Institute for Capital Market Research Malaysia

COVID-19:

Rethinking Long-Term Savings for Greater Financial Inclusion in a Changing Economy

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July 2020

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ICMR

Introduction

With the International Monetary Fund (IMF) predicting global GDP growth to contract by 3% in 2020[1], and possibility of a further downgrade due to profound uncertainties on the full impact of the pandemic, inclusive growth will become an even greater challenge. As headline numbers like GDP growth continue to be the main measure of economic development, we would also have to rethink the impact of COVID-19 on the distributive elements of this growth.

Financial inclusion is a vital element in ensuring that the benefits of growth are more equitably dispersed. Providing underserved populations with greater access to financing and capital helps raise overall living standards as it facilitates making long-term consumption and investment decisions, increases participation in productive activities, and helps to cope with unexpected negative shocks like COVID-19.

However, there is also growing evidence that financial inclusion carries benefits beyond the improvement in individual lives. Key developments such as the impact of digital finance and the indirect role financial inclusion plays in achieving many of the Sustainable Development Goals (SDGs) have extended the context of discussions on financial inclusion beyond being a part of social responsibility into one which is capable of delivering broader development objectives as well as sustainable market value.

Deepening the commitment to financial inclusion will require going beyond the context of broadening access to the banking system, and to explore integration with more market-based measures in helping individuals with long-term savings and asset accumulation. This is particularly crucial when it comes to retirement savings as individuals can benefit from early access to the capital market to grow their pool of funds, in order to meet the relatively large amounts required in old age. As such, it is important to ensure equitable access to retirement funds, so that individuals can partake in and benefit from the capital market.

Reciprocally, studies have shown that growth in pension funds significantly and positively affects output per capita, leading to overall economic development.[2] In addition, the spillover effects of pension funds on the capital market are also well studied and pension reforms are strongly connected to capital market development, especially in developing markets.[3] In fact, in many countries, pension funds play a critical role as asset allocators and investors within the capital market. Unlike the short-term capital flows which are often deemed as reactive to speculative activities, pension funds have long-term liabilities on their balance sheet. Hence, pension funds do not only affect market capitalisation, but also play a role to provide general stability in the domestic capital markets and play an instrumental role in integrating domestic capital markets at the international level as well as creates demand for diversifying financial instruments.[4] Given the role of pension funds on capital market development, the structural

[1] International Monetary Fund (2020) World Economic Outlook, April 2020: The Great Lockdown

[2] Davis, E.P. & Hu, Y. (2008) Does Funding of Pensions Stimulate Economic Growth?. Journal of Pension Economics and Finance, 7, pp 241-249

[3] Catalan, Mario & Impavido, Gregorio & Musalem, Alberto (2000) Contractual Savings or Stock Market Development Which Leads? Journal of Applied Social Science Studies. 2421

[4] Raisa, M.L (2012) Spillover effects of pension funds on capital markets: The EU-15 countries case. *Annals of the "Constantin Brâncuşi" University of Târgu Jiu, Economy Series*, *4*, 164-170.

shifts in the labour market with a growing discussion on the future of work could also lead to longer-term impact not only to the pension funds itself, but also to capital markets and the real economy.

This paper provides a discussion on how the evolving nature of jobs and work may exacerbate the current challenges in the Malaysian retirement landscape and further examines possible solutions which can provide more equitable access to the capital market for long-term savings and asset accumulation. This paper forms part of a series of studies by ICMR that encompasses various aspects related to Financial Inclusion in the Capital Market.

Current challenges in the Malaysian context

While the ongoing COVID-19 crisis has had immediate tangible effects to the economy, it has also brought to the fore several key issues:

- That majority of individuals do not have sufficient savings to tide themselves over in an emergency or in the face of unexpected income loss.

- For many people, their mandated retirement savings might be their only form of savings. This could be seen from the government's announcement to allow RM500 per month to be withdrawn from individual's Employees' Provident Fund (EPF) accounts under the i-Lestari scheme.[5]

- When retirement funds are used as a proxy for emergency savings, it leads to people having to decide between meeting present demands or saving for their future needs. A lack of basic financial knowledge, or lack of longer-term financial planning, could lead to uninformed decision making regarding this trade-off.

- This also highlights the challenge for policymakers, as short-term relief comes at the expense of longer-term trade-offs. Further, policymakers will have to consider any potential impact from a macro perspective, including the impact that pension funds have on capital markets and economic growth.

- Most recently, there has also been an acknowledgement from the government on the lack of retirement coverage for workers in the gig economy, with the announcement under the Penjana Economic Recovery Plan of a RM50 million matching grant for gig platforms who help workers contribute into EPF's i-Saraan scheme or Socso's employment injury scheme.[6] While the take-up rate and long-term effectiveness of this scheme is yet to be seen, there is still a need to address issues of coverage from a long-term structural perspective.

Over the years, this issue has been highlighted numerous times:

- A Bank Negara Malaysia (BNM) survey has shown that 52% of Malaysians would face difficulty raising RM1,000 immediately in the event of an emergency, and that 76% would not be able to sustain themselves for more than three months.[7]

- Similarly, Employees' Provident Fund (EPF) statistics show that two out of three EPF members aged 54 have retirement savings of less than RM50,000, far below the minimum threshold of RM240,000 as set by EPF.

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[5] Speech of YAB Tan Sri Dato' Haji Muhyiddin Yassin, Prime Minister of Malaysia, "Pakej Rangsangan Ekonomi Prihatin Rakyat (PRIHATIN)", 27 March 2020, available at https://www.pmo.gov.my/ms/2020/03/teks-ucapan-perutusan-khas-pakej-rangsangan-ekonomi-prihatin-rakyat-prihatin/ (last accessed 18 June 2020)
[6] Speech of YAB Tan Sri Dato' Haji Muhyiddin Yassin, Prime Minister of Malaysia, "Pelan Jana Semula Ekonomi Negara (PENJANA)", 5 June 2020, available at https://penjana.treasury.gov.my/pdf/Teks-Ucapan-PM-Pelan-Jana-Semula-Ekonomi-Negara-PENJANA.pdf (last accessed 18 June 2020)
[7] Bank Negara Malaysia (2019) Financial Stability and Payment Systems Report 2019. Bank Negara Malaysia.

There also appears to be a disconnect between reality and many individuals' expectations on their retirement. As will be discussed in more detail below, it is estimated that more than 60% of Malaysians are not covered by any retirement scheme. However, academic research has shown that 43.8% of Malaysians surveyed believe they can fully depend on EPF savings for living after retirement.[8] The low coverage, low amount of savings and the lack of diversity in retirement planning is a worrying combination that could have adverse repercussions on the welfare and healthcare systems in the long run.

This is exaggerated by the fact that Malaysia is fast becoming an ageing nation. It is estimated that Malaysia will transition from a population with 7% above the age of 60 to one with 14% above the age of 60 in just 25 years; while countries like the UK took 45 years and the US took 69 years.[9]

The COVID-19 crisis has once again highlighted the need to look at these longstanding issues, in particular as they will be exacerbated by a confluence of other factors like demographic changes, technological shifts, and the changing nature of work.

What is the future of work and why it is relevant to retirement?

A combination of increasing life expectancy and lower birth rates means that Malaysia is predicted to be an ageing population as early as 2030. An increasingly ageing population means that either our retirement savings will have to sustain us for a longer period, or people will have to work until a much older age to be able to sustain their lifestyles.

At the same time, technological advancement has allowed for more remote and freelance work. It has also seen the rise in the gig economy and on-demand part time jobs, most of which do not come with traditional employer-sponsored benefits. As the economic impact of COVID-19 continues to unfold, more people may either be taking on gig work full time or using it to supplement income from other sources. The shifting labour market also means that people continue to move in and out of "formal" work to care for their families, further their studies or pursue other opportunities that may not be tied to a formal employer.

The basis of the current retirement and pensions system was introduced pre-Independence in then-Malaya, with the public pensions established under the Pensions Ordinance 1951 and private sector system under the Employees Provident Fund Ordinance 1951. While the system was designed based on the economic and social needs of that time, the way we live and work have obviously changed drastically since then. As COVID-19 expedites some of these structural shifts, an assessment of the retirement system needs to be framed in the context of these changes to foster greater financial inclusion and to avoid the risk of more people being left vulnerable and unprotected in the long run due to changes in the future of work.

[8] Mokhtar, N., Moga Dass, T., Sabri, M.F., & Ho, C.S.F. (2018) A Preliminary Evaluation of Financial Literacy in Malaysia, Journal of Financial and Wealth Planning.
9 Prof. Dato' Dr. Tengku Aizan (2019) Ageing in Malaysia. Malaysian Research Institute on Ageing, Universiti Putra Malaysia.

The Malaysian retirement landscape

Malaysia has a relatively developed pensions system, with both public and private sector pension schemes introduced in 1951. It has evolved over the years and now includes:

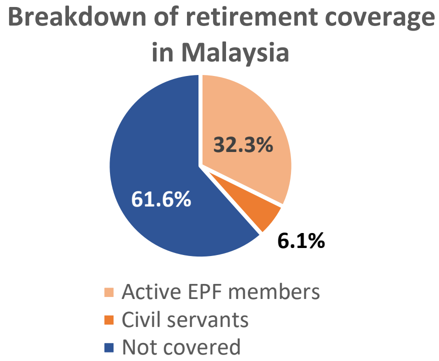
Public sector pensions	Retirement Fund Incorporated (KWAP)	• Non-contributory defined benefit (DB) scheme (funded by taxation) • Pays out up to 60% of last drawn salary for civil service retirees as a monthly pension; confers survivorship benefits for life • Fund size: RM136.51 billion* **As of end 2018, latest available KWAP Annual Report*
	Armed Forces Retirement Fund (LTAT)	• Defined contribution (DC) scheme with contributions from members and the government • Members are entitled to withdraw their portion of savings upon the age of 50, while the government contribution portion is used to fund a monthly pension • Fund size: RM10.06 billion* **As of end 2017, latest available LTAT annual report*
Private sector pensions	Employees' Provident Fund (EPF)	• DC scheme with both employers and employees contributing to the fund • Members are entitled to make a partial withdrawal at 50 and full withdrawal at age 55 • Contributions are accepted until the age of 80, while dividends are paid out on savings until the age of 100 • Fund size: RM833.76 billion* • Total members: 14.12 million* • Active members: 7.36 million* **As of end 2018, latest available EPF Annual Report*
	Private Retirement Schemes (PRS)	• Private sector-administered investment schemes introduced in 2012 • 8 PRS providers with a total of 57 funds* • Total NAV: RM3.5 billion* • Total members: 455,000* **As of end 2019, latest available Securities Commission Annual Report*

The pensions schemes form the main sources of retirement support in Malaysia. Despite the relatively large fund sizes and diversity, several key challenges remain:

i. Low coverage

As EPF only covers those who are formally employed, there remains a large segment of the population who are not actively covered by any retirement schemes. While there is no official data, EPF has estimated that up to 62% of the total working age population may not be covered.[10]

This is in line with ICMR's own calculations, based on a total working age population of 22.8 million people[11], EPF's active membership of 7.36 million, and civil service force (including armed forces) of 1.4 million.[12] This would mean that around 14 million Malaysians are potentially vulnerable without savings in old age.



Source: EPF; MOF; ICMR's own calculation

Who are the ones that are not covered by any retirement schemes?

There are multiple reasons why a significant number of Malaysians are not covered by any retirement schemes. They cover a diverse spectrum of roles, including but not limited to:

- Agricultural roles such as farmers, fishermen or rubber tappers
- Traditional solitary roles such as taxi drivers, or workers in construction and trade
- Highly skilled professionals such as lawyers, accountants, medical specialists and consultants
- Workers in the gig or platform economy, such as e-hailing drivers
- Freelancers
- Small business owners or traders

Partly due to differing classifications, there is a lack of official data on people who are not formally covered by retirement schemes. Based on the latest data from the Department of

[10] Speech of Tan Sri Samsuddin Osman, then-EPF Chairman, at the International Social Security Conference 2018, from The Edge, "62% of working-age M'sians not covered by any formal social protection, says EPF", published August 8 2018, available at https://www.theedgemarkets.com/article/62-workingage-msians-not-covered-any-formal-social-protection-says-epf (last accessed 12 June 2020)

[11] Department of Statistics Malaysia (2019) Current Population Estimates (Malaysia) 2018-2019

[12] Estimation from Ministry of Finance, *Tinjauan Fiskal dan Anggaran Hasil Kerajaan Persekutuan 2020*

Statistics Malaysia (DoSM), approximately 7.24 million working-age people are outside the labour force (i.e. housewives, students, or disabled).[13] Another 2.81 million people are "own-account" workers, defined as "*a person who operates his or her own farm, business or trade without employing any paid workers assisting in the conduct of the enterprise*".[14]

A 2017 survey by DoSM also indicated that 1.36 million people fall under the category of *employed persons in the informal sector*.[15] However, as highlighted by the Khazanah Research Institute, there are two ways of categorising informal work: by firm and by worker.[16] DoSM adopted the *firm-based* approach, with informality being defined by the status of the firm which employed the workers. They were considered informal if their firm or employer was profit-oriented; unregistered with the Companies Commission of Malaysia or professional bodies or local government; and had less than ten workers. This excludes *worker-based informality,* where a worker might be informally employed or contracted by a formal firm (e.g. a registered micro-enterprise) but still lack any social protection or coverage. As such, the actual number of people in the informal economy is estimated to be much higher.

There are currently no fixed definitions for *self-employed*, *informal worker*, or *gig worker*. For the purpose of this report, usage of these terms will contextually be used interchangeably when referring to members of the working-age population who are not covered by any retirement schemes.

Cognisant of the issue on low coverage, EPF has introduced a few voluntary schemes. All voluntary contributions are capped at a maximum of RM60,000 per annum:

Scheme	What is it?
i-Saraan	Voluntary contributions by the self-employed or informal workers Additional government incentive of 15% of contribution (up to RM250 per annum) between 2018-2022
i-Suri	Voluntary contributions by housewives and their spouses Additional government incentive of up to RM480 per annum
Top-Up Savings Contributions	A parent, child or spouse may top up contributions into the account of any EPF member
Self-contribution	Additional voluntary self-contribution by any EPF member

[13] Department of Statistics Malaysia (2020) Key Statistics of Labour Force in Malaysia, March 2020
[14] Department of Statistics Malaysia (2020) Labour Force Survey Report 2019
[15] Department of Statistics Malaysia (2018) Informal Sector Work Force Survey Report Malaysia 2017
[16] Tumin, S.A. (2020) Unregistered and "Invisible": Workers in Malaysia's Informal Sector. Khazanah Research Institute

As of end-2019, 137,000 individuals have registered for i-Saraan, while 88,500 registered for i-Suri.[17] PRS was introduced in 2012 also an avenue for the self-employed and informal workers to save for their retirement. However, as of end-2019, only 9% of PRS members (or around 40,000) consist of the self-employed. Assuming there is no overlap, this would mean that less than 2% of the 14 million people not covered have voluntarily signed up for any retirement schemes. While the government has recently announced a RM50 million matching grant for gig platforms who help workers contribute into EPF's i-Saraan scheme or an employment injury scheme, the take-up rate and effectiveness of this scheme, particularly in the long term, is yet to be seen.

ii. Lack of adequacy

More than 75% of EPF members do not meet the minimum basic savings requirement of RM240,000 at age 55 (which equates to a monthly amount of RM1,000 over 20 years).[18] In fact, in 2015 65% of EPF members aged 54 have retirement savings of less than RM50,000, putting them at risk of living below the poverty line.[19] Similarly, more than 60% of the 455,000 PRS members have less than RM5,000 in their accounts.[20]

The lack of adequacy in retirement is further exacerbated by a few factors:

- Overall lack of savings: As previously mentioned, only 24% of Malaysians would be able to sustain living expenses for at least three months or more after losing their income. DOSM data which provides estimates of savings for household show that aggregated household savings in 2013 was 1.4% of adjusted disposable income. [21]

- High levels of household debt: Overall household debt levels in Malaysia remain elevated at 82.2% of GDP as of the first half on 2019.[22] This is significantly higher than regional neighbours like Singapore and Thailand, where household debt-to-GDP ratio is 53.6% and 68.9% respectively. However, high cost of borrowing and minimum payments on credit cards also means that many individuals are caught in a vicious cycle of debt repayment, which will come at the cost of savings and other forms of financial planning. Statistics from the Malaysian Department of Insolvency show that more than 80,000 individuals have been declared bankrupt between 2015 and August 2019 due to unpaid debt.

- Usage of retirement funds in place of emergency funds: The announcement of the i-Lestari EPF withdrawal programme (which allows withdrawals of up to RM500 a month from Account 2), as well as allowing up to RM1,500 tax-free withdrawal from PRS until 31 December 2020, highlights that retirement savings are still viewed as a proxy for emergency funds. As of 19 June 2020, 4.3 million applications for i-Lestari withdrawals have been

[17] Employees' Provident Fund (2020) EPF Delivers Solid Performance in Light of Challenging 2019, available at https://www.kwsp.gov.my/-/epf-delivers-solid-performance-in-light-of-challenging-2019 (last accessed 12 June 2020

[18] Hussein, N. (2019) The Malaysian Pension System. Nomura Journal of Asian Capital Markets, Vol. 3/No. 2.

[19] Employees' Provident Fund (2016) Annual Report 2015. Employees' Provident Fund.

[20] Securities Commission Malaysia (2020)

[21] Khazanah Research Institute (2016) The State of Households II. Khazanah Research Institute.

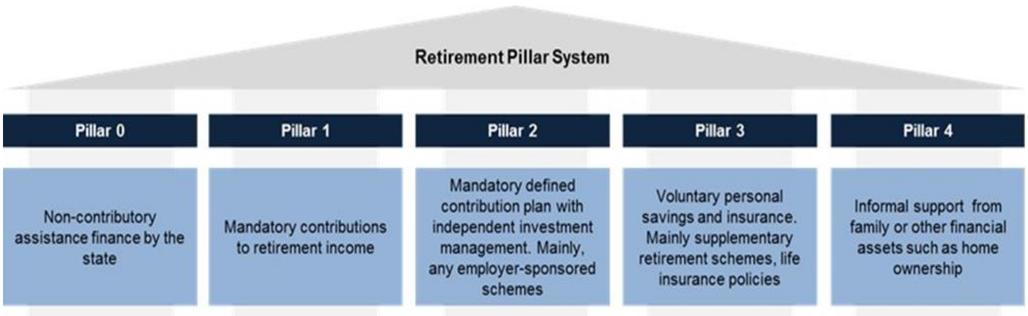
[22] Bank Negara Malaysia (2019) Financial Stability Report H1 2019

approved, amounting to disbursement of RM2 billion a month.[23] Allowing early withdrawals from retirement savings aggravates the issue of adequacy, particularly when loss of dividends or compounding interest is taken into consideration.

- **Low levels of financial knowledge:** The above factors are further impaired by a lack of knowledge on basic financial concepts, which could lead to uninformed decision making or planning. In the global OECD/INFE International Survey of Adult Financial Literacy, Malaysia scored 12.3 out of a possible 21 points, ranking 25 out of 30 countries. Worryingly, Malaysia scored especially low for financial knowledge with a 3.6 score – lowest among all the participating countries. This is in line with the findings from BNM's Financial Capability and Inclusion 2018 survey. Only 43% of respondents surveyed understand that money grows on a compounded basis over time, with one in five believing that money grows on a linear basis.

- **Inadequate long-term, holistic financial planning:** Academic research have shown that Malaysians only start planning for retirement after the age of 40, hence missing out on the critical long-term accumulation stage that could make a significant difference in their retirement savings. While EPF's statistics highlights that a majority of members do not have enough for retirement, 43.8% of Malaysians believe that they can fully depend on EPF savings for living after retirement. This has broader implications both for the lack of immediate financial security and also on longer-term financial planning especially for the most vulnerable segments of our society.

iii. Lack of harmonisation across the various schemes



The World Bank Pension Conceptual Framework

The World Bank's Pension Conceptual Framework recommends a multi-pillar pension system to provide a holistic framework for retirement planning. This includes basic social protection from the State for the most vulnerable, mandated and voluntary retirement savings, as well as informal support, social programmes and ownership of other assets. Under this framework, the

[23] Ministry of Finance (2020) Laporan Pelaksanaan Pakej Prihatin Rakyat Kesepuluh, available at https://www.treasury.gov.my/ (last accessed 20 July 2020)

various pillars complement each other to provide sufficient social and financial protection in old age – it requires all pillars to be present to ensure effectiveness.

In the Malaysian context, this would cover not just the public and private pensions discussed above (KWAP, LTAT, EPF and PRS) but also schemes under the Social Security Organisation (SOCSO), as well as social aid programmes under various ministries and agencies. It will also include personal investments in government-linked schemes such as those under Permodalan Nasional Berhad (PNB) or Tabung Haji, private investments and home ownership. However, as each of these players have different socioeconomic mandates, there is a need to ensure greater coordination and alignment across these players so that comprehensive retirement solutions can be provided (beyond just pensions) and overlaps can be minimised.

There is currently also a lack of centralised data collection which is required to drive greater participation, develop more targeted benefits and to enhance coverage. The recent COVID-19 stimulus package highlighted the current shortcomings in providing relief mechanisms based on income as due to lack of registration or income disclosure to tax authorities. This can lead to gaps in disbursement and resource misallocation with intended beneficiaries not receiving aid, and vice versa. While the recent government announcement on the reactivation of the Malaysian Social Protection Council (MySPC) is a step in the right direction, it would require a more cohesive long-term roadmap to ensure coordinated implementation of an overarching social protection framework.

Structural shifts impacting the retirement landscape - and what it means for the capital market

Changing demographics

A combination of increased life expectancy and lower birth rates means that Malaysia is an increasingly ageing nation. It is estimated that the proportion of Malaysians above the age of 60 will hit above 15% sometime between 2030 and 2035.[24] Globally, it is estimated that children in developed countries born in 2007 have a more than 50% chance of living past their 100th birthday.

As people get older, a few scenarios may happen in the context of retirement:

- People could still retire at the retirement age (which is currently set at 60 for the private sector), but any savings they have will have to be stretched for much longer. Inflation and rising living costs may also erode the value of savings over the long term. It is also important to note that while the minimum retirement age was increased from 55 to 60 in 2013, the age in which full withdrawal is available for EPF members remains at 55, with any new contributions between the age of 55 to 60 being locked in under Akaun Emas. However, given the relatively low amount of savings for members at age 54 as we highlighted above, this could lead to potential situations where most EPF savings have been withdrawn at age 55 even prior to retirement.

- People will need to work for longer past “retirement” age to maintain an income stream, by virtue of not having enough retirement savings to live on. The current basic minimum savings level for the age of 55 set by EPF is RM240,000 [25] – this amounts to RM1,000 a month over 20 years. However, as life expectancy increases, people would have to work for longer to be able to sustain their basic needs.

- Further, as societal and cultural norms evolve, the traditional concept of multi-generational households may also no longer be relevant, as seen by the average household size in Malaysia falling from 5.2 in 1980 to just 4.0 in 2016. This could result in lesser provision of family care for retirees and older folks, which could also lead to them having to work for longer. However, on the flipside, a lack of expectation to take on “grandparent duties” may also lead to an increase in older people opting to remain in the workforce out of interest or to remain active.

[24] Department of Statistic Malaysia (2016) Population Projections Malaysia 2010 – 2040 (Revised)
[25] Employees’ Provident Fund (2019) EPF Sets New Target of RM240,000 for Basic Savings. Available at https://www.kwsp.gov.my/-/epf-sets-new-target-of-rm240-000-for-basic-savings (last accessed 18 June 2020)

The rise of the gig economy

As discussed above, workers in the informal economy cover a wide spectrum that includes agricultural workers, freelancers, traders, consultants, ride-hailing drivers and many more. It is estimated that there are around 250,000-300,000 people working in the gig economy in Malaysia.[26] While informal workers have always been a significant part of the economy in Malaysia, digital adoption and the rise of platform marketplaces have now expanded the scope to a broader and more diverse range of jobs, for example:

- On-demand services like food delivery, transportation, cleaners and plumbers
- Remote and freelance work like consulting, designing, copywriting or digital marketing
- Small to medium business owners whose primary marketplace is via online platforms or social media, e.g. Etsy, Shopee or Instagram

While the number of gig economy jobs were already increasing, the COVID-19 crisis has expedited this in a few ways:

- The unemployment rate in Malaysia was 3.9% as of end March 2020, which was the highest it has been in a decade. However, this number may increase as businesses continue to face uncertainties over the next 6-12 months, with the Ministry of Finance estimating that unemployment rate will reach 7% by the end of 2020.[27] People who are faced with unemployment may turn to gig work to make ends meet, particularly as gig work tend to have a relatively low barrier to entry.
- Businesses will likely be cutting costs, with a DOSM survey showing that 76.6% of businesses found salary payments the main challenge during the COVID-19 crisis.[28] This may lead businesses to outsource more services, or for more roles to be on a part-time or freelance basis with lesser benefits.
- Businesses that were forced to digitalise or leverage on platforms during the lockdown may continue down this traction, with more job opportunities created for gig or remote work.

[26] The Centre (2019) Gig Work: Side Hustle or Main Job?
[27] New Straits Times, "New normal may be permanent, says Tengku Zafrul", published 23 May 2020, available at https://www.nst.com.my/business/2020/05/594891/new-normal-may-be-permanent-says-tengku-zafrul (last accessed 12 June 2020)
[28] Department of Statistics Malaysia (2020) Special Survey Effects of COVID-19 on Economy and Companies/Business Firms (Round 1)

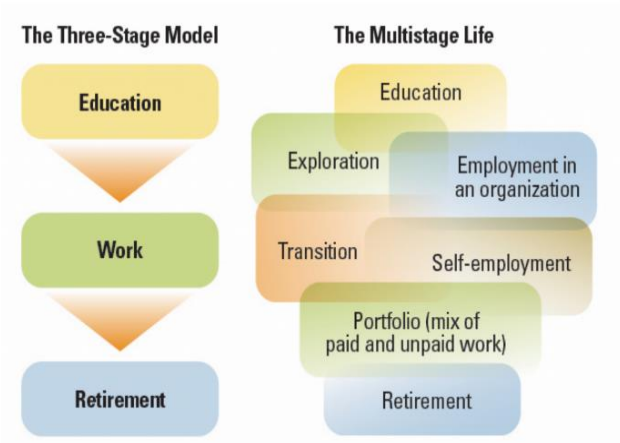
Increasing fluidity between different modes of employment

As a result of increasing opportunities in the gig economy, and changing demographics and societal norms, the landscape of the labour market will also change accordingly. It used to be common for someone to work in an organization for life and retire with the benefits provided for by that organization. In the US, while the median tenure for employees age 65 and over is 10.3 years, it is only 3.2 years for workers aged 25 to 34.

Research has shown that millennials are more willing to change jobs than any other previous generations and look beyond the paycheque for work that emphasizes development and fulfils a sense of purpose. As employment becomes flexible and a continuous learning culture is emphasized, people will shift in and out of formal employment to pursue self-employment, further their studies, to care for family or to take career breaks. In an era where "social media influencer" or "youtuber" has become an actual career, people will also continue to dabble in multiple income streams rather than having one fixed employer. As technological advancement evolves at a rapid pace, it is almost certain that there will be jobs in the next 10 to 20 years for roles that we cannot even imagine yet.

The future of retirement

The future of work is looking very different from what we know. The confluence of various factors driving it goes beyond the few factors we have discussed above and includes globalisation and automation. As the older generation continue to work even pass "retirement" age, this will affect job opportunities in the traditional labour market. In turn, more people may look towards informal or gig work, or combination of different jobs in the formal and informal sector. It is also highly plausible that we may not be able to fully imagine what kind of jobs will be available in the future.



Source: Lynda Gratton and Andrew Scott (2017) The Corporate Implications of Longer Lives, MIT Sloan Management Review

In line with this, the concept of a "hard-stop" retirement at a certain age may no longer be relevant. Researchers have posited that the linear three-stage model of education-work-retirement can no longer apply. As lifespans increase and we work for more years, we will need to continuously learn and reskill in order to remain relevant. As such, a multistage approach that provides flexibility with options to reorganize life in a way that does not necessarily fall within age-specific stages. This will include fluidity to move in and out of education, formal employment, self-employment, exploration and a combination of different roles throughout the course of a lifetime.

The current retirement system in Malaysia was designed in the colonial era based on traditional notions of long-term, stable employment with a single income stream and employers providing social security benefits. As the economic and social landscape evolves, it is crucial that the retirement system can cater for this change.

Potential impact of pension policy on the capital market

As the retirement system evolves to cater for the structural shifts discussed above, it will likely have significant impact on the current structure and role of pension funds. Globally, pension assets amounted to USD 44.1 trillion as of end 2018. For many countries, pension funds manage substantial assets and play a critical role as asset allocators and investors. Hence, any changes to the pension funds will also have an impact on the overall capital market.

Pension funds have strong holding power of equities and bonds compared to retail investors and other financial institutions due to its long-term liabilities, and restrictions for premature withdrawals by its members. Growth in pension funds have been shown to correlate with improved resource allocation and more productive capital stock. This is in part due to more efficient pooling of assets, reduced cost of capital, longer time horizon of pension funds, and better corporate governance. [29] Further studies have also shown that growth in pension funds as a proportion of GDP significantly and positively affects output per capita, leading to economic growth, particularly in Emerging Markets.[30]

An extensive empirical study on Asia's pension funds by ADBI[31] has shown strong positive links between pension fund assets and market capitalisation in Asia. Interestingly, the study also highlights that pension assets growth improves market stability as pension funds have a lower tendency to participate in short-term speculative activities. On market liquidity, the ADBI study shows that pension growth increases market liquidity (total value traded) in the short run, but in the long-run the positive relationship is only observed in less developed markets (which included Malaysia, in this study). This positive correlation does not apply to more developed markets, largely since pension funds as long-term institutional investors have a lesser tendency to participate in short term speculative activities and hence has a stabilising effect on the stock market.[32] Similar to equity market, the private debt market also exhibits a positive link to growth to pension assets, which supports the argument that pension growth has positive spillovers to the real economy via its the capital market. Catalan et al (2000)[33] in his paper to study causality between contractual savings and stock market development suggest that pension reform and capital market reform should be pursued simultaneously, given its importance to the economy especially in the developing countries.

[29] Walker, E. & Lefort, F. (2002) Pension Reform and Capital Markets: Are there Any (Hard) Links?. The World Bank Pension Reform Primer.
[30] Davis, E.P. & Hu, Y. (2008) Does Funding of Pensions Stimulate Economic Growth?. Journal of Pension Economics and Finance, 7, pp 241-249
[31] Hu, Y. (2012) Growth of Asian Pension Assets: Implications for Financial and Capital Markets. ADBI Working Paper No. 360 Asian Development Bank Institute.
[32] Ibid
[33] Catalán, Mario & Impavido, Gregorio & Musalem, Alberto. (2000). Contractual Savings or Stock Market Development Which Leads?. Journal of Applied Social Science Studies. 2421.

Meanwhile, the World Bank has highlighted that in order for this growth potential to be effectively capitalised on, it is important for pension investment portfolios to be diversified, both in terms of asset class and geographical region. Asset class diversification would enable longer-term domestic investments that could positively impact economic development, while international diversification allows funds to productively seek returns and reduce risks, particularly if the domestic economy is unable to absorb all the savings.[34] Based on OECD data, pension funds with a more diversified portfolio, such as Canada and Netherlands, have a higher rate of real investment returns.[35]

As Malaysia progresses towards becoming a developed economy, any government policy on retirement and pensions would need to take into consideration the potential impact on the overall financial and the capital market.

- As the median population age increases, should there be no change in withdrawal age, there is a chance of withdrawals being higher than deposits. This will be unsustainable for any fund in the long run.

- However, given the substantial sizes of many pension funds, any policy that may significantly increase the number of contributors and/or amount of pooled contribution may lead to increased systemic risks, both at the level of the institution and for the overall market.

- In the Malaysian context, EPF is already the largest institutional investor with RM833.76 billion fund size at end 2018. EPF has highlighted that it is expected to hit RM 1 trillion by 2023. This means that EPF alone could potentially be almost a third of the overall Malaysian capital market, which currently stands at RM3.2 trillion. Given the statutory guarantee of 2.5% dividends, any increase in EPF asset size will also increase contingent liabilities of the government.

- EPF has been actively pursuing a more diverse asset allocation strategy, with 27.1% of total investment assets as of end 2018 being placed in overseas investments, and with a view to gradually increase this to 32%.[36] However, any regulatory limitations on asset diversification could lead to an over-concentration in the domestic market. This could have an impact on the liquidity and vibrancy of the market, which could in turn affect dividends for EPF members.

- To manage the size of pension funds, some countries like Singapore have introduced an income cap for pension contributions – contributions for ordinary wages are capped at SGD6,000 a month, with any income above that amount not subjected to Central Provident Fund (CPF) deductions.

[34] Stewart, F., Despalinsm R., & Remizova, I. (2017) Pension Funds, Capital Markets, and the Power of Diversification. World Bank Group.
[35] Ibid
[36] Employees' Provident Fund (2019) Annual Report 2018

Moving forward

As the economy evolves, we can consider two approaches to relooking at the retirement system:

i. Adapting the current system to cater for evolving needs

The first approach, which is what most countries including Malaysia are already doing, involves adapting the current system to fill the gaps. One example of this would be the introduction of the i-Saraan and i-Suri schemes by EPF, as previously highlighted.

This is clearly the more expedient way as it leverages and builds on existing infrastructure. However, several key issues remain:

- Mandating contributions for those in the informal or gig economy is a challenge due to irregular and inconsistent income. Mandating a certain fixed amount may cause financial hardship during periods of low income.

- However, if contributions are not mandated, take up rate for voluntary schemes have not been encouraging. This is evident from the relatively low take-up rate of EPF's voluntary schemes and PRS by the self-employed, as discussed earlier. OECD has highlighted that this is a universal issue with voluntary pension schemes.

- Even if contributions are mandated, the savings of the self-employed or informal worker will generally still be less than those who are formally employed, as the current system requires an employer contribution. This means that the system will still lean in favour of formal employment.

- Some jurisdictions have tried to work around this by introducing regulation that requires platforms to fill in the role of employer. For example, California's Assembly Bill 5 came into effect in January 2020, requiring gig workers and independent contractors to be classified as regular employees. While the full impact has yet to be assessed, initial reports have emerged that some companies have chosen to let go off their workers instead of providing them the full benefits.[37] While this highlights that regulation does not always achieve its intended outcomes and may instead have adverse effects, it also fails to adequately cover all scenarios – for example, small businesses owners who use online platforms to market and trade their products.

[37] CNN, "California's new gig economy law was meant to help workers. But it will likely hurt them instead", published 9 January 2020, available at https://edition.cnn.com/2020/01/09/perspectives/california-ab5/index.html (last accessed 12 June 2020)

ii. Redesigning the ecosystem holistically

The second approach calls for the entire retirement and pensions system to be redesigned, to cater for the changing norms of work. A new system may be linked to all forms of income (as opposed to job), be it via formal employment, informal/self-employment, or a combination of both. In line with the World Bank Conceptual Pension Framework, a new retirement ecosystem can also holistically take into consideration non-pension forms of retirement benefits, for example those linked to home equity, government benefits or other forms of personal savings. However, building a new system from the ground up brings with it some important challenges too:

- Rethinking a whole new retirement system will require a significant amount of resources, both financially and time-wise. It will need substantial investment by the government, which might not be feasible at the moment due to the economic impact of the COVID-19 crisis. However, given the long gestation period needed to design such a framework, it may essentially allow the government to reassess, recalibrate and realign long-term fiscal allocations. Heavy upfront investment may be offset in the long run if resources can be used more efficiently, with less leakages and misallocation.

- It will also require significant political will from the government's part, as this will be a long-term undertaking, and its effects may not be visible for decades. There will need to be buy-in from many different stakeholders, including various ministries, regulators, government agencies, government-linked investment companies, trade associations and unions, as well the broader private sector.

- Any large-scale, structural change of a national interest like this would require substantive engagements and consultation. Any redesign would have to take into consideration various aspects, including economic, financial, social and cultural.

Both ways present their own challenges to policymakers. When it comes to an issue as fundamental and universal as retirement, there is no silver bullet.

Given the worrying statistics on savings and retirement that we highlighted earlier, it is imperative for policymakers to tackle the present issue, not least due to the impact that COVID-19 will have on the real economy. However, there is also a need to keep an eye on the accelerated structural shifts that will have an impact on work and life in the coming decades.

As such, this paper presents recommendations for both the short-medium term and long term. The short-medium term measures leverage on behavioural insights and digital tools to encourage participation in retirement savings. It aims to capitalise on existing mechanisms by making it more affordable, convenient and flexible to save and invest. It is particularly important to target the young here as research has shown that young people have stronger responses to "reward" schemes or incentives, and young people also tend to be more comfortable with exploring new digital technology. The long-term measures acknowledge the need to look beyond filling the cracks of the current system, and to cater to changing modalities of work. Instead, these recommendations require key structural and institutional change that need to be complemented with a shift in culture and mindset.

These recommendations can be concurrently considered, with implementation of short-medium term measures taking place first while the framework for long-term measures are being developed. The recommendations we have provided can be considered either independently or in tandem with each other.

As part of our research, we undertook studies on how some of these measures have been implemented in other jurisdictions. Where relevant, we have referenced examples. However, pension systems tend to be unique and specific to each country, and as such any references to other jurisdictions would have to be understood and adapted from that context.

In developing the recommendations, we have kept in mind several broad intended outcomes to inform and guide our approach:

- Increasing overall participation in retirement savings
- Ensuring sufficient savings for a dignified old age
- Harmonisation of retirement benefits between different modes of employment
- Adopting a holistic viewpoint of social security benefits for retirement

Short to medium-term measures • These measures focus on enhancing pre-existing solutions to increase participation and building savings as a habit • These recommendations leverage on insights from behavioural economics and usage of digital tools to make retirement savings more convenient, affordable and flexible	
Framing of contributions as daily or smaller amounts	• There should be a focus on encouraging small but regular savings, also known as micropensions or microinvestments. This provides an affordable entry point into the capital market for the purpose of long-term asset accumulation while incrementally encouraging a savings habit. • Encouraging daily contributions of small amounts may make it particularly attractive for gig economy workers whose income fluctuate daily. This daily contribution may be done physically or could also be linked to e-wallets or digital banking, depending on the target user. • In India, UTI Mutual Fund, a private asset management company, has partnered with microfinance institutes and NGOs to introduce a voluntary micro pension scheme that allows for flexible contributions from as low as INR 50. Savings from this scheme is invested in their existing UTI Retirement Benefit Pension Fund. • In the Philippines, the AlkanSSSya programme was started to enable informal workers to make small deposits (as low as PHP11 which is less than RM10) into designated individual locked steel boxes that are placed in accessible and convenient locations. The money would be collected and calculated once a month and remitted if the goal is met. • In the UK, the government pension scheme NEST is carrying out trials on the effectiveness of describing contributions as a daily amount, i.e. “Could you save £2.50 a day?”
Linking up retirement accounts with existing bank accounts	• Linking up EPF or PRS accounts to existing bank accounts allow users to have a snapshot view of their finances, including their retirement savings. • This helps to overcome “mental accounting”, or the human tendency to mentally segregate and categorise their money. • While EPF currently allows for contribution payments via Maybank’s online banking platform, this is done akin to a bill payment. Users are unable to automatically link and view their EPF balance, the way it is possible for PNB accounts.

	• This would require greater public-private partnerships between EPF, PRS providers and the banks.
Capitalising on existing contact points to enhance peer group messaging	• Using existing contact points such as trade associations or local community leaders to reach out to informal sector workers to build trust, facilitate financial education efforts and enhance positive peer group messaging with the aim to increase participation in retirement schemes. • Leveraging on existing savings or financing mechanisms available to particular groups, e.g. co-operatives schemes for particular workers' associations. As of end 2018, there were 14,247 cooperatives in Malaysia that covered more than 6 million members. More than 3,000 of these co-operatives were in the agricultural sector. This could include working with retirement providers like EPF or PRS to offer retirement solutions as part of the savings schemes. • This would require developing partnerships with Suruhanjaya Kooperasi Malaysia, workers' and employers' organisations, civil society groups, trade unions and community leaders to help facilitate coverage for hard-to-reach groups. • Indonesia introduced the Kader JKN programme, with local community agents in remote areas facilitating online social insurance payments. This approach saw a 73% increase in online utilisation rate and 14% increase in collection rates, as well as overall reduced staff cost.
Linking up tips on platforms to a retirement savings fund	• Many digital service platforms allow customers to leave tips for gig workers, such as e-hailing drivers or food delivery riders. • These tips could be automatically channelled by the platform into an EPF or PRS account. This will provide an easy way for gig workers to save based on additional income. • Customers may also be encouraged to contribute more tips towards specific savings goals.
Committing a percentage of future income above a certain amount towards retirement savings	• Self-employed or gig workers can commit, through the platforms they are using, a percentage of future income once a base threshold is met. • For example, a food delivery rider could pre-determine a base threshold income of RM2,000 a month. He could then commit that 10% of any income made above that threshold can be automatically channelled by the platform provider towards retirement savings.

	• This addresses the issue of inconsistent income, as there will be no forced savings if income for the month falls below a certain threshold. • A study by Nobel prize-winning behavioural economist Richard Thaler showed the successful implementation of the Save More Tomorrow programme, where participants committed in advance to allocate a portion of their future salary increases toward retirement savings. Not only did a high percentage (78%) of those offered the plan opt to join, the average saving rates for participants increased from 3.5 percent to 13.6 percent over the course of 40 months.[38]
Specialised roboadvisors that focus on PRS	• Penfold is a British fintech pension app for self-employed workers. It provides convenient setting up of an account, provides a pension calculator, and allows flexible payments that can be topped up or paused at any time. • A specialised PRS roboadvisor would be able to provide these conveniences, while allowing for lower fees and initial entry cost.
Role of employers or platforms in enhancing financial wellbeing	• Employers or platforms with gig workers can play an active role in providing impartial financial wellness programmes for their employees. • Financial stress has direct effects on physical and mental health, and can be linked to lower productivity, unplanned job absences and lower job performances. A 2019 report by PwC showed that not only was financial stress the leading cause of stress among its employees, but loyalty to their employer was influenced by how much the company cared about their financial well-being, particularly for the younger generation. As such, financial wellness programmes could be a means of talent retention, as well as a direct example of a stakeholder-value based model for the company. • Digital service platforms can harness their reach and influence by providing financial education and financial counselling programmes for gig workers signed on to their platforms.

[38] Thaler, R.H. & Benartzi, S. (2004) Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving. Journal of Political Economy, Vol. 112, No. 1, Pt. 2.

Longer-term measures • These recommendations acknowledge the need to look beyond filling the cracks of the current system. Instead, these recommendations require key structural and institutional change that need to be complemented with a shift in culture and mindset. • These recommendations shift the focus from the current employer-based system to be income-based, in order to accommodate multiple job modalities beyond a single formal employer. • It is important to acknowledge the need to look beyond a "hard-stop" retirement and provide for a multi-stage life.	
Mandating and syncing tax and pension enrolment	• Mandatory automatic enrolment into the tax system (LHDN) and the pension system for all Malaysians upon a certain age would ensure comprehensive coverage for all Malaysians. It would facilitate retirement contributions that are income-based regardless of employment status and multiple income streams. • It would also enable centralised data collection in terms of income and retirement coverage regardless of employment status. This data would be critical to facilitate income-based incentives and in designing appropriate retirement policies and products. • In Singapore, the tax system is linked to the Central Provident Fund (CPF). Any self-employed person who makes an annual net income of more than SGD6,000 (as confirmed by the tax authorities) is mandated to contribute to the MediSave account under CPF (MediSave is a mandatory third account under CPF that allows withdrawals for medical purposes). Contributions to the other CPF accounts remain voluntary.
Single pensions portal to manage all social security benefits	• Following on from mandatory enrolment into the tax and pensions system, a single pensions portal linked to an individual's identity card (IC number) can also be introduced so that users have a better overview of the various pensions schemes (including PRS), their taxes and other social security benefits (e.g. government aid and SOCSO). • Partnerships with other agencies and private sector institutions could potentially also extend coverage in the portal to include PNB investments, bank savings and loans, and other forms of investments. • Being able to have a holistic overview would enable users to better manage their savings and benefits, as well as understand various options available to them.

	• Indonesia has worked with the International Labour Organisation (ILO) to pilot a single-window service programme to streamline mechanisms for social and employment benefits. • Pensiontech is an emerging sector, with private solution providers working with government and private sectors to introduce digital single-window platforms. Open APIs allow other financial institutions or digital platforms to embed these platforms on to their own applications. • One example is Pinbox Solutions, a private Pensiontech firm that provides customisable digital platforms to integrate existing pension and financial ecosystem with micropensions and other digital products. They also provide administrative, record-keeping, data collection and compliance functions to lower overall cost.
Universal flat-rate pension	• A basic pension to all Malaysians above a certain age would address coverage issues, and also guarantee a minimum standard of living and protection for all older people. • While most benefits or aid in Malaysia thus far have tended to be income-based, a universal flat-rate is particularly important for pensions as older people may not have any form of income, thus making it an unreliable form of assessing need in old age. • New Zealand pays a flat-rate pension to all citizens and residents above the age of 65, regardless of income or employment status. However, the benefit is subject to income tax, and tax rates would depend on income. • Thailand has an old-age allowance for all above the age of 60 who are not recipients of any other pensions. While the scheme initially provided a flat-rate benefit of THB500, multiple monthly benefit levels were introduced in 2012 so that the allowance increases incrementally based on age tier.
Considering alternative non-pension forms of income, like reverse mortgages	• A reverse mortgage allows for homeowners to borrow against their house equity and receive monthly payments while still living in the house until they pass away or move out. This allows homeowners to liquidate home equity in their senior years and provide them a form of regular income when they may need it most. • Reverse mortgages are available in developed markets like US, UK, Canada, Australia and Hong Kong. The eligibility age to qualify for reverse mortgages range from 55-65 years old in these jurisdictions. • However, it will require significant consideration on the regulatory and social impact, as it will touch on complex issues covering the property market, financial regulations, and inter-generational

	wealth transfer. It will also require educational efforts to ensure homeowners understand the impact of their decisions.
Incentivising lifelong learning and reskilling	• Incentivising lifelong learning and reskilling regardless of age is important to enable people to transition through different jobs or roles in a multi-stage life. It would also encourage individuals to take ownership of their own career development and learning. • Incentives could be in the form of tax incentives, providing free or subsidised training, or advisory and matching services. Incentives can also be used to nudge reskilling towards particular sectors that are in need of talent injection. • This would require partnerships between relevant government agencies and universities, training providers, online learning platforms, employers and worker associations. • In Singapore, the Skillsfuture programme provides a one-off credit worth SGD 500 to every Singaporean above the age of 25, that is redeemable for more than 8,000 approved courses. Since then, top-up credits have also been provided has also been provided as part of additional stimulus packages.
Ongoing holistic financial literacy efforts	• Empowering individuals to make sound financial decisions for their own long-term futures would require equipping them with the necessary financial literacy tools. • The OECD defines financial literacy as "a combination of awareness, knowledge, skills, attitude and behaviours necessary to make sound financial decisions and ultimately achieve individual financial wellbeing". [39] • Of this, financial education is a core element to ensure that individuals have the adequate amount of knowledge and skills to manage their finances. However, for overall financial literacy to be advanced effectively, financial education efforts will also need to go hand-in-hand with consumer protection and regulation, as well as an understanding of how investors' behaviour can affect their decision making. • Academic research has shown that financial literacy is influenced by a variety of factors, including gender, number of children, income and education levels. As such, one-sized-fits-all financial education efforts may not always achieve its intended effects. • A holistic financial literacy policy would thus need to take into account all aspects and factors that could affect an individual's

[39] OECD/INFE (2011) Measuring Financial Literacy: Core Questionnaire in Measuring Financial Literacy: Questionnaire and Guidance Notes for conducting an Internationally Comparable Survey of Financial literacy. OECD.

	financial choices. It would need to consider how individual attitude, behaviour and environment can influence outcomes. Financial literacy efforts would also need to be ongoing and continuous in order to reap long-term benefits.
Use of retirement policies as a policy tool to address generational transfer issues	• Broader retirement policies can be used to address structural issues within other sectors. • The farming industry in Ireland was unable to attract younger talent and hence the old age structure and late succession impact was detrimental to innovation and the productivity of agriculture. • To address this issue, the Early Retirement Scheme was introduced whereby farmers who, before turning 66, transferred their land by gift, lease or sale to an experienced or trained farmer of less than 50 years old, would then be eligible for a pension of up to €15,000 a year for up to 10 years.
Harmonised regulatory framework for retirement	• As Malaysia's overall retirement framework consists of many different players, there is a need to have a harmonised regulatory framework to align the different socioeconomic mandates and ensure greater coordination across these players so that comprehensive retirement solutions can be provided and overlaps can be minimised. • A single retirement regulator would be best positioned to develop this harmonised framework, to execute the long-term measures that have been highlighted and to ensure synergies between retirement policies and overall national considerations.

Conclusion

Ongoing structural changes, from demographics to digitalisation, will rapidly shift the way we work and live. This will only be further fuelled by the changes we are starting to witness in a post-COVID-19 world. If unaddressed, these changes will exacerbate any existing issues, leading to widening economic inequalities and hindering overall development.

The capital market can play a key role in providing a channel for asset accumulation and capital growth. However, ensuring inclusive growth would mean providing equitable opportunity to access the capital market. The nature of retirement savings and pension funds means that it remains one of the most accessible, but also important, ways that an individual can access the capital market.

This paper has examined the ways in which the gaps in the retirement system can be narrowed, to enable as many people to benefit from it as possible. As we move forward, it is important for policymakers to not only address existing issues, but to also consider the ways in which rapidly incoming structural shifts may impact the overall ecosystem and the lives of many individuals.

References

Adams, T.D. (2018) Why Financial Inclusion Matters. Center for Financial Inclusion.

Aegon Center for Longevity and Retirement (2016) Retirement Preparation in a New Age of Self-Employment

Bank Negara Malaysia (2012) Measuring Financial Literacy: The Malaysia Case. Presented at the IFC Workshop on Financial Inclusion Indicators. Bank Negara Malaysia.

Bank Negara Malaysia (2019) Financial Stability and Payment Systems Report 2019. Bank Negara Malaysia.

Betterment (2018) Betterment's 2018 Report: Gig Economy and the Future of Retirement

Blakstad, M., Border, P., Ferrari, E., Freeman, J., Hodgkinson, C. & Lessiter, J. (2018) Working For Today, Preparing for Tomorrow: The Realities of Self-Employment and Saving. NEST Insight.

Blakstad, M., Hodgkinson, C., & Sandbrook, W. (2018) Retirement Saving and the Self-Employed: A Research Summary. NEST Insight.

Blakstad, M., Bowe, G., Phillips, J., Quinlan, M., Sandbrook, W., & Turner, G. (2019) Supporting Self-Employed People to Save for Retirement. NEST Insight.

CNN, "California's new gig economy law was meant to help workers. But it will likely hurt them instead", published 9 January 2020, available at https://edition.cnn.com/2020/01/09/perspectives/california-ab5/index.html (last accessed 12 June 2020)

Davis, E.P. & Hu, Y. (2008) Does Funding of Pensions Stimulate Economic Growth?. *Journal of Pension Economics and Finance,* 7, pp 241-249

Department for Work & Pensions UK (2018) Enabling Retirement Savings for the Self-Employed: Pensions and Long Term Savings Trials

Department for Work & Pensions UK (2020) Automatic Enrolment Evaluation Report 2019.

Department of Statistics Malaysia (2016) Population Projections Malaysia 2010 – 2040 (Revised)

Department of Statistics Malaysia (2018) Informal Sector Work Force Survey Report Malaysia 2017

Department of Statistics Malaysia (2019) Current Population Estimates (Malaysia) 2018-2019

Department of Statistics Malaysia (2020) Key Statistics of Labour Force in Malaysia, March 2020

Department of Statistics Malaysia (2020) Labour Force Survey Report 2019

Department of Statistics Malaysia (2020) Special Survey Effects of COVID-19 on Economy and Companies/Business Firms (Round 1)

Etsy (2016) Economic Security for the Gig Economy: A Social Safety Net that Works for Everyone Who Works

Employees' Provident Fund (2016) Annual Report 2015. Employees' Provident Fund.

Employees' Provident Fund (2019) Annual Report 2018. Employees' Provident Fund.

Employees' Provident Fund (2019) EPF Sets New Target of RM240,000 for Basic Savings. Available at https://www.kwsp.gov.my/-/epf-sets-new-target-of-rm240-000-for-basic-savings (last accessed 18 June 2020)

Employees' Provident Fund (2020) *EPF Delivers Solid Performance in Light of Challenging 2019,* available at https://www.kwsp.gov.my/-/epf-delivers-solid-performance-in-light-of-challenging-2019 (last accessed 12 June 2020)

Firouz, A. (2020) Why i-Lestari will Miss the Most Vulnerable During COVID-19. Khazanah Research Institute.

Firouz, A. (2020) COVID-19: Are All Workers Equally Protected? A Case of the Self-Employed. Khazanah Research Institute.

Gallup (2016) How Millennials Want to Work and Live. Gallup.

Gratton, L. & Scott, A. (2017) The Corporate Implications of Longer Lives. *MIT Sloan Management Review.* Spring 2017 issue

Gratton, L. (2020) Welcome to the Multi-stage Life. London Business School. Available at https://www.london.edu/think/welcome-to-the-multi-stage-life (last accessed 12 June 2020)

Holzmann, R., Hinz, R.P. & Dorfman, M. (2008) Pension Systems and Reform Conceptual Framework. World Bank.

Hu, Y. & Stewart, F. (2009) Pension Coverage and Informal Sector Workers: International Experiences. *OECD Working Papers on Insurance and Private Pensions*, No 31. OECD.

Hu, Y. (2012) Growth of Asian Pension Assets: Implications for Financial and Capital Markets. *ADBI Working Paper Series.* Asian Development Bank Institute.

Hussein, N. (2019) The Malaysian Pension System. *Nomura Journal of Asian Capital Markets,* Vol. 3/No. 2.

Joubert, C. (2014) Pension Design with a Large Informal Labor Market: Evidence from Chile. *IZA Discussion Paper No. 8211.* The Institute for the Study of Labor.

Khazanah Research Institute (2016) The State of Households II. Khazanah Research Institute.

Kumpulan Wang Persaraan (Diperbadankan) (2019) Annual Report 2018

Lembaga Tabung Angkatan Tentera (2018) Annual Report 2017

MacKellar, L. (Eds) (2009) Pension Systems for the Informal Sector in Asia. The World Bank.

Matijascic, M. & Kay, S.J. (2008) Pensions in Brazil: Reaching the Limits of Parametric Reform in Latin America. *Lessons from Pension Reform in the Americas.* Oxford University Press.

Mines, J.A.E. (2015) Moving Towards Inclusive Growth: The Philippine Social Security System. SSS.

Ministry of Finance (2019) Tinjauan Fiskal dan Anggaran Hasil Kerajaan Persekutuan 2020

Ministry of Finance (2020) Laporan Pelaksanaan Pakej Prihatin Rakyat Keenam, available at https://www.treasury.gov.my/pdf/Laporan-Pelaksanaan-Pakej-Prihatin-Rakyat-Keenam.pdf (last accessed 12 June 2020)

Mokhtar, N., Moga Dass, T., Sabri, M.F., & Ho, C.S.F. (2018) A Preliminary Evaluation of Financial Literacy in Malaysia, *Journal of Financial and Wealth Planning.*

New Straits Times, "New normal may be permanent, says Tengku Zafrul", published 23 May 2020, available at https://www.nst.com.my/business/2020/05/594891/new-normal-may-be-permanent-says-tengku-zafrul (last accessed 12 June 2020)

Nguyen, Q.A. & Da Cunha, N.M.S. (2019) Extension of Social Security to Workers in Informal Employment in the ASEAN Region. International Labour Organization.

OECD/INFE (2011) Measuring Financial Literacy: Core Questionnaire in Measuring Financial Literacy: Questionnaire and Guidance Notes for conducting an Internationally Comparable Survey of Financial literacy. OECD.

OECD (2019) Pension Markets in Focus. OECD.

OECD (2019) Pensions at a Glance 2019: OECD and G20 Indicators. OECD.

Perera, K., Ohrvik-Stott, J., & Miller, C. (2020) Better Work in the Gig Economy. Doteveryone.

Reder L., Steward, S., & Foster, N. (2019) Designing Portable Benefits: A Resource Guide for Policymakers. The Aspen Institute Future of Work Initiative.

RNSF (2017) Extending Coverage: Social Protection and the Informal Economy. Research Network and Support Facility/

Sazali, N.T. & Tan, Z.G. (2019) The Demise of Formal Employment? A Literature Update on Informality. Khazanah Research Institute.

Schaper, M.T. (2020) Malaysia's Self-Employment Explosion: Why So Many Own-Account Workers? ISEAS-Yusof Ishak Institute.

Securities Commission Malaysia (2020) Annual Report 2019

Stewart, F., Despalinsm R., & Remizova, I. (2017) Pension Funds, Capital Markets, and the Power of Diversification. World Bank Group.

Suruhanjaya Koperasi Malaysia (2019) Malaysia Co-operative Statistics 2018.

Thaler, R.H. & Benartzi, S. (2004) Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving. *Journal of Political Economy*, Vol. 112, No. 1, Pt. 2.

The Centre (2019) Gig Work: Side Hustle or Main Job?. The Centre.

The Edge, “62% of working-age M'sians not covered by any formal social protection, says EPF”, published August 8 2018, available at https://www.theedgemarkets.com/article/62-workingage-msians-not-covered-any-formal-social-protection-says-epf (last accessed 12 June 2020)

Tumin, S.A. (2020) Unregistered and “Invisible”: Workers in Malaysia’s Informal Sector. Khazanah Research Institute.

Walker, E. & Lefort, F. (2002) Pension Reform and Capital Markets: Are there Any (Hard) Links?. The World Bank Pension Reform Primer.

World Bank Group (2019) Breaking Barriers: Toward Better Economic Opportunities for Women in Malaysia. *Knowledge & Research, The Malaysia Development Experience Series.* World Bank Group Global Knowledge & Research Hub in Malaysia.

YAB Tan Sri Dato’ Haji Muhyiddin Yassin, Prime Minister of Malaysia, “Pakej Rangsangan Ekonomi Prihatin Rakyat (PRIHATIN)”, 27 March 2020, available at https://www.pmo.gov.my/ms/2020/03/teks-ucapan-perutusan-khas-pakej-rangsangan-ekonomi-prihatin-rakyat-prihatin/ (last accessed 18 June 2020)

YAB Tan Sri Dato’ Haji Muhyiddin Yassin, Prime Minister of Malaysia, “Pelan Jana Semula Ekonomi Negara (PENJANA)”, 5 June 2020, available at https://penjana.treasury.gov.my/pdf/Teks-Ucapan-PM-Pelan-Jana-Semula-Ekonomi-Negara-PENJANA.pdf (last accessed 18 June 2020)