eISBN: 978-967-2122-74-6

Impact of Population Ageing on the Malaysian Economy

MURNI YUNUS MAWAR
Kolej Universiti Islam Antarabangsa Selangor
mawarmurni@kuis.edu.my

MOHD ADIB ISMAIL
Universiti Kebangsaan Malaysia
mohadis@ukm.edu.my

ABSTRACT

The ageing of the population presents a major fiscal challenge for the Malaysia. The combination of increased longevity and a reduced birth rate will directly reduce the growth rates of the Malaysian economy. There is undoubtedly that Malaysia's population is ageing, therefore it is crucial to investigate what impact it will have on the broader community. The purpose of this study is to discuss the impact of population ageing on the Malaysian economy. We will address the way forward to alleviate the negative impact of this issues. Benchmarking against other countries' best practices will help the Government in drafting and formulating comprehensive policies for population ageing. The Government should keep on investing on human capital so that even though we face the aging society, we already prepared stock of quality human capital.

Keywords: Population ageing, Life expectancy, Fertility rate, Aged society, Labor force
JEL Classifications: H5, J0

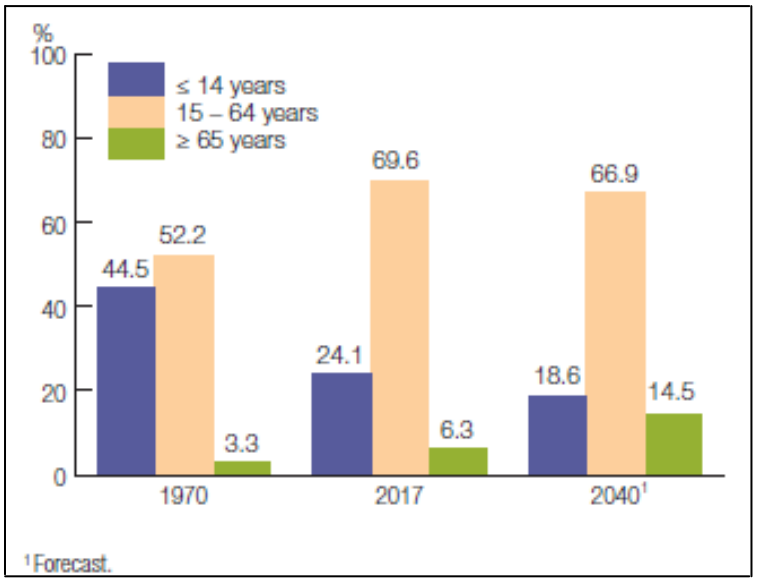
INTRODUCTION

United Nations (2002) define population ageing is the process by which older individuals encompasses a proportionally larger share of the total population. According to the World Health Organization (WHO), when a society in which the proportion of people aged 65 years and above is 7 percent or higher, it is known as an "ageing society", while 14 percent or higher is called an "aged society" and 21 percent or higher is called a "super-aged society". In Malaysia, as of 2017, the number of people aged 65 and above is approximately two million or 6.3 percent of the total population. Nevertheless, by year 2020 it is predictable to increase to 2.4 million, constituting about 7 percent of the total population, hence becoming an ageing nation.

At the same time, the old-age dependency ratio is expected to increase significantly in the coming decades. In 1970, only 3.3 percent of the Malaysian population was aged 65 years and above, and almost half of the population (44.5 percent) was 14 years and below. However, in 2017, the share of Malaysian population aged 14 years and below decreased to 24.1 percent of the total population, while those aged 65 years and above increased to 6.3 percent. Thus, the gap between the young and older population will be narrowing with the share of the population aged below 14 years decreasing to 18.6 percent of the total population, while the population aged 65 years and above reaching 14.5 percent by 2040. Figure 1 refers to the share of population by age group in Malaysia.

eISBN: 978-967-2122-74-6

Figure 1: The Share of Population by Age Group in Malaysia



Source: Department of Statistics, Malaysia, 2017.

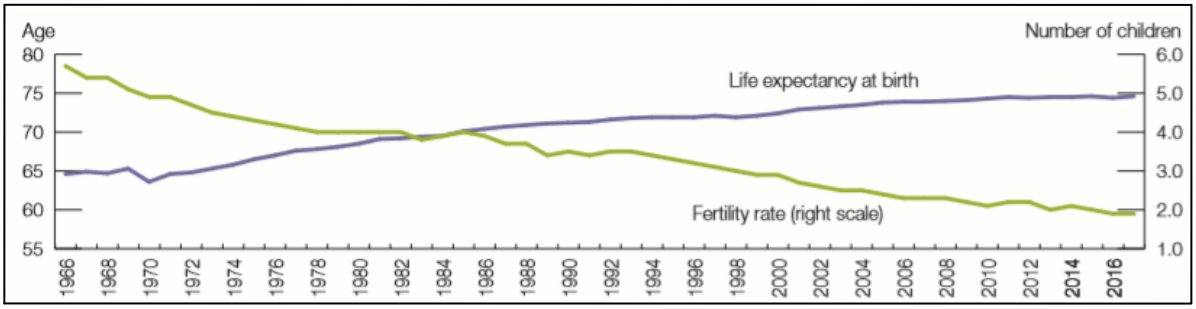
Once Malaysia reaches the status of an ageing society, the speed of ageing will accelerate. It will take only about 20 years for the country to double its elderly population to become an aged society by year 2040. In contrast, France took 115 years to become an aged society from an ageing society, while Japan took 24 years and the Republic of Korea 18 years to reach that stage. The speed of ageing in selected countries are revealed in Table 1.

Table 1: The Speed of Ageing in Selected Countries

	Ageing society (Year)	Aged society (Year)	Number of years for transition
Proportion of population ≥ 65	**≥ 7 %**	**≥ 14 %**	**7 % to 14 %**
France	1864	1979	115
Sweden	1887	1972	85
US	1944	2013	69
UK	1930	1975	45
Germany	1932	1972	40
Japan	1970	1994	24
Malaysia	**2020**	**2040**	**20**
Republic of Korea	2000	2018	18

Source: National Authorities, World Bank, OECD, 2015 and Department of Statistics, Malaysia, 2017.

Figure 2: Life Expectancy and Fertility Rate in Malaysia (1966 – 2016)



Source: Department of Statistics, Malaysia, 2017.

According to United Nations (2015), population ageing is due to an increase in life expectancy and a reduction in fertility. Developments in healthcare and technology increased life expectancy while higher cost of living contributed to lower fertility rate. Consequently, in the future older people will make up a larger percentage of the population. Life expectancy and fertility rate in Malaysia are revealed in Figure 2. Life expectancy increased to 74.6 years in 2017 as compared to 64.4 years in 1966, while the fertility rate decreased to 1.9 children per woman from 5.7 during the same period.

LITERATURE REVIEW

Population ageing will tend to lower both labor force participation and saving rates, thus raising concerns about a future slowing of economc growth. Bloom, Canning and Fink (2011) suggest that OECD countries are likely to see uncertain, but not catastrophic, declines in the rate of economic growth. However, behavioral responses (including greater female labor force participation) and policy reforms (including an increase in the legal age of retirement) can alleviate the economic consequences of an older population. By itself, besides having an impact on economic growth through labor supply, the age-structure of a population also has an impact on economic growth through savings and investments (Bloom and Williamson, 1998).

Demographic changes may not only affect economic growth through the mechanism of the labor market but also savings and capital accumulation. Lee, Mason and Miller (2001), Mason and Lee (2004), and Lee and Mason (2006) claim that a longer life expectancy and a smaller family size may lead to a strong incentive for people to save for their extended period of retirement. Increased savings, no matter investing domestically or abroad, may contribute to economic growth given effective policies in support systems for the elderly. Depend on the life-cycle model and calibrations, Mason and Lee (2004) clarify that most of the speedy increase in Taiwanese savings by changes in the age structure of the population.

In the existing literature, there is uncertain evidence on the impact of population ageing on the economic growth; a mixture of positive and negative impact. Empirical evidence concerning the important role of demography as a determinant of economic growth is rich and can be found in developed as well as developing countries. For instance, Bloom and Williamson (1998) study the effect of demography on economic growth for European Union countries during the period from 1965 to 1990. In their paper, they found that almost 20 percent of economic growth is attributed to population dynamics.

For developing countries, where population is assumed to be young and the countries have the chance to take advantage of demographic dividend, demography is also shown to have great impact on economic growth. Bloom et al. (2011), among others, show that around one third of economic growth in Asia's 'miracle countries' is assigned to age-structure. China has also grown from its demographic dividend over the recent years, where its age-structure accounts for 15–20 percent of its economic growth (Cai and Wang, 2006).

Nevertheless, a demographic dividend only provides an opportunity for an economy to grow more quickly; it is not sufficient in and of itself. Appropriate policies in investment (in both physical and human capital) and job creation are necessary in order to realize the opportunity. The success of the Asia's miracles is a good example. Wei and Hao (2010) extend the growth equation by integrating age structure dynamics and apply it to China's provincial-level data during 1989–2004. They found that changes in demographic structure, especially the contribution of fertility decline to lower youth dependency, have helped fuel China's economic growth since 1989. The effect of demographic change on income growth operates mainly through its impact on steady state income levels and the effect of age structure is more pronounced in provinces that are more open to market forces. They also

found a significant feedback of economic growth on demographic behaviors through the mechanisms of birth rates, marriage age and life expectancy.

Similarly, Minh (2009) found that the change in demographics has contributed up to 15 percent of economic growth during the last five years based on data from 2002, 2004 and 2006 over 61 provinces using ordinary least squares (OLS) method. The statistics show that Vietnam's demographics have been changing remarkably with an increase in the labor force as well as a decrease in the dependency ratio. He also found that while being categorized as dependent, the aged population seems to have no negative impact on Vietnam's economic growth, but the young population does. Vietnam's population will probably shift from a demographic dividend to demographic debt in about 10 years. Therefore it is very important for Vietnamese Government to take advantage of this dividend period in order to prepare a coming period of demographic debt.

In contrast, based on data from seventy countries over the period 1961–2003, Choudhry and Elhorst (2010) reveal that GDP per capita growth is positively related to the growth differential between the working-age population and the total population, and negatively related to child and old-age dependency ratios. Based on these results, they found that population dynamics explain 46 percent of economic growth in per capita GDP in China over the period 1961–2003, 39 percent in India, and 25 percent in Pakistan. Additionally, population dynamics are expected to have a positive effect on economic growth in India and Pakistan over the period 2005–2050, and a negative effect in China.

IMPACT ON THE MALAYSIAN ECONOMY

The phenomenon of population ageing will affect economic growth. From a theoretical standpoint, population ageing acts as a depressant on economic growth, due to a reduction in productivity. Population ageing will be disposed to lower labour force participation and savings rates, therefore raising concerns about slower economic growth (Bloom et al., 2010). However, some empirical studies have shown opposite results. Even though Malaysia will face issues of ageing society by 2020, economic growth is expected to remain stable in the long run as a reduction on fertility rate implies that women will be participating more in the labour market and thus contribute to higher labour productivity and economic growth (Ismail and Rahman, 2016).

Another impact of population ageing is increasing public expenditure. The longer life expectancy of the population, particularly the pensioners and their dependents tent to increase pension payments, given the higher number of pensioners (Chee, 1997). Therefore, the current pension scheme may not be sustainable in the long run as it will pose a larger financial burden to the Government's fiscal position.

Ministry of Finance estimates indicate that a decrease in population by 0.8 percent will result in lower employment, which lead to a negative deviation in real GDP by an average of 0.004 percentage points between 2018 and 2024. Following a lower GDP, household disposable income is expected to fall which in turn reduces private consumption. In the longer run, if industries remain its labour intensity, the economy may not be able to shift to capital-driven growth. Therefore, it is vital for industries to adopt automation and mechanization to remain competitive amid lower labour input.

THE WAY FORWARD

There are several measures to alleviate the negative impact of population ageing on the Malaysian economy. First, increase the female labor force participation rate to balance reduction in labor force. Malaysia presently has among the lowest female labor force

participation rate in ASEAN, China, Japan, and Republic of Korea (World Bank, 2018). Hence, increasing female labor force participation rate will partially reduce the downward pressure on labour following population ageing. A study by Moody's across Asia Pacific emerging markets, suggests that closing the gap between female and male labor force participation by 50 percent could offset up to 1.7 percentage points of a slowdown in the labor force.

In the case of Malaysia, in 2017, the female and male labor force participation rates stood at 54.5 percent and 80.1 percent, respectively. If the gap is reduced by 50 percent, then it would increase the labour force by an additional of 1.3 million to 16.3 million. Therefore, intensifying the implementation of various policies ranging from flexible working arrangements, provision of quality childcare facilities, skills training and entrepreneurship programmes for women will accelerate women participation in the labour force.

Second, gradual retirement and re-employment opportunities for post-retirement-aged workers. Encouraging older workers to remain longer in the labour market is often cited as the most viable solution related to population ageing. A rethinking of retirement norms beyond the legal retirement age of 60 is necessary, and the gradual retirement and re-employment opportunities are some possible options. Gradual retirement involves a scheme whereby older workers could choose to work fewer hours yet remain longer in the labour market, including after retirement.

For re-employment opportunities, some countries for example Japan, Singapore, and the UK incentivise employers who hire older workers by giving special employment credits and wage subsidies. The gradual retirement and re-employment opportunities will be beneficial to workers, employers and the nation through continuous Employees Provident Fund (EPF) contribution and tax revenue collection. Additionally, with their knowledge and experience, older workers could contribute to organisations and younger colleagues apart from promoting their wellbeing.

Third, improve productivity will alleviate the negative impact of population ageing. Productivity is a game changer for economic growth. Efforts to improve productivity are already a policy thrust in the Eleventh Malaysia Plan (2016 – 2020). These efforts should be further strengthened by technological innovation and increasing adoption of robotics, in turn partially offsetting demographic pressures on growth.

Fourth, improvement of the pension scheme. The Government should seek ways of reforming their pension systems in anticipation of fiscal burdens in the future (Holzmann, 1988). Currently, the civil service pension scheme is implementing the unfunded arrangement (pay-as-you-go) where it is disbursed directly from the Federal Government's budget. Consequently, to ensure a sustainable fiscal position in the long run, the civil service pension scheme could be improved and modernized by introducing the defined-contribution scheme for new recruitments in the civil service.

Fifth, creates elderly-friendly living environment. Health and wellbeing are determined not only by genes and personal characteristics but also by physical and social living environments. Therefore, environment plays an significant role in determining how people age and respond to diseases, loss of functions besides other forms of loss and adversity at different stages of life. In this regard, facilities such as elderly-friendly housing scheme, day care centres, public spaces and transportation need to be increased. This will enable them to stay independent and actively participate in the community. Towards this end, the private sector has an important role to play in creating a conducive environment for the elderly.

Sixth, encourage lifelong learning in the society. The quality of education should be improved to match the available skills set with the requirements of the modern labour market. Skills upgrading should be promoted across every life cycle to keep people productive. The

human resources department of organisations should adopt appropriate solutions and mechanisms to provide the necessary training and support as well as promote lifelong learning.

CONCLUSION

Population ageing poses challenges for the Malaysian economy. Benchmarking against other countries' best practices will help the Government in drafting and formulating comprehensive policies for population ageing. Correspondingly, a thorough study on policies for the elderly with comprehensive data will help the Government in dealing with challenges associated with ageing population. These policies should also focus on leveraging opportunities to benefit both the current and future generations. In this regard, the Government will continuously engage with relevant stakeholders including the private sector, non-governmental organisations and communities to promote wellbeing and enhance older generation's contribution to the nation's development.

In the next year, even though Malaysia will facing the aging society by year 2020, the economic growth can be remained stable as reduction on fertility rate implies that women will be participating more in the labor market and thus contribute to higher labor productivity and economic growth too. The Government should keep on investing on human capital so that even though we face the aging society, we already prepared stock of quality human capital.

References

Bloom, D. E., & Williamson, J. G. (1998). Demographic transitions and economic miracles in Emerging Asia. *The World Bank Economic Review*, 12(3), 419–455.

Bloom, D. E., Canning, D., & Fink, G. (2010). Implications of population aging for economic growth. *Oxford Review of Economic Policy*, 26(4), 583–612.

Bloom, D. E., Canning, D., & Fink, G. (2011). Implications of population aging for economic growth. *NBER Working Paper No. 16705*. Program on the Aging, Economic Fluctuations and Growth, Labor Studies.

Cai, F. & Wang, M. (2006). Challenge facing China's economic growth in its aging but not affluent era. *China & World Economy*, 14(5), 20–31.

Chee, L. K. (1997). The Malaysian Government pension scheme: whither its future direction. *Jurnal Ekonomi Malaysia*, 31, 87–106.

Choudhry, M. T., & Elhorst, J. P. (2010). Demographic transition and economic growth in China, India and Pakistan. *Economic Systems*, 34, 218–236.

Department of Statistics, Malaysia. (2017). *Ageing: August Newsletter*. Putrajaya: Department of Statistics, Malaysia.

Holzmann, R. (1988). *Reforming public pensions* (No. 5). Paris: Organisation for Economic Co-operation and Development.

Ismail, N. W. & Rahman, H. S. W. H. A. (2016). Aging and economic growth: empirical analysis using autoregressive distributed lag approach. *Sains Malaysiana*, 45(9), 1345–1350.

Lee, R. & Mason, A. (2006). Back to basics: what is the demographic dividend. *Finance and Development*, 16–17.

Lee, R. D., Mason, A., & Miller, T. (2001). Saving, wealth and population. *Population does matter: demography, poverty and economic growth*. Birdsall, N., Kelley, A. C., & Sinding, S. W. Oxford, Oxford University Press, 137–164.

Mason, A. & Lee, R. (2004). Reform and support systems for the elderly in developing countries: capturing the second demographic dividend. *International Seminar on the Demographic Window and Healthy Aging: Socioeconomic Challenges and Opportunities*, China Centre for Economic Research, Peking University, Beijing.

Minh, N. T. (2009). Dynamic demographic and economic growth in Vietnam. *Journal of the Asia Pacific Economy*, 14(4), 389–398.

United Nations. (2002). *World Population Ageing 1950 – 2050*. New York: United Nations.

United Nations. (2015). *The World Population Prospects: 2015 Revision*. New York: United Nations.

Wei, Z. & Hao, R. (2010). Demographic structure and economic growth: evidence from China. *Journal of Comparative Economics*, 38(4), 472–491.

World Bank. (2015). *Malaysia Economic Monitor*. Retrieved frow http://documents.worldbank.org/curated/en/509991467998814353/pdf/97393-WP-P152893-Box391466B-PUBLIC-MEM12-Draft-v3-3b.pdf

World Bank. (2018). *Labor force, female (% of total labor force*. Retrieved frow https://data.worldbank.org/indicator/SL.TLF.ACTI.1524.FE.ZS.