

Population Ageing in Malaysia: Economic and Policy Challenges from a Systematic Review (2010–2024)

Nurulashikin Romli*, Aflah Isa

Faculty of Business and Management, University Technology MARA Cawangan JohorKampus
Segamat, Malaysia

*Corresponding author

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ABSTRACT

Malaysia is experiencing a significant demographic shift, driven by rising life expectancy and declining fertility rates. By 2030, individuals aged 60 and above are expected to comprise over 15% of the population. This study undertakes a systematic literature review (SLR) of research published from 2010 to 2024, focusing on the economic and financial implications of population ageing within Malaysia. Only 14 articles within the domains of Economics, Econometrics, and Finance met the criteria, highlighting a notable research gap. The analysis underscores major concerns, including increased healthcare expenditure, pension sustainability, and labour market transitions. This paper calls for integrated policy frameworks and intensified interdisciplinary research to support the socio-economic well-being of Malaysia's ageing population.

with further increases expected beyond 2050. This demographic transition has far-reaching consequences, demanding timely and targeted policy responses.

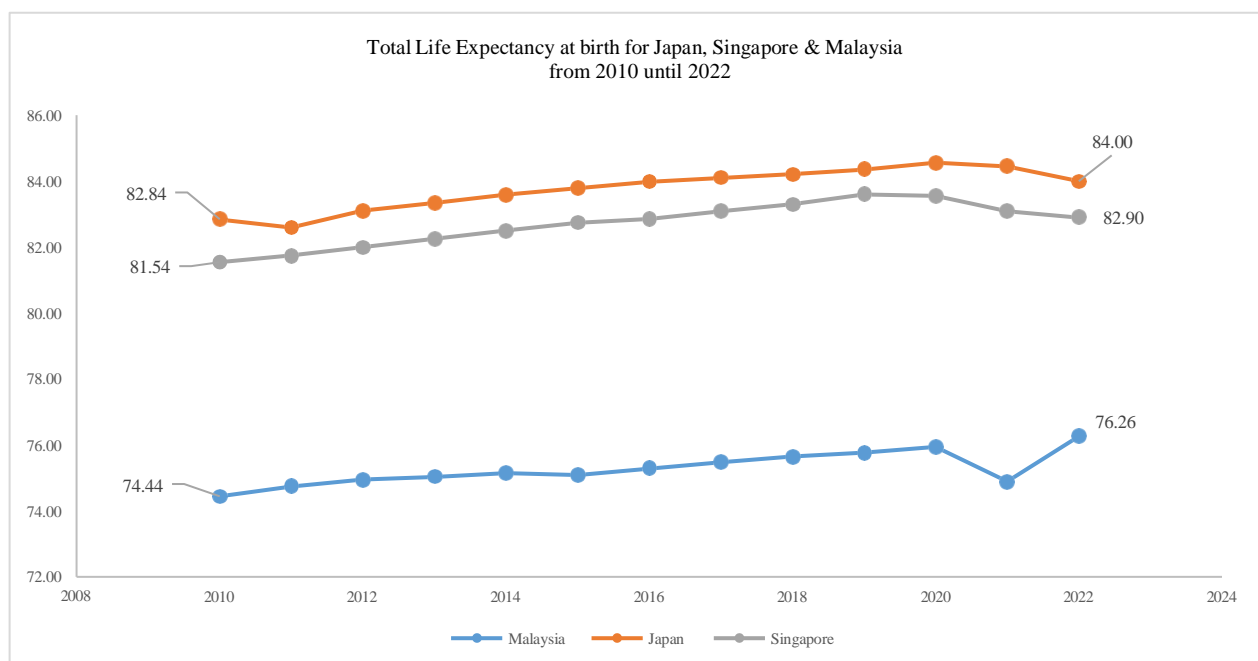


Fig. 1 illustrates the life expectancy trends for Japan, Singapore, and Malaysia between 2010 and 2022.

The economic implications of ageing are broad, impacting healthcare financing, pension structures, labour supply, and social welfare. Yet, a review of open-access publications from Scopus shows that of the 196,909 global articles on ageing in Medicine and 168,808 in Biochemistry, only 1,906 were related to Economics, Econometrics, and Finance with merely 14 focused on Malaysia. This illustrates a critical knowledge gap in understanding the economic dimensions of ageing at the national level.

In response, this study undertakes a systematic literature review (SLR) of Malaysian ageing-related research within economic disciplines, aiming to synthesise findings, identify theoretical frameworks, and recommend future research directions. The review is also augmented by comparisons with regional peers such as South Korea, Thailand, and China, thereby strengthening the contextual depth of the analysis.

Keywords: Ageing population, economic impact, healthcare expenditure, retirement planning, Malaysia

INTRODUCTION

The global phenomenon of population ageing is reshaping national economies, with Malaysia no exception. Marked by a rise in life expectancy and a consistent decline in fertility rates, this transition has led to a growing proportion of older individuals, posing multifaceted challenges to economic structures, healthcare systems, and social frameworks.

Malaysia's life expectancy increased from 74.44 years in 2010 to 76.26 years by 2022. However, the country still trails behind regional leaders such as Japan and Singapore, whose life expectancies reached 84.00 and 82.90 years, respectively, over the same period. These figures, sourced from World Development Indicators (WDI), suggest that Malaysia has the potential to achieve further gains in longevity through strategic policy interventions.

Projections from the Ministry of Finance's Economic Outlook 2023 indicate that individuals aged 60 and above will represent more than 15% of the population by 2030,

THEORETICAL FRAMEWORK

Understanding the economic and financial consequences of ageing necessitates diverse theoretical lenses. Central among these is the Demographic Transition Theory, which explores how fertility and mortality trends influence age structure and economic growth. The Economic Dependency Ratio Theory further highlights the fiscal burden of supporting a growing elderly population with a shrinking working-age base.

Table I Theoretical Foundations in Reviewed Studies

Source	Theories
Teh et al. (2023)	Health Engagement Theory, Social Capital Theory
Ma & Tang (2023)	Inflationary Pressure Theory, Macroeconomic Stability Frameworks
Ogawa et al. (2022)	Cognitive Aging Theory, Comparative Analysis Framework
Md Isa et al. (2022)	Cultural Competence Theory, Systems Theory
Abd Rahman et al. (2021)	Economic Dependency Ratio Theory, Public Policy Frameworks
Ogawa et al. (2021)	Demographic Transition Theory, Three Dividends Framework
Chee (2020)	Phenomenological Approach, Crisis Management Theory
Noor & Md Isa (2020)	Role Theory, Stress Process Model
Koris et al. (2019)	Health Economics Theory, Utilization Theory
Samsudin et al. (2019)	Aging in Place Theory, Life Course Perspective
Osman et al. (2016)	Job Satisfaction Theory, Transition Theory

In particular, the Health Economics Theory is instrumental in explaining the rising costs associated with an ageing population, including both direct medical expenses and indirect societal costs. Social Capital Theory, on the other hand, investigates how social participation and network support enhance older adults' economic engagement and psychological resilience.

METHODOLOGY

This study employs a Systematic Literature Review (SLR) methodology, guided by PRISMA protocols. The aim is to gather, evaluate, and synthesise empirical and theoretical studies on the economic dimensions of ageing in Malaysia, published between 2010 and 2024.

The selection procedure for the articles followed a structured and multi-stage approach. Initially, a comprehensive search was conducted using academic databases such as Scopus and Web of Science, applying key terms including “population ageing,” “economic impact,” “pension,” “healthcare expenditure,” and “Malaysia.” This initial search yielded a total of 45 studies. These articles were then subjected to a screening process to determine relevance and accessibility. Specifically, studies were filtered to include only those published between 2010 and 2024, available through open access, and situated within the domains of Economics, Econometrics, and Finance.

Following this screening, 16 articles met the inclusion criteria for full-text review. Each study was then assessed for methodological relevance and alignment with the objectives of the research. Two articles were excluded at this stage: one lacked direct relevance to the Malaysian context, and the other did not fit the disciplinary focus of the review. This led to a final selection of 14 studies.

To ensure rigour and transparency, the selected articles were further evaluated using elements of the AMSTAR tool and PRISMA checklist to assess quality and reduce bias. In addition to the literature synthesis, an empirical trend analysis was conducted using demographic and macroeconomic data from the World Bank and the Department of Statistics Malaysia (DOSM). This empirical component helped validate literature insights by examining the relationship between the old-age dependency ratio and macroeconomic indicators such as healthcare expenditure and pension obligations.

RESULTS AND FINDINGS

The reviewed studies were categorized based on sample, methodology, findings, and suggested future directions. Table II summarizes these core details.

Financial issues featured prominently. For instance, Abd Rahman et al. found that population ageing contributes to higher external debt [2], while Koris et al. identified a high burden of out-of-pocket health spending [5]. Similarly, Shair and Purcal concluded that residential elder care offers better cost-efficiency than nursing homes, yet current service models require structural reform [17].

The COVID-19 pandemic magnified vulnerabilities among the elderly. Chee documented heightened emotional distress [3], and Noor and Md Isa reported dual caregiving pressures on Malaysia’s sandwich generation [12]. These findings highlight the need for mental health support and expanded care infrastructure.

Active engagement was associated with improved health outcomes, as shown by Teh et al. [4], while Samsudin et al. found strong preferences for ageing in place [16]. Design considerations—such as retirement villages with age-friendly layouts—were shown to enhance well-being [9].

TABLE II

Research Summary on Ageing Population and Related Issues

1. Mohamad Bohari et al. (2024)

- Sample: Gen X in Sarawak
- Method: Survey; SEM, CFA
- Result: Supportive design improves elder well-being

- Future Direction: Align village design with future needs

2. Ma & Tang (2023)

- Sample: 125 countries (1996–2019)
- Method: Panel FE; OLS; SUR-PCSE
- Result: Ageing affects inflation; future policy impact
- Future Direction: Institutional quality key for policy design

3. Teh et al. (2023)

- Sample: 4,039 Malaysians aged 60+
- Method: SPSS; Bivariate/Multivariate
- Result: Active participation linked to better health
- Future Direction: Boost elder engagement via programs

4. Md Isa et al. (2022)

- Sample: 28 care centres; 33 interviews
- Method: Semi-structured interviews
- Result: Financial and staffing challenges
- Future Direction: Improve funding, training, licensing

5. Ogawa et al. (2022)

- Sample: Adults 50+ in 5 Asian countries
- Method: CADR; cognitive analysis
- Result: Cognitive patterns vary by country
- Future Direction: Need longitudinal cognitive studies

6. Ogawa et al. (2021)

- Sample: Asia (1950–2050)
- Method: National Transfer Accounts
- Result: Public transfers up; family support down
- Future Direction: Study economic shifts, elder workforce.

7. Abd Rahman et al. (2021)

- Sample: 36 UMIEs (2000–2017)

- Method: System GMM
- Result: Ageing increases external debt
- Future Direction: Explore domestic debt implications

8. Shair & Purcal (2021)

- Sample: Elderlies in care institutions
- Method: QALY; Cost analysis
- Result: Residential care more cost-effective
- Future Direction: Reform elderly care policy

9. Noor & Md Isa (2020)

- Sample: 5 sandwich families in Malaysia
- Method: Phone interviews; thematic analysis
- Result: Dual caregiving causes stress
- Future Direction: Study elder views and support systems

10. Chee (2020)

- Sample: 10 elders in Subang Jaya
- Method: Colaizzi method; interviews
- Result: Pandemic increased anxiety and isolation
- Future Direction: Enhance mental/emotional care in crises

11. Koris et al. (2019)

- Sample: 2,274 elders in 4 states
- Method: Survey; regression
- Result: High healthcare out-of-pocket costs
- Future Direction: Support chronic illness management

12. Samsudin et al. (2019)

- Sample: 1,153 pre-elders in Malaysia
- Method: Probit model
- Result: Prefer ageing at home
- Future Direction: Develop home-based support systems

13. Osman et al. (2016)

- Sample: 523 adults in Sabah
- Method: Questionnaire; PLS
- Result: Job satisfaction predicts bridge employment
- Future Direction: Track retirement and employment effects

14. Moschis et al. (2011)

- Sample: Urban samples in Malaysia & Japan
- Method: Surveys; SEM
- Result: Scale reliability varies with context
- Future Direction: Improve cross-cultural measurement tools.

Cognitively, Ogawa et al. advocated the use of Cognition-Adjusted Dependency Ratios (CADR) for a more nuanced demographic measure [13]. The reliability of ageing measurement tools across cultural contexts was explored by Moschis et al., emphasising the need for context-sensitive methodologies [10].

Future Research Directions

The reviewed literature identifies several key areas that warrant further scholarly attention. Future studies should explore sustainable financing mechanisms for long-term eldercare to address the increasing strain on public resources. Longitudinal research is needed to examine cognitive ageing trends and the progression of chronic non-communicable diseases (NCDs) among Malaysia's elderly population. Moreover, the impact of demographic ageing on intergenerational equity and domestic debt requires deeper investigation to ensure long-term fiscal sustainability. There is also a growing need to capture the perspectives of older adults regarding caregiving, retirement preparedness, and their preferences for ageing-in-place arrangements. In addition, evaluating the effectiveness of community engagement strategies and support systems can provide insight into promoting active and dignified ageing. By addressing these gaps, future research can contribute meaningfully to the development of evidence-based policies tailored to the evolving needs of Malaysia's ageing society.

Policy Implications

Short-term priorities include the provision of financial protection against catastrophic health expenditure, licensing improvements for eldercare institutions, and expanding caregiver training. Long-term strategies must address pension reform, urban design for age-friendliness, and the establishment of national long-term care insurance.

CONCLUSION

Population ageing presents Malaysia with an urgent yet manageable policy agenda. This review highlights key economic, healthcare, and social implications that require immediate attention. Strengthening the evidence base, integrating comparative perspectives, and adopting forward-looking strategies will be essential to navigate this demographic transition effectively.

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