optional supplement but as a critical component of successful ageing-in-place strategies. AT encompasses a broad range of devices and systems, from mobility aids and home modifications to digital monitoring and robotic assistance, that can maintain or improve an individual's functional capacity and independence. Today, AT products, systems and software are increasingly included in care programmes for disabled and older persons, in response to limited care resources and options, as well as the desire of these persons to live healthily and independently for as long as possible (Sharif et al., 2018; Shore et al., 2020; Shirogane & Tanaka, 2026). Access to assistive products enables persons with functional impairments to enjoy a better quality of life and well-being.

While the use of AT in elderly care aligns with modern development perspectives, this study does not argue that it should replace the family or the human role in care. It simply facilitates or augments the caregiving process and aligns with the fundamental objectives of Maqasid Shariah—Hifz al-Nafs (preservation of life) — and, embedded within it, the ability to age with dignity. This, together with the Sustainable Development Goals (SDGs), forms the overarching motivation for this study.

Against this backdrop, the study addresses three key research questions. First, it seeks to identify the types of assistive technology most useful for supporting older people to age at home, and to examine the challenges of developing affordable AT options for Malaysian households. Second, it maps existing policies and programmes that promote or facilitate the use of at-home assistive technology, identifying gaps and areas for improvement. Third, the study proposes policy recommendations to incentivise both consumers and manufacturers to enhance the accessibility, affordability, and uptake of AT in Malaysia.

RESEARCH METHODOLOGY

This study employed a mixed-methods approach comprising four components. First, a desktop review mapped local and international policies promoting at-home assistive technology (AT) use, identifying strengths, gaps, and market dynamics. Second, two focus group discussions (FGDs) were held in August–September 2025 with a purposively sampled cross-section of 13 stakeholders: 9 demand-side representatives (including caregivers, potential users, and community-based enablers) and 4 supply-side stakeholders (manufacturers, distributors, and AT service providers). The FGDs explored constraints affecting AT adoption, affordability, and accessibility in at-home elderly care. Third, a benchmarking analysis examined cross-national AT governance models—including Norway, Singapore, the Philippines, and Japan—to draw comparative insights for policy adaptation to Malaysia's context.

Fourth, a field case study was conducted in the Klang Valley in September–October 2025, involving direct home observations of two households: one with a complex chronic care profile and another with preventive or post-surgical mobility needs. A Care Assessor Team (CAT), comprising a gerontology specialist, a medical doctor, and a licensed medical supply representative, conducted comprehensive home hazard assessments and functional evaluations using a structured questionnaire (see Annex B of the full report). The CAT identified specific AT needs across mobility, self-care, home modifications, and safety, and estimated itemised costs and prioritised interventions. This triangulation of methods enabled the identification of both systemic barriers and granular, household-level AT requirements, providing a robust evidence base for the policy recommendations.

ASSISTIVE TECHNOLOGY'S IMPORTANCE IN AGEING AT HOME

The National Health and Morbidity Survey 2025 (Institute of Public Health [IPH] 2025) has revealed that 18.8% of elderly individuals in Malaysia are living alone, a significant increase from 6.3% in 2018. With no constant caregiver present, AT—motion sensors, emergency buttons, automated medication dispensers—enables safe independent living.

Financial and infrastructural constraints also favour AT. Many older Malaysians lack savings for institutional care, and no standalone long-term care insurance exists (Khalid & Mansor, 2025). Formal care facilities are limited, especially in rural areas. A one-off AT investment of a few thousand ringgit (as per this project's case studies) can delay costlier nursing home placements or hospitalisations, reducing the caregiver burden and overall care costs, thereby making ageing in place feasible for modest-income households.

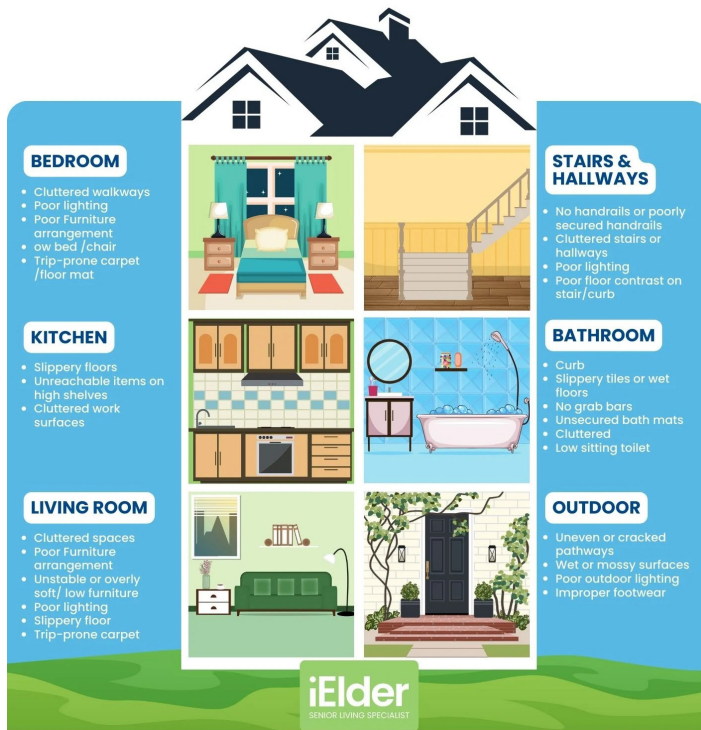
TYPES OF ASSISTIVE TECHNOLOGY

Assistive technology for elderly care spans a wide range of products and systems. The World Health Organisation's classification organises AT by functional purpose: mobility (e.g., wheelchairs, walkers, stair lifts); self-care (e.g., shower chairs, raised toilet seats, incontinence products); vision and hearing (e.g., magnifiers, hearing aids); cognition (e.g., pill organisers, calendar alerts); and communication (e.g., amplified telephones, video-calling platforms).

Beyond these low- and intermediate-tech devices, gerontechnology, also referred to as digital AT or AgeTech, includes wearable health monitors, smart home sensors for fall detection, telemedicine platforms, and, in more advanced applications, socially assistive robots. The feasibility and cost-effectiveness of implementing in-home passive remote monitoring (PRM) systems, supported by interactive communication technologies, warrant further study to facilitate home-based care for individuals with Alzheimer's disease and related dementias (ADRD) (Gerłowska et al., 2020).

Home modifications, such as installation of grab bars, anti-slip flooring, and portable ramps, are also included as a critical sub-category, as they directly address environmental barriers to safe independent living (see Figure 1). The appropriate selection of AT often requires assessment across multiple domains, since older persons frequently present with overlapping mobility, sensory, and cognitive limitations.

Figure 1: Example of Home Hazard Assessment Checkpoints



Source: iElder (<https://ielder.asia/>)

MARKET-SHAPING FACTORS FOR ASSISTIVE TECHNOLOGY

Despite the benefits of employing AT for ageing-in-place, the study identifies persistent and multifaceted barriers to its uptake. On the demand side, high out-of-pocket costs are the primary obstacle. Many assistive products require significant upfront expenditure; for example, a stair lift ranges from RM12,000 to RM40,000, and low-income households frequently prioritise other necessities. Health inequality intersects with wealth inequality; those with the greatest functional need are often least able to afford appropriate AT. Furthermore, most medical insurance plans do not cover assistive devices, and public funding is limited to means-tested programmes with restrictive eligibility criteria. The requirement to register as a person with disability (Orang Kurang Upaya, OKU) under the Social Welfare Department's scheme excludes many older persons who do not self-identify as disabled but nonetheless require AT. The application process for government assistance is fragmented, involving multiple agencies (hospitals, Jabatan Kebajikan Masyarakat or JKM, suppliers) and requiring extensive documentation, leading to approval delays of weeks or months. Low awareness of AT options, stigma associated with device use, and a lack of post-fitting training further suppress effective demand.

On the supply side, the study finds that the Malaysian AT market remains fragmented and oriented towards the high-income segment. Imported products are costly due to intellectual property protections and limited domestic production capacity. Malaysia's private AT sector faces structural barriers, including high material costs and weak effective demand, leaving low-income and rural populations underserved. This suppresses market signals, deterring investment and perpetuating high costs (WHO, 2025). Additionally, gaps persist across the product life cycle: weak referral pathways from healthcare providers to specialist AT services limited training for the AT sales and services workforce, ineffective regulation, and buyers' financing constraints that discourage after-sales support, all hindering fit-for-purpose provision and use (Tangcharoensathien et al., 2018).

Furthermore, the study finds that Malaysia has yet to establish a national Priority Assistive Products List (APL)—a gap that weakens government policy coordination in procurement planning, subsidy design, and market signalling. Regulatory oversight is uneven: while medical devices such as wheelchairs and patient lifts must be registered with the Medical Device Authority (MDA), other AT categories (e.g., simple mobility aids, cognitive support tools) are not subject to equivalent quality and safety standards. Suppliers also face high compliance overhead due to the siloed mandates of multiple ministries and agencies.

The study's two case studies illustrate these dynamics. In the first case (complex chronic care), a 76-year-old man with stage 4 prostate cancer, heart disease, and mobility impairment required immediate safety modifications, including portable ramps, grab bars, a shower chair, and a bed safety rail. The estimated cost of essential AT was RM3,461. In the second case (preventive and post-surgical), a 79-year-old woman with spinal instability needed a stair-assist cane, hallway grab bars, anti-slip bathroom treatment, and night lights, totalling RM1,575. Both households had full-time carers, so digital monitoring devices were not prioritised; however, for older people living alone, such technologies (e.g., fall detectors, SOS buttons, activity sensors) are increasingly relevant.

The two case study costs represent a basic safety basket—the minimum essential modifications to address immediate fall risks and enable safe daily functioning. They are deliberately modest in scope, focusing on low-tech, high-impact interventions that most households can feasibly install. This is distinct from the high-cost, specialised equipment category, such as stair lifts (RM12,000–RM40,000), hospital-grade adjustable beds, or advanced rehabilitation robotics, which may be necessary for people with more severe mobility impairments or complex architectural barriers (e.g., multi-storey homes with narrow staircases). The second case, for instance, did not proceed with a stair lift due to the staircase's narrow, multi-turn configuration, which made installation both technically difficult and prohibitively expensive—hence the recommendation of a lower-cost stair-assist cane instead. Thus, while the baseline

investment for a basic AT package is relatively modest, the overall financial barrier can be substantial for other households whose needs extend beyond this minimum basket, particularly as functional decline progresses or when home layouts are unsuitable for safe ageing and thus require extensive structural modification.

POLICY RECOMMENDATIONS

Based on these findings, the study proposes a set of policy interventions to improve AT access and uptake. First, financing mechanisms should be expanded. A tiered voucher system linked to a national APL would allow eligible beneficiaries to purchase AT from registered suppliers, with co-payment options for higher-specification devices. If introduced, long-term care insurance should explicitly include AT in its benefit package. Alternative financing instruments, such as social impact bonds or micro-Takaful schemes, could be piloted.

Second, government assistance channels require streamlining. A unified digital portal that integrates OKU registration, medical assessment, income verification (e.g., e-Kasih), and AT application would reduce administrative fragmentation. Appointing a designated case officer to guide applicants from clinical evaluation to device delivery would improve accountability and timeliness. Public service standards should set maximum processing times (e.g., 30 days for OKU registration, 45 days for AT approval). A “trade-in” and refurbishment pool for used devices could reduce costs and support temporary needs.

Third, regulatory and market oversight should be strengthened. A Malaysian Priority Assistive Products List (APL) should be developed, based on the WHO model (WHO, 2016), to guide procurement, subsidies, and tax incentives. Malaysia’s MDA oversight should be extended to cover a broader range of AT products, with enhanced post-market surveillance and platform accountability for online sales. Universal design guidelines for residential buildings (MS1184:2014) should be enforced more rigorously, particularly in new housing developments.

Fourth, awareness and workforce capacity must be addressed. AT demonstration centres—located in public hospitals, community centres (Pusat Aktiviti Warga Emas or PAWE), or retail spaces—would enable older people and carers to trial devices before purchase. Frontline health staff (e.g., community nurses, occupational therapists, family medicine specialists) should receive training in basic AT needs assessment and referral. Public awareness campaigns should present AT expenditure as a standard component of responsible eldercare, rather than as an optional or stigmatised purchase.

Finally, the study recommends developing a national action plan for AT, aligned with the WHO regional strategic framework (WHO, 2016, 2025). Such a plan would set out specific objectives, lead agencies, monitoring indicators, and a timeline for implementation. Coordination across ministries—Health, Women, Family and Community Development, Economy, Science, Technology and Innovation, and Local Government—is essential to avoid duplication and ensure coherent policy implementation.

CONCLUSION

As Malaysia approaches aged nation status, the sustainability of home-based eldercare will increasingly depend on the systematic integration of assistive technology. Current barriers—financial, regulatory, informational, and administrative—are substantial but surmountable. Evidence from the case studies shows that relatively modest capital investments in AT can significantly improve home safety and support continued independence. Without deliberate policy intervention, AT will remain accessible only to higher-income households, and the broader objective of enabling older Malaysians to age in place with dignity and security will not be realised. Transitioning from a disability-compensation model to a preventive, ageing-in-place support model requires coordinated action across financing, service delivery, regulation, and public awareness. Addressing these gaps is not merely a health or social welfare concern but a strategic necessity for the country's long-term social and economic resilience.

FUNDING SUPPORT

This study was supported by the Ministry of Finance under the IERIF 2025 Grant Project No. 372 through INCEIF University.

REFERENCES

- Campbell, J. E., & Herge, E. A. (2000). Challenges to aging in place. *Physical & Occupational Therapy in Geriatrics*, 18(1), 75–90. https://doi.org/10.1080/J148v18n01_06
- Department of Statistics Malaysia. (2016). *Population Projection (Revised), Malaysia, 2010-2040*. Department of Statistics Malaysia.
- Department of Statistics Malaysia. (2024). *Household Income and Expenditure Survey 2024*. Department of Statistics Malaysia.
- Gerlowska, J., Furtak-Niczyporuk, M., & Rejdak, K. (2020). Robotic assistance for people with dementia: A viable option for the future? *Expert Review of Medical Devices*, 17(6), 507–518. <https://doi.org/10.1080/17434440.2020.1770592>
- Goh, C. L., Lai, P. S. M., & Chan, K. G. (2013). Informal caregiving in Malaysia: Trends and challenges. *Malaysian Journal of Public Health Medicine*, 13(2), 1–7. <https://doi.org/10.5539/ass.v9n4p174>
- Institute for Public Health. (2025). *National Health and Morbidity Survey (NHMS) 2025: Health Status of Older Persons in Malaysia*. Ministry of Health Malaysia.
- Jawahir, S., Tan, E.H., Tan, Y.R. et al. (2021). The impacts of caregiving intensity on informal caregivers in Malaysia: findings from a national survey. *BMC Health Service Research* 21, 391. <https://doi.org/10.1186/s12913-021-06412-5>.
- Khalid, H., & Mansor, N. (2025). Living longer and in need of care: Should long-term care benefits be introduced in Malaysia's social protection system? (Working Paper No. 3/2025). Social Wellbeing Research Centre.
- Owusu, B., Bivins, B. L., Marseille, B. R., & Baptiste, D. (2023). Aging in place: Programs, challenges and opportunities for promoting healthy aging for elderly adults. *Nursing Open*, 10(9), 5784–5786. <https://doi.org/10.1002/nop2.1872>
- Samsudin, S., Abdullah, N., Syakiran, N., Ismail, A., Hassan, K., & Ahmad, U. A. (2019). Growing old at own home: A study among pre-elderly adults in Peninsular Malaysia. *Economics & Sociology*, 12(1), 115–124. <https://www.economics-sociology.eu/>
- Sharif, M. S., Alsallal, M., & Herghelegiu, L. (2018). An effective telehealth assistive system to support senior citizens at home or care homes. 2018 International Conference on Computing, Electronics & Amp; Communications Engineering (iCCECE), 113–117. <https://doi.org/10.1109/iccecome.2018.8658877>
- Shirogane, Satoshi & Tanaka, Toshiaki. (2026). Supporting mobility for the elderly and persons with disabilities 1. In book: *Inclusive and barrier-free designs for rehabilitation engineering* (pp.69–88), Tanaka, T. (2026). *Inclusive and Barrier-Free Designs for Rehabilitation Engineering*. University of Tokyo. Springer.
- Shore, L., Eyto, A. d., & O'Sullivan, L. (2020). Technology acceptance and perceptions of robotic assistive devices by elderly adults – implications for exoskeleton design. *Disability and Rehabilitation: Assistive Technology*, 17(7), 782–790. <https://doi.org/10.1080/17483107.2020.1817988>
- Tangcharoensathien, V., Witthayapipopsakul, W., Viriyathorn, S., & Patcharanarumol, W. (2018). Improving access to assistive technologies: Challenges and solutions in low-and middle-income countries. *WHO South-East Asia Journal of Public Health*, 7(2), 84–89. <https://doi.org/10.4103/2224-3151.239419>
- Wong, K. P., Teh, P., Lim, W. M., & Lee, S. W. H. (2025). Enhancing elderly adults' lives through positive aging perception, quality-of-life enhancement, and social support to drive acceptance and readiness toward indoor assistive technology: Cross-sectional study. *JMIR Aging*, 8, e59665. <https://doi.org/10.2196/59665>
- World Health Organisation. (2016). *Priority assistive products list*. World Health Organisation.
- World Health Organisation. (2025). *Guide for assistive technology market assessment and shaping*. WHO Regional Office for Europe.

ARTICLE 3

DESIGNING EFFECTIVE ENTREPRENEURSHIP TRAINING PROGRAMMES FOR SENIOR ENTREPRENEURS: INSIGHTS FOR INCLUSIVE PROGRAMME DEVELOPMENT

Fatimah Zahra Ros'azam
Mary Rose Sankaran

ASEAN Research Center, Asia School of Business (ASB)

ABSTRACT

Due to increasing life expectancy and rising cost of living, retirees are often faced with financial insecurity. Entrepreneurship is seen as an alternative source of income which helps relieve their financial burden and promote continued economic and social participation. While many entrepreneurship training programmes are available to assist individuals in their ventures, there is a lack of entrepreneurship training programmes specifically tailored to older adults, whose diverse backgrounds, needs and skillsets may require different approaches compared to younger participants. This study examines key elements of effective entrepreneurship training for seniors based on a review of existing literature. The study then assesses the current provision of such programmes in Malaysia before offering targeted recommendations for policymakers and Non-Governmental Organisations (NGOs).

INTRODUCTION

Malaysia is undergoing a profound demographic shift, ranking fourth in population ageing among ASEAN member states (Department of Statistics Malaysia, 2024). This mirrors a broader global trend in which longer life expectancy and low fertility rates are placing heavy strain on pensions, healthcare, and long-term care systems, leaving older people at continued risk of poverty. In Malaysia, retirement preparedness remains inadequate: as of 2024, only 36% of active Employees Provident Fund (EPF) contributors met the basic savings level to sustain basic necessities in retirement by 2030 (EPF, 2024).

Entrepreneurship has gained recognition globally as a viable pathway for older adults to maintain financial independence while contributing meaningfully to society and the economy (Organisation for Economic Co-operation and Development [OECD] & European Commission, 2023). It supports the goals of active ageing, a framework that encourages older adults to age independently and securely. Financially, entrepreneurship offers retirees a supplementary income stream that can offset the inadequacy of pension and retirement savings, enabling them to maintain their standard of living without reliance on family or state support. This sentiment is reflected locally. A study conducted by Kumpulan Wang Persaraan (KWAP) found that 60% of surveyed civil servants expressed interest in starting a business after retirement, with the pursuit of additional income cited as a primary motivation (KWAP, 2026). Entrepreneurship also provides older adults with a sense of purpose and meaning in their post-retirement years, offering an avenue through which decades of professional experience and accumulated skills can be channelled into productive contributions to society and the economy (OECD & Economic Research Institute for ASEAN and East Asia [ERIA], 2025).

Entrepreneurship training equips individuals with the skills and confidence needed to start and sustain a business, and plays an important role in enterprise growth and survival. Without structured support, many aspiring entrepreneurs struggle to actualise their intentions, making training programmes a much-needed bridge between planning and execution. However, supporting older adults in entrepreneurship is not as straightforward as extending existing programmes to include them, as older and younger entrepreneurs differ considerably in their motivations, learning preferences, life circumstances, and the barriers they face. While younger entrepreneurs typically seek training to build technical skills, access capital, and accelerate wealth-building goals, older adults are more often seeking motivation, empowerment, renewed self-esteem, and peer connection (Hantman & Gimmon, 2014). They also bring distinct assets, such as decades of professional experience and industry knowledge, while challenged by lower digital literacy and outdated professional networks (OECD & European Commission, 2023). Training programmes designed without these accommodations risk being ineffective or inaccessible to the very people they intend to serve.

METHODOLOGY AND DATA

This paper employs a narrative review methodology to synthesise evidence on entrepreneurship training programmes for older adults. Literature was sourced primarily from Google Scholar using keywords including *entrepreneurship training programmes*, *senior entrepreneurs* and *senior entrepreneurship* in Malaysia. Sources from 2010 to 2026 were prioritised, encompassing peer-reviewed journal articles, policy reports, and guidelines from organisations such as the OECD. Inclusion was guided by relevance, focusing on literature addressing entrepreneurship training for adults aged 50 and above. Both Malaysian and international sources were drawn upon to contextualise local needs within broader global evidence and best practices. In addition, the authors reviewed publicly available information on entrepreneurship programmes offered by government agencies and non-governmental organisations (NGOs), including programme descriptions, eligibility criteria, application processes, and other relevant details that were accessible through official websites or readily available via web searches. Although narrative reviews can provide a rich and meaningful overview of the topic, they lack the structured approach and synthesis that systematic reviews have, leaving their interpretation open to critique (Sukhera, 2022).

RESEARCH FINDINGS

Designing Effective Entrepreneurship Training Programmes for Older Adults

The literature review draws on international studies on entrepreneurship training for older adults, which highlight several key elements required for effective programme design for this demographic. One key element is the adoption of age-sensitive learning approaches that recognise the learning preferences and circumstances of this demographic. Maritz and Eager (2017) found that older adults prefer interactive, peer-based learning over specific technical instruction. They appreciate an environment where they are able to collaborate with their peers and trainers, engage with real-world challenges and gain practical skills that can be applied to their business. Working collaboratively allows older learners to exchange skills and experience, enhance their self-esteem and improve confidence. Alternative delivery tools such as role-playing activities, case studies, feedback sessions, videos and simulation-based learning can also enhance learning. Personalised guidance also plays a significant role in supporting the learning and development of older adults, with many participants identifying individualised support as beneficial to their entrepreneurial journey (Römer-Paakkanen & Suonpää, 2023).

Survey findings on preferred delivery methods among older adults show mixed results. One study found that 56% preferred in-person classes, 22% preferred online learning, and 22% preferred hybrid learning approach (Maritz & Eager, 2017), while Römer-Paakkanen and Suonpää (2023) reported higher preferences for online learning (40%) and hybrid approach (34%), with only 4% favouring in-person classes. Overall, the findings suggest that delivery preferences among older adults are not consistent and may vary depending on individual preferences and circumstances. It is important for training providers to adopt flexible approaches that accommodate different levels of access and digital literacy.

Furthermore, social and emotional support is an important component in training for seniors, especially for those who are beginning to navigate unfamiliar entrepreneurial environments. Business counselling, mentoring, and personal coaching have been identified as key enablers that encourage older adults to pursue entrepreneurship (Hantman & Gimmon, 2014). According to Kibler et al. (2015), mentoring programmes are essential in helping older adults with their business, and retirees preferred to have mentors of a similar age. Reverse mentoring, where younger entrepreneurs mentor older entrepreneurs, was also seen as a beneficial strategy to promote intergenerational learning (Kenny & Rossiter, 2017), and both groups found it a rewarding experience (Hantman & Gimmon, 2014). This is further reflected in group-based learning, where participants report feeling less isolated and more confident in moving from planning to implementation when learning alongside peers. Given the diversity among older adults, training programmes should offer access to mentors from different age groups, enabling participants to benefit from a wider range of experiences and expertise (Matos & Amaral, 2019).

Digital and technological inclusion is another important consideration in entrepreneurship training for older adults. Compared to younger counterparts, there is a digital literacy gap for senior entrepreneurs, which may restrict their ability to utilise online platforms for business (OECD & European Commission, 2023). This gap potentially limits their ability to fundraise and earn when starting their businesses. For example, older participants were found to be less familiar with crowdfunding as a means of raising capital, despite demonstrating strong problem-solving abilities in other areas. In contrast, younger participants readily identified crowdfunding as a potential funding source (Chee, 2025). These findings highlight the importance of incorporating digital literacy into training programmes for seniors.

Apart from that, effective entrepreneurship training for older adults should also be supported by a strong institutional and entrepreneurial ecosystem. Matos and Amaral (2019) found that funding is the least common form of support available to senior entrepreneurs. Financial assistance, including grants and microfinance, plays a crucial role in enabling senior entrepreneurship, as seniors often face greater challenges in accessing finance. This is partly due to lenders and investors imposing shorter time horizons for loan repayment or return on investment, which may place older entrepreneurs at a disadvantage (OECD & European Commission, 2023). Business financing schemes that include entrepreneurship training tend to be more effective, as they provide entrepreneurs with the skills needed to use the financing received (European Commission & OECD, n.d.).

Institutional and ecosystem support extends beyond financial assistance to include networking opportunities that facilitate access to knowledge and business connections. Although retirees are seen as having more developed networks accumulated throughout their careers (Römer-Paakkanen & Suonpää, 2023), these networks might be outdated, especially for those who are transitioning into entrepreneurship after retirement or engaging in business activities unrelated to their prior work experience (OECD & European Commission, 2023). Entrepreneurship training programmes should therefore enable seniors to expand and diversify their networks by connecting them with mentors, investors, and peers, thereby strengthening their social capital and supporting business development.

Current Entrepreneurship Training Provision for Older Adults in Malaysia

Building on the literature on effective entrepreneurship training for seniors, the following section assesses the current Malaysian context through a review of publicly available information on existing entrepreneurship programmes.

The review found that, although numerous entrepreneurship training programmes are offered by government agencies and NGOs in Malaysia, programmes that are tailored specifically to the elderly remain scarce. Existing initiatives dedicated to assisting retirees economically, such as SEBA: Senior Back in Action programme by Human Resource Development Corporation (2024), tend to emphasise employability and general income generation opportunities, rather than providing entrepreneurship-specific training and support. Programmes that do offer entrepreneurship-specific training and support are sometimes limited to particular groups of retirees. For instance, the JanaMyPesara programme by KWAP focuses primarily on retired public servants (KWAP, 2026), which limits access for retirees from other backgrounds. Similarly, some organisations, such as Majlis Amanah Rakyat (MARA) and Dewan Bahasa dan Pustaka (MARA, 2026; Institut Keusahawanan Negara, 2026) offer pre-retirement programmes aimed at preparing employees for entrepreneurship as a potential post-retirement career pathway; however, access is limited exclusively to the organisations' employees.

Beyond issues of programme availability and access, our review also indicates that limitations exist in the transparency of information provided. While information may be available on organiser's websites, it is often difficult to determine whether the details are up-to-date, unless prospective participants contact the organisations directly. Other than that, many programmes are offered on a limited or periodic basis, yet information on programme duration, or start and end dates is not always clearly stated. This lack of clear and accessible information may reduce awareness of available opportunities.

Funding for these programmes is also limited, as financial support is rarely provided. When funding is available, it is often accompanied by strict eligibility requirements. For example, our review of Belanjawan 2026 (Ministry of Finance, 2025) identified only one financing initiative that specifically targets retirees, namely the Bank Simpanan Nasional Micro-i Madani Bakti programme (Bank Simpanan Nasional, 2026). However, eligibility is restricted to veterans and government pensioners, excluding older adults from other backgrounds.

Furthermore, the review shows that the outcomes of these entrepreneurship training programmes are rarely reported in the media, and there is also a lack of publicly available evaluation reports and outcome assessments, making it difficult to assess their effectiveness in creating and assisting senior entrepreneurs. Lack of monitoring and evaluation reduces the opportunity for programme improvement and may discourage participation among potential applicants.

Overall, there is a clear gap between the elements identified in the literature as essential for effective senior entrepreneurship training and the current provision in Malaysia, which remains limited in scope, accessibility, and support.

POLICY RECOMMENDATIONS/IMPLICATIONS

Unlocking the potential of Malaysia's silver economy requires coordinated policy efforts to support entrepreneurship among older adults. Building on the findings of this review, the following policy recommendations are proposed to address the identified gaps and strengthen the entrepreneurial support for older adults:

- **Promote entrepreneurship as a viable post-retirement pathway** by raising awareness of its benefits, including financial security, active ageing, and social participation. This can be achieved through role model initiatives, awareness campaigns, events, and recognition awards that showcase the contributions of older entrepreneurs.
- **Improve the visibility and accessibility of entrepreneurship programmes for older adults** by establishing a centralised, government-managed platform that provides up-to-date and consolidated information on programme availability, eligibility requirements, and application timelines.
- **Expand financial support for senior entrepreneurs** through grants, microfinance schemes, and special tax incentives to improve access to capital and encourage business growth.
- **Design age-sensitive and inclusive entrepreneurship training programmes** that accommodate the diverse learning needs of older adults and incorporate appropriate digital literacy support.
- **Provide structured post-training support mechanisms** such as follow-up mentoring, business incubation support, and peer alumni networks to enhance the transition from training to business implementation.
- **Strengthen programme monitoring and evaluation** by systematically tracking outcomes such as business creation and business sustainability, and have the results shared publicly to enhance transparency and accountability.

CONCLUSION

Entrepreneurship presents a meaningful pathway for seniors to sustain their livelihoods, maintain purpose and contribute actively to society and the economy post-retirement. Malaysia's growing senior population is an underutilised economic force and their entrepreneurial potential remains untapped. Realising this potential requires the right support to this population through programmes that are intentionally designed around their unique needs and circumstances, rather than adapted from existing frameworks. Investing in the development of entrepreneurs from vulnerable groups is a progressive move to broaden economic participation, population wellbeing and reduce fiscal burdens.

REFERENCES

- Majlis Amanah Rakyat. (2026, March 12). Infografik: Program Persediaan Bakal Pesara MARA. Program ini dirangka khas untuk memberi laluan kepada bakal pesara menceburi bidang baharu sebelum melangkah ke alam persaraan. Bahagian Sumber Manusia. Facebook. Retrieved May 29, 2026, from <https://www.facebook.com/photo/?fbid=1412206490950684&set=a.230064632498215>
- Bank Simpanan Nasional. (2026). Madani Bakti-i. Retrieved May 29, 2026, from <https://www.bsn.com.my/page/MadaniBakti-i?lang=ms-MY>
- Chee, H. (2025). Harnessing the silver tsunami: an investigation into the benefits and challenges of senior entrepreneurship in Singapore. *Entrepreneurship and Regional Development*, 1–18. <https://doi.org/10.1080/08985626.2025.2465711>
- Department of Statistics Malaysia. (2024). MyAgeing Portal [Dataset]. <https://www.dosm.gov.my/portal-main/article/myageing>
- Employees Provident Fund. (2024, December 12). EPF releases Belanjawanku 2024/2025 and Retirement Income Adequacy Framework [Press release]. <https://www.kwsp.gov.my/en/w/epf-releases-belanjawanku-2024/2025-and-retirement-income-adequacy-framework>
- European Commission & Organisation for Economic Co-operation and Development. (n.d.). Facilitating access to finance for senior entrepreneurs. In *The Better Entrepreneurship Policy Tool*. <https://betterentrepreneurship.eu/en/guidance-note/facilitating-access-finance-senior-entrepreneurs>
- Hantman, S., & Gimmon, E. (2014). Dare to Dream: New venture incubator for older adults. *Educational Gerontology*, 40(10), 737–744. <https://doi.org/10.1080/03601277.2014.893748>
- Human Resource Development Corporation. (2024). Senior Back in Action (SEBA). Human Resource Development Corporation. Retrieved May 29, 2026, from <https://supportcentre.hrdcorp.gov.my/portal/en/kb/articles/senior-back-in-action-seba>
- Institut Keusahawanan Negara. (2026, May 22). Persaraan bukan noktah kepada perjalanan, tetapi ruang untuk memulakan fasa baharu dengan ilmu, pengalaman dan peluang yang berbeza. Instagram. Retrieved May 29, 2026, from <https://www.instagram.com/p/DYn78Qajrvo/>
- Kenny, B., & Rossiter, I. (2017). Transitioning from unemployment to self-employment for over 50s. *International Journal of Entrepreneurial Behaviour & Research*, 24(1), 234–255. <https://doi.org/10.1108/ijeb-01-2017-0004>
- Kibler, E., Wainwright, T., Kautonen, T., & Blackburn, R. (2015). Can social exclusion against “Older entrepreneurs” be managed? *Journal of Small Business Management*, 53, 193–208. <https://doi.org/10.1111/jsbm.12194>
- Kumpulan Wang Persaraan. (2026). KWAP Lancar jana MyPesara, program pembiayaan mikro untuk menyokong pesara sektor awam [Press release]. Retrieved May 29, 2026, from <https://www.kwap.gov.my/media-centre/kwap-lancar-jana-mypesara-program-pembiayaan-mikro-untuk-menyokong-pesara-sektor-awam/>
- Maritz, A., & Eager, B. (2017). Senior Entrepreneurship Themes: An Australian perspective. *International Journal of Organizational Innovation*, 9(4), 206–221. <https://www.ijoi-online.org/index.php/back-issues/52->
- Matos, C. S., & Amaral, M. (2019). Senior Entrepreneurship: global mapping of supporting initiatives and programmes. In Edward Elgar Publishing eBooks. <https://doi.org/10.4337/9781788116213.00008>
- Ministry of Finance. (2025, October 10). Ringkasan Belanjawan. Retrieved May 29, 2026, from <https://belanjawan.mof.gov.my/pdf/belanjawan2026/ucapan/touchpoint-budget-bm.pdf>
- Organisation for Economic Co-operation and Development & European Commission. (2023). *The Missing Entrepreneurs 2023*. OECD Publishing. <https://doi.org/10.1787/230efc78-en>
- Organisation for Economic Co-operation and Development & Economic Research Institute for ASEAN and East Asia. (2025). *Promoting active ageing in Southeast Asia*. OECD Publishing. <https://doi.org/10.1787/22849f38-en>
- Römer-Paakkanen, T., & Suonpää, M. (2023). Entrepreneurship Education with Purpose: Active Ageing for 50+ Entrepreneurs and Sustainable Development for Rural Areas. *Education Sciences*, 13(6), 572. <https://doi.org/10.3390/educsci13060572>
- Sukhera, J. (2022). Narrative reviews: Flexible, rigorous, and practical. *Journal of Graduate Medical Education*, 14(4), 414–417. <https://doi.org/10.4300/jgme-d-22-00480.1>

ARTICLE 4

ISLAMIC CHOICE ARCHITECTURE FOR RETIREMENT DECISIONS: APPLYING THE HUKUM FRAMEWORK TO OVERCOME BEHAVIOURAL BARRIERS AMONG MUSLIM RETIREES IN MALAYSIA

Aminath Sharahath¹

Ziyaad Mahomed²

¹*Sanabil Academy*

²*INCEIF University*

ABSTRACT

Malaysia is projected to become a super-aged society by 2056, and its retirement system is already under pressure. Among Muslim Malaysians, limited use of retirement financial instruments is often attributed to cultural and religious factors. This paper re-examines this assumption by applying the *Hukum* framework (the Islamic classification of actions into categories such as obligatory, permissible, and prohibited) to understand retirement decision-making. Drawing on interviews with 21 Shari'ah scholars and a survey of 92 Muslim respondents using a hypothetical scenario, the study identifies three key barriers: (1) a strong preference to leave inheritance even at the expense of personal financial security, (2) broad aversion to debt regardless of structure, and (3) gaps in understanding of *nafaqa* (the obligation to ensure financial self-sufficiency before supporting others and financial duty towards parents). The findings suggest that these barriers interact with behavioural biases, while *Hukum* reframing may shift decisions on inheritance and family support. They point to the need for clearer product explanations, stronger *nafaqa* literacy, more consistent religious guidance, and further testing of Shari'ah-compliant retirement income options.

INTRODUCTION

Malaysia became an ageing society in 2020, when more than 7% of its population reached the age 65. The World Bank expects that share to double to 14% by 2044 and to reach 20% by 2056 (World Bank, 2020). Few countries have aged this fast (UN DESA Population Division, 2024), and the institutions meant to support old age have not caught up.

The numbers are stark. Under the Basic Savings benchmark, restructured in 2024 under the Employees Provident Fund's (EPF) Retirement Income Adequacy Framework, only about 41% of active formal-sector members had reached the age-based target by the end of 2025 (EPF, 2024; The Edge Malaysia, 2026). One in four Malaysians exhaust their EPF savings within five years of the withdrawal age (New Straits Times, 2024). 40% of working-age Malaysians have no formal retirement coverage at all (World Bank, 2025). Among EPF members aged 18 to 30, around 60% are not on track to achieve the Basic Savings benchmark of RM390,000 by age 60 (EPF, 2026).

For Muslim Malaysians, retirement decisions are judged against religious obligation as much as the household budget, and conventional policy treats this as a constraint to manage. This paper proposes an alternative perspective: deployed deliberately, the *Hukum* framework may turn paralysing trade-offs into clearer obligations, and that is a practical lever for the EPF. In this paper, the *Hukum* framework—the Islamic classification of actions (e.g. obligatory, permissible, or prohibited)—is used to understand how Muslim retirees evaluate financial decisions. A related concept is *nafaqa*, which refers to the obligation to ensure basic financial support, beginning with oneself before supporting others when needed.

This paper focuses on reverse mortgage, a financial product that allows homeowners to convert housing value into retirement income while continuing to live in the property, as the study context (instead of a policy goal). This focus is appropriate given that older Malaysians are house-rich but income-poor, and the instrument lets them draw income from the home while staying in it (Caplin, 2002). A conventional version already exists yet sees negligible uptake, because the obstacle is unlikely to be the product. It is whether the retiree regards the choice as permissible and understands what it does to the property and the inheritance. The same patterns extend to annuities, *takaful* products, voluntary schemes, and EPF withdrawal decisions.

BEHAVIOURAL BARRIERS TO RETIREMENT FINANCIAL DECISIONS

The research used a sequential mixed-methods design. Interviews with 21 Shari'ah scholars establish the *Hukum* rulings for the decision to engage in reverse mortgage. A survey of 92 Muslim respondents then compared stated preferences across non-*Hukum* and *Hukum*-framed versions of the same retirement decision scenario, allowing the study to identify where original preferences appeared potentially malleable under Islamic legal framing. The sample is modest and, after an attempt to recruit elderly Malaysians failed on the instrument's complexity, consists largely of university staff with postgraduate qualifications, so the results are exploratory and directional rather than representative. Three behavioural barriers were identified across both phases of the sequential mixed-methods study: the qualitative interviews with 21 Shari'ah scholars and the quantitative survey of 92 Muslim respondents.

The first is inheritance. Muslim retirees prefer to preserve property for their heirs even when they cannot meet their own needs, because many believe that leaving an inheritance outranks self-sufficiency as a religious duty. The majority jurisprudential position places *nafaqa* on oneself ahead of bequest, particularly under conditions of genuine financial need. The observed preference responsiveness among 55% of respondents suggests that knowledge of this prioritisation is either lacking or not consistently reflected in financial decisions. Under the normative assumption that Muslim decision-makers seek to act in accordance with correctly understood *Hukum*, the findings indicate that many respondents may be likely to revise their original inheritance-oriented preference when the priority of self-sustenance over bequest is clearly understood and applied.

The second is debt. Respondents reject retirement products because the products involve debt, without separating *riba*-based borrowing (interest-based financing), which is prohibited, from equity-based structures, which are not. The aversion functions as a reflex rather than a ruling, and it closes off legitimate Shari'ah-compliant options. The preferences show that clarifying the distinction is expected to increase engagement among a substantial proportion of respondents.

The third barrier carries the clearest policy handle: a gap in *nafaqa* knowledge. Nearly a third of respondents could not classify *nafaqa*-related actions at all. Furthermore, most did not know that a parent's claim on a child's support is conditional on need and capacity, or that providing for oneself comes first. Making relevant jurisprudential information clearer was associated with a greater likelihood that respondents reconsidered their initial preferences in evaluating retirement trade-offs. Knowledge gaps, rather than fixed values, may be a substantial and addressable driver of behaviour. Many retirees are not rejecting security, but are uncertain whether pursuing it aligns with their faith. This is a gap that policy can help address.

These barriers do not act in isolation. They sit alongside forces the retirement literature has long documented: loss aversion (a tendency to avoid losses) (Kahneman & Tversky, 1979), present bias (a preference for immediate needs over future ones), inertia (a tendency to stick with the current situation or avoid making changes) and a tendency to underestimate longevity. Religion does not displace these. For Muslim decision-makers, it interacts with them and can be used to counter them. Beneath this, however, is one condition: none of the reframing works unless the retiree understands the product. Someone who cannot follow how an equity-release arrangement treats the house, the heirs, and the repayment has no basis on which to weigh the religious questions. Comprehension comes first.

THE *HUKUM* FRAMEWORK AS ISLAMIC CHOICE ARCHITECTURE

How might a religious framing influence the potential malleability, or likelihood of change, in financial decision-making? It does so by helping individuals better understand how to weigh competing trade-offs. A retiree weighing self-provision against bequest may face uncertainty about which course is religiously prioritised and how the decision should be judged. Classifying the action under *Hukum* may reduce part of the uncertainty, although neutral classifications may leave important decisions unresolved. Once self-provision is understood as *wajib* (obligatory) and bequest as merely voluntary within the fivefold *Hukum* classification (Kamali, 1991), the ambiguity that produced hesitation resolves and willingness to act rises. The pathway is therefore conditional rather than automatic. Where relevant *Hukum* knowledge is absent or inconsistently applied, original preferences may reflect uncertainty rather than settled religious conviction. On the other hand, where the relevant classification is correctly understood, those preferences may become more likely to change. This is not a default option or a cash incentive, and it carries a legitimacy that secular nudges lack (Thaler & Sunstein, 2008).

The above observation is supported by the within-subject comparison, which represents the more robust component of the study design. Reframing was associated with indications of potential preference malleability in 38% to 68% of respondents, concentrated on the questions that matter most (see Table 1). The intergenerational beliefs examined in the study, especially the desire to inherit and the assumption that children must provide regardless of their parents' assets, showed the strongest indications of potential malleability and are also central obstacles to retirement adequacy.

Importantly, these differences across frames should not be interpreted as observed behavioural change or arbitrary preference instability. Under the normative assumption that Muslim decision-makers seek to align choices with correctly understood *Hukum*, they indicate the possibility that original preferences may be revised when relevant religious obligations are properly understood and applied.

Table 1: Share of Respondents Classified as Potentially Malleable Under *Hukum* Reframing

Decision attribute	Potentially malleable
Family's desire to inherit	68%
Reliance on children for financial support	64%
Engagement in a conventional reverse mortgage	56%
Family influence over the decision	56%
Preserving property for bequest under hardship	55%
Engagement in a Shari'ah-compliant reverse mortgage	38%

Notes: Potentially malleable combines respondents whose evaluations differed across frames and those who could not classify the action. This indicates the possibility of preference revision when relevant *Hukum* principles are understood and applied.

The framework has a specific limitation which lies in the role of scholars. The scholars interviewed showed broad agreement on some product-level issues, particularly on whether the product is permissible. However, there was substantial divergence on key retirement trade-offs. These differences focused on issues such as inheritance and family pressure, which are the actual concerns faced by retirees. Given the limited number of scholars interviewed, this study could not establish whether scholarly inconsistency represents the principal bottleneck. It does suggest that greater consistency in public guidance would improve confidence and complement any literacy effort.

POLICY RECOMMENDATIONS

The recommendations below are structured to reflect the findings, progressing from comprehension and reframing to guidance and product development. The EPF can act on the first two immediately, while the latter two involve convening stakeholders and testing approaches rather than prescribing solutions.

- Build product comprehension into existing member channels.** The EPF should add a retirement-instrument module to its pre-retirement programme and i-Akaun platform for members aged 45 to 60. This could cover how equity release works, how Shari'ah compliant structures differ from conventional debt and what each does to the house and the heirs. It should include retirement calculators and scenario simulators, since people grasp trade-offs better from worked examples than from description. Cagamas can supply the content and Shari'ah scholars can certify it. This needs no legislation and can run within a year, measured by consultation and enquiry rates in the cohort.

- **Develop and pilot a national *nafaqa* literacy programme prior to wider rollout.**
 The EPF should develop content to clarify three key areas where misunderstandings are common: (1) that individuals should prioritise their own financial needs in times of hardship, (2) that children's support depends on need and ability, and (3) that ensuring financial security in old age may be a religious responsibility. This can be delivered through the EPF's advisory and digital channels, and where appropriate, through existing religious education channels in collaboration with JAKIM and the state religious authorities. It should be pursued as a partnership rather than a directive, as the EPF does not control sermon content. Before rollout, pilot the programme in two states, one using *Hukum* framing and the other standard messaging. Consultation outcomes should be measured at six and twelve months with a research partner to ensure the results are publishable.
- **Convene a multi-stakeholder guidance initiative on retirement trade-offs.**
 Scholarly inconsistency on bequest and family-support questions appears to potentially contribute to hesitation. These issues relate to personal jurisprudence, particularly the priority of *nafaqa* over bequest and the limits of family obligation, and fall under the remit of state muftis and the National Fatwa Committee rather than the financial Shariah Advisory Councils. The EPF can play a convening role by bringing these stakeholders together. A working group of fatwa authorities, SAC members, scholars, and retirement experts could help establish a common reference position and provide clearer guidance. A published position within twelve to eighteen months is a realistic target.
- **Explore a Shari'ah-compliant equity-release product through sandbox testing.**
 The study assessed neither demand, pricing, feasibility, consumer protection, nor adverse selection, so it cannot recommend a specific product; what it supports is structured testing. The EPF should encourage a regulatory sandbox, together with Bank Negara and a provider such as Cagamas, to test a Diminishing *Musharakah* home equity release product (a Shari'ah-compliant partnership-based structure where ownership is gradually transferred). This would allow the open questions to be evaluated in a structured setting. One option worth testing within it is whether voluntary contributions funded from equity-release proceeds might qualify for EPF incentives under i-Saraan, channelling home wealth back into the formal system. That is a hypothesis to test, not a settled design.

CONCLUSION

Malaysia has about three decades before it is super-aged, and less before today's under-saved workers retire. For many Muslim retirees seeking alignment with perceived religious obligations, the *Hukum* framework offers a form of legitimacy what an ordinary nudge cannot: religious legitimacy. Where respondents accepted that self-provision is itself a religious obligation, preferences appeared more receptive toward retirement planning options. The reverse mortgage was only the testbed; the logic extends to annuities, takaful products, and voluntary schemes.

The recommendations turn that into a sequence the EPF can run, each step within its mandate and each carrying a metric. Two limits bound them. The findings are exploratory and rest on stated preferences, so the pilot in the second recommendation is the test of whether reframing changes behaviour rather than answers. And the 40% of workers outside any formal scheme lie beyond the reach of these measures. Closing that gap needs coverage reforms the EPF can advocate but cannot deliver alone. Neither limit is a reason to wait on what the evidence already supports.

REFERENCES

- Caplin, A. (2002). The reverse mortgage market: Problems and prospects. In O. S. Mitchell et al. (Eds.), *Innovations in retirement financing*. University of Pennsylvania Press.
- Employees Provident Fund. (2024). *Belanjawanku 2024/2025 and Retirement Income Adequacy (RIA) Framework*. <https://www.kwsp.gov.my>
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263-291.
- Kamali, M. H. (1991). *Principles of Islamic jurisprudence*. Islamic Texts Society.
- New Straits Times. (2024, June 4). 1 in 4 Malaysians exhaust EPF savings within 5 years of withdrawal age.
- Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press.
- The Edge Malaysia. (2026, March 5). 60% of EPF members to reach basic savings level of around RM390,000 by 2030.
- United Nations, Department of Economic and Social Affairs, Population Division. (2024). *World Population Prospects 2024*.
- World Bank. (2020). *A silver lining: Productive and inclusive aging for Malaysia*. World Bank.
- World Bank. (2025). *Should Malaysia expand its social pension? Global evidence, design issues and options*. World Bank.

SECTION 2

ENHANCING THE ECOSYSTEM FOR RETIREMENT WELLBEING



ARTICLE 5

FLEXIBLE ACCESS, DIFFERENT REALITIES: INSIGHTS FROM AKAUN FLEKSIBEL WITHDRAWALS

Hawati Abdul Hamid
Puteri Marjan Megat Muzafar

Employees Provident Fund (EPF)

ABSTRACT

Introduced as part of the Employees Provident Fund's (EPF) account restructuring, Akaun Fleksibel expanded access to savings for short-term needs. Drawing on administrative and survey data, this article shows that the facility serves different purposes across life stages, earning levels, and contribution status. Younger members withdraw for recurring needs such as food and commuting, while midlife members use them for larger commitments, including housing costs. Lower earners use withdrawals for essential needs, while higher earners use them more selectively, including for housing maintenance costs. For members with disrupted contributions, Akaun Fleksibel may provide temporary support, but its role is limited unless contributions resume and savings are rebuilt. Flexible access therefore provides uneven benefits and risks, with those who rely on it most having less capacity to rebuild their savings. Policy responses should combine flexible access with tailored financial planning, stronger pathways to rebuild savings and broader measures to address financial vulnerability.

INTRODUCTION

In May 2024, the EPF introduced Akaun Fleksibel as part of the restructuring of members' accounts. The previous two-account structure was replaced by Akaun Persaraan, Akaun Sejahtera and Akaun Fleksibel. While Akaun Persaraan remains focused on long-term retirement savings and Akaun Sejahtera supports specific pre-retirement needs (e.g., buying a home), Akaun Fleksibel allows members below the age of 55 to withdraw their available balance at any time and for any purpose. The reform reflects an effort to balance two objectives: preserving savings for retirement and providing members with greater flexibility to manage current financial needs (EPF, 2024). It reflects lessons from the Covid-19 pandemic, when income disruptions led many members to rely on special withdrawal facilities for short-term relief (Jiton & Ibrahim, 2024; Abd Ghani et al., 2023). At the same time, the restructuring increased the share of contributions channelled to Akaun Persaraan, reinforcing EPF's long-term retirement adequacy objective.

Akaun Fleksibel recognises that members face competing financial priorities throughout their working lives. However, greater flexibility also raises an important question: does the facility play the same role for all members? This article examines how withdrawal frequency, amounts and purposes vary across member subgroups, particularly those at different life stages, earnings levels and working status. It draws on EPF's broader study, *Enduring Today, Shaping Tomorrow: Akaun Fleksibel as a Financial Lifeline for Wellbeing* (EPF, 2026), but synthesises the findings to highlight the different roles the facility plays across member groups and what these differences mean for strengthening member support and resilience.

RESEARCH METHODOLOGY

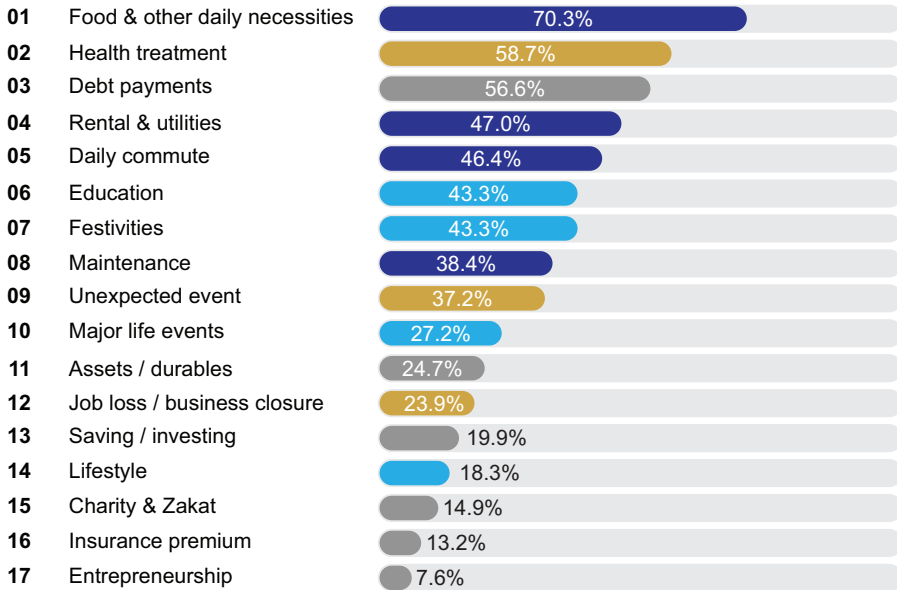
The analysis draws on EPF administrative and member survey data. The administrative dataset covers nearly 5 million members below the age of 55, including withdrawers and non-withdrawers, as well as more than 25 million withdrawal transactions between May 2024 and October 2025, providing insights into participation, withdrawal frequency, amounts and member characteristics. These data are complemented by a survey conducted between September and November 2025 among members who had made at least one Akaun Fleksibel withdrawal, garnering 14,204 responses. The survey captured perceptions of the facility, withdrawal purposes, and financial planning behaviour. As the survey covered only members who had made at least one withdrawal, the findings reflect withdrawers' experiences rather than those of all EPF members. Full methodological details and limitations are available in the main report (EPF, 2026).

RESEARCH FINDINGS

Aggregate Uses of Akaun Fleksibel

Findings show that food and daily necessities were the most commonly reported use of withdrawals, followed by healthcare expenses and debt repayment (Figure 1). On the other hand, lifestyle expenses did not feature among the top 10 reported uses, suggesting that the facility is used mainly to meet essential needs, manage health-related costs and service financial obligations rather than for discretionary consumption. These aggregate patterns provide a useful overview, but they do not fully explain how the facility functions across different member groups. The same withdrawal category may reflect different financial realities depending on members' life stage, earnings and labour market attachment. The following sections examine these differences in greater detail.

Figure 1: Top 10 Cited Uses of Withdrawals



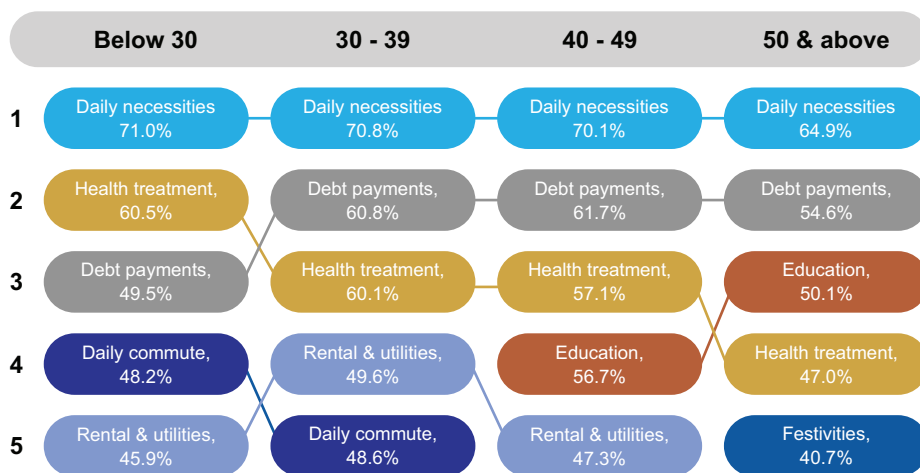
Notes: Multiple responses allowed.

Source: EPF (2026)

A Changing Role Across the Life Course

One important source of these different financial realities is members' stage of life. As members move through the life course, their financial priorities and capacity to rebuild savings also change. The age patterns suggest a gradual shift from managing the costs of entering working life to meeting larger household commitments, and later, supporting family needs while preparing for retirement (see Figure 2).

Figure 2: Top 5 Cited Uses of Withdrawals, by Age Group



Source: EPF (2026)

For younger members below the age of 30, Akaun Fleksibel primarily supports short-term cash-flow management. Although they accounted for a sizeable share of withdrawers (34.5%), they represented a smaller share of total withdrawal amounts (15.1%). Withdrawal frequency also rises among members in their late 20s and early 30s before moderating among older groups. More frequent withdrawals of smaller amounts suggest that younger members mainly use the facility for recurring expenses. Survey findings support this observation. Younger members commonly cited using withdrawals for food and daily necessities, healthcare and commuting, consistent with the costs of entering and sustaining working life. They also reported stronger intentions to replenish their savings, an aim made more achievable by having more working years ahead to do so. As repeated withdrawals at an early age may weaken the benefits of compounding, timely nudges are needed to help translate their replenishment intentions into action.

For members in their 30s and 40s, Akaun Fleksibel helps manage larger and overlapping commitments. Members aged 40 to 49 accounted for a smaller share of withdrawers (22.8%) but constituted a larger share of total withdrawal amounts (42.1%). They also tended to withdraw larger amounts, which may reflect higher accumulated balances as well as greater financial obligations. Members of this group commonly used withdrawals for debt repayment, healthcare and housing costs. This pattern is consistent with a life stage in which members may simultaneously support children, service debts and meet other household commitments (Noor & Isa, 2020; Lewin-Epstein & Semyonov, 2016). As withdrawals during higher-earning working years may reduce savings that could otherwise continue growing toward retirement, timely guidance is needed to help members balance immediate needs with longer-term retirement security.

Among members aged 50 and above, the facility provides flexibility as retirement draws closer. This group represented a smaller share of withdrawers (6.9%) but recorded higher average withdrawal amounts than younger members. Survey findings suggest that these withdrawals supported ongoing family responsibilities, with education and festive expenditure among the prominent reported uses. Open-ended responses indicate that their education-related withdrawals often support children's schooling or tertiary education rather than members' own education. This suggests that family responsibilities may continue into the years nearing retirement. Older withdrawers were also less likely to plan to rebuild their savings. With fewer working years remaining, older members have less time to rebuild withdrawn savings, making it especially important to help them preserve their remaining pre-retirement balances where possible.

Essential Support for Lower Earners, Flexibility for Higher Earners

Withdrawal patterns differ markedly by earnings. Among lower earners, Akaun Fleksibel is more closely associated with essential needs, while higher earners use the facility across a broader range of expenses (see Figure 3).

Figure 3: Top 5 Cited Uses of Withdrawals, by Earnings

Rank	1	2	3	4	5
Below RM3K	 74.6% Daily necessities	 61.7% Health treatments	 55.8% Debt payments	 46.9% Daily commute	 46.7% Rental & utilities
RM10K & above	 65.2% Debt payments	 56.0% Daily necessities	 52.8% Maintenance	 52.5% Education	 49.3% Unexpected event

Source: EPF (2026)

Members earning below RM3,000 made up the largest share of withdrawers (66.6%) but accounted for a smaller share of total withdrawal amounts (39.5%). Lower and middle earners also tended to withdraw more frequently. This pattern is consistent with members making relatively small withdrawals to manage recurring cash-flow pressures. Their reported uses were concentrated on daily necessities, healthcare

and debt obligations. For many lower earners, Akaun Fleksibel therefore supports essential expenditure rather than discretionary spending. Although many expressed an interest in budgeting and financial planning, they were less likely to report having a budget or financial plan. As financial literacy alone may not be enough where low earnings leave little room to budget or build emergency savings, broader support is needed to help lower earners turn planning interest into practical action.

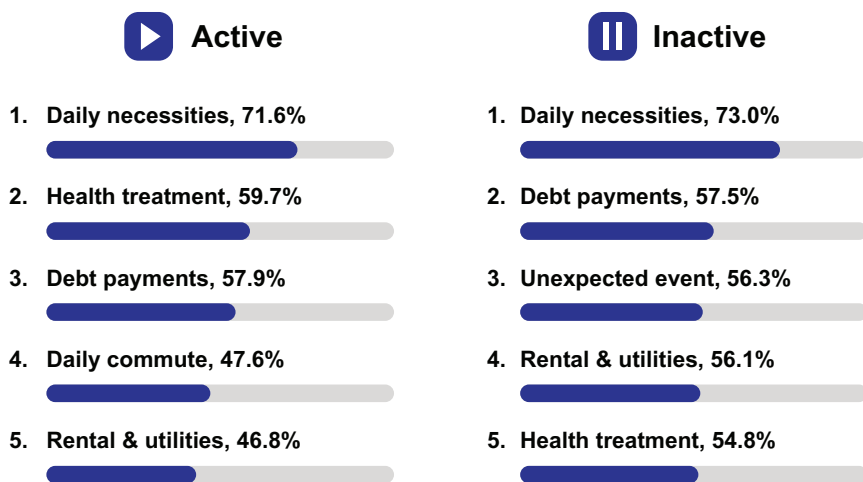
Higher earners displayed a different pattern. Members earning RM10,000 and above accounted for a smaller share of withdrawers (4.0%) but recorded higher average monthly withdrawal amounts than lower earners. For higher earners, besides using withdrawals for debt repayments, they also channelled them to housing maintenance, education and unexpected expenses. This suggests that they use Akaun Fleksibel more selectively to manage larger commitments and financial shocks rather than recurring daily needs. They were also more likely to report having a budget or financial plan, suggesting that withdrawals may be considered as part of their broader financial decisions. As larger withdrawals may reduce retirement savings if not restored, timely prompts can help members plan how to rebuild their balances.

Capacity to Earn and Contribute Underpins Withdrawal and Rebuilding Savings

Labour market attachment and earning capacity affect both the need to withdraw and the ability to continue contributing and replenish savings. The EPF defines active members¹ as those who made at least one EPF contribution during the preceding 12 months, while inactive members recorded no contributions over the same period. Active members, typically those in employment and contributing actively, represented a larger share of withdrawers (85.8%) and total withdrawal amounts (90%). For these members, Akaun Fleksibel generally supplements employment income. Their use of withdrawals for commuting and healthcare suggests that the facility helps cover work-related and routine household expenses (see Figure 4). On top of that, continued contributions also provide some opportunity to rebuild withdrawn savings.

¹ Active members are identified through contribution records and may not necessarily be currently employed, although contributions generally originate from employment.

Figure 4: Top 5 Cited Uses of Withdrawals, by Member Status



Source: EPF (2026)

Inactive members, whose EPF contributions have stopped or been temporarily disrupted, face a different situation. They accounted for 14.2% of total withdrawers but recorded higher average monthly withdrawals per member compared to active members. This partly reflects withdrawals made during the initial transfer period², when inactive members could access a one-off balance despite having no new contributions. Survey findings reinforce the temporary nature of this support, showing that inactive members were more likely to use withdrawals for rent, utilities and expenses arising from job loss or business closure compared to active members. As inactive members have no incoming contributions to replenish withdrawn balances, Akaun Fleksibel may provide only temporary support. Once the transferred balance is exhausted, new contributions become important to rebuild savings and maintain access to future withdrawals.

²The initial transfer period, from 11 May to 31 August 2024, allowed members to opt in to a one-time automatic transfer of savings from Akaun Sejahtera to their newly created Akaun Fleksibel.

POLICY IMPLICATIONS

The findings suggest that Akaun Fleksibel serves different functions according to members' life stages and circumstances, thus a uniform response focused on financial literacy alone will not address the diverse pressures driving withdrawals. Policy should instead respond to the distinct financial challenges faced by different groups. The findings point to three intervention priorities:

1. **Financial planning support should reflect members' stage of life.** Younger members could receive prompts, nudges and guidance to rebuild savings as their earnings increase. Members with substantial household commitments may benefit from tools showing the effect of different withdrawal and repayment choices. Those approaching retirement should receive personalised projections showing how withdrawals could affect their retirement income.
2. **Measures to preserve retirement savings must address the underlying causes of withdrawals.** Lower-income and inactive members often withdraw because they lack sufficient income or financial buffers, not because they misunderstand the importance of retirement savings. Employment services, social assistance and access to essential services can reduce the need to use retirement savings for basic living expenses.
3. **Pathways to support members in restoring withdrawn savings must be strengthened.** Possible approaches include strengthening the current voluntary top-up mechanisms, targeted incentives and timely prompts based on members' contribution and withdrawal patterns. Communications should explain the long-term effects of withdrawals without discouraging members from using the facility when genuinely needed.

These responses should preserve the flexibility valued by members while recognising that their capacity to benefit from it is uneven. Members who most need access, particularly lower-income and inactive members, may also have less savings available and limited means to rebuild them. Akaun Fleksibel can provide temporary relief for these groups, but it cannot sustain support through prolonged hardship.

CONCLUSION

Akaun Fleksibel provides valuable financial flexibility, but its protective role varies across members. It helps younger members meet the costs of establishing themselves in work, supports midlife members facing multiple household commitments and enables older members to continue meeting family responsibilities. It also provides an important buffer for lower-income and inactive members during periods of financial pressure.

However, flexible access to retirement savings cannot by itself address financial vulnerability. Members who rely most heavily on the facility for essential needs may also have lower balances and less capacity to rebuild their savings. Once these balances are exhausted, the support provided by Akaun Fleksibel also ends. The facility should therefore be viewed as one part of a broader social protection system that combines retirement savings with financial planning, income protection and employment support. Its long-term effectiveness depends not only on how the facility is implemented, but also on whether members have sufficient financial capacity to keep contributing, accumulate savings and rebuild what they have withdrawn.

REFERENCES

- Abd Ghani, M. A. A., Awang, H., Ab. Rashid, N. F., Tan, L. Y., Tan, C. L., Apalasamy, Y. D., Subbahi, K. F., & Mansor, N. (2023). Examining i-Sinar and i-Lestari withdrawals among Employees Provident Fund (EPF) members during COVID-19 Crisis. *Malaysian Journal of Consumer and Family Economics*, (30), 175–213.
- EPF. (2024). EPF account restructuring set to address members' life cycle needs. Employees Provident Fund. <https://www.kwsp.gov.my/en/w/epf-account-restructuring->
- EPF. (2026). Enduring Today, Shaping Tomorrow: Akaun Fleksibel as a Financial Lifeline for Wellbeing. Employees Provident Fund. https://www.kwsp.gov.my/documents/d/guest/enduring-today-shaping-tomorrow_digital-report-min
- Lewin-Epstein, N., & Semyonov, M. (2016). Household debt in midlife and old age: A multinational study. *International Journal of Comparative Sociology*, 57(3), 151–172.
- Jiton, C., & Ibrahim, D. (2024). Determinants of special EPF withdrawals among Malaysian employees amidst the COVID 19 pandemic. *International Journal of Research and Innovation in Social Science*, 8(4), 1861–1871. <https://dx.doi.org/10.47772/IJRISS.2024.804224>
- Noor, S., Md Isa, F. (2020). Malaysian Sandwich Generation Issues and Challenges in Elderly Parents Care. *International and Multidisciplinary Journal of Social Sciences*, 9(3), 289–312.

ARTICLE 6

REBALANCING MALAYSIA'S SOCIAL PROTECTION SYSTEM AMID RISING COST-OF-LIVING PRESSURES

Muhammad Aizat Zainal Alam
Norma Mansor
Zulkipli Omar

Social Wellbeing Research Centre (SWRC), Universiti Malaya (UM)

ABSTRACT

Malaysia's cost-of-living pressures are increasingly embedded in household budgets, not merely a temporary price shock. Rising essential spending, slower income growth and debt obligations reduce the space for precautionary saving and weaken retirement adequacy. While Employees Provident Fund (EPF) Akaun Fleksibel improves short-term liquidity, its use for essential expenditure shows that retirement savings are being asked to perform too many roles: emergency support, consumption smoothing and old-age income. This article argues for a clearer social protection architecture built around three layers: a tax-funded Social Old-Age Protection Floor, stronger decumulation arrangements that convert savings into income, and a formal liquidity layer with replenishment safeguards. The objective is not to remove household trade-offs, but to allocate risks more coherently across individuals, savings institutions and the state.

FROM COST PRESSURE TO SYSTEM DESIGN

Cost-of-living pressure in Malaysia should be read as a structural problem. In this article, structural refers to pressures arising from recurring commitments such as housing, transport, health, education, childcare and debt repayments, not only from temporary price increases. These commitments constrain how households allocate income across time. In practical terms, many households may prioritise immediate expenses and postpone savings, even when they recognise the need to prepare for shocks and retirement.

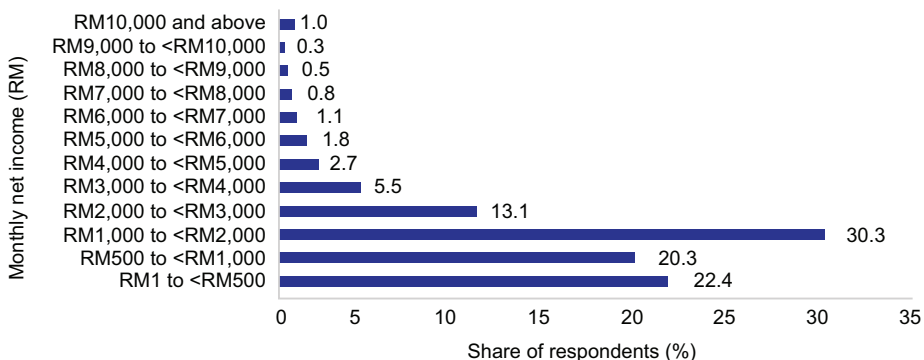
This pattern is consistent with life-cycle theory, which predicts that liquidity constraints and income uncertainty can prevent households from smoothing consumption over time (Deaton, 1991; Modigliani & Brumberg, 1954). Malaysian evidence also shows that savings adequacy is shaped not only by income, but by behaviour, financial literacy, expenditure rigidity, mental accounting and present bias (Mahdzan et al., 2017; Zainal Alam et al., 2022). Mental accounting refers to the way individuals separate money into different mental categories, while present bias refers to the tendency to overvalue immediate needs relative to future outcomes (Laibson, 1997; Thaler, 1999). Belanjawanku benchmarks by the Employees Provident Fund (EPF) show that essential expenditure in housing, transport, food, health and childcare continues to compress disposable income, especially for urban households (EPF, 2023).

Policy direction: The issue is therefore not only whether households save enough. It is whether the system asks individual savings to perform too many roles at once, namely emergency liquidity, consumption smoothing and retirement income. A coherent response requires a layered system in which each instrument has a clearer function.

FINANCIAL STRESS, LIQUIDITY AND INTERGENERATIONAL PRESSURES

Evidence from the Malaysia Ageing and Retirement Survey (MARS) Wave 2 points to limited income space among many older and near-older Malaysians. MARS is a longitudinal survey by the Social Wellbeing Research Centre, Universiti Malaya (SWRC UM), covering adults aged 40 and above and their retirement, health and family support circumstances. Figure 1 reports *individual* monthly net income (instead of *household* income) including private transfers. While individual income may understate actual economic resources available as some individuals may receive support from spouses or family members within the household, low individual income remains policy-relevant because it signals limited personal liquidity and weaker independent protection against shocks.

Figure 1: Monthly Net Income Including Private Transfers (%)

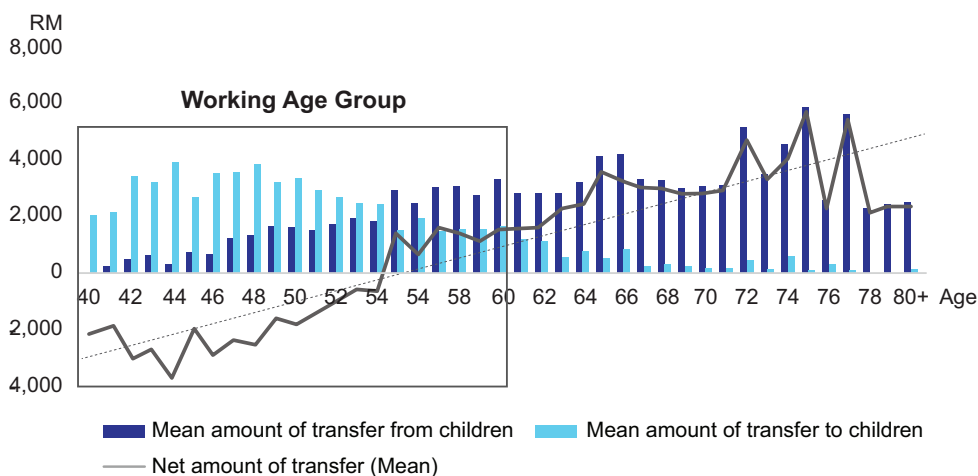


Source: Malaysia Ageing and Retirement Survey (MARS) Wave 2, SWRC UM

Even with this caveat, about 73% of respondents report individual monthly net income below RM2,000. This suggests limited capacity to manage shocks, especially when debt obligations and expenditure needs remain persistent (Bank Negara Malaysia, 2022; EPF, 2026).

Intergenerational obligations further constrain household resources. Figure 2 shows that many working-age individuals provide transfers to children while also receiving or expecting support across generations. These flows are part of family resilience, but they also reduce the room for precautionary savings and reinforce reliance on short-term coping strategies.

Figure 2: MARS Wave 2 – Intergenerational Transfers



Source: Malaysia Ageing and Retirement Survey (MARS) Wave 2, SWRC UM

Within this context, EPF introduced the Akaun Fleksibel that allows members to access part of their retirement savings anytime for any purpose during the accumulation phase (i.e., prior to the EPF withdrawal age of 55). It addresses a liquidity constraint, meaning a situation where households may have savings on paper but lack cash to meet immediate needs. EPF data indicate that withdrawals have been used mainly for essential expenditure, including consumption, healthcare and debt servicing (EPF, 2026). This suggests that liquidity demand is structural rather than episodic.

Care costs are another structural driver. Childcare and early education increase household expenditure and can also affect labour supply decisions, particularly for mothers and other primary caregivers. International evidence shows that childcare availability and affordability influence mothers' labour market outcomes (Halim et al., 2023). In Malaysia, these pressures reinforce the case for linking social protection reform with essential services, not treating savings policy in isolation.

Policy direction: Financial stress reflects income constraints, cost drivers and intergenerational responsibilities. Liquidity access is necessary, but it must be supported by expenditure-reducing measures such as childcare support, affordable essential services and safeguards that preserve retirement savings.

AKAUN FLEKSIBEL: USEFUL LIQUIDITY, BUT NOT A SUBSTITUTE FOR PROTECTION

Akaun Fleksibel is an important financial resilience tool. However, it also creates a policy tension: access to savings can improve welfare today, but repeated withdrawals without replenishment can weaken adequacy later (EPF, 2026). The issue is therefore not whether flexibility is useful. It is whether flexibility is being used to compensate for gaps in wages, services and foundational protection.

Liquidity should be formally recognised as a separate function within social protection, rather than treated as an implicit adjustment mechanism inside retirement savings. The International Labour Organization (ILO, 2024) emphasises the need to separate basic income security from contributory savings and short-term assistance.

Policy direction: Practical safeguards could include automatic replenishment after withdrawals through small future payroll deductions, voluntary top-up matching for low-balance members, reminders that show the impact of withdrawals on future monthly income, and waiting periods for repeated withdrawals. These measures preserve access while reducing the risk that emergency liquidity permanently erodes retirement adequacy.

THE CASE FOR A SOCIAL OLD-AGE PROTECTION FLOOR

A Social Old-Age Protection Floor is a tax-funded minimum income guarantee for older persons. It would provide a modest basic pension independent of contribution history, while EPF and other savings would continue to support income replacement. The purpose is not to replace contributory savings, but to ensure that old-age poverty risk is not borne solely by individuals with weak or irregular contribution histories.

The role of the floor is to reduce the pressure on EPF savings to operate as a safety net. This is what is meant by reallocating risk: part of the risk of old-age poverty shifts from individuals and families to a publicly financed minimum guarantee. This is especially relevant for informal workers and others who cannot contribute consistently to formal retirement schemes (ILO, 2024; Rabi et al., 2026).

Available estimates suggest that a basic pension floor can be introduced at about 0.6% of gross domestic product (GDP), with gradual scaling over time (Rabi et al., 2026). This level should be assessed against the fiscal and social costs of inadequate retirement income, including poverty, family financial strain and higher reliance on ad hoc assistance.

Policy direction: The floor should be designed as a modest, fiscally sequenced and broad-based instrument. Eligibility, benefit levels and indexation rules should be transparent, while implementation can be phased by age cohort or benefit level to manage fiscal exposure.

FROM LUMP SUMS TO RETIREMENT INCOME

Malaysia's retirement system is stronger in accumulation than in decumulation. Decumulation refers to the phase when accumulated savings are converted into spending or income after retirement. There are more schemes geared towards promoting accumulation (e.g., i-Saraan, i-Suri) relative to decumulation. Furthermore, heavy reliance on lump-sum withdrawals exposes retirees to longevity risk, or the risk of outliving savings, and can accelerate depletion (Yaari, 1965; Rabi et al., 2025). This risk rises as life expectancy increases.

Policy direction: A more income-based design would make regular retirement income the default, while preserving flexibility. Practical options include default monthly drawdowns from part of EPF balances, phased withdrawals that increase with age, simple retirement-income projections, and financial incentives for retirees to keep part of their balances invested for scheduled income. The decumulation agenda should move from a savings-balance mindset to a retirement-income mindset.

BEHAVIOURAL DESIGN AND SYSTEM INTEGRATION

Behavioural design matters because financial decisions are not made under perfect information. Malaysian evidence shows that financial literacy and observed savings behaviour differ across groups and affect savings outcomes (Mahdzan et al., 2017; Zainal Alam et al., 2022).

Behavioural tools should therefore be embedded into system design. Examples include default replenishment, reminders at the point of withdrawal, simple retirement-income projections, waiting periods for repeated withdrawals and targeted financial education for members approaching retirement. These measures are more useful when they are linked to actual decisions, rather than provided as general information.

Overall, Malaysia's social protection system should be organised around three connected layers: a tax-funded protection floor to guarantee minimum old-age income; contributory savings to support income replacement; and a dedicated liquidity layer to manage short-term shocks. These layers require institutional coordination, shared monitoring and clear governance so that savings, protection and liquidity reinforce rather than substitute for one another (ILO, 2024; Rabi et al., 2026).

CONCLUSION

Malaysia's cost-of-living pressures and population ageing require a shift from fragmented instruments to coherent system design (EPF, 2023; ILO, 2024). Akaun Fleksibel has helped households manage liquidity, but it also shows the limits of relying on retirement savings to solve short-term financial stress. A rebalanced system should separate and align three functions: minimum old-age protection, retirement income and emergency liquidity. This requires a Social Old-Age Protection Floor, stronger decumulation pathways and liquidity safeguards that include replenishment mechanisms. The objective is not to eliminate trade-offs, but to manage them more fairly across individuals, savings institutions and the state.

REFERENCES

- Bank Negara Malaysia. (2022). Financial stability review for second half 2022.
- Deaton, A. (1991). Saving and liquidity constraints. *Econometrica*, 59(5), 1221-1248.
- Employees Provident Fund. (2023). Belanjawanku 2022/2023: Expenditure guide for Malaysian individuals and families.
- Employees Provident Fund. (2026). Akaun Fleksibel as a financial lifeline for wellbeing.
- Halim, D., Perova, E., & Reynolds, S. (2023). Childcare and mothers' labor market outcomes in lower- and middle-income countries. *The World Bank Research Observer*, 38(1), 73-114.
- International Labour Organization. (2024). World social protection report 2024-26: Universal social protection for climate action and a just transition.
- Laibson, D. (1997). Golden eggs and hyperbolic discounting. *The Quarterly Journal of Economics*, 112(2), 443-477.
- Mahdzan, N. S., Zainudin, R., & Au Yong, H. H. (2017). Financial literacy and savings behavior. *Journal of Financial Counseling and Planning*, 28(2), 261-276.
- Modigliani, F., & Brumberg, R. (1954). Utility analysis and the consumption function: An interpretation of cross-section data. In K. K. Kurihara (Ed.), *Post-Keynesian economics* (pp. 388-436). Rutgers University Press.
- Rabi, A., Mansor, N., & Kikkawa, A. (2025). Securing dignity in ageing. Social Wellbeing Research Centre, Universiti Malaya.
- Rabi, A., Mansor, N., & Kikkawa, A. (2026). Integrated old-age income protection framework. Social Wellbeing Research Centre, Universiti Malaya.
- Thaler, R. H. (1999). Mental accounting matters. *Journal of Behavioral Decision Making*, 12(3), 183-206.
- Yaari, M. E. (1965). Uncertain lifetime, life insurance, and the theory of the consumer. *The Review of Economic Studies*, 32(2), 137-150.
- Zainal Alam, M. A., Yong, C. C., & Mansor, N. (2022). Predicting savings adequacy using machine learning: A behavioural economics approach. *Expert Systems with Applications*, 203, Article 117502.

ARTICLE 7

FROM SAVINGS TO CARE: RETHINKING RETIREMENT PREPAREDNESS IN AN AGEING MALAYSIA

Siti Nurazira Mohd Daud
Abd Halim Ahmad

School of Economics, Finance and Banking, Universiti Utara Malaysia (UUM)

ABSTRACT

Malaysia's transition towards an aged nation raises concerns about retirement savings adequacy, healthcare financing, and long-term care (LTC) preparedness. Using data from 534 employed young adults aged 20–45, this study evaluates readiness for retirement and LTC financing while examining the Financial Literacy for Health and Retirement (FinHeart) score. Although the average FinHeart score of 70.49% places respondents in the “Financially Confident” category, the findings reveal a significant “perceptual illusion”. While 68.73% believe they can self-finance future LTC needs, more than half lack understanding of the time value of money concept, and over 40% fail to execute simple and compound interest calculations. The findings also indicate changing preferences, with 79.21% expecting professional care during retirement while LTC affordability and limited insurance literacy remain major barriers. This paper proposes policy to strengthen retirement preparedness and LTC financing through enhanced protection mechanisms, improved planning tools and sustainable retirement savings strategies.

INTRODUCTION

Malaysia's transition toward an ageing society has intensified concerns over the adequacy and sustainability of retirement savings among younger workers. Although the Employees Provident Fund (EPF) remains the primary retirement protection mechanism in Malaysia, increasing life expectancy, rising healthcare costs, and growing long-term care (LTC) needs may place significant pressure on retirement savings. Existing retirement planning frameworks largely emphasise wealth accumulation but pay limited attention to post-retirement care financing and longevity-related risks that can rapidly deplete retirement funds. At the same time, changing family structures and the increasing preference for professional elderly care (Mandi et al., 2026; Chandran, 2020) suggest that future retirees may rely less on informal family support and more on market-based care services. This raises an important policy concern as to whether current retirement savings are sufficient not only for income replacement but also for healthcare and LTC expenditures in old age. This study examines the retirement preparedness of young working Malaysians through the Financial Literacy for Health and Retirement (FinHeart) framework.

RESEARCH OVERVIEW

Awareness of LTC and healthcare financing is becoming increasingly important as Malaysians face longer retirement periods and rising ageing-related costs. Increasing longevity, healthcare inflation, and changing family structures may expose future retirees to significant financial vulnerability if retirement planning does not adequately incorporate future care needs.

Financial literacy has long been recognised as a key determinant of financial behaviour, retirement planning, and long-term financial well-being (Lusardi & Mitchell, 2014; Xiao & Porto, 2017). However, conventional measures often overlook competencies related to healthcare decision-making, insurance navigation, and LTC planning. In response, the concept of financial health literacy has emerged as an integrated framework encompassing financial literacy, health literacy, and insurance literacy (Gillen & Kim, 2014; Leung et al., 2022). Collectively, these domains influence an individual's ability to manage healthcare costs, evaluate protection plans, and prepare for ageing-related financial risks (Davis & Jones, 2024; MacLeod et al., 2017).

The literature on Financial Health Literacy (FHL) shows growing integration of financial literacy (FL), health literacy (HL), and health insurance literacy (HIL), highlighting their combined role in healthcare and financial decision-making. Studies such as MacLeod et al. (2017), Patel et al. (2016), and Palaci et al. (2018) emphasise that FL and HL are closely interconnected and jointly influence individuals' ability to manage healthcare costs, understand treatment options, and plan long-term finances.

More recent reviews, including Davis and Jones (2024), Leung et al. (2022), and MacLeod et al. (2017), describe FHL as a multidimensional construct combining financial literacy, health literacy, and health insurance literacy. Leung et al. (2022) further conceptualise FHL across domains such as money management, medical billing, insurance understanding, healthcare decision-making, and long-term care planning, while Davis and Jones (2024) highlight its attributes in terms of knowledge, skills, and decision-making behaviours. Despite these developments, gaps remain in integrated measurement tools and population-specific applications.

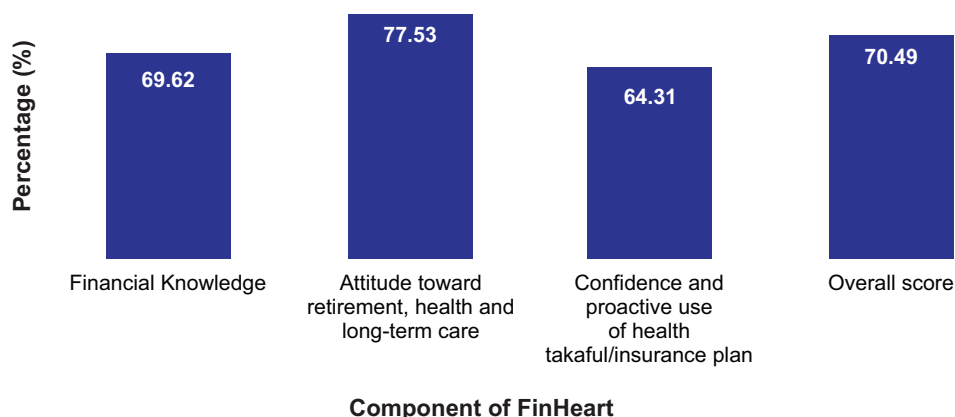
Addressing this gap, the FinHeart instrument was developed to operationalise and assess multidimensional preparedness for ageing among Malaysian young adults aged 20–45, based on the integrated FHL framework proposed in the literature. A survey conducted between April and June 2025 collected 564 responses, of which 534 valid cases were retained for analysis. A stratified sampling approach based on the Department of Statistics Malaysia (DOSM) population distribution was applied to enhance representativeness across all states and federal territories. The final sample exceeded the minimum requirement for a 95% confidence level and 5% margin of error, while also capturing demographic variation across categories of age, gender, occupation, marital status, and health status.

The FinHeart Index was constructed using three core dimensions: financial knowledge; attitudes toward retirement, health, and LTC; and confidence and proactive use of health Takaful or insurance products. The financial knowledge component was adapted from OECD International Network on Financial Education (OECD/INFE) financial literacy instruments, while health and long-term care attitude items were adapted from the HLS19-Q12 instrument developed by Pelikan et al. (2022) which focuses on general health literacy. The insurance dimension incorporated elements from the Health Insurance Literacy Model (HILM) developed by Paez et al. (2014). Each component was standardised to a 0–100 scale and aggregated into an overall index. The FinHeart Index classifies total scores into four categorical readiness levels on a 0–100 scale. Scores of 0–50 are defined as “Financially Unprepared,” 51–60 as “Financially Curious,” 61–80 as “Financially Confident,” and 81–100 as “Financially Empowered.” Importantly, the instrument underwent rigorous validation through expert review, pilot testing, reliability analysis (Cronbach’s alpha), and factor analysis. The validation process involved five experts comprising academics, industry practitioners, and collaborators from Agensi Kaunseling dan Pengurusan Kredit (AKPK) to ensure strong validity, reliability, and policy relevance. This multidimensional framework enables the identification of specific gaps in technical financial literacy, retirement planning behaviour, and the ability to navigate health Takaful or insurance products. However, as a newly developed instrument, its applicability is currently limited to initial validation evidence, and further studies are required to confirm its generalisability and predictive validity across broader populations.

ANALYSIS OF RESEARCH FINDINGS

The overall FinHeart score recorded an average score of 70.49%, placing Malaysian young adults in the “Financially Confident” category (Figure 1). This suggests a moderate level of preparedness in managing financial matters related to health, retirement, and LTC. Among the three domains, attitudes toward retirement, health, and long-term care achieved the highest score (77.53%), followed by financial knowledge (69.62%). Confidence and proactive use of health Takaful/insurance recorded the lowest score (64.31%), indicating that many respondents still face challenges in understanding and selecting suitable insurance or Takaful plans.

Figure 1: Average Score of Financial Knowledge, Attitudes Toward Retirement Health and LTC, Confidence and Proactive Use of Health Takaful/Insurance Plan, and Overall FinHeart Score



Source: Daud et al., 2026

The "I Can Handle It" Illusion

While the overall FinHeart Index categorises the sample as "Financially Confident", it reveals critical issues that may threaten long-term retirement adequacy. The data reveals that 68.73% of young workers strongly agree that they possess sufficient independent means (via assets or cash savings) to fund all future old-age care expenses without relying on LTC insurance protection. However, as shown in Figure 2, matching these 367 self-reliant individuals against their financial knowledge question highlights an empirical blind spot.

Figure 2: Key Behavioural Findings on LTC Preparedness



Source: Daud et al., 2026

Among respondents who agreed that they had their own means of paying for LTC without Takaful/insurance, only 28.88% answered the time value of money item correctly, while 50.14% answered the compound interest calculation item correctly. Similarly, among respondents who reported being “confident” or “very confident” in their retirement financial plans, only 25.15% correctly answered the time value of money item, and 53.29% correctly answered the compound interest calculation item (Table 1). Working adults understand the text-based definition of inflation but are fundamentally unequipped to apply that math to actual calculations over year horizons. They are planning for retirement with a nominal bias, failing to perceive how cost inflation will compound over 30 years.

Table 1: Readiness on LTC and Retirement vs. Financial Knowledge

Financial concept	All sample	Response “Agree”: “I have my own means of paying for long-term care (such as savings or assets) even without long-term care Takaful/insurance.”	Response “Confidence” and “very confidence”: “How confident are you in the financial plans you have made for your retirement?”
	% of respondents who answered correctly		
Simple interest calculation	55.81	52.04	50.30
Compound interest calculation	51.12	50.14	53.29
Time value of money	34.46	28.88	25.15
Interest on a loan	85.02	81.74	82.04
Definition of inflation	88.39	87.47	89.82
Risk and return	87.64	85.83	83.83
Risk diversification	57.12	59.67	58.08

Source: Daud et al., 2026

The Family Safety Net is Gone

A foundational assumption of social culture in Malaysia is that the extended family serves as the primary eldercare buffer. However, the data indicates 79.21% of young adults expect to be cared for by professional staff rather than their children or relatives when they experience long-term functional dependency. Furthermore, 62.73% (335 respondents) actively state that they will require a private institutional care centre, retirement village, or assisted living facility at age 65.

Analysing the motives of these 335 facility-bound individuals suggests that their preferences reflect both personal choice and broader demographic and family structure changes. A total of 74.03% preferred professional care to avoid becoming a financial or lifestyle burden to their children, 63.88% valued social interaction with peers, and 47.16% prioritised professional care over informal family support. These findings are consistent with changing family structures, including smaller households, greater geographic mobility, and reduced availability of informal caregiving (Costa-Font & Rovira-Forns, 2008; Ng et al., 2002).

The Affordability Mismatch and Consumer Confidence Bottleneck

Out of the 335 young adults who actively recognise their future institutional care needs, 34.63% state their maximum monthly premium budget is capped under RM100, and another 18.81% cap it between RM101 and RM150. Effectively, 53.44% of the market cannot pay more than RM150 per month for an old-age protection plan. This structural ceiling exposes a profound macroeconomic mismatch. In the current Malaysian private market, comprehensive professional elderly care, skilled nursing, and assisted living facilities routinely cost anywhere from RM2,000 to over RM5,000 per month (Daud et al., 2026). To safely secure a private commercial insurance or Takaful policy that guarantees a payout of that magnitude, retail monthly premiums on the open market easily exceed the RM150 threshold, especially when taking into account future medical inflation.

This affordability deficit is further compounded by severe gaps in insurance navigation and cost-estimation confidence (Table 2):

- 54.49% state they are completely unconfident or only slightly confident in their ability to project future medical and eldercare costs.
- Nearly 42.88% of respondents reported being “a little confident” or “not confident at all” in knowing where to seek financial assistance if they were unable to afford health Takaful/insurance payments
- 36.89% admit they have no understanding of what questions to ask to evaluate or compare competing commercial policies.
- 32.96% are fundamentally paralysed by basic technical vocabulary, concepts, and clauses in standard commercial medical contracts.

Table 2: Confidence and Proactive Use of Health Takaful/Insurance

How confident are you that you...	“A little confident” and “not confident at all” (%)
...understand concepts and terms about health Takaful/insurances?	32.96
...can estimate your healthcare costs if you do not have any health Takaful/insurance?	54.49
...know what questions to ask in order to choose the health Takaful/insurance that is right for you?	36.89
...know where to find the information you need to choose a health Takaful/insurance?	27.15
...know where to go for financial help if you cannot pay your health Takaful/insurance?	42.88
...are choosing a health Takaful/insurance that suits your needs?	26.78
...in filling out medical forms by yourself?	25.66

Source: Daud et al., 2026

POLICY RECOMMENDATIONS

1. Institutional Demand-Pooling via an Expanded i-Lindung Ecosystem

The empirical evidence indicates a substantial affordability gap between respondents' maximum stated willingness to pay (RM150 per month) and the cost of comprehensive private nursing and long-term care services in Malaysia, which typically exceed RM2,000 per month and may reach RM5,000 depending on care needs and facility type. This finding is consistent with the broader literature, which shows that the limited uptake of private long-term care insurance is driven by multiple factors, including affordability constraints, information frictions, and market imperfections (Brown & Finkelstein, 2007; Lambregts & Schut, 2020). To address this issue, the Employees Provident Fund (EPF) could function as an institutional aggregator by expanding i-Lindung into a standardised group Long-Term Care Takaful rider based on pooled-risk pricing. By enrolling members at scale through automatic or default participation (with opt-out flexibility), the scheme would minimise adverse selection and enable lower premiums through risk pooling across the entire contributor base. This group-based underwriting structure would allow insurers to price coverage on a population-average risk profile rather than individual high-risk selection, thereby improving affordability and market sustainability.

By pooling the collective demand of over 15 million active accounts, the EPF has the potential to achieve economies of scale that may reduce distribution and administrative costs relative to retail insurance markets, as observed in established social long-term care financing systems such as Japan's public LTC insurance and Germany's mandatory social LTC insurance rely on compulsory contributions and broad coverage, although their financing, eligibility and benefit structures differ (Karagiannidou & Wittenberg, 2022; Rhee et al., 2015). Similarly, Singapore's CareShield Life similarly uses mandatory participation to reduce adverse selection and pool risks within birth cohorts; affordability is further supported by early enrolment, prefunding and targeted subsidies (Fong & Borowski, 2022). In principle, such a structure could support the development of a group-based long-term care rider aligned with mass-market affordability thresholds. However, this should be interpreted as a preliminary policy direction requiring further actuarial and policy feasibility assessment rather than an operational proposal. Its implementation would require legislative amendments and coordinated oversight involving relevant stakeholders, including the Ministry of Finance, Bank Negara Malaysia, and insurance regulators, rather than being undertaken by EPF independently.

2. **Implementing "De-Biased" Health-Shock Stress Testing**

Because 68.73% of respondents who expect to self-finance their retirement failed foundational inflation and compounding evaluations, current nominal retirement calculators are actively reinforcing a false sense of security. Showing a member a large, nominal flat sum for their retirement projection feeds into an illusion of preparedness because it ignores the compounding effect of medical cost inflation over a 30-year horizon.

The EPF may improve their digital interface by introducing mandatory De-Biased Health-Shock Stress Testing within the main user dashboard. When members view their retirement adequacy savings path, the system can simulate the real purchasing power of those funds when subjected to ageing shocks. The platform would explicitly display a dual projection: the nominal account value alongside an inflation-adjusted care longevity metric (e.g., "Your current balance equals RM500,000 in nominal terms, but covers only 2.4 years of professional skilled nursing care at projected costs in year 2055"). Forcing members to visualise this rapid asset erosion will transform their mindset from passive accumulation to active risk protection.

3. **Direct Care Provider Institutional Payout Channels**

With 79.21% of the future demographic openly rejecting informal family care in favour of commercial professional staff, the withdrawal dynamics of old age will alter fundamentally. Unstructured lump-sum withdrawals at age 55 or 60 may increase the risk of rapid asset depletion and old-age income insecurity, as lump-sum retirement savings are often exhausted within a few years of retirement (World Bank, 2020). The EPF should transition its operational framework to act as a managed care liquidity provider by constructing direct institutional payout channels.

The proposed nationwide accreditation network for verified medical care operators and assisted living facilities would require coordinated cross-agency governance, particularly involving the Ministry of Health, the Department of Social Welfare, and relevant financial regulators. Moreover, upon withdrawal eligibility, EPF members should have the option to lock a portion of their retirement funds into an automated corporate disbursement schedule. These funds would be remitted directly to the accredited eldercare provider on a monthly service-reimbursement basis, bypassing individual retail banking friction, protecting ageing assets from cognitive decline or exploitation, and ensuring that accumulated wealth is directly transformed into guaranteed long-term care security.

CONCLUSION

Malaysia's ageing transition requires stronger financial preparedness and institutional support to ensure sustainable retirement security and LTC financing. Although young Malaysian adults demonstrate positive attitudes toward retirement and health planning, significant gaps remain in financial knowledge and Takaful/insurance literacy. The findings highlight the need for coordinated policy interventions involving financial education, affordable LTC protection products, and stronger institutional support mechanisms.

Although respondents reported high confidence in retirement preparedness, important gaps remain in financial knowledge, LTC affordability, and Takaful literacy. These findings support the need for integrated retirement planning tools and affordable LTC financing mechanisms.

Because the individual retail insurance/ Takaful market is constrained by an affordability ceiling of below RM150 per month and limited consumer literacy, voluntary commercial insurance/ Takaful alone may not be sufficient to address this challenge. This creates scope for EPF to potentially play a more facilitative institutional role. In principle, this could involve exploring demand-pooled long-term care Takaful riders within its account ecosystem, alongside simplified planning tools and structured engagement with approved providers. Such approaches may help mitigate the risk of retirement asset depletion due to health-related shocks and contribute to improving retirement adequacy as Malaysia moves towards aged nation status.

FUNDING SUPPORT

This research was supported by Ministry of Finance (MoF) Malaysia through The Islamic Economics Research and Innovation Fund (IERIF) managed by International Centre for Education in Islamic Finance (INCEIF) (IERIF Project 114 (S/O 21869)).

REFERENCES

- Brown, J. R., & Finkelstein, A. (2007). Why is the market for long-term care insurance so small? *Journal of Public Economics*, 91(10), 1967–1991. <https://doi.org/10.1016/j.jpubeco.2007.02.010>
- Chandran, S. A. (2020). Extent of population ageing and intergenerational support in the states of India. In M. K. Shankardass (Ed.), *Ageing issues and responses in India* (pp. 115–127). Springer. https://doi.org/10.1007/978-981-15-5187-1_7
- Costa-Font, J., & Rovira-Forns, J. (2008). Who is willing to pay for long-term care insurance in Catalonia? *Health Policy*, 86(1), 72–84. <https://doi.org/10.1016/j.healthpol.2007.09.011>
- Daud, S. N. M., Ahmad, A. H., Mohamed, N. A., Samsudin, S., & Razli, A. Y. (2026). Assessing financial health literacy and market demand among Malaysian young adults: Towards establishing a Takaful-based elderly care scheme in preparation for an ageing nation (Final Report No. I-RISE/IERIF/AWARD/114). Unpublished technical report.
- Davis, K. D., & Jones, T. L. (2024). Financial health literacy and community-dwelling older adults: A concept analysis. *Nursing Forum*, 2024, 1–10. <https://doi.org/10.1155/2024/3400780>
- Fong, J. H., & Borowski, A. (2022). Long-term care insurance reform in Singapore. *Journal of Aging & Social Policy*, 34(1), 73–90. <https://doi.org/10.1080/08959420.2021.1926867>
- Gillen, M., & Kim, H. (2014). Older adults' receipt of financial help: Does personality matter? *Journal of Family and Economic Issues*, 35(2), 178–189. <https://doi.org/10.1007/s10834-013-9365-0>
- Karagiannidou, M., & Wittenberg, R. (2022). Social insurance for long-term care. *Journal of Population Ageing*, 15, 557–575. <https://doi.org/10.1007/s12062-022-09366-6>
- Lambregts, T. R., & Schut, F. T. (2020). Displaced, disliked and misunderstood: A systematic review of the reasons for low uptake of long-term care insurance and life annuities. *The Journal of the Economics of Ageing*, 17, 100236. <https://doi.org/10.1016/j.jea.2020.100236>
- Leung, A. Y. M., Parial, L. L. B., Szeto, S. S., & Koduah, A. O. (2022). Understanding the role of financial health literacy in midlife and old age: A scoping review. *Health & Social Care in the Community*, 30(6), e3921–e3933. <https://doi.org/10.1111/hsc.14101>
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52(1), 5–44. <https://doi.org/10.1257/jel.52.1.5>
- MacLeod, S., Musich, S., Hawkins, K., & Glaus, C. (2017). The impact of resilience among older adults. *Geriatric Nursing*, 37(4), 266–272. <https://doi.org/10.1016/j.gerinurse.2016.11.014>
- Mandi, R., Bansod, D. W., & Goyal, A. K. (2026). Rethinking family care: How changing family dynamics are reshaping support for older adults in India? *Archives of Gerontology and Geriatrics Plus*, 3(1), Article 100236. <https://doi.org/10.1016/j.aggp.2025.100236>
- Ng, A. C. Y., Phillips, D. R., & Lee, W. K.-M. (2002). Persistence and challenges to filial piety and informal support of older persons in a modern Chinese society: A case study in Tuen Mun, Hong Kong. *Journal of Aging Studies*, 16(2), 135–153. [https://doi.org/10.1016/S0890-4065\(02\)00040-3](https://doi.org/10.1016/S0890-4065(02)00040-3)
- Paez, K. A., Mallery, C. J., Noel, H., Pugliese, C., McSorley, V. E., Lucado, J. L., & Ganachari, D. (2014). Development of the Health Insurance Literacy Measure (HILM): Conceptualizing and measuring consumer ability to choose and use private health insurance. *Journal of Health Communication*, 19(sup2), 225–239.
- Palaci, F., Flores, L., & Zepeda, Y. (2018). Financial literacy, confidence, and financial well-being. *Journal of Economic Psychology*, 67, 101–117. <https://doi.org/10.1016/j.joep.2018.05.006>
- Patel, M. R., Piette, J. D., Resnicow, K., Kowalski-Dobson, T., & Heisler, M. (2016). Social determinants of health literacy in chronic illness. *Health Literacy Research and Practice*, 1(1), e9–e21. <https://doi.org/10.3928/24748307-20170111-01>
- Pelikan, J. M., Link, T., Straßmayr, C., Waldherr, K., Alfes, T., Bøggild, H., Griebler, R., Lopatina, M., Mikšová, D., Nielsen, M. G., Peer, S., Vrdeja, M., & The HLS19 Consortium of the WHO Action Network M-POHL. (2022). Measuring comprehensive, general health literacy in the general adult population: The development and validation of the HLS19-Q12 instrument in seventeen countries. *International Journal of Environmental Research and Public Health*, 19(21), 14129. <https://doi.org/10.3390/ijerph192114129>
- Rhee, J. C., Done, N., & Anderson, G. F. (2015). Considering long-term care insurance for middle-income countries: Comparing South Korea with Japan and Germany. *Health Policy*, 119(10), 1319–1329. <https://doi.org/10.1016/j.healthpol.2015.06.001>
- World Bank. (2020). A silver lining: Productive and inclusive ageing for Malaysia. World Bank. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/287981606116408851/a-silver-lining-productive-and-inclusive-aging-for-malaysia>
- Xiao, J. J., & Porto, N. (2017). Financial education and financial satisfaction: Financial literacy, behavior, and capability as mediators. *International Journal of Bank Marketing*, 35(5), 805–817. <https://doi.org/10.1108/IJBM-01-2016-0009>

ARTICLE 8

PREPARING TODAY'S YOUTH FOR TOMORROW'S SENIORS: ARE MALAYSIANS FINANCIALLY READY FOR ELDERLY CARE?

Mohammad Mafrukhin Mokhtar
Nur Rusyda Jamali

*Financial Education and Well-being Research Centre (FEWRC),
Agensi Kaunseling dan Pengurusan Kredit (AKPK)*

ABSTRACT

Malaysia is experiencing a rapid demographic transition marked by longer life expectancy, declining fertility rates, and rising healthcare costs. These trends are increasing future demand for elderly and long-term care, while overall retirement preparedness remains weak. Young adults, in particular, face gaps in financial capability and low retirement planning with lack of insurance coverage. This article examines the structural and behavioural factors shaping elderly care preparedness among young adults in Malaysia. The discussion considers the factors influencing financial readiness, including financial vulnerability, affordability consideration, retirement planning behaviour, as well as broader social and risk-related factors. Drawing these insights together, the article highlights gaps between longevity, financial preparedness, and the current elderly care financing landscape. It concludes by outlining key policy and ecosystem considerations, including the role of insurance innovation, long-term care financing, and targeted financial education.

INTRODUCTION

This article aims to explore whether Malaysians—particularly today's working-age population and youth—are financially prepared for the future costs and realities of elderly care. It also seeks to highlight the emerging gap between rising care needs and diminishing informal support systems, and to frame ageing not only as a demographic issue, but also as a critical financial planning and policy challenge for the nation.

MALAYSIA'S DEMOGRAPHIC SHIFT: WHY AGEING IS BECOMING A FINANCIAL ISSUE

Malaysia is undergoing a profound demographic transformation that will reshape not only its population structure, but also the financial preparedness required for ageing and elderly care.

Longer Lives, Longer Periods of Financial and Care Dependency

According to the Department of Statistics Malaysia (DOSM), older persons aged 60 years and above made up 11.6% (3.9 million) of the population in 2024 (DOSM, 2024a), and this is projected to rise to 17.3% (6.4 million) by 2040, classifying Malaysia as an aged nation, before becoming a super-aged society by 2057 when more than one in five Malaysians will be aged 60 and above (DOSM, 2025a). This ageing trend is reinforced by rising life expectancy, with DOSM's project life expectancy at birth to reach 75.3 years in 2025 (77.9 years for females and 73.1 years for males) (DOSM, 2025b). These trends imply longer retirement periods, increasing the need for adequate financial resources for living expenses, healthcare, and long-term care, and shifting the focus of healthy ageing toward financial preparedness for longer retirement.

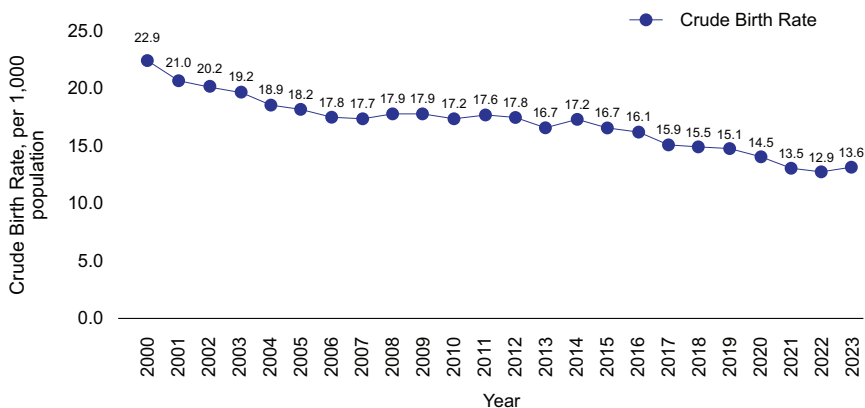
Shrinking Family Support Networks and Changing Social Structure

Traditionally, elderly care in Malaysia has relied on family support from spouses and adult children. However, urbanisation, labour mobility, and changing work patterns have weakened this system, making it more difficult for families to provide informal care. Report shows that approximately 44.68% of Malaysians are single, including those who have never married, divorced, separated, or widowed (United Nations, Department of Economic and Social Affairs [UN DESA], 2019) indicating that a growing share of individuals may enter old age without a spouse as a primary support.

Declining Birth Rates and the Future Reduction of Caregivers

These structural changes are further intensified by Malaysia's long-term decline in fertility. As shown in Chart 1, the crude birth rate has steadily decreased from 22.9 births per 1,000 population in 2000 to 13.6 births per 1,000 population in 2023 (DOSM, 2024b).

Figure 1: Crude Birth Rate in Malaysia, 2000–2023



Source: DOSM (2024b)

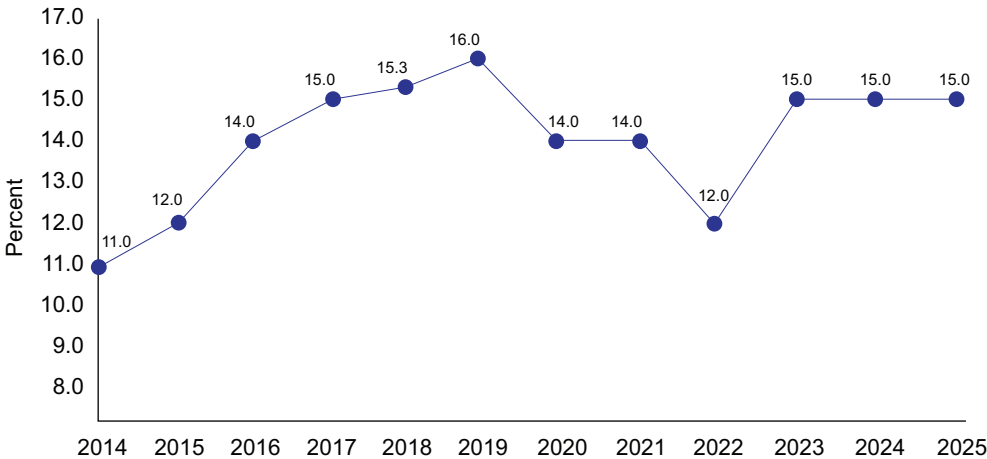
Malaysia's declining birth rates and smaller household sizes indicate a long-term shift towards smaller families. According to the DOSM (2022), the average private household size declined from 4.2 persons in 2010 to 3.9 persons in 2020, reflecting this trend. Smaller families mean fewer adult children are available to provide informal care, increasing the caregiving burden as the population ages.

Medical Inflation Trajectory and the Rising Cost of Ageing: Implications for Elderly Care Financing

Since future generations are expected to bear a greater share of their own elderly care costs, it is important to understand the trajectory of healthcare expenditure and its implications for financial preparedness. As shown in Chart 2, medical trend rates (data for Malaysia) refer to annual increases in medical plan costs, driven by inflation, medical technology advancement, higher utilisation, and cost shifting within healthcare systems. Between 2014 and 2025, medical trend rates show a sustained upward movement. The period 2014–2017 recorded sharp increases, reflecting rapidly compounding cost pressures, followed by a milder but still rising trend in 2018–2019, indicating temporary moderation rather than stabilisation.

From 2020 onwards, the trend became more volatile due to global healthcare disruptions, but overall cost levels remained elevated. In 2023–2025, medical trend rates stabilised at a persistently high plateau, suggesting a structural shift to a higher-cost healthcare environment and reinforcing concerns about long-term affordability and financial preparedness for future elderly care needs.

Figure 2: Annual Medical Trend Rates (Gross), Malaysia, 2014-2025



Source: Aon Hewitt (2015), Aon Hewitt (2017), Aon Global Benefits (2019), Aon Global Benefits (2021), Aon Global Benefits (2023), Aon Global Benefits (2025)

Rising Long-Term Care Costs and Implications for Financial Preparedness

Table 1 presents indicative long-term care (LTC) service cost estimates in Malaysia, which range from approximately RM1,500 to RM12,000 per month, depending on the type of care required, level of dependency and service arrangements. Most retirees may need to prepare RM3,000–RM8,000 per month for LTC, while those requiring dementia or intensive nursing care may incur costs of RM8,000–RM12,000 or more. As medical inflation continues to rise, these costs are expected to increase further.

Table 1: Indicative Long-Term Care Service Cost Estimates in Malaysia

No	Long-Term Care Service	Cost (RM) Per Month
1	Nursing Home Basic Care	1,500.00 - 3,000.00
2	Nursing Home Intermediate Care	3,000.00 - 5,000.00
3	Skilled Nursing	5,000.00 - 8,000.00
4	Memory Care	6,000.00 - 12,000.00
5	Care Concierge assisted living	4,000.00
6	Sunway Sanctuary luxury assisted living	9,600.00
7	Care Concierge Day Care (The Mansion)	2,500.00

No	Long-Term Care Service	Cost (RM) Per Hour
1	Home Care for daily-living care	30.00
2	Home Care for nursing care	36.00
3	Home Care for Physiotherapy	135.00

Source: Dollar and Sense Malaysia (2024), Nursing HomeMy (2026)

Using the indicative cost estimates presented in Table 1, Illustration 1 demonstrates how increasing longevity and deteriorating health conditions can substantially increase care-related expenses, highlighting the importance of financial preparedness and financial well-being in supporting quality of life during old age. Based on the illustration, over just five years, the long-term care expenditure accumulates to approximately RM143,280, excluding medical treatment, medications, hospitalisations, and transportation.

Illustration 1: Five-Year Long-Term Care Journey for an Elderly Malaysian

Illustrative Persona



Age:
70 years old

Socioeconomic Status:
Middle-class

Location:
Urban Malaysia

Family Situation:
Widower with no children; lives alone

Income:
Retiree receiving pension and EPF withdrawals

Health Condition: Hypertension and Type 2 Diabetes (common chronic conditions among older adults). Over time, he develops mobility limitations and mild cognitive decline.

Year	Age	Health Status	Care Service Utilised	Estimated Monthly Cost (RM)	Estimated Annual Cost (RM)
Year 1 (2026)	70	Independent, managing hypertension and diabetes	Home care for daily living assistance (10 hrs/month)	300	3,600
Year 2 (2027)	71	Reduced mobility due to diabetes-related complications	Home care for daily living assistance (20hrs/month) + Physiotherapy (4sessions/month)	1,140	13,680
Year 3 (2028)	72	Increased difficulty living independently	Care Concierge Day Care (The Mansion)	2,500	30,000
Year 4 (2029)	73	Mobility impairment requiring regular supervision	Care Concierge Assisted Living	4,000	48,000
Year 5 (2030)	74	Mild cognitive decline and multiple chronic conditions	Nursing Home Intermediate Care	4,000	48,000
Total cost (5 years)				143,280	

Notes: The projection period begins in 2026, with an estimated inflation rate incorporated into the cost projections.

FINANCIAL VULNERABILITY, RETIREMENT PREPAREDNESS AND AFFORDABILITY OF CURRENT YOUTH

Financial Vulnerability among Malaysian Youth

Financial vulnerability among Malaysian youth continues to pose a challenge, with debt obligations, limited savings, and inadequate financial buffers constraining their financial resilience. Agensi Kaunseling dan Pengurusan Kredit (AKPK) (2022) highlights a growing trend of over-indebtedness among young consumers, with more than 30% engaging in compulsive online purchases. This vulnerability is further reflected in AKPK's (2024) finding that 46.1% of youths are classified as "Vulnerable" or "Extremely Vulnerable" financially, while 28% struggle to accumulate RM1,000 in emergency savings and 24.7% lack sufficient savings to cope with job loss.

Affordability Considerations of Current Youth

Affordability of elderly care services is likely to become an increasingly important concern for today's youth as Malaysia transitions into an aged nation. Given the limited availability of publicly financed aged care and the growing role of private care providers (Yunus, Johar, & Katiman, 2022), future seniors are likely to bear a significant share of care-related expenses out of pocket. Consequently, ensuring affordability of elderly care will require younger generations to prepare not only for retirement income adequacy but also for potentially substantial long-term care expenses arising from increased longevity, higher care needs, and reduced availability of informal family support. Such trends underscore the importance of integrating long-term care financing into retirement planning from an early stage of working life (World Bank, 2020).

Retirement Planning Behaviour of Current Youth

AKPK (2018) found that although younger Malaysians demonstrate positive saving habits, these do not consistently translate into retirement planning. Individuals aged 20–29 and 30–39 recorded retirement planning scores below the national average, while also showing lower participation in retirement savings and investments. This suggests that younger adults prioritise general savings over retirement wealth accumulation, potentially increasing their risk of inadequate financial resources in old age.

Broader Social and Risk-Related Factors

Smaller household sizes and higher labour force participation are reducing the availability of informal family caregivers traditionally relied upon in Malaysia. In addition, the rising prevalence of non-communicable diseases such as diabetes, hypertension, and dementia is expected to increase the proportion of older persons requiring long-term, high-intensity care (Ministry of Health Malaysia, 2022). Collectively, these trends increase both the likelihood and duration of care dependency, thereby amplifying lifetime financial exposure for future retirees.

CONCLUSION/RECOMMENDATIONS

Malaysia's ageing trajectory, rising life expectancy, shrinking household size, and persistent medical inflation collectively indicate that elderly care will become a major long-term financial obligation for future generations. A coordinated, system-wide policy response is required across government, financial institutions, employers, and care providers.

Strengthen Lifelong Financial Preparedness through Coordinated Policy and Financial Literacy Initiatives

Financial preparedness for ageing should be integrated across education, employment, and social protection systems through a coordinated whole-of-society approach. Under the National Strategy for Financial Literacy 2026–2030, government agencies, Financial Education Network (FEN) members (including AKPK and EPF), financial institutions, education providers, and employers should strengthen financial literacy programmes beyond basic budgeting to include retirement planning, longevity risk, medical inflation, and long-term care costs. Standardised retirement planning benchmarks that reflect projected life expectancy and long-term care expenses should also be promoted to encourage early behavioural change and informed financial decision-making throughout the life course.

Develop a National Multi-Agency Long-Term Care Financing Framework

Malaysia faces a growing long-term care (LTC) financing gap due to limited insurance coverage and a high reliance on out-of-pocket payments. As demand for formal care increases with population ageing, a National Multi-Agency Long-Term Care Financing Framework should be developed through coordinated collaboration among relevant government agencies, financial regulators, social protection institutions, and the private insurance and banking sectors to establish a sustainable and accessible LTC financing system.

Expand Integrated Community and Private Care Ecosystems

Given the rising care demand and shrinking family-based support systems, Malaysia should develop a coordinated ecosystem of care involving public healthcare providers, private care centres, NGOs, and community organisations. This includes expanding affordable community care centres, home-based care services, and regulated assisted living options. Stronger coordination is required to ensure affordability, quality standards, and geographic accessibility of services.

Research Recommendation: Develop a National Long-Term Care Demand and Affordability Projection Model

Future policy planning should be supported by a dedicated research initiative to develop a Malaysia-specific LTC Demand and Affordability Projection Model. This model should integrate demographic projections, medical inflation trends, dependency probabilities, and income distribution data to estimate future national LTC demand and household affordability gaps up to 2040 and 2057. The study should be conducted through collaboration between public research institutions, universities, and statistical agencies to ensure evidence-based policymaking.

REFERENCES

- Agensi Kaunseling dan Pengurusan Kredit. (2018). Financial behaviour and state of financial well-being of Malaysian working adults.
- Agensi Kaunseling dan Pengurusan Kredit. (2022). Rebuilding financial resilience: What consumers can learn from the pandemic. https://www.akpk.org.my/sites/default/files/2024-07/Rebuilding%20Financial%20Resilience%20%28What%20Consumers%20Can%20Learn%20From%20The%20Pandemic%29%28290124%29_compressed.pdf
- Agensi Kaunseling dan Pengurusan Kredit. (2024). An investigation into the relationship between spending behaviour, compulsive online buying behaviour, and financial vulnerability among young Malaysian consumers.
- Aon Hewitt. (2015). 2015 global medical trend rate survey report. https://www.aon.com/attachments/human-capital-consulting/2015_global_medical_trend_rate_survey_report_2015_01.pdf
- Aon Hewitt. (2017). 2017 global medical trend rates report. <https://www.aon.com/russia/hr/files/2017%20Aon%20Global%20Medical%20Trend%20Rates%20Report.pdf>
- Aon Global Benefits. (2019). 2019 global medical trend rates report. <https://www.monacey-assurances.com/doc/AH-2019.pdf>
- Aon Global Benefits. (2021). 2021 global medical trend rates report. <https://www.aon.com/getmedia/6c3a61fb-d99b-4cf8-b3cf-57f6e052c9d9/2021-global-medical-trend-rates-report.pdf.aspx>
- Aon Global Benefits. (2023). 2023 global medical trend rates report: Global overview and data tables key highlights. <https://www.aon.com/getmedia/01fe1a12-0ca6-4d5a-8754-cf8691bcc19b/global-medical-trend-rates-report.pdf>
- Aon Global Benefits. (2025). 2025 global medical trend rates report: Global overview and data tables. <https://assets.aon.com/-/media/files/aon/reports/2025/aon-global-medical-trend-rates-report-2025.pdf>
- Department of Statistics Malaysia. (2022). Key findings: Population and housing census of Malaysia 2020. <https://www.statistics.gov.my>
- Department of Statistics Malaysia. (2024a). Current Population Estimate, Malaysia, 2024
- Department of Statistics Malaysia. (2024b). Annual number of births with signs of life upon delivery. https://open.dosm.gov.my/data-catalogue/births_annual
- Department of Statistics Malaysia. (2025a). Population Projections Malaysia 2020-2060
- Department of Statistics Malaysia. (2025b). Statistics of Life Expectancy, Malaysia, 2025e
- Dollar and Sense Malaysia. (2024). Cost guide to senior care services in Malaysia. <https://dollarsandsense.my/cost-guide-senior-care-services-malaysia/>
- Ministry of Health Malaysia. (2022). National health and morbidity survey: Non-communicable diseases. <https://www.moh.gov.my>
- Nursing HomeMy. (2026). Nursing home costs in Malaysia 2026: Complete price guide. <https://www.nursinghomemalaysia.com/guides/nursing-home-costs-malaysia>
- United Nations, Department of Economic and Social Affairs [DESA], Population Division. (2019). World Marriage data 2019
- World Bank. (2020). A silver lining: Productive and inclusive aging for Malaysia. <https://documents1.worldbank.org/curated/en/287981606116408851/pdf/A-Silver-Lining-Productive-and-Inclusive-Aging-for-Malaysia.pdf>
- Yunus, R., Johar, H., & Katiman, D. (2022). In search for a sustainable and equitable long-term care for Malaysia. *Journal of Aging & Social Policy*, 35(4), 1–13.

ARTICLE 9

FROM VOCATION TO PROFESSION: STATUTORY REGULATION FOR SOCIAL WORK IN MALAYSIA*

Haniza Khalid
Norma Mansor

Social Wellbeing Research Centre (SWRC), Universiti Malaya (UM)

ABSTRACT

Malaysia faces a severe social worker shortage, with a ratio of 1:8,576 compared to Singapore's 1:3,448 and Australia's 1:1,040. Without statutory regulation, private and NGO practitioners lack structured supervision and career pathways, leading to high burnout and turnover. Occupational safety risks are acute, yet the profession remains unrecognised. The Social Work Profession Bill or Rang Undang-undang Profesion Kerja Sosial (RUU PKS) proposes a statutory council to mandate registration, protect the title "social worker," enforce continuing professional education, and establish enforceable professional conduct standards.

*This article was drafted prior to the passage of the Social Work Profession Bill. The Bill was subsequently introduced in the Dewan Rakyat on 14 July 2026 and passed by the Dewan Negara on 30 July 2026. The article is presented as originally written.

INTRODUCTION

Malaysia is currently experiencing significant social challenges, as evidenced by recent national statistics. Between 2020 and 2022, the Department of Social Welfare or Jabatan Kebajikan Masyarakat (JKM) recorded 18,750 cases of child abuse (Akhtar, 2024). This pressure on public well-being is further highlighted by mental health trends; the Ministry of Health's (MOH) dedicated hotline received 24,346 calls in just the first eight months of 2023 (New Straits Times, 2023). Additionally, institutional data reveals a sharp rise in domestic instability, with police reports of domestic violence increasing by 35% between 2020 and 2024 (Galen Centre, 2024).

In standard social support frameworks, trained social workers serve as the primary line of defence in managing these crises. Operating at the centre of family and community support systems, these professionals are responsible for evaluating risks, managing immediate crises, and protecting vulnerable populations from harm. Academic and practical literature emphasises that social workers play a vital role in guiding individuals through complex challenges, offering critical intervention for those affected by mental health crises, substance abuse, domestic violence, homelessness, and systemic discrimination (Forrester et al., 2020; Rollins, 2020).

Social workers function across diverse organisational settings, including non-governmental organisations (NGOs) and government agencies such as JKJ, MOH, the Children's Development Department, the National Anti-Drugs Agency (AADK), and the Council for Anti-Trafficking in Persons and Anti-Smuggling of Migrants (MAPO). Despite a measurable increase in institutional demand, the profession faces substantial systemic deficits, characterised by escalating burnout rates, expanding caseloads, and stagnant financial remuneration (Azman & Singh, 2019; Shuhaimi et al., 2026).

Furthermore, a significant gap exists between public perception and the operational realities of the profession. While social work is frequently perceived as a low-risk vocation, empirical realities indicate high exposure to occupational hazards. Practitioners regularly operate in isolation and without adequate clinical supervision, frequently engaging with high-risk demographics experiencing acute trauma, substance dependence, interpersonal violence, and psychological crises (Amin et al., 2020). These realities underscore the urgency of reform. It is time for the Social Work Profession Bill (RUU PKS), which has been in development since 2010, to be tabled in Parliament (Daut, 2022; Hua, 2023). The bill represents a long-overdue recognition that social work cannot remain a mere vocational calling when lives and well-being are often at stake.

The Bill's prolonged delay stems primarily from two interrelated factors. First, there is fundamental disagreement over its scope of application. The government proposes excluding public sector social workers—who constitute the bulk of the workforce—while civil society insists on universal applicability to both public and private practitioners, warning that creating "two systems of regulation" risks imposing double standards and perpetuating confusion over professional qualifications (Social Workers Alliance Malaysia [SWAM], 2025). Second, the government has continued to revise the Bill internally, but the full draft has not been shared beyond a limited circle of civil society organisations and practitioners. These unresolved issues, combined with repeated changes in government, have stalled the Bill's progression despite repeated promises of tabling since 2017.

A ROADMAP FOR REFORM

The professionalisation of social work in Malaysia requires a statutory regulatory framework, which the Social Work Profession Bill seeks to provide. The Bill would establish a governing council to enforce standardised competencies and disciplinary accountability, while working alongside existing professional associations to ensure public protection and workforce development.

Through the proposed establishment of a Social Work Profession Council a public register will be used to protect the title "social worker," restricting its use to individuals with recognised qualifications—including the requisite hours of supervised practicum. This aligns with the "protection of title" model, under which only registered professionals may designate themselves as social workers. The Council will also set professional standards, mandate continuing development to keep practitioners current, and establish a legally enforceable complaints mechanism with sanctions—including removal from the register.

MANDATORY REGISTRATION

In its current form, the bill will apply to private sector practitioners and to public servants who engage in social work outside their official government duties. It also permits public officers to volunteer for registration, creating a pathway for those who wish to adhere to professional standards beyond their departmental requirements.

This scope is critically important given Malaysia's severe workforce constraints. In a parliamentary reply on October 9, 2019, the then Deputy Prime Minister Datuk Seri Dr. Wan Azizah Wan Ismail informed the Dewan Rakyat that Malaysia's social worker-to-population ratio stood at just 1:8,576—far behind Singapore's 1:3,448 and Australia's 1:1,040 (Malaysia, Dewan Rakyat, 2019; UNICEF, 2024) as summarised in Table 1. Another data point presented to parliament shows that in 2022 JKM had

only 3,790 officers engaged in social work nationwide — 1,658 social welfare officers, 1,661 probation officers and 471 anti-trafficking officers (Malaysia, Dewan Rakyat, 2023). This constraint makes private practitioners—in NGOs, private hospitals, and independent practice—indispensable. Research shows they have no structured supervision, professional development, or career pathways, driving high burnout and turnover (Shuhaimi et al, 2026). By extending regulation to these practitioners, the bill finally recognises that private sector professionals deserve the same support as those in government.

**Table 1: Social Worker Density and Population Ratios in Malaysia
(with Comparison to Neighbouring Countries)**

Country	Social Worker to Population Ratio	Number of People per Social Worker	Workforce Capacity Status	Statutory Regulation Status (Inferred)
Australia	1:1,040	1040	High capacity	Strong professional legal framework expected
Singapore	1:3,448	3448	Moderate capacity	Professional legal framework likely established
Malaysia	1:8,576	8576	Low capacity; far behind regional peers	Acute need for statutory regulation

Source: Adapted from UNICEF (2024)

Critics argue that the bill should apply universally to both private and government social workers under mandatory registration (see SWAM, 2025). However, the government maintains that government-based social workers already operate within a clear statutory framework that defines, certifies, and supports their profession. The government also asserts that the proposed statutory framework does not supersede or replace the need for voluntary, membership-based organisations (see Table 2). These organisations, such as the Malaysian Association of Social Workers (MASW) and SWAM, serve essential roles in networking, mentoring, continuing education, and advocacy. However, because they lack the legal authority to regulate the entire profession and impose enforceable sanctions, associations must leverage the council's legal authority to enforce continuing professional education (CPE) and disciplinary mechanisms.

Table 2: Complementary Ecosystem Proposed

Statutory Regulatory Council (Proposed Body)	Professional Associations (e.g., MASW)
1. Legal Authority & Regulation: Holds statutory power to regulate the entire profession, investigate all practitioners, and enforce legally binding sanctions.	1. Voluntary Engagement: Functions as a voluntary, membership-based organisation without statutory regulatory power; ethics processes only bind registered members.
2. Mandatory Registration: Oversees the mandatory registration, certification of practice, and implementation of the "protection of title" model for qualified practitioners.	2. Professional Networking: Facilitates professional networking, peer mentorship, community-building, and localised support systems for practitioners.
3. Standards & Quality Assurance: Sets minimum competency baselines and evaluates technical/academic programmes in collaboration with the Malaysian Qualifications Agency (MQA).	3. Continuing Education: Organises voluntary training, provides professional resources, and advances field-specific educational development.
4. Disciplinary Accountability: Establishes legally enforceable mechanisms to handle public complaints, investigate misconduct, and execute removal from the public register.	4. Systemic Advocacy: Conducts policy advocacy, champions social justice, and promotes workforce welfare and professional recognition.

Source: Khalid & Mansor (2026)

CONTINUOUS PROFESSIONAL EDUCATION (CPE)

The bill also helps address training and professional development. Without mandatory registration, private practitioners' engagement with accreditation frameworks remains voluntary and inconsistent. The bill would require licensed social workers to complete ongoing professional development to maintain their licences, ensuring structured access to continuing education, supervised practicum updates, and ethical refreshers—as well as training in modern, trauma-informed interventions. Ideally, a transitional phase should be introduced, allowing current, experienced but unaccredited social workers (particularly in NGOs) to practise while working towards mandatory formal qualifications. This shift would not only raise practice standards across the sector but also directly tackle the high burnout and turnover rates driven by the current lack of support.

Ministry of Women, Family and Community Development plans to use the proposed Council to help government agencies raise competency requirements to professional benchmarks while preserving each agency's specialised expertise, thereby promoting alignment across the public sector social work workforce. One notable effort is the Malaysian Social Institute's development of national competency standards (due 2027)—work that is already progressing independently of the Bill. The Council, once established, will complement this by providing statutory oversight and enforcement. Hence, it is critical that the Council board feature balanced representation from government officials, university faculty, civil society organisations, and service users.

CONCLUSION

The urgent need for statutory regulation arises from Malaysia's significant workforce deficit in the social work sector, which directly affects the protection and support of vulnerable populations. Benchmarking Malaysia against regional neighbours such as Singapore and developed nations like Australia reveals a significant gap: Malaysia's ratio of 1:8,576 lags far behind Singapore's 1:3,448 and Australia's 1:1,040. This disparity underscores a critical lack of personnel capacity to meet the country's social welfare demands. Ultimately, the article advocates for legislative reform to professionalise the industry and improve service accessibility.

The vision of RUU PKS is to elevate the profession, ensure accountability, and enhance public safety—fostering a culture of professionalism and excellence. Social workers must be viewed beyond their quiet, unsung roles and recognised for their systemic contributions: advocating for social justice, influencing policy, and spearheading reforms in welfare, healthcare, and community services.

REFERENCES

- Akhtar, R. (2024, January 25). Combating child abuse for a safer tomorrow. Malay Mail. <https://www.malaymail.com/news/what-you-think/2024/01/25/combating-child-abuse-for-a-safer-tomorrow-rulia-akhtar/114458>
- Amin, S. M., Mohamad, M. S., & Azizul, M. D. A. (2020). Analisa Perspektif Kepentingan Akta Profesion Kerja Sosial di Malaysia: The Perspective of Significance of the Social Work Professionals Act in Malaysia. 'Abqari Journal, 23(1), 196-212.
- Azman, A., & Singh, P. S. J. (2019). A new horizon for institutionalizing the social work profession: Is there a new hope for Malaysia?. In Asian Social Work (pp. 86-99). Routledge.
- Daut, M. A. M. (2022). Profesionalisme kerja sosial di Malaysia dari sudut perundangan. International Journal of Social Policy and Society (IJSPS), 18, 10-23.
- Forrester, D., Killian, M., Westlake, D., & Sheehan, L. (2020). Patterns of practice: An exploratory factor analysis of child and family social worker skills. Child & Family Social Work, 25(1), 108-117.
- Galen Centre. (2024, December 5). PDRM recorded 30,228 cases of domestic violence from 2020 to September 2024. <https://ova.galencentre.org/pdrm-recorded-30228-cases-of-domestic-violence-from-2020-to-september-2024/>
- Khalid, H. & Mansor, N. (2026, April). Expedite the tabling of the social work profession bill. The Edge Malaysia. <https://theedgemalaysia.com/node/800512>
- Hua, T. A. (2023). Professionalisation of social work in Malaysia: 1969–2010. Universiti Utara Malaysia, Sintok.
- Malaysia. Dewan Rakyat. (2019, October 9). Official Parliamentary Record (Hansard). Question from Maria Chin Abdullah regarding the effectiveness of the social protection system under JKM.
- New Straits Times. (2023, September 6). HEAL Line 15555 receives 24,346 calls as of August - Health DG. <https://www.nst.com.my/news/nation/2023/09/953545/heal-line-15555-receives-24346-calls-august-health-dg>
- Rollins, W. (2020). Social worker–client relationships: Social worker perspectives. Australian social work, 73(4), 395-407.
- Shuhaimi, N. A., Md Noor, A., Wan Jaafar, W. M., & Mohd Khir, A. (2026). The influence of trust and job satisfaction on structural empowerment and social work competency. Journal of Human Behavior in the Social Environment, 36(5), 305-327.
- Social Workers Alliance Malaysia. (2025). Common statement on Social Work Profession Bill [Unpublished document].
- UNICEF (2024, October 3). UNICEF and MASW urge swift action to professionalize Social Work in Malaysia. <https://www.unicef.org/malaysia/press-releases/unicef-and-masw-urge-swift-action-professionalize-social-work-malaysia>

SECTION 3

STRENGTHENING INSTITUTIONS FOR RETIREMENT SECURITY



ARTICLE 10

WORKING LONGER, LIVING LONGER? RETIREMENT AGE AND LONGEVITY AMONG PUBLIC SERVICE PENSIONERS IN MALAYSIA

Raja Abdul Azim Raja Abdullah
Amirul Hamza Abdullah

Kumpulan Wang Persaraan (Diperbadankan) (KWAP)

ABSTRACT

This study examines whether increases in the civil service mandatory retirement age in Malaysia affected pensioners' mortality. Building on the mandatory retirement age increases from 58 to 60 effective 1 January 2012, we applied fuzzy Regression Discontinuity and Instrumental Variables approaches to administrative pension data. Mortality by age 70 was used as the outcome measure. Across multiple cohorts, we found no statistically significant causal effect of working two additional years on early elderly mortality. The findings suggest that extending working life in the public sector is not associated with significant short-term changes in longevity.

INTRODUCTION

Malaysia, like many middle-income economies, is experiencing rapid population ageing, mainly driven by declining fertility and rising life expectancy. These demographic trends increase the need for long-term planning across national retirement systems, particularly defined-benefit schemes for civil servants. In response, the Government of Malaysia has progressively raised the mandatory retirement age over the past two decades. The compulsory retirement age for civil servants increased from 55 to 56 in 2001, from 56 to 58 in 2008, and most recently from 58 to 60 with effect from 1 January 2012 (Jabatan Perkhidmatan Awam, 2011a, 2011b, 2011c).

While these reforms are motivated by system sustainability, workforce continuity and demographic ageing, they have also raised concerns regarding the potential health and mortality implications of prolonged working life. Two competing hypotheses dominate the policy debate. On the one hand, extending employment may adversely affect health due to longer exposure to work-related stress or physical demands. On the other hand, continued labour force participation may promote better health outcomes through sustained income, social interaction, and cognitive engagement. Empirical evidence on the relationship between retirement timing and mortality has been mixed (Giesecke, 2019) and often confounded by selection effects, particularly the tendency of healthier workers to remain employed longer (Fitzpatrick & Moore, 2018; Sewdas et al., 2020).

Against this backdrop, the objective of this study is to provide causal evidence on whether extending the mandatory retirement age affects mortality among Malaysian public service pensioners. Focusing on the 2012 reform, we ask whether individuals who work until age 60 experienced different mortality outcomes compared with those who retired at age 58. The study does not assess non-mortality health outcomes such as morbidity, disability, healthcare use or quality of life. Drawing on institutional eligibility rules and administrative data, this study contributes policy-relevant evidence to inform ongoing debates on retirement age reforms in Malaysia and similar contexts.

DATA AND METHODOLOGY

Policy Context and Identification Strategy

The civil service mandatory retirement age increase effective 1 January 2012 applied strictly based on the service appointment date. Civil servants appointed before the effective date were given the option to retain their existing mandatory retirement age arrangement (age 55, 56, or 58), or to opt into the increased retirement age of 60. Although eligibility was administratively defined by appointment status, in practice it is closely aligned with birth cohorts, since retirement eligibility is determined by the age at which individuals reach the compulsory retirement threshold. In particular, individuals who turned 58 on or after 1 January 2012 (predominantly those born in 1954) became eligible for retirement at age 60, whereas those who turned 58 earlier

(primarily born in 1953) remained subject to the previous retirement age of 58. This institutional feature produced a natural, quasi-experimental setting in which eligibility for the higher retirement age was determined by date of birth, rather than individual characteristics.

We employed two complementary econometric approaches to estimate the causal impact of the retirement age reform on mortality outcomes:

- (i) Fuzzy Regression Discontinuity Design (RDD), exploiting the discontinuity in retirement eligibility at the birth date cutoff while accounting for the voluntary nature of the treatment.
- (ii) Instrumental Variables (IV) analysis, implemented via two-stage least squares, using eligibility for retirement at age 60 as an instrument to isolate exogenous variation in actual retirement age.

These methods combined help isolate the effect of the reform from the fact that healthier workers may be more likely to continue working. By relying on the same institutional cutoff, both approaches support credible causal inference while mitigating self-selection bias.

Main Dataset (2012 Reform: 58 to 60)

The main dataset was extracted from the civil service pensioner administrative database (PowerGen2). The dataset comprised compulsory retirement pensioners born between 1 January 1953 and 31 December 1954, representing one year before and one year after the key birth date cutoff of 1 January 1954. This window captured individuals who turned 58 immediately before and after the 2012 reform.

The individual-level dataset included date and year of retirement, retirement age (58 or 60), date of birth, mortality status by age 70, service group (Top Management; Management & Professional; Implementer), and gender.

Supporting Dataset (2008 Reform: 56 to 58)

A supporting dataset was constructed from the same database to assess the earlier increase in the mandatory retirement age from 56 to 58, which took effect on 1 July 2008. This dataset included pensioners born between 1 July 1951 and 30 June 1953, centred on the corresponding birth date cutoff of 1 July 1952. The supporting dataset served as an additional robustness and validation exercise, allowing us to assess whether similar retirement age increases in a different period yielded consistent mortality patterns.

Outcome Variable: Mortality by Age 70

The mortality by age 70 threshold was chosen for both substantive and data-driven reasons. This threshold is substantively appropriate because it captures early elderly survival in the years following retirement, which is the most policy-relevant period for assessing whether a higher mandatory retirement age is associated with any observable change in mortality. It also keeps the analysis focused on near- to medium-term mortality outcomes, without extending interpretation to later-life survival that falls outside the study's observation window.

From a data perspective, the first large cohort eligible to retire at age 60 reached that age in 2014. By 2026, the maximum observable age for this cohort is approximately 70+, and higher age mortality outcomes would be subject to incomplete observation and potential reporting delays. Age 70 therefore represented the most suitable and consistently observable mortality threshold for assessing early elderly mortality across cohorts.

Model Specifications

We estimated two models:

- (i) 2012 Reform: Fuzzy RDD and IV on the main dataset
- (ii) 2008 Reform: Fuzzy RDD and IV on the supporting dataset.

The main analysis focused on the 2012 Reform, while the 2008 Reform served as a robustness check. Robustness was established through consistency of results across these specifications.

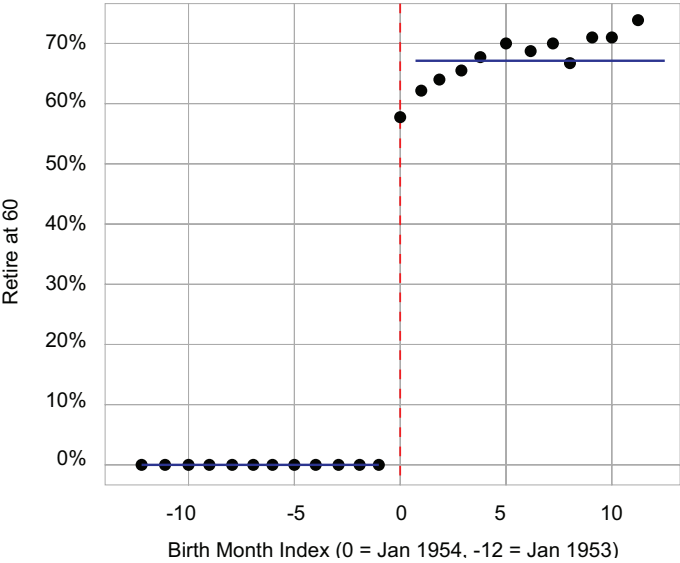
RESEARCH FINDINGS

Main Results (2012 Reform: 58 to 60)

Both RDD and IV approaches consistently indicated no statistically detectable effect within the observed range in mortality attributable to the retirement age increase. The fuzzy RDD analysis on the main dataset (Figure 1) showed a large discontinuity in treatment (retiring at 60) at the birth date cutoff, with uptake increasing from approximately 0% to about 67%. However, there was little to no corresponding discontinuity in mortality outcome (Figure 2).

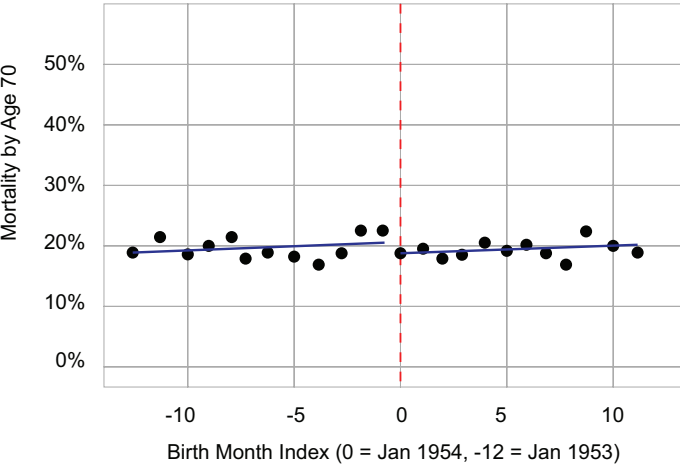
In the IV analysis, the first stage confirmed that being in the 1954 birth cohort is highly predictive of working longer (coefficient = 0.61, SE = 0.008). The second-stage IV estimate for the effect of working until age 60 (versus retiring at 58) on mortality by age 70 was approximately -1.6 percentage points (SE = 0.015). While the estimate suggests a small reduction in mortality among later retirees, the effect is not statistically significant (p-value = 0.28). The 95% confidence interval (between -0.045 and 0.013) easily includes a null effect. We therefore conclude that an additional two years of work had no statistically significant causal impact on early elderly mortality within this population.

Figure 1: Retirement at Age 60, by Birth Month Cohort



Source: Own calculations based on the main dataset extracted from PowerGen2

Figure 2: Mortality by Age 70, by Birth Month Cohort



Source: Own calculations based on the main dataset extracted from PowerGen2

Supporting Evidence (2008 Reform: 56 to 58)

Replicating the analysis using the supporting dataset centered on the 2008 reform yields qualitatively similar results. Although the increase in retirement age from 56 to 58 significantly affected retirement timing, no statistically significant effect on mortality by age 70 is detected (-1.1 percentage points effect, p-value = 0.367). These findings reinforce the conclusion that moderate increases in retirement age do not have detectable short-term mortality effects.

Overall Interpretation

Table 1 summarises results across both models from two distinct timeframes. The findings are remarkably consistent: two additional years of work have no statistically significant causal impact on early elderly mortality for this population. The modest raw mortality advantage observed among the age 60 retirees (approximately 1.1 to 1.6 percentage point lower mortality) may reflect selection effects, as individuals who choose to work two more years were, on average, healthier to begin with. Once we isolate the policy-induced component of retirement timing, the mortality outcomes equalise. This is consistent with other similar evidence. For example, the United States studies using Social Security age discontinuities found mixed or negligible mortality effects (Fitzpatrick & Moore, 2018), and a systematic review concluded that apparent mortality differences often disappear after accounting for prior health status (Sewdas et al., 2020). In our context, it appears that two additional years of work had neutral mortality consequences in the first decade of retirement.

Table 1: Summary of Estimates

Model	Effect on Mortality	Standard Error	p-value	95% Confidence Interval	Number of Observation
2012 Reform	-1.6 pp	1.5 pp	0.280	[-4.5, +1.3] pp	29,230
2008 Reform	-1.1 pp	1.3 pp	0.367	[-3.6, +1.3] pp	34,607

Source: Own calculations based on the main dataset extracted from PowerGen2. Note: pp = percentage points

While the dataset includes characteristics such as service group and gender, these variables are incorporated primarily to improve estimation precision rather than to conduct subgroup analysis. Re-estimating the models with these covariates does not materially alter the results, suggesting that the absence of a measurable effect is not driven by differences in observable workforce composition. Overall, the evidence indicates that the estimated effects are stable across specifications and not sensitive to the inclusion of individual characteristics.

It is worth noting that our analysis captured mortality through age 70, where potential effects on older ages (beyond 70) remain an open question. No long-term health, wellbeing, or productivity outcomes were investigated in the study. Moreover, our results apply to civil service employees under stable employment conditions. Effects could differ in private sector occupations or less secure job contexts. In summary, our evidence indicates that the 2012 and 2008 policies on increasing the mandatory retirement age achieved extended working lives without compromising retirees' survival in the early elderly years.

POLICY RECOMMENDATIONS/IMPLICATIONS

The findings carry encouraging implications for policymakers:

- (i) For comparable public-sector cohorts, raising the retirement age (even optionally) need not worsen early elderly mortality outcomes for retirees within the period examined (up to age 70). From a public health perspective, concerns that prolonging working life might lead to earlier deaths are not supported in this case. However, these results should be interpreted within the scope of this study and do not speak to longer-term survival beyond age 70 or to broader outcomes such as morbidity or quality of life.
- (ii) The absence of a mortality benefit suggests that retirement age reforms should be justified primarily on economic, fiscal, and labour-market grounds, rather than expectations of improved longevity. Gradually increasing the retirement age remains a viable policy tool to address fiscal challenges (Ibrahim, 2012). Working longer does not in itself extend life, but crucially it does not shorten it either.

Another option is to move away from a fixed retirement age and instead allow people to keep working based on their abilities, preferences, job fit, and organisation needs. International evidence supports flexible retirement options, such as gradually reducing work hours, combining a pension with part-time work, or retiring in stages to help people work longer (OECD, 2025).

- (iii) While average effects are neutral, policymakers should continue to complement retirement age reforms with age-friendly workplace policies to ensure older workers remain healthy and capable on the job. These include expanded workplace wellness programmes, flexible work arrangements, usage of assistive technology, relevant training programmes and robust health screenings as employees age (Cooke & Rogovsky, 2025; Staudinger et al., 2016).

CONCLUSION

This study investigated whether “working longer means living longer (or shorter)” in the case of a Malaysian civil service retirement age reform. By applying robust quasi-experimental methods to administrative data, we found that raising the retirement age from 58 to 60 was not associated with measurable changes in mortality by age 70. Evidence from the earlier 2008 reform yields similar conclusions. The absence of a significant mortality effect implies that extended employment did not place undue mortality risk on older workers, at least in the initial years of retirement. These results contribute to a growing body of evidence that transitioning to later retirement ages, if implemented appropriately, does not necessarily compromise older adults’ survival.

For policymakers, the findings provide clearer understanding that raising the retirement age is not associated with observable changes in early retirement mortality. While this suggests no short-term impact on survival up to age 70, the results do not extend to longer-term outcomes or broader aspects of well-being.

REFERENCES

- Cooke, F. L., & Rogovsky, N. (2025). Extending the productive working life of older workers: The role of human resource management [Research Brief]. International Labour Organization. <https://www.ilo.org/publications/extending-productive-working-life-older-workers-role-human-resource>
- Fitzpatrick, M. D., & Moore, T. J. (2018). The Mortality Effects of Retirement: Evidence from Social Security Eligibility at Age 62. *Journal of Public Economics*, 157, 121–137. <https://doi.org/10.1016/j.jpubeco.2017.12.001>
- Giesecke, M. (2019). The Retirement Mortality puzzle: Evidence from a regression discontinuity design (Ruhr Economic Papers No. 800). RWI – Leibniz-Institut für Wirtschaftsforschung, Essen. <https://hdl.handle.net/10419/201716>
- Ibrahim, R. I. (2012). Impact of Increasing Retirement Age on Longevity Factor: An Empirical Study for Government Pensioners in Malaysia. *Jurnal Ekonomi Malaysia*, 46(2), 29-35.
- Jabatan Perkhidmatan Awam. (2011a). Service Circular No. 11/2011: Exit Policy in the Public Service. Putrajaya.
- Jabatan Perkhidmatan Awam. (2011b). Service Circular No. 12/2011: New Public Service Remuneration System (SBPA). Putrajaya.
- Jabatan Perkhidmatan Awam. (2011c). Service Circular No. 13/2011: Implementation of the New Public Service Remuneration System for Federal Education Service Officers. Putrajaya.
- OECD. (2025). OECD Employment Outlook 2025: Can we get through the demographic crunch? OECD Publishing. <https://doi.org/10.1787/194a947b-en>
- Sewdas, R., de Wind, A., Stenholm, S., Coenen, P., Boot, C. R. L., & van der Beek, A. J. (2020). Association Between Retirement and Mortality: Working Longer, Living Longer? A Systematic Review and Meta-analysis. *Journal of Epidemiology & Community Health*, 74, 473–480.
- Staudinger, U. M., Finkelstein, R., Calvo, E., & Sivaramakrishnan, K. (2016). A Global View on the Effects of Work on Health in Later Life. *The Gerontologist*, 56(Suppl_2), S281–S292. <https://doi.org/10.1093/geront/gnw032>

ARTICLE 11

FROM BURDEN TO ENGINE: THE ECONOMIC CASE FOR UNIVERSAL BASIC PENSIONS IN MALAYSIA

Mohammad Ikmal Kadir¹
Muhammad Aizat Zainal Alam²

¹*Employees Provident Fund (EPF)*

²*Social Wellbeing Research Centre (SWRC), Universiti Malaya (UM)*

ABSTRACT

This article examines the economic case for introducing a Universal Basic Pension (UBP) in Malaysia as a response to population ageing, retirement income inadequacy and fragmented pension coverage. Drawing on fiscal simulation and input-output analysis, it assesses whether UBP can be both fiscally sustainable and economically productive. The findings suggest that a modest UBP can remain within manageable fiscal limits while generating demand-side effects across key domestic sectors through household consumption. The article argues that UBP should be reframed not merely as expenditure, but as an investment in income security, consumption stability and long-term economic resilience.

INTRODUCTION AND OBJECTIVES

Malaysia's population ageing is no longer a distant policy concern, but an emerging structural reality with direct implications for retirement security, fiscal policy and long-term economic resilience. In 2025, persons aged 65 and above accounted for 8.0% of the population, up from 7.6% in 2024, while the old-age dependency ratio rose from 10.9 to 11.4 older persons for every 100 persons of working age (Department of Statistics Malaysia [DOSM], 2025). These trends indicate that Malaysia has already entered the ageing-society phase and that the balance between the working-age and older populations is gradually shifting.

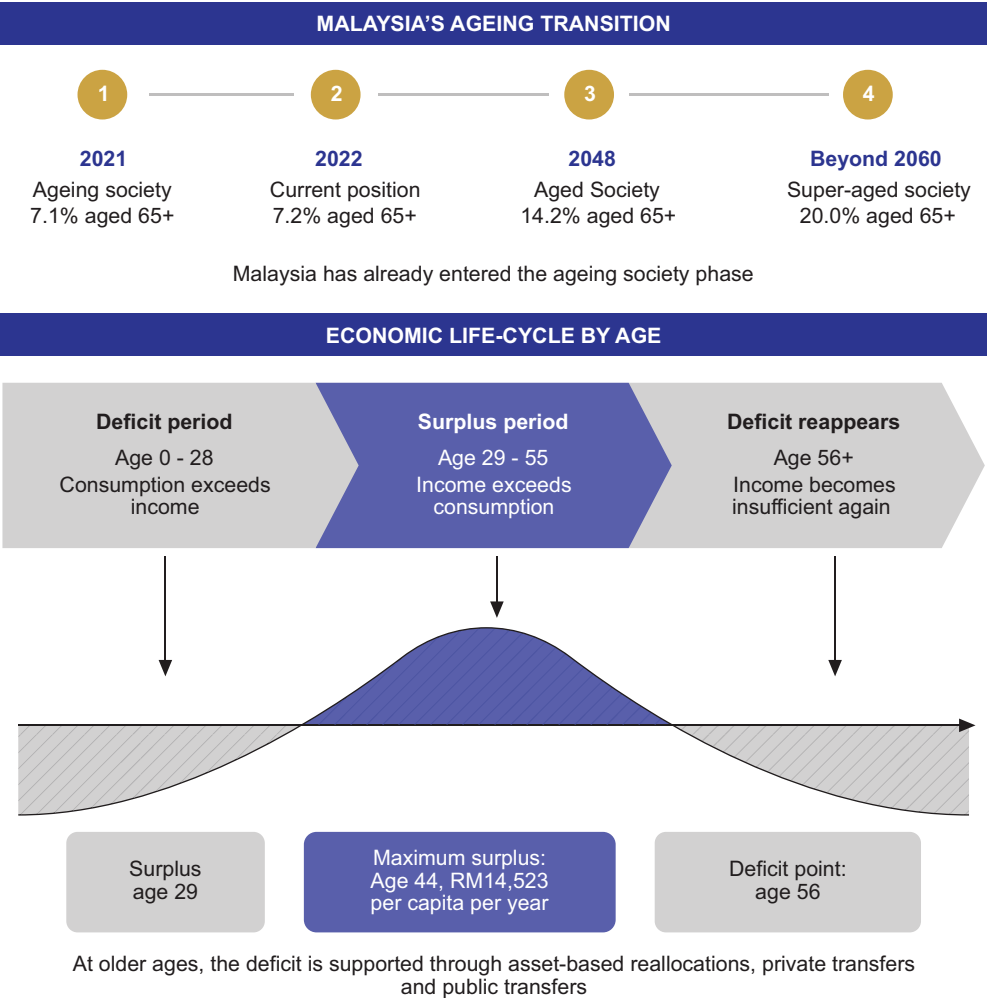
According to the Life-Cycle Hypothesis, individuals are expected to smooth consumption by accumulating savings during their working years and drawing them down in retirement (Modigliani & Brumberg, 1954; Modigliani, 1986). However, Malaysia's National Transfer Accounts show that the economic life cycle turns into deficit again from age 56 onwards (see Figure 1), when labour income becomes insufficient to meet consumption needs and individuals increasingly rely on assets and private or public transfers (DOSM, 2026). Old-age income security therefore cannot be understood solely as a matter of individual savings behaviour; it also depends on how retirement risks and resources are distributed across society.

This transition exposes persistent weaknesses in Malaysia's retirement architecture. Although the Employees Provident Fund (EPF) remains the principal retirement savings mechanism for formal-sector workers, a defined contribution system cannot by itself address longevity risk, irregular employment histories and uneven savings accumulation. Retirement adequacy and coverage gaps remain particularly pronounced among informal, self-employed and non-standard workers (World Bank, 2020; Organisation for Economic Co-operation and Development [OECD], 2024; EPF, 2024). Participation in retirement scheme therefore does not necessarily guarantee adequate or lifelong retirement income.

Universal Basic Pension (UBP) warrants consideration not just as a stand-alone Pillar 0 programme, but as the old-age component of a broader life-cycle Social Protection Floor and the foundational tier of an integrated retirement-income system. It performs the function commonly associated with Pillar 0 by providing basic, tax-financed income security regardless of employment or contribution history. Horizontally, it would extend minimum protection to older persons who may otherwise remain outside contributory arrangements. Vertically, EPF, public-sector pensions and voluntary savings would provide progressively higher levels of retirement income. This framing recognises that old-age insecurity often reflects risks accumulated across the life course, including low wages, informal employment, unpaid care responsibilities and interrupted contribution histories (International Labour Organization [ILO], 2014; Rabi et al., 2024; Rabi et al., 2025).

The policy debate, however, often concentrates on fiscal cost and financing trade-offs associated with universal transfers (Coady & Prady, 2018; Hanna & Olken, 2018). While affordability remains central, this perspective may overlook the economic activity generated when pension income is spent on essential goods and services. Drawing on fiscal simulation and input-output analysis, this article examines whether a modest UBP can remain fiscally manageable while also supporting household consumption and domestic economic activity. Its objective is to assess UBP as both an old-age income floor and a potential contributor to economic resilience.

Figure 1: Ageing Transition and Economic Life Cycle in Malaysia



Source: DOSM (2026)

METHODOLOGY AND DATA

This article combines a fiscal simulation with input-output analysis. The fiscal model estimates the long-term public cost of UBP, while the input-output model examines the domestic economic activity associated with household consumption under each benefit scenario.

The fiscal simulation covers 2026 to 2050 and considers monthly benefits of RM300, RM500 and RM1,000. Eligibility is defined by age rather than employment status, covering Malaysians aged 60 and above, including those who remain employed. The eligibility population is derived from single-age male and female population projections. In 2026, the model estimates approximately 4.51 million eligible persons.

A baseline take-up rate of 80% is applied, producing approximately 3.61 million beneficiaries in 2026. This is a conservative implementation assumption that allows for initial non-registration, incomplete beneficiary records, limited awareness and access barriers. It is not intended as the long-term coverage target of a universal scheme; full take-up would increase beneficiary numbers and expenditure by 25% relative to the baseline.

Annual benefit expenditure is calculated by multiplying the number of beneficiaries by the monthly benefit and 12 months. Benefit levels are indexed annually to the Consumer Price Index. An additional administrative allowance of 2.5% of benefit expenditure is included for registration, payment delivery, data management, communications, monitoring and grievance handling. This represents a lean planning assumption for a mature programme using existing identification and payment infrastructure, although initial implementation costs may be higher. Fiscal cost is expressed as a percentage of nominal Gross Domestic Product (GDP) under baseline, adverse and expansionary macroeconomic scenarios, consistent with established pension-costing approaches (ILO, 2014; OECD, 2019; World Bank, 2019).

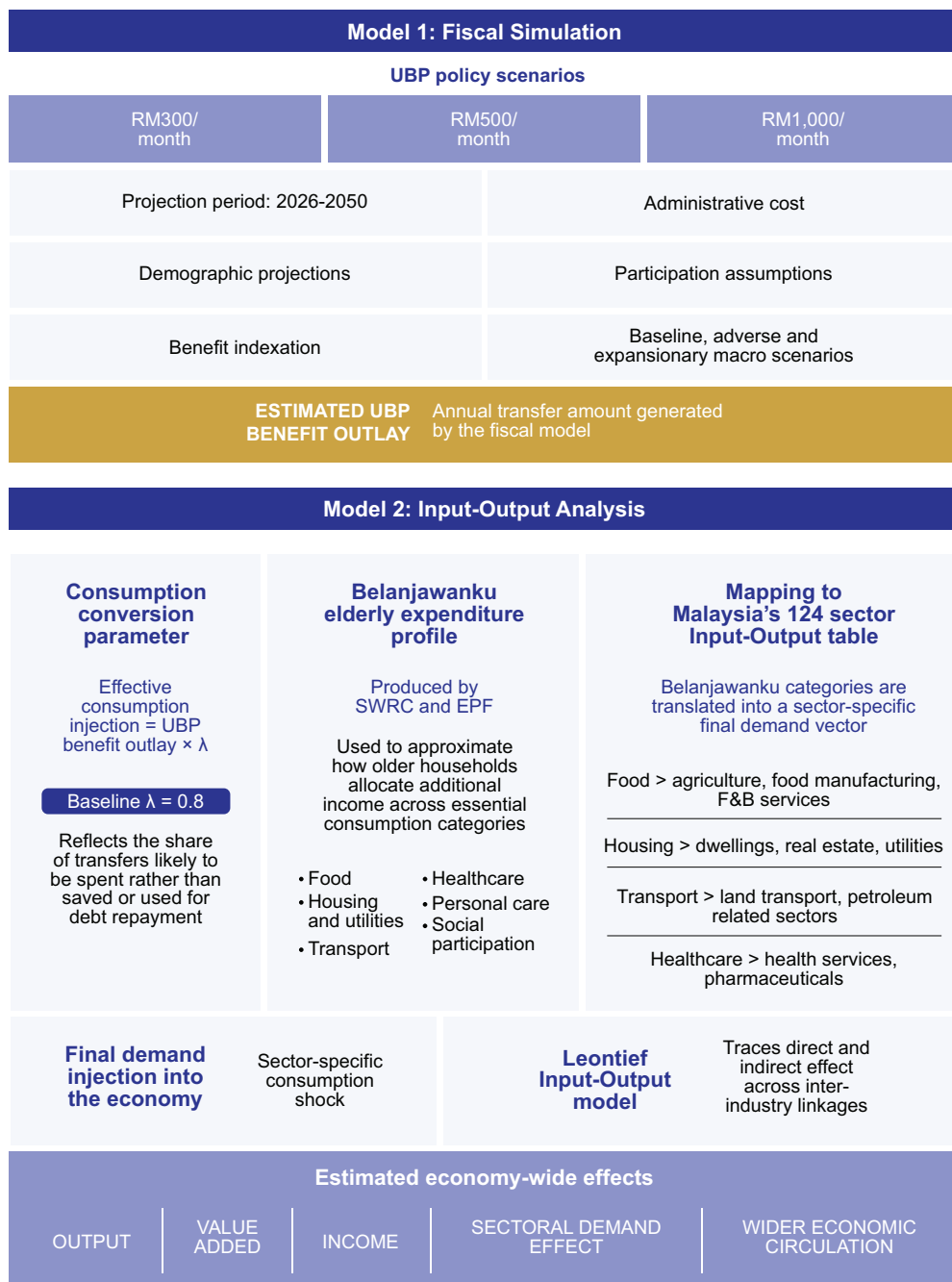
The second component uses Malaysia's 124-sector input-output structure to estimate the direct and indirect production effects associated with UBP-induced spending (DOSM, 2022; Leontief, 1936; Miller & Blair, 2009). The benefit expenditure, excluding administrative costs, is entered as a household final-demand shock. This produces consumption shocks of RM12.98 billion, RM21.63 billion and RM43.27 billion under the RM300, RM500 and RM1,000 scenarios respectively.

The demand shock is distributed across 44 commodities and services using expenditure shares derived from the older-person profile in Belanjawanku. These include housing, food, transport, utilities, healthcare, retail and other essential services. The resulting

demand vector is applied to the domestic-use input-output matrix to estimate effects on gross output, value added and income. Imported commodity requirements are calculated separately and are not counted as Malaysian domestic output, although associated domestic services, such as retail and transportation, may remain within the estimated effects (EPF, 2024; DOSM, 2022). Figure 2 summarises the analytical framework of this paper.

The results are comparative-static estimates rather than economic forecasts. The input-output model assumes fixed production coefficients, available productive capacity and no price, technological or supply-side responses. It also applies the same expenditure distribution across all benefit scenarios, causing the estimated effects to scale proportionately with the demand shock. As the full benefit expenditure is treated as household consumption, the results represent an upper-bound scenario and may overstate the effects if recipients save part of the transfer or use it to repay debt. The analysis also does not model possible crowding out of private or EPF savings, changes in family transfers, or labour-supply responses among older workers. The findings should therefore be interpreted as potential domestic economic effects under the stated assumptions, rather than guaranteed outcomes or evidence that UBP would pay for itself.

Figure 2: Analytical Framework to Assess UBP



RESEARCH FINDINGS

Recent Malaysia-specific research illustrates both the need for broader old-age protection and the fiscal choices involved. Rabi et al. (2024) estimate that a wider social protection floor, including basic income security for older persons, could be introduced progressively at a cost of between 0.683% and 0.939% of GDP. The study identifies additional revenue mobilisation and expenditure reprioritisation as potential sources of fiscal space. Separately, O’Keefe and Rongen (2025) find that Bantuan Warga Emas currently covers only around 4% of Malaysia’s older population, highlighting the limited reach of existing social pensions. These studies do not determine the optimal design of UBP, but demonstrate that the central policy challenge lies in balancing coverage, adequacy and fiscal capacity.

The fiscal simulation shows that the affordability of UBP depends substantially on the benefit level. As shown in Table 1, the RM300 monthly benefit is estimated to cost 0.60% of GDP in 2026, declining to 0.51% in 2050 under the baseline scenario. The RM500 benefit is estimated at 1.01% of GDP in 2026 and 0.84 in 2050. By comparison, the RM1,000 benefit would require 2.02% of GDP in 2026 and 1.69% in 2050.

Table 1: Baseline Fiscal Cost of UBP by Benefit Level

Monthly UBP Benefit	Estimated cost in 2026 (% to GDP)	Estimated cost in 2050 (% to GDP)	Relative fiscal requirement
RM300	0.60	0.51	lower
RM500	1.01	0.84	moderate
RM1,000	2.02	1.69	higher

Notes: All scenarios assume an 80% take-up rate. The model projects 4.51 million eligible persons and 3.61 million recipients in 2026, increasing to 9.57 million eligible and 7.65 million recipients in 2050.

Although the cost-to-GDP ratio declines over time under the baseline assumptions, this does not mean that UBP impose no fiscal burden. In 2026, the three scenarios would be equivalent to approximately 2.7%, 4.5% and 9.0% of projected government expenditure respectively. Financing could involve additional general revenue, tax reform, the reprioritisation of overlapping social assistance expenditure or borrowing. Each option carries distributional consequences and opportunity costs for other priorities, including healthcare, education and infrastructure. Fiscal manageability must therefore be understood as conditional on benefit design, implementation phasing and the financing instrument selected.

The results nevertheless suggest that a modest starting benefit, particularly within the RM300 to RM500 range, would be more fiscally tractable than the RM1,000 scenario. Such a design could be introduced progressively and reviewed as fiscal space, demographic conditions and administrative capacity evolve.

The input-output analysis estimates the gross domestic production effects associated with spending the pension transfers. As shown in Table 2, a final-demand injection of RM12.98 billion under the RM300 scenario generates approximately RM22.32 billion in gross output, RM10.25 billion in value added and RM2.92 billion in income. The corresponding effects rise proportionately under the RM500 and RM1,000 scenarios.

Second, the input-output analysis suggests that UBP has the potential to generate economy-wide demand effects. Pension transfers to older households are likely to be spent largely on essential goods and services, particularly among households with limited savings and higher marginal propensities to consume. In the model, UBP payments are treated as income injections into household consumption, which then generate demand across Malaysia's production network through inter-industry linkages (Leontief, 1936; Miller & Blair, 2009).

Table 2: Gross economy-wide effects of UBP-induced household spending

Monthly UBP benefit (RM)	Household final-demand injection (RM bil)	Gross output effect (RM bil)	Value-added effect (RM bil)	Income effect (RM bil)
300	12.98	22.32	10.25	2.92
500	21.63	37.20	17.09	4.86
1,000	43.27	74.41	34.18	9.72

Notes: Gross output represents the total value of production generated across industries, including intermediate transactions. Value added represents output after deducting intermediate inputs and is conceptually closer to GDP. The income effect represents additional household income associated with the production response. Source: Authors' calculations based on the input-output model.

The stable output-to-injection ratio of approximately 1.72 reflects the linear structure of the Leontief model. Because the production coefficients and expenditure distribution remain fixed, each increase in final demand scales proportionately through inter-industry linkages (Leontief, 1936; Miller & Blair, 2009). The largest production responses are concentrated in ownership of dwellings, wholesale and retail trade, refined petroleum, land transport, food processing, electricity and gas, healthcare, real estate, food and beverage services, and telecommunications.

These figures represent **gross demand effects rather than net macroeconomic gains**. The model does not deduct the potentially contractionary effects of the taxes, expenditure reductions or borrowing required to finance UBP. It also does not incorporate price responses, supply constraints, changes in private saving, labour-supply behaviour or subsequent fiscal feedback. The findings therefore do not demonstrate that UBP would pay for itself. Rather, they identify the scale and sectoral distribution of economic activity that could arise when pension transfers are spent under the modelled assumptions.

Taken together, the findings indicate that a modest UBP could be fiscally more tractable than higher-benefit alternatives and could support measurable domestic production linkages. Its overall economic case, however, ultimately depends on policy design, financing arrangements and the net effects relative to the next-best use of public resources.

POLICY RECOMMENDATIONS AND IMPLICATIONS

The findings support a calibrated approach to UBP rather than a binary choice between universal protection and fiscal restraint. Its design should reflect Malaysia's fiscal capacity, demographic transition and existing retirement architecture.

First, UBP should be positioned as the universal old-age income guarantee within a life-cycle Social Protection Floor and as the foundational tier of an integrated, multi-tier retirement-income system. In the horizontal dimension, it would close coverage gaps by providing basic income security to eligible older persons regardless of their employment or contribution history. In the vertical dimension, EPF, public-sector pensions, occupational arrangements and voluntary savings would provide progressively higher levels of protection. UBP should therefore complement rather than replace contributory arrangements, with stronger coordination between the different tiers to improve both coverage and retirement-income adequacy (ILO, 2014; Rabi et al., 2025).

Second, implementation should begin with a **modest benefit**. The RM300 and RM500 scenarios provide more fiscally tractable starting points than RM1,000, while still establishing a continuing minimum income floor. Any proposal should be accompanied by a medium-term financing plan specifying whether expenditure will be met through additional revenue, expenditure reprioritisation or the consolidation of

existing programmes. The implications for healthcare, education, infrastructure and other priorities should be assessed explicitly. Benefit levels should subsequently be reviewed against inflation, fiscal space and retirement adequacy benchmarks.

Third, policymakers should consider **phased implementation**. Priority should be given to establishing reliable registration, payment, monitoring, audit and grievance systems before expanding programme generosity. The model's 80% take-up assumption should not be treated as the eventual policy target: a universal scheme should progressively seek near-complete effective coverage. Any proposal to alter the eligibility age from the modelled threshold of 60 should be subject to separate fiscal and distributional analysis. Coordination with Bantuan Warga Emas and other assistance programmes should also ensure that vulnerable recipients are not made worse off during the transition.

Finally, UBP should form part of a wider retirement-income strategy. Complementary reforms should strengthen EPF adequacy, expand contributory coverage among informal and gig workers, support later-life employability where appropriate and improve coordination across social protection programmes. Evaluation should extend beyond programme expenditure to include coverage, poverty reduction, retirement adequacy, distributional outcomes and domestic demand effects. The input-output findings may inform this assessment but should be interpreted as gross production linkages rather than evidence of fiscal repayment or net macroeconomic gain.

CONCLUSION

Malaysia's demographic transition is increasing the need for a more inclusive and durable old-age income framework. This article assessed UBP through fiscal simulation and input-output analysis. The findings indicate that modest monthly benefits of RM300 or RM500 are more fiscally manageable than a RM1,000 benefit, although all scenarios require explicit financing choices and entail opportunity costs. The input-output results further show that pension spending may support domestic production and income through household consumption, but these estimates represent gross demand effects and do not account for financing, behavioural or supply-side responses. UBP should therefore be considered as a carefully calibrated Pillar 0 component within Malaysia's wider retirement system, supported by phased implementation, transparent financing and continued evaluation.

REFERENCES

- Coady, D., & Prady, D. (2018). Universal basic income in developing countries: Issues, options, and illustration for India (IMF Working Paper No. 18/174). International Monetary Fund.
- Department of Statistics Malaysia. (2022). Malaysia input-output tables, 2019 & 2020.
- Department of Statistics Malaysia. (2025). Current population estimates, Malaysia, 2025.
- Department of Statistics Malaysia. (2026). National transfer accounts, Malaysia, 2022.
- Employees Provident Fund. (2024). Belanjawanku: Expenditure guide for Malaysian individuals and families-Klang Valley and selected cities 2024/2025 (in collaboration with the Social Wellbeing Research Centre, Universiti Malaya).
- Hanna, R., & Olken, B. A. (2018). Universal basic incomes versus targeted transfers: Anti-poverty programmes in developing countries. *Journal of Economic Perspectives*, 32(4), 201–226.
- International Labour Organization. (2014). World social protection report 2014/15: Building economic recovery, inclusive development and social justice. International Labour Office.
- Miller, R. E., & Blair, P. D. (2009). Input-output analysis: Foundations and extensions (2nd ed.). Cambridge University Press.
- Modigliani, F., & Brumberg, R. (1954). Utility analysis and the consumption function: An interpretation of cross-section data. In K. K. Kurihara (Ed.), *Post-Keynesian economics* (pp. 388–436). Rutgers University Press.
- Modigliani, F. (1986). Life cycle, individual thrift, and the wealth of nations. *American Economic Review*, 76(3), 297–313.
- O’Keefe, P., & Rongen, G. (2025). Should Malaysia expand its social pension? Global evidence, design issues and options. World Bank.
- Organisation for Economic Co-operation and Development. (2019). Pensions at a glance 2019: OECD and G20 indicators. OECD Publishing. <https://doi.org/10.1787/b6d3dcfc-en>
- Organisation for Economic Co-operation and Development. (2024). OECD economic surveys: Malaysia 2024. OECD Publishing. <https://doi.org/10.1787/e45ca31a-en>
- Rabi, A., Vasquez, J., & Mansor, N. (2024). Creating fiscal space for constructing Malaysia’s social protection floor (SWRC–UNICEF Policy Paper Series No. 1). Social Wellbeing Research Centre, Universiti Malaya, and UNICEF Malaysia.
- Rabi, A., Mansor, N., & Kikkawa, A. (2025). Securing dignity in ageing: A framework for Malaysia’s integrated old-age income protection in advancing RMK13 (SWRC Working Paper Series No. WP2025/5). Social Wellbeing Research Centre, Universiti Malaya
- World Bank. (2019). Protecting all: Risk sharing for a diverse and diversifying world of work. World Bank. <https://doi.org/10.1596/978-1-4648-1427-3>
- World Bank. (2020). *A silver lining: Productive and inclusive aging for Malaysia*. World Bank.

ARTICLE 12

ARTIFICIAL INTELLIGENCE, LONGEVITY RISK, AND RETIREMENT ADEQUACY: EVIDENCE FROM MALAYSIA

Turalay Kenc¹
Nurfarahin Mazlan¹
Nurhuda Othman²

¹*INCEIF University*

²*Centre of Excellence for Research and Innovation in Islamic Economics (i-RISE), INCEIF University*

ABSTRACT

Malaysia's retirement system already faces low EPF balances among many near-retirees; longer lifespans would intensify the challenge. Using DOSM 2024 life tables, EPF administrative data and a stochastic life-cycle model, this paper examines how illustrative AI-longevity scenarios could affect retirement adequacy. Median EPF savings at age 54 are far below the modelled wealth needed to sustain income through retirement, implying monthly incomes below EPF Retirement Income Adequacy Framework for Adequate Savings of about RM 2,700. If workers can remain employed and preserve contributions for longer, delayed retirement can partly offset longer payout periods and raise modelled monthly pensions by 27–54%. These gains are conditional: they assume stable employment, full contributions, limited withdrawals and broad access to health improvements. Workers unable to extend working lives, especially women, informal workers and today's 45–65 cohort, may face larger old-age income gaps. The policy priority is staged reform of EPF preservation, retirement-age policy and lifetime-income products.

INTRODUCTION

Malaysia's retirement system faces two linked pressures. The immediate pressure is savings adequacy. EPF's Integrated Annual Report 2024 reports median active-member savings at age 54 of RM 192,119 for men and RM 134,977 for women (Employees Provident Fund [EPF], 2025). Under this paper's annuity calculation, those balances generate monthly retirement incomes of about RM 1,253 and RM 823, below the RM 2,700 adequacy benchmark used for comparison (EPF and Social Wellbeing Research Centre [SWRC], 2025). The calculation annuitises each balance using

$$P = \frac{W(r/12)}{1 - (1 + r/12)^{-12H}}$$

with a 5.5% annual return and DOSM remaining-life horizons of 22.1 years for men and 25.4 years for women.

The second pressure, AI longevity, is prospective. In this article, "AI longevity" refers to the possibility that AI-enabled improvements in diagnosis, drug discovery, prevention and health management could increase healthy lifespans and lengthen retirement horizons. Some observers suggest gains of up to 12 years (AI+12) and 15 years (AI+15) over coming decades (Topol, 2019). As the timing and distribution of such gains remain uncertain, this paper treats AI+12 and AI+15 as stress-test scenarios rather than forecasts.

We contribute three findings. First, actual median age-54 EPF savings are about 16% of the modelled adequacy balance, computed as actual median savings divided by the model's corresponding optimal balance. Second, under favourable assumptions, delayed retirement can lift monthly pensions by 27–54% despite longer payout periods. Third, workers unable to extend careers may face a larger shortfall between savings and expected years in retirement, especially the current 45–65 cohort.

MALAYSIA'S RETIREMENT LANDSCAPE

Demographics

Malaysia crossed the Ageing Society threshold (65+ share >7%) in 2021 and is projected to reach Aged Society status by 2048 (Bloom et al., 2010; United Nations, 2023). This paper's cohort-component simulation projects the old-age dependency ratio doubling from 11.4 in 2025 to 23.4 in 2050, while the EPF age-proxy support ratio—persons aged 15–54 per person aged 55+—falls from 3.78 to below 2.0. A total fertility rate of 1.6 in 2024, well below the 2.1 replacement level (Lee and Mason, 2010), implies that much of Malaysia's ageing transition over the next 25 years is already embedded in current demographic trends.

EPF Savings Adequacy

EPF's Integrated Annual Report 2024 reports 8.78 million active members and RM 962.4 billion in active-member savings as of 31 December 2024, excluding the 2024 annual dividend (EPF, 2025). Strong aggregate fund performance therefore masks substantial variation in savings outcomes across members. Pre-retirement access is one important source of leakage. The RM 29.1 billion figure used in this paper is the authors' calculation from EPF 2024 withdrawal and facility categories, excluding retirement-related withdrawals at ages 55 and 60, death, in-capacitation, leaving country, pensionable employee withdrawals and savings above RM 1 million. Akaun Fleksibel alone recorded RM 12.17 billion in withdrawals between May and December 2024 (EPF, 2025). Women face an additional disadvantage: lower median savings combined with longer life expectancy reduces median female monthly income to RM 823, about one-third of the adequacy benchmark (Jefferson, 2009; Lusardi and Mitchell, 2008).

STOCHASTIC OPTIMAL RETIREMENT MODEL

Kenc, Mazlan, and Othman (2026) propose a stochastic optimal retirement model for Malaysia. The model asks a simple question: given a worker's EPF balance, wage path, contribution rate, investment-return uncertainty and expected remaining lifetime, at what retirement age would lifetime retirement resources be highest? It simulates many possible return paths and compares retirement ages from 50 to 70. The results should be read as model-based benchmarks, not predictions of actual behaviour, because they assume continuous formal employment, contribution discipline and no further pre-retirement withdrawals.

Under baseline DOSM 2024 mortality (Department of Statistics Malaysia [DOSM], 2024), optimal retirement ages are $\tau^* = 57$ for men and $\tau^* = 53$ for women in the current-savings exercise. Actual median EPF savings at age 54 are only 15.6% and 16.5% of the corresponding modelled adequacy balances. This indicates that retirement inadequacy is influenced not only by pension design, but also by withdrawal patterns, contribution histories and labour-market attachment (Holzmann and Hinz, 2005; Kenc and Perraudin, 1997).

AI-DRIVEN LONGEVITY: SCENARIOS AND IMPACT

AI could affect longevity through faster drug discovery, earlier disease detection and more personalised treatment (Topol, 2019; Stokes et al., 2020). These advances may improve survival at older ages, but their timing, scale and distribution remain uncertain. For that reason, this article does not assume that a 12–15 year increase is inevitable. Instead, it uses AI+12 and AI+15 as stress tests to ask how Malaysia’s retirement system would perform if lifespans rose substantially faster than historical actuarial trends.

The scenarios apply a uniform upward shift to DOSM 2024 remaining-life estimates from 2030. This is a simplifying assumption. In practice, longevity gains are likely to differ by income, gender, employment type and access to healthcare; unequal gains would widen the distributional risks discussed below. For the same pension wealth, a 30.6-year payout horizon under AI+12 rather than an 18.6-year baseline horizon reduces the monthly annuity by about 29% (Milevsky, 2006). Table 1 summarises the model results under full-career employment and no further withdrawals.

Table 1: AI Longevity – Optimal Retirement Results

Scenario	Gender	T*	LE at T*	Median Wealth	Monthly Pension
Baseline (DOSM 2024)	Male	62	17.2yrs	RM 1,729,831	RM 12,039
	Female	61	20.6yrs	RM 1,395,038	RM 8,658
AI +12 years	Male	≥70	23.6yrs	RM 2,844,859	RM 16,306
	Female	≥70	25.4yrs	RM 2,424,905	RM 13,350
AI +15 years	Male	≥70	26.6yrs	RM 2,844,859	RM 15,286
	Female	≥70	28.4yrs	RM 2,424,905	RM 12,605

Notes: Return assumption $\mu = 6.3\%$ follows EPF’s 2024 dividend and should be read as conditional on a strong recent return; full-career EPF, no withdrawals.

Source: Authors’ simulations using DOSM 2024 life tables and EPF Annual Report 2024 inputs

Under baseline mortality, optimal ages in the full-career exercise are 62 and 61, already above Malaysia’s statutory age of 60. Under AI+12 and AI+15, both genders reach the model’s upper bound of 70. The result should therefore be read as “70 or higher within this specification”; it does not identify the optimum beyond age 70. Under the model’s favourable assumptions—continued formal employment, full contributions, limited withdrawals and sustained returns—delayed retirement can more than offset the longer payout horizon. Median male wealth rises from RM 1.73 million to RM 2.84 million under AI+12, while monthly pensions rise 35%; female monthly pensions rise 54%. The result is conditional, not automatic.

Distributional Risks

Workers unable to extend their careers in line with longer lifespans may face a larger gap between retirement resources and expected years in retirement. Evidence from comparable economies shows that the income–longevity gradient is already steep (Chetty et al., 2016). If AI-enabled health gains arrive first for higher-income and formal-sector workers, the same technology that extends average lifespans could also widen retirement-income inequality. The transitional cohort aged 45–65 today may face the sharpest risk: they may experience longer lifespans but have limited time to raise savings, rebuild withdrawn balances or adjust retirement timing.

POLICY IMPLICATIONS

Three staged reforms would make Malaysia's retirement system more resilient under a range of longevity outcomes.

Protect Compound Savings

Pre-retirement withdrawals can meet legitimate liquidity needs, but they reduce compound returns over the years when balances grow fastest. EPF could strengthen disclosure by showing each member the lifetime-income cost of a withdrawal and could pair conditional access with automatic re-contribution when workers return to employment (Milevsky and Young, 2007). In this paper's classification, RM 29.1 billion of 2024 withdrawals and facilities represented pre-retirement leakage rather than normal retirement drawdown.

Prepare for Longer Working Lives

Malaysia's statutory retirement age of 60 sits below the model's full-career baseline optimum and further below the AI-longevity stress-test result. A gradual retirement-age adjustment linked to longevity indicators should be considered, with safeguards for workers in poor health, physically demanding jobs and informal employment (Stock and Wise, 1990; Gruber and Wise, 1999). Sustaining employer contributions beyond age 60 would matter as much as the headline age itself.

Build Lifetime-Income Products

Longer lifespans require drawdown and annuity products that can finance 25–30 year retirements. EPF-administered default drawdown products, deferred annuities, inflation protection and longevity-risk instruments should be stress-tested against alternative mortality scenarios (Blake and Burrows, 2001; Cairns et al., 2006; Mitchell et al., 1999). Gender-sensitive contribution credits for caregiving breaks would help prevent longer lives from deepening existing retirement-income gaps (Jefferson, 2009).

CONCLUSION

Malaysia's current retirement challenge is already visible in low median EPF balances among near-retirees. Longer lifespans would make the same adequacy gap harder to manage. The simulations show that delayed retirement and preserved contributions can improve outcomes, but only for workers able to remain in formal employment and avoid further leakage. The policy implication is not to assume an AI-longevity future with certainty, but to build a system robust enough for it: stronger EPF preservation, gradual preparation for longer working lives and lifetime-income products designed for 25–30 year retirements.

DATA SOURCES

DOSM: Abridged Life Tables 2024, Current Population Estimates 2025, Vital Statistics 2024 and Population Projections 2020–2060. EPF: Integrated Annual Report 2024. Belanjawanku: Expenditure Guide for Malaysians 2024/2025. Computational model: ai longevity retirement.py.

REFERENCES

- Blake, D., and Burrows, W. (2001). Survivor bonds: Helping to hedge mortality risk. *Journal of Risk and Insurance*, 68(2), 339–348.
- Bloom, D. E., Canning, D., and Fink, G. (2010). Implications of population ageing for economic growth. *Oxford Review of Economic Policy*, 26(4), 583–612.
- Cairns, A. J. G., Blake, D., and Dowd, K. (2006). A two-factor model for stochastic mortality with parameter uncertainty. *Journal of Risk and Insurance*, 73(4), 687–718.
- Chetty, R., Stepner, M., Abraham, S., et al. (2016). The association between income and life expectancy in the United States, 2001–2014. *JAMA*, 315(16), 1750–1766.
- Department of Statistics Malaysia. (2024). Abridged Life Tables, Malaysia, 2022–2024. Department of Statistics Malaysia.
- Employees Provident Fund. (2025). Integrated Annual Report 2024. Employees Provident Fund. https://www.kwsp.gov.my/documents/d/guest/kwsp24_e
- Employees Provident Fund and Social Wellbeing Research Centre. (2025). Belanjawanku 2024/2025 Expenditure Guide for Malaysians: Key Findings and Technical Notes.
- Gruber, J., and Wise, D. A. (Eds.). (1999). *Social Security and Retirement around the World*. University of Chicago Press.
- Holzmann, R., and Hinz, R. (2005). *Old Age Income Support in the 21st Century*. World Bank.
- Jefferson, T. (2009). Women and retirement pensions: A research review. *Feminist Economics*, 15(4), 115–145.
- Kenc, T., and Perraudin, W. (1997). European pension systems: A simulation analysis. *Fiscal Studies*, 18(3), 249–277.
- Kenc, T., Mazlan, N., & Othman, N. (2026). Stochastic optimal retirement model: An application to Malaysia [Unpublished manuscript].
- Lee, R., and Mason, A. (2010). Fertility, human capital, and economic growth over the demographic transition. *European Journal of Population*, 26(2), 159–182.
- Lusardi, A., and Mitchell, O. S. (2008). Planning and financial literacy: How do women fare? *American Economic Review*, 98(2), 413–417.
- Milevsky, M. A. (2006). *The Calculus of Retirement Income*. Cambridge University Press.
- Milevsky, M. A., and Young, V. R. (2007). Annuitization and asset allocation. *Journal of Economic Dynamics and Control*, 31(9), 3138–3177.
- Mitchell, O. S., Poterba, J. M., Warshawsky, M. J., and Brown, J. R. (1999). New evidence on the money's worth of individual annuities. *American Economic Review*, 89(5), 1299–1318.
- Stokes, J. M., Yang, K., Swanson, K., et al. (2020). A deep learning approach to antibiotic discovery. *Cell*, 180(4), 688–702.
- Stock, J. H., and Wise, D. A. (1990). Pensions, the option value of work, and retirement. *Econometrica*, 58(5), 1151–1180.
- Topol, E. J. (2019). High-performance medicine: The convergence of human and artificial intelligence. *Nature Medicine*, 25(1), 44–56.
- United Nations. (2023). *World Population Ageing 2023*. Department of Economic and Social Affairs.

ARTICLE 13

RETIREMENT SAVINGS SUKUK: A SHARIAH-COMPLIANT PATHWAY TO LONG-TERM PENSION ADEQUACY IN MALAYSIA

Ziyaad Mahomed¹

Maya Puspa Rahman¹

Amelia Nur Natasha Nazeri²

Gopi Krishnan a/l K.K. Vijayaraghavan³

Azleen Osman Rani³

Shamimi Mohd Zulkarnaini²

¹*INCEIF University*

²*Centre of Excellence for Islamic Social Finance (CoE ISF), INCEIF University*

³*Institute for Capital Market Research (ICMR)*

ABSTRACT

Malaysia's transition to a super-aged society exposes uncovered informal workers and asnaf (i.e., zakat-eligible individuals) to retirement insecurity that contributory schemes alone cannot address. Building on Institute for Capital Market Research's (ICMR) Retirement Savings Bond, we propose the Retirement Savings Sukuk (RSS), which adapts the consumption-indexed design to Malaysia's Islamic capital market. It is a long-duration sovereign sukuk, retail non-tradable but institutionally transferable for liquidity. A social protection layer funded by waqf and sadaqah extends coverage, with zakat operating as a parallel direct subsidy. The paper recommends piloting the RSS as a voluntary Pillar 3 scheme, with auto-enrolment and opt-out for new labour market entrants below age 25, coordinated across Securities Commission (SC), Bank Negara Malaysia (BNM), Ministry of Finance (MOF), Employees Provident Fund (EPF), and the state Islamic religious councils (SIRC).

INTRODUCTION

Many Malaysians rely on the Employees Provident Fund (EPF), a defined-contribution scheme that largely covers formal-sector workers, while civil servants are covered separately under a public-sector pension scheme. Contributions from these formal arrangements provide a strong basis for retirement savings. Certain structural features of the labour market nonetheless leave large segments of the workforce uncovered, and existing arrangements cannot be stretched to reach them through a gradual increase in savings rates alone. Low incomes and the high cost of living, compounded by non-standard work arrangements, mean that around 40% of Malaysia's workforce are not covered by any form of formal retirement scheme (EPF, 2024). Furthermore, an estimated 3.45 million gig and informal workers are not covered by formal pension arrangements (Khazanah Research Institute, 2024). Traditional retirement solutions, such as conventional interest-bearing bonds and conventional annuity or insurance-based pension products, are also constrained for Shariah-sensitive savers.

The demographic shift is well established. Malaysia became an ageing society in 2020, with 7% of its population aged 65 years and above. By 2044, the percentage of older persons in its population will increase to 14%. In 2056, with more than 21% of the population aged 65 years and above, the country will be classified as a super-aged society (World Bank, 2020). In the ASEAN region, the number of persons aged 60 years and over is projected to rise from 77 million in 2020 to 173 million by 2050 (United Nations, 2022).

The Institute for Capital Market Research Malaysia (ICMR) has proposed the Retirement Savings Bond (RSB), a capital market product based on Robert Merton's consumption-indexed bond¹ and on the successful experience of the Brazilian RendA+ and the US I-Bond, to provide stable and inflation-protected retirement income through a strong accumulation and automatic decumulation mechanism (ICMR, 2025).

Building on this framework, this article proposes a Retirement Savings Sukuk (RSS), a Shariah-compliant replicator of the RSB, to bring the inflation- and capital-protected product into the Islamic capital market in Malaysia. It additionally leverages Islamic Social Finance (ISF) by making use of zakat, waqf, and sadaqah as a safety net for those unable to contribute enough in conventional schemes to achieve basic financial security in retirement. The proposal is drawn from a wider mixed-methods study that included review of regulation documents, comparative pension models across 21 jurisdictions, key informant interviews with senior stakeholders in Malaysia, and focus group discussions with social protection and vulnerable groups. The case for a Shariah-compliant retirement product is reinforced by the most recent data: in February 2026 the EPF declared a 6.15% dividend for both Simpanan Konvensional and Simpanan

¹ A consumption-indexed bond is a long-duration debt instrument whose periodic payout is indexed to a measure of consumption or inflation (e.g., the CPI) rather than fixed in nominal terms, so that the real purchasing power of the payout is preserved over the holding period.

Shariah for the year ended 31 December 2025, with a combined payout of RM79.6 billion (including RM12.5 billion for Simpanan Shariah) and investment assets of RM1.409 trillion (KWSP, 2026). Yet only 39.5% of active members met the EPF's revised Basic Savings benchmark of RM390,000 (KWSP, 2026), while Malaysia's Islamic capital market expanded to RM2.6 trillion in 2025 (Securities Commission Malaysia [SC], 2026).

METHODOLOGY AND DATA

The proposal draws on a separate mixed-methods study combining document analysis, comparative case studies, expert interviews, and a policy simulation (Mahomed et al., 2026). The document review covered Malaysian regulatory and policy instruments (the Financial Services Act 2013, the Islamic Financial Services Act 2013, the Gig Workers Bill 2025, the EPF Retirement Income Adequacy Framework 2026) and the zakat, waqf, and sadaqah enactments and fatwas of all fourteen Malaysian jurisdictions. The comparative case studies covered 21 jurisdictions, with the Brazilian RendA+ Bond, the US Series I Savings Bonds, and the UAE Golden Pension Scheme as principal references. Expert interviews were conducted with senior stakeholders from the government and regulators. The policy simulation uses 2005–2026 Malaysian market data to model 30-year accumulation and decumulation under varying contribution and returns assumptions.

RESEARCH FINDINGS

Retirement Savings Sukuk: Making the RSB Framework Work

The RSS is a national Shariah-compliant retirement income scheme that can be implemented on top of existing pension systems. It is structured as a long-term government sukuk of up to thirty years, providing a predictable real income through a Shariah-compliant, inflation-indexed return while preserving capital. The RSS could use existing laws for Malaysian sovereign sukuk structures such as the hybrid Wakalah bi al-Khadamat structure and Tawarruq structure, both of which are currently used for Malaysian sovereign sukuk. The Shariah Advisory Councils would need to consider the treatment of CPI indexation, capital preservation, payout criteria, and other non-tradability features of the proposed RSS.

The RSS extends the RSB along three structural dimensions. First, the RSS reduces reliance on general fiscal transfers by embedding a social finance overlay: rather than depending on any revenue-side adjustment to bridge lower-income shortfalls, waqf returns and sadaqah supplement contributions on behalf of eligible participants. Zakat, which remains non-investable under prevailing state fatwas (with a narrow Perak exception for surplus), would operate as a parallel direct subsidy crediting individual asnaf participants (i.e., individuals eligible for zakat), throughout the accumulation period rather than only at retirement, rather than as pooled capital within the sukuk.

Second, whereas the RSB credits coupon yields directly to subscribers, the RSS reinvests profits semi-annually throughout the accumulation phase, allowing the fund to compound across the subscriber's working life and reducing the corpus required to sustain monthly disbursements in retirement.

Third, the RSS uses an inflation-indexed class of sovereign sukuk. The RSS does not index the coupon rate or the fixed-rate profit rate. Instead, it indexes the nominal value of the wakalah asset pool to the CPI. It is therefore non-tradable in the retail secondary market. A yield indexed for inflation and guaranteed by the government, if freely circulated, would constitute a duplicative benchmark and distort the pricing of other Malaysian Government Securities and Government Investment Issues. Institutional holders such as the EPF may, however, transfer holdings through the SSDS in RENTAS for liquidity management without exposing the instrument to retail price discovery.

Simulation analysis using 2005–2026 Malaysian market data shows that, under baseline assumptions (a RM300 monthly contribution from age 25, a 5.54% target profit rate combining a 4.04% base with a 1.50% inflation adjustment and floored at the EPF 2.5% dividend benchmark, with semi-annual compounding), the RSS delivers an inflation-indexed monthly payout of approximately RM1,500 from age 60 to 90 without depleting the fund. Under the expected contribution path for informal workers, however, the replacement rates fall short of OECD and World Bank adequacy benchmarks. This is a significant finding: no contributory instrument, however well designed, can on its own provide for all vulnerable groups. Table 1 further outlines the simulation parameters and basis.

Table 1: Illustrative RSS Baseline Simulation Parameters and Outcomes

Parameter	Value	Basis
Monthly contribution	RM300	EPF minimum allocation, increasing 3% p.a. with wage growth
Entry age	25 years	Pilot cohort under MPS framework
Accumulation tenor	30 years	Continuous semi-annual compounding, no interim payouts
Base profit rate	4.04%	Long-run real rate on GII-i (2005–2026 average); distinct from prevailing nominal yield
Inflation adjustment	1.50%	CPI-indexed uplift applied to a real base rate; floored at 0% in deflationary periods
Target profit rate	5.54%	Base plus inflation adjustment; minimum 2.5% EPF floor
Monthly payout (age 60–90)	RM1,500	Inflation-indexed, fund not depleted at horizon end

Notes: The 4.04% base is the long-run real return on GII-i (2005–2026), not the nominal yield; the 1.50% is a CPI uplift applied to that real base

Source: Authors' calculations based on IERIF/ISRA RSS feasibility study (2026); 2005–2026 Malaysian market data

Islamic Social Finance as a Tier 0 Inclusion Mechanism

Two groups warrant particular attention. The first is gig and informal workers, estimated at 3.45 million, who face variable incomes and have no employer pension contributions. The second group is zakat recipients (i.e., asnaf), who constitute a separate population eligible for Islamic charity. Policy responses for the two groups must therefore differ to reflect their distinct circumstances.

Both groups are served through a common Tier 0 architecture, defined here as the social-finance-funded inclusion layer. It is distinct from the tax-funded universal pension designated "Pillar 0" in the World Bank framework because it draws instead on waqf returns, sadaqah, and zakat. The ISF layer would function as a Tier 0 retirement floor for those unable to sustain regular contributions on their own. Rather than a non-contributory grant, Tier 0 operates as a subsidised-contributory mechanism: waqf returns and sadaqah top up contributions on behalf of eligible participants, while zakat provides parallel direct subsidies to verified asnaf outside the investment pool (i.e., those receiving zakat directly rather than through RSS contributions). The Tier 0 layer should therefore be supported by clear rules on who qualifies, how support amount is determined to fill up the contribution gap, and how waqf/sadaqah-funded top-ups are kept separate from zakat-based direct assistance.

Three instruments serve different functions in this social protection layer. The first is waqf, which constitutes the largest source of investable social finance. Under Malaysian law, state Islamic religious councils (SIRCs) are the sole trustees of waqf assets. Some states, such as Selangor, Johor, and the Federal Territories, allow conversion of cash waqf into Shariah-compliant investments, preserving donors' capital while distributing profits to beneficiaries. Johor's Waqaf An-Nur Corporation illustrates a corporate approach to waqf securitisation. The SC's Waqf-Featured Fund Framework provides a complementary capital-market channel for the same purpose, and together the two demonstrate the viability of securitised waqf. A government-endorsed, corpus-preserving sukuk could be compatible with a waqf regime that permits cash waqf investment, subject to state sanction and waqf-specific corpus-preservation and reporting requirements.

The second is zakat, a targeted transfer, which, in almost every Malaysian state, is treated as a distributive allocation requiring prompt disbursement to the eight categories of asnaf. In the absence of uniform state authorisation to pool zakat into long-term capital market instruments for retirement, zakat should continue to support the welfare of each asnaf rather than be accumulated as long-term capital in zakat accounts.

The third is sadaqah and Corporate Social Responsibility (CSR) funds, which may be used to provide pre-funding, interim shortfalls in disbursements, or operational liquidity until a sufficient base of donors has been established, subject to the intention of donors and reporting requirements.

The variation in state-level policies regarding zakat investments and waqf management presents a material implementation challenge for the ISF layer. Table 2 summarises this variation. The policies vary across Malaysia's fourteen states, with each state having its approval thresholds, investment limits and reporting guidelines.

Table 2: State-Level Treatment of Zakat and Waqf for Long-Term Investment

State	Zakat	Waqf (cash, investable)	Sources
Selangor	Six-month distribution ceiling, no long-term pooling	Permitted with capital preservation	Jawatankuasa Fatwa Negeri Selangor, 2012; Enakmen Wakaf [Negeri Selangor], 2015
Kelantan	Distribution only	Permitted (2019 fatwa)	Majlis Agama Islam dan Adat Istiadat Melayu Kelantan, 1994, 2019
Federal Territories	Distribution only	Active; cash and capital-market waqf	Akta Pentadbiran Undang-Undang Islam [Wilayah-Wilayah Persekutuan], 1993
Johor	Distribution only	Permitted; corporate waqf via WANCorp	Enakmen Pentadbiran Hal Ehwal Agama Islam [Johor], 2003
Penang	Distribution only	Permitted (Seetee Aisah precedent)	Enakmen Pentadbiran Agama Islam [Negeri Pulau Pinang], 2004; Ulum Islamiyyah, 2006
Perak	Surplus investment permitted (2024 regs)	Permitted (2015 enactment, 2016 fatwa)	Enakmen Wakaf [Perak], 2015; Peraturan-Peraturan Zakat dan Fitrah Negeri Perak, 2024
Kedah	Distribution only	Permitted (2022 Irsyad al-Hukmi)	Enakmen Pentadbiran Undang-Undang Islam Kedah Darul Aman, 2008; Jabatan Mufti Negeri Kedah, 2022
Pahang	Distribution only	Permitted (2024 fatwa on cash waqf)	Enakmen Wakaf Pahang, 2022; Jawatankuasa Perundingan Hukum Syarak Negeri Pahang, 2024
Negeri Sembilan	Distribution only	Permitted (2005 enactment)	Enakmen Wakaf [Negeri Sembilan], 2005
Melaka	Distribution only	Permitted (2005 enactment, 2009 fatwas)	Enakmen Wakaf [Negeri Melaka], 2005
Terengganu	Distribution only	Permitted (2016 enactment)	Enakmen Wakaf [Negeri Terengganu], 2016
Perlis	Distribution only	Permitted (2022 fatwas)	Enakmen Pentadbiran Agama Islam, 2006; Jabatan Mufti Negeri Perlis, 2022a, 2022b

Source: Compiled from state enactments, fatwas, and council rulings

POLICY RECOMMENDATIONS

The findings above point to four institutional actions, each addressed to a named set of authorities.

Recommendation 1: Structure the RSS as a new class of Malaysian Government Investment Issue (MGII)-i inflation-indexed sovereign sukuk. Joint consultations led by the SC, Bank Negara Malaysia (BNM), and the Ministry of Finance (MOF) can fix the sukuk structure, indexation mechanism, capital protection features, retail non-tradability, institutional transferability, and payout schedule, with early engagement of the SC and BNM Shariah Advisory Councils.

Recommendation 2: Position the RSS as a voluntary Pillar 3 scheme, with auto-enrolment and opt-out tested in a pilot for new labour market entrants below age 25. Auto-enrolment preserves the voluntary character of Pillar 3 while materially improving uptake among younger participants.² Enrolment can be open to informal sector workers and eligible vulnerable groups; the pilot must validate the indexation mechanism, Shariah treatment, member uptake, and state-level coordination with the ISF channel.

Recommendation 3: Use the EPF and Simpanan Shariah as the first implementation channels. The EPF is the obvious pilot vehicle given its member base, Shariah investment infrastructure, and i-Saraan voluntary channel; a portion of Shariah-designated contributions can be routed into the RSS, accommodating non-EPF members alongside.

Recommendation 4: Establish a Tier 0 ISF layer funded by waqf returns, sadaqah, and CSR contributions, with zakat operating as a parallel direct subsidy channel for eligible asnaf rather than as pooled capital. Establish a federal coordination mechanism to harmonise eligibility, reporting, and approval processes across the twelve SIRCAs covered in this study before the pilot is extended beyond its initial jurisdiction. A clear boundary must be maintained between the contributory channel and the ISF subsidy channel.

² This approach has been tested successfully under the UK National Employment Savings Trust (NEST) and Australian Superannuation Guarantee frameworks before mandatory designation.

CONCLUSION

This article has proposed a Shariah-compliant, inflation-indexed retirement instrument, the Retirement Savings Sukuk, paired with an Islamic social finance overlay, to extend both coverage and adequacy in Malaysia's retirement system. The EPF is the natural vehicle to host this proposal, with the State Islamic Religious Councils serving as implementing partners for the social finance element. A Shariah-compliant Malaysian retirement system requires a multi-layered approach: an inflation-linked Retirement Savings Sukuk that adapts the ICMR's RSB for the Islamic capital market, paired with an Islamic social finance overlay to reach the uncovered population.

The institutional building blocks are in place: a large Islamic capital market, established Shariah governance at federal and state levels, and a sovereign sukuk track record. Regulatory coordination across multiple authorities remains the central challenge. With Malaysia's super-aged status still two decades away, the window for reform is open.

FUNDING SUPPORT

This research was funded by the Islamic Economic Research and Innovation Funds (IERIF), INCEIF University, with a grant provided by the Ministry of Finance, Malaysia.

REFERENCES

- Akta Pentadbiran Undang-Undang Islam (Wilayah-Wilayah Persekutuan) 1993 (Akta 505).
- Enakmen Pentadbiran Agama Islam (Negeri Pulau Pinang) 2004.
- Enakmen Pentadbiran Agama Islam 2006 (Enakmen 4), Negeri Perlis. https://www.perlis.gov.my/phocadownload/DUN/25%20Mei%202006_compressed.pdf
- Enakmen Pentadbiran Hal Ehwal Agama Islam (Johor) 2003.
- Enakmen Pentadbiran Undang-Undang Islam Kedah Darul Aman 2008.
- Enakmen Wakaf (Negeri Melaka) 2005 (No. 5/2005).
- Enakmen Wakaf (Negeri Selangor) 2015. [full citation to be confirmed]
- Enakmen Wakaf (Negeri Sembilan) 2005 (Enakmen No. 5/2005).
- Enakmen Wakaf (Negeri Terengganu) 2016.
- Enakmen Wakaf (Perak) 2015.
- Enakmen Wakaf Pahang 2022 (Enakmen 29).
- Institute for Capital Market Research Malaysia. (2025). Building financial security: Capital market strategies to address retirement needs and spur the silver economy. <https://www.icmr.my/>
- Jabatan Mufti Negeri Kedah. (2022). Pandangan mengenai kerjasama pembangunan dana wakaf tunai: Kajian Bank Muamalat Malaysia Berhad (BMMB) [Irsyad al-Hukmi]. <https://fatwa.kedah.gov.my>
- Jabatan Mufti Negeri Perlis. (2022a). Hukum istibdal harta wakaf berasaskan nilai [Mesyuarat MAIPs Bil 1/2022, 20 January]. <https://muftiperlis.gov.my/index.php/en/himpunan-fatwa-negeri/692-hukum-istibdal-harta-wakaf-berasaskan-nilai>
- Jabatan Mufti Negeri Perlis. (2022b). Fatwa tentang wakaf tunai (Bil. 4/59 Tahun 2022) [Mesyuarat MAIPs Bil 5/2022, 22 September]. <https://muftiperlis.gov.my/index.php/himpunan-fatwa-negeri/795-fatwa-tentang-wakaf-tunai>
- Jawatankuasa Fatwa Negeri Selangor. (2012). Fatwa sistem pengurusan agihan zakat Negeri Selangor [Meeting, 28 August 2012]. Cited in Dewan Negeri Selangor. (2021). Wang zakat. <https://dewan.selangor.gov.my/question/wang-zakat/>
- Jawatankuasa Perundangan Hukum Syarak Negeri Pahang. (2024). Cadangan wakaf tunai sebagai mawquf atau harta yang diwakafkan [Meeting 2/2024, 25 to 26 November].
- Khazanah Research Institute. (2024). The state of households 2024.
- KWSP Malaysia. (2026). EPF declares 6.15% dividend for Simpanan Konvensional and Simpanan Shariah for 2025. <https://www.kwsp.gov.my>
- Mahomed, Z., Rahman, M. P., Nazeri, A. N. N., Krishnan, G., Nasihin, N., Ibrahim, N., & Zahri, S. (2026). Designing a Shariah-compliant pension framework: Retirement savings sukuk and Islamic social finance for financial inclusion (IERIF Research No. 389) [Unpublished Research]. INCEIF University; ICMR. Funded by the Ministry of Finance Malaysia through the Islamic Economics Research and Innovation Fund (IERIF)
- Majlis Agama Islam dan Adat Istiadat Melayu Kelantan. (1994). Enakmen Majlis Agama Islam dan Adat Istiadat Melayu Kelantan 1994 (No. 4/1994).
- Majlis Agama Islam dan Adat Istiadat Melayu Kelantan. (2019). Fatwa wakaf tunai sebagai wakaf dan hukum pelupusan aset-aset wakaf [Jemaah Ulama meeting, 11 February]. <https://mufti.kelantan.gov.my/index.php?view=article&id=59>
- Merton, R. C. (1983). On the role of Social Security as a means for efficient risk sharing in an economy where human capital is not tradable. In Z. Bodie & J. B. Shoven (Eds.), Financial aspects of the United States pension system (pp. 325-358). University of Chicago Press.
- Muralidhar, A., & Vitorino, A. (2025). How Brazil's RendA+ Bond could render DC retirement risk obsolete: A case study. SSRN Working Paper No. 5116379.
- Peraturan-Peraturan Zakat dan Fitrah Negeri Perak 2024.
- Securities Commission Malaysia. (2026). Annual report 2025. <https://sc.com.my>
- Ulum Islamiyyah. (2006). Seetee Aisah waqf case study [2006 fatwa, 2007 joint venture].
- United Nations, Department of Economic and Social Affairs, Population Division. (2022). World population prospects 2022: Summary of results.
- World Bank. (2020). A silver lining: Productive and inclusive aging for Malaysia. World Bank.



ISWC2026

INTERNATIONAL SOCIAL WELLBEING
CONFERENCE 2026

iswc.kwsp.gov.my