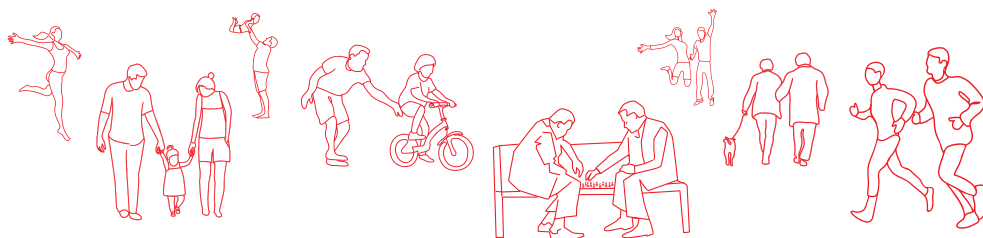
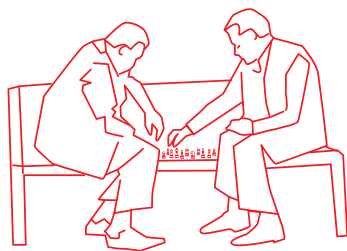
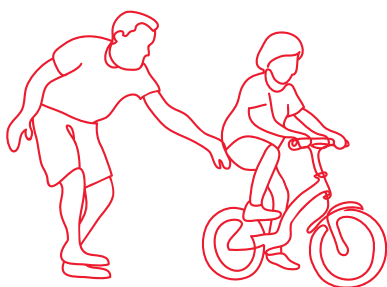
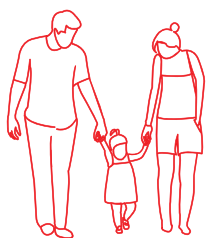




A Longevity Agenda for Singapore

October 2019







Author:

Professor Andrew Scott

London Business School

Contributors:

Wilf Blackburn

Chief Executive Officer

Prudential Singapore

Dr Mary Ann Tsao

Chairman

Tsao Foundation

Professor John Eu-Li Wong

Chief Executive

National University Health System

Introduction



Over the last 60 years, life expectancy in Singapore has increased by nearly 20 years to reach 85 – one of the highest in the world. That's an extraordinary achievement that is taken for granted and that too often leads to a conversation about the costs of an ageing society. Those costs and concerns are very real, but a deeper more fundamental set of questions need to be answered.

If we are living this much longer, then how do we – individuals, companies and governments – respond to make the most of this extra time? How do we restructure our lives to make sure that as many people as possible, live as long as possible, in as healthy and fulfilled ways as possible?

This note draws on the findings from a high-level conference, sponsored by Rockefeller Foundation and Prudential Singapore, to map out what a global longevity agenda looks like, and to raise awareness around the world – at a government, corporate and individual level – on how we need to seize the benefits of this wonderful human achievement of longer lives.

It also looks at the measures that Singapore has taken to adjust to longer lives. Reassuringly, Singapore leads the world along many dimensions that have to do with ageing, and also longevity. However, there is much that needs to be done. Framing policies around longevity and 'all of life' and not just ageing and 'end of life' is needed if Singapore is to collectively maximise the gains available.

Executive Summary

- Singapore is undergoing a rapid demographic transition which will see the average age of its society increase as the proportion of its older citizens increases.
- An ageing society creates many challenges. However, at the same time, with the number of older people increasing, Singapore is benefitting from a longevity dividend.
- On average, Singaporeans are living for longer and in better health. In other words, how we are ageing is changing – it is not just about there being more senior people. Exploiting this opportunity to seize these positive advantages is the longevity agenda.
- A new-born in Singapore today, faces the prospect of living on average one of the longest lives in human history, and so needs to prepare for his or her future differently.
- At an individual level, Singaporeans are already behaving differently – in terms of marriage, families, work and education. Many are acting as social pioneers as they try to create a new map of life.
- To support individuals as they adapt to longer lives, Singapore needs to create a new map of life that enables as many people as possible to live as long as possible and as healthily and as fulfilled as possible.
- Achieving this will also ensure that not only the individual, but also the economy will benefit.
- Singapore is at the international frontier of best practice in terms of adjusting to an ageing society. It also leads the way with many longevity measures.
- Further entrenching social change and experimentation, and creating a positive narrative around longer, healthier lives; in particular, extending policies away from a sole focus on the old and towards the whole course of life are some key priorities ahead of us.

I. An Ageing Society

The world is ageing. For the first time in human history, there are now more people alive aged over 65 than under 5. Between now and 2050 ¹, every country around the world will see an increase in its average age, and in the proportion of its population aged over 65 and 80.

This ageing of society is caused by a demographic transition during which the birth rate declines and more people live for longer. The result is more older people, fewer younger ones, and an increase in the average age

of society. The faster a country experiences economic growth, the more rapid its demographic transition and the greater the challenge of an ageing society.

Given how long-lasting and rapid its economic growth has been, it is no surprise then that Singapore is experiencing one of the most dramatically ageing societies. Life expectancy in Singapore has risen from 66 in 1960 to 85 today, the highest in the world ². Over the same time, its birth rate has fallen from 37.5 births per 1000 people to only 8.9, one of the lowest in the world ³.

Population by age groups and sex (absolute numbers)



The dotted line indicates the excess male or female population in certain age groups. The data are in thousands or millions.

United Nations Department of Economic and Social Affairs/Population Division
World Population Prospects: The 2017 Revision, Volume II, Demographic Profiles

Figure 1 – Singapore's Demographic Pyramid

¹ https://population.un.org/wpp/Publications/Files/WPP2019_Highlights.pdf

² <https://www.straittimes.com/singapore/health/singapore-tops-in-life-expectancy-at-84-8-years>

³ <https://www.singstat.gov.sg>

As shown in Figure 1, these trends are producing a dramatic change in the population structure of Singapore. The demographic pyramid has inverted such that now older adults outnumber the young. Further, more and more Singaporeans aren't just living into old age but 'old' old age - with increasing numbers of people living into their 90s and beyond.

The result is that the median age of Singapore's population is expected to reach 53.4 by 2050 (up from 29.3 in 1990 and 40.8 in 2018). By 2050, nearly half the population will also be aged over 65.

In 1950, only 50 Singaporeans were over 100. Today there are 1300 of them and the number of centenarians is the fastest growing demographic group – not just in Singapore, but globally.

Singapore is leading the world as an ageing society, seeing one of the fastest changes in population structure, having one of the highest life expectancies, and experiencing one of the largest proportions of older citizens. How Singapore responds to these changes will shape its economic fortunes in the decades ahead.



II. The Longevity Approach

An ageing society is a source of concern for many countries. The fear is that older people work less, require retirement savings and incur higher levels of health expenditure. The commonly-agreed consequence is that, as society ages, we should expect to see slowing economic growth and rising pressure on public finances.

However, there is a more positive way of viewing these demographic developments. In particular, it is important to recognise the extraordinary achievement that Figure 1 reflects. More and more people are living

longer and healthier lives, rather than dying as infants or in middle age. That makes it one of humanity's greatest ever achievements and one that Singapore has excelled in. That is something to celebrate.

Further, whilst the ageing society narrative portrays this development as one of there being more older people, what is also happening is that, each of us has more time on average. Figure 2 shows life expectancy at birth in Singapore since 1960 and shows how it has been increasing at a steady rate of 3 years every decade.

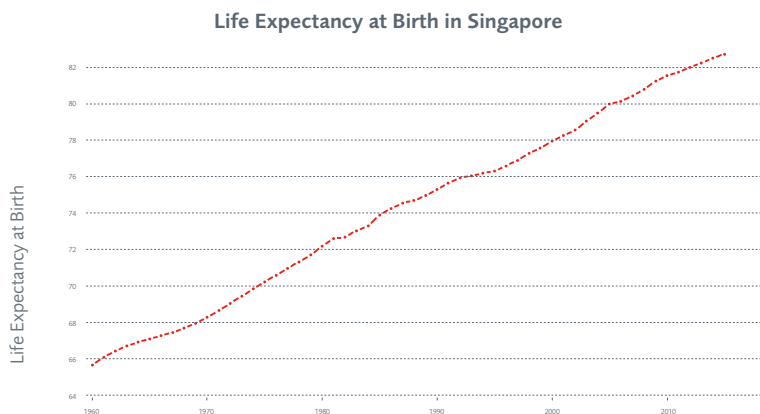


Figure 2 – Singapore's Life Expectancy at Birth 1960-2018

Given the average age of becoming a first-time mother in Singapore is now just over 30, this trend means every generation is living around 10 years longer than their parents and nearly 20 years more than their grandparents. With Figure 2 showing no signs of a trend slowdown, the implication is that Singapore has to think about how to support the children being born today who have the very real potential of a 100-year life.

It isn't just that people are living for longer. They are also, on average, healthier for longer. For instance, between 2000 and 2016, Singapore saw its life expectancy increase from 77.95 to 82.8 years and healthy life expectancy from 71.3 to 76.2 years. It is this increase which creates whole new opportunities at the

individual level such as what to do with this extra time, and when to make best use of it.

This is the longevity perspective - viewing this demographic development as being not mainly about a shift in the age structure of the population, but as an extension in the duration of life. How should family life, education, work, financial preparedness and health practices change in order to support a 100-year life⁴? Should we embark on careers and families at a later age? Should we use the extra time during mid-life to take time out and repurpose and redirect our future? How much of this extra time should we spend working by postponing retirement? How should we use these extra healthy years in retirement – by travelling? Engaging with our community?

⁴"The 100 Year Life – Living and Working in an Age of Longevity", Lynda Gratton and Andrew Scott, Bloomsbury Press, London 2016

The three-stage life of education, career and then retirement cannot be easily stretched out to last 100 years. If we live a 100-year life using the same social norms and behaviours that worked for 70 years, it is unlikely to be a good long life. That may be why only 1 in 3 Singaporeans when asked, said "yes" to the idea of living to a 100⁵. Just as the 20th century saw the invention of new stages of life, such as teenagers and pensioners, the 21st century needs to create a new life course with new stages. We are in need of what Professor Laura Carstensen of Stanford University calls, "A New Map of Life"⁶.

Seizing the opportunities of a longer life requires a great deal of initiative at the individual level, and not just because of the need for individual experimentation. Longer lives are not an automatic right – they require an awareness of how each stage of life links to the next. It requires the individual to be mindful of diet and exercise, to actively invest in skills that will support a longer career, to focus on savings over the long term, and to cultivate relationships and social engagement that all together provide a sense of purpose.

However, whilst there is much that individuals need to do to adjust to longer lives, they will also need support from government, corporates and educational institutions. Without changes in policies and practices,

individuals will not be able to fully adjust to seize the advantages of longer lives.

The challenge then is for societies around the world to find a way of structuring life that supports as many people as possible, living as long as possible, in as healthy and fulfilled ways as possible.

Critically, longevity is about all of life and not just about the end of life. It emphasises that society isn't just experiencing an increase in the number of old people, but that how we are ageing is changing, and that making the most of this second channel is crucial to seize the opportunities that longevity offers.

Because of the speed with which Singapore is experiencing an ageing society, it is crucially important that it invests and focuses on a longevity agenda. If Singapore is seeing one of the sharpest increases in the number of old people, it also needs to generate one of the sharpest improvements in how its population ages. Doing so will not only improve the welfare of an increasing number of citizens, but will also enable the economy to seize the benefits of longer healthier lives. If we live longer, healthier and more productive lives, that should be good news for the individual and the economy.



⁵ <https://readyfor100.economist.com>

⁶ <http://longevity.stanford.edu/envision-new-map-of-life/>

III. Longevity Principles

In September, a small group of global experts met in Bellagio, Italy to discuss and define a global longevity agenda. The group sought to identify the key issues across countries and the extent to which they were different or common to one another. The event was sponsored by the Rockefeller Foundation and Prudential Singapore, and organised by The Longevity Forum, UK⁷ and the Stanford Center on Longevity⁸.

Amidst all the discussion, a number of key principles manifested themselves.

- I. **Celebrating a positive achievement.** The trend increase in global healthy life expectancy is a phenomenal human achievement that deserves to be celebrated.
- II. **Improve the distribution of time over our lives.** The longevity agenda is about improving the distribution of time over our life to provide novel and better opportunities at all ages.
- III. **About all of life not just end of life.** Longevity requires a focus on improving all ages of life and not just the end of life and supporting the 'future old', i.e. the current young.
- IV. **Recognising the malleability of ageing and health.** Changes in individual behaviour, shifts in policy and improvements in our environment all impact how we age. We should look at how to restructure the 'life course' to optimise this malleability.
- V. **Avoid a reliance on chronological age.** Current policies and social norms are heavily based around chronological measures of age. However, because age is malleable, chronological age is increasingly becoming a poor measure of what it means to be old. It is a source of ageism and imposes unnecessary restrictions on how we should live our life.
- VI. **Ensure intergenerational fairness and solidarity.** In thinking through how to change the life course and assessing different government policies, it is crucial to achieve intergenerational fairness and solidarity.
- VII. **Support flexible multi-stage life paths.** Firms and governments need to implement policies that support a multi-stage life and the different ways this can be sequenced.
- VIII. **Promote a Longevity Economy.** Recognise that living for longer in better health raises the possibility of being productive for longer and so corporate and government policies are needed to support longer careers.
- IX. **Provide support and insurance around periods of transition.** A multi-stage life involves more transitions. It is important that governments provide support and insurance to help individuals through these crucial periods in order to avoid disadvantages cumulating over a lifetime.
- X. **Shift towards preventative health and lifelong learning.** With more people living into older age, it is inevitable that there will be a rise in co-morbidities. This entails a switch in the health system, away from intervening when people become ill, and towards a focus on preventative measures. Education needs to become similar to health and something that is a focus throughout life rather than just concentrated in the early years.
- XI. **Exploit and invest in new technologies.** Investing in new technologies to help preventative medicine, caring needs, education and further innovations in life sciences aimed at tackling the diseases of old age, so as to accelerate improvements in age malleability.

⁷<https://thelongevityforum.com>

⁸<http://longevity.stanford.edu>



IV. Singapore and the Longevity Agenda

- Success Stories

Promote a Longevity Economy

As people live for longer, they need to save more and work for longer. Countries around the world are looking to extend the length of working life and Singapore has taken a number of successful steps in this direction.

Singapore labour force participation rate in older age groups, 2007-2017

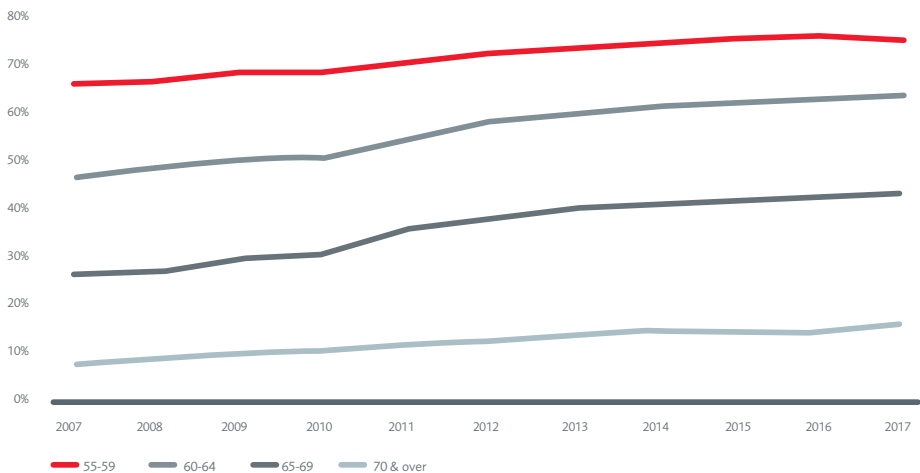


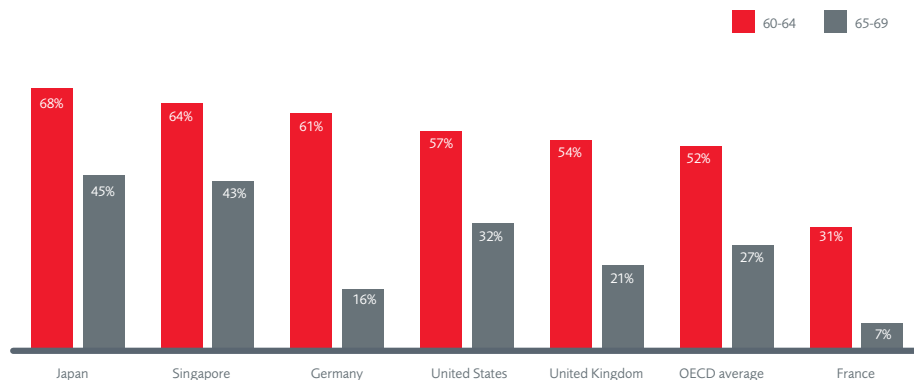
Figure 3 Labour Force Participation for 55+

As shown in Figure 3, Singapore has seen a steady increase in the participation of older workers in the labour force over the last decade. Given that the majority (64%) of Singaporeans aged 55-64 say they still enjoy their work, this seems a good outcome.

A number of policy measures have supported this change, including the announced increase in retirement

age from 62 to 65 by 2030, and the raised ceiling on re-employment age from 67 to 70 over the same period. Employment at older ages is also supported by the WorkPro scheme which makes grants to companies to help them in providing a supportive work environment for older workers, as well as the Special Employment credit, which offers a wage offset for workers over 50.

Singapore and OECD labour force participation rates, selected age groups, 2016



Source: OECD and Singapore Ministry of Manpower

Figure 4 – International Comparison of Labour Force Participation

As shown in Figure 4, Singapore is already one of the best internationally at promoting older workers, but further improvements would yield major benefits. There are currently 309,000 Singaporeans aged 50-54. That means that improving the labour force participation rate by 10% for those aged over 60 will yield an extra 31,000 jobs as this cohort ages. Given employment is 3.7 million, that's almost another 1% of jobs or approximately another 1% of GDP every year.

Shift towards preventative health and lifelong learning

Just raising the age at which people can retire is not likely to produce a successful longevity economy if nothing else changes. Without improvements in health and lifelong learning, raising the retirement age alone will just lead to increases in unemployment or sickness and disability.

That is why Singapore's policies around lifelong learning get so much international attention. Its National Silver Academy and the SkillsFuture Programme are all

means of promoting adult learning in a large scale and in an accessible and affordable manner. With 431,000 Singaporeans making use of SkillsFuture Credit in 2018, lifelong learning is increasingly a reality in Singapore.

Similarly, the health initiatives around the 2016 Action Plan for Successful Ageing are providing a health system increasingly focusing on preventative measures, active ageing and community based integrated approaches (through measures such as the Agency for Integrated Care, Active Ageing programmes, etc).

As lives lengthen, the importance of being in good health increases even more, especially against the backdrop of an ageing population. Key to this are preventative measures. Wearable devices, health monitors and big data and AI can all play an important role in monitoring individuals' health from an early age and enabling a lifelong focus on good health.

Recognise the malleability of ageing

As these measures reveal, Singapore recognises that ageing is malleable and that whatever your age, there are steps that can be taken to support healthy ageing. Continuing to work, learning new skills, keeping active and engaged are all key ways to promote age malleability.

Recognising the malleability of age is at the heart of exploiting the gains from longevity. Estimates⁹ suggest that only around 25% of how we age is genetic, and the rest is down to behaviour and the environment. Creating a supportive environment which enables individuals to take positive steps that support healthy ageing is therefore crucial, especially as the gains in life expectancy tend to exceed the gains in healthy life expectancy.

Ensure Intergenerational Solidarity

Singapore has a strong sense of family ties, which provides a strong platform upon which to base intergenerational connections. Finding further ways to boost these intergenerational connections will be a key part of how society responds to longer lives. Singapore is already showing signs of experimentation.

Active ageing hubs which promote volunteering, the Intergenerational Learning Programme which allows seniors to share classes with younger students, and combined childcare-nursing home projects such as St. John's-St. Margaret's Church (SJSJ) are all examples of needed intergenerational policies. Such connections

tend to boost both young and old alike at an individual level and reduce the risk of society getting dragged into generational conflicts.

Due to the changing structure of families, it is important that Singapore looks to create more intergenerational linkages through the community. As the birth rate declines, families take on a 'beanpole' shape, with fewer young people to provide support and care for more older generations. Finding intergenerational connections outside of families will be an important part of Singapore's longevity agenda.

Exploit and invest in new technologies

With every country around the world ageing, an ever-increasing number of nations are looking to develop their Life Sciences sector and invest in Age Tech. The aim in doing so is both to support their own population, but also to develop what is likely to be a rapidly growing global industry and therefore high value-added export sectors.

Given how rapidly Singapore (and much of Asia) is ageing, any R&D aimed at improving how people age is likely to be extremely important for the region. Investing in life sciences, especially around anti-ageing themes, as well as focusing on AI and digital health, are important, and a number of projects on these subjects underway. Greater focus aimed at providing scale and positive externalities in this sector is needed given the scope of the longevity agenda in Singapore and its comparative advantage in R&D in the region.

⁹<https://ghr.nlm.nih.gov/primer/traits/longevity>



V. Singapore and the Longevity Agenda

– Areas of Further Development

Celebrating and Creating a New Narrative

The fact that Singapore has one of the highest proportions of older people and some of the highest life and healthy life expectancy statistics of any country around the world, is a remarkable achievement. It is important that this achievement is given prominence and presented positively. Singapore needs to create a narrative that makes everyone aware of the fact that they are living longer than past generations, and therefore need to act differently to seize the advantages that longer lives can bring. Creating this awareness will help people plan their careers and finances accordingly, while also encouraging them to think about how they age well.

One important step in this regard would be to give greater focus to cohort rather than period measures of life expectancy. The Singapore government, like most other countries, highlights period measures of life expectancy. However, these do not make any allowance for improvements in future mortality rates. As a result, they are likely to seriously underestimate life expectancy for today's population. Focusing on cohort measures, which make assumptions about future mortality improvements, would be an important step towards raising awareness around longevity.

Providing realistic estimates of life expectancy and a positive narrative are crucial in order to help individuals realise the possibilities that longevity offers and motivate them to invest more in their longer futures.

All of Life and Not End of Life

Singapore has taken many steps to support the growing number of older individuals. It has also taken steps to support productive extended careers. All of these are welcome, but they have generally been aimed at supporting the older generation and stretching out the traditional notion of a 'three stage life' to support longer lives. The focus has been more on an ageing society than a longevity agenda.

However, if the generation being born today has to plan for a 100-year life, they have to think about moving away from a 'three stage life' and towards a 'multi-stage life', where career paths become more flexible. This requires a major rethink around working education and how careers are structured, and an emphasis on the flexibility to work at all ages.

To ensure that there is a focus on all of life, the government should look to establish a Longevity Council that draws on experts from multiple areas (policy, economics, health, education, business, etc) and from all ages to consider the most important areas of policy needed to support a new life course. Both Japan and the UK governments have announced related measures, and a cross department group is needed to provide policy focus.

A Longevity Council has the advantage of looking at all of life – rather than just end of life, and also provides a forum to consider intergenerational fairness. It should look to see if measures are being implemented that benefit all ages, and that an intergenerational audit of policies reveals no cross generational challenges.

Support flexible multi-stage life paths

A 100-year life will require working well beyond 67, and it seems implausible that we can simply extend careers to last for 60 years. Whilst government efforts to support people working for longer are to be applauded, measures to help support flexible working at all ages are required.

Flexible working will be important to help people change with shifting needs. Sometimes work will be a main focus, at other times, caring (either for children, parents or grandparents) will be important, or just working less dramatically to help support education or career shifts. Providing parental leave allowances (for both children and parents, for male and female employees), and right to leave legislation, are all needed to support longer working careers and provide the time to support caring.

Singapore is rightly famous for its CPF, which has helped provide retirement financing for its citizens. The need is to think about long term planning beyond merely financial aspects and have firms support workers over their career to build up their skills, their health and well-being, and their relationships. This involves more flexible working practices – with hiring occurring across all ages, enabling employees to ramp up and ramp down their working hours, in predetermined ways, and refashioning multiple paths around retirement and a focus on lifelong learning.

This will require major changes in corporate culture. Currently, many Singaporeans are experimenting and acting as social pioneers as they work out how to create longer lives. Similarly, the government has implemented several measures to help support changes, especially for those in their older years. However, the corporate sector is tending to lag behind and is appearing slow to change. This has real commercial risks, as firms who fail to realise the need to change their working patterns run the risk of losing valuable staff at all ages. They will also run the risk of losing older workers, who will be particularly valuable in terms of understanding the needs of consumers who are also ageing.

Steps need to be taken to raise the profile of business champions who are changing working conditions to support a longer multi-stage life. Showcasing leading companies and senior figures who are advocates of the agenda is an important way to bring about change. Making sure that the Longevity Council mentioned above has leading business figures whose companies follow best practice will be an important part of this. Businesses should also be encouraged to establish intergenerational teams who review policies around flexible working, and tackle ageism in the workplace. The government has already taken steps to support longer working careers. Companies and individuals too need to adjust their behaviours to support further increases in the working population that is over 50 years of age.

Move Away from Chronological Age

One of the hardest challenges in adjusting to longer lives is to move away from deep-seated ageist prejudices. Not only are people ageing differently from past generations, but because age is malleable, they are ageing at very different rates. This leads to considerable diversity in what people need as they age. All of this requires a shift away from a focus on chronological age, to a focus on the differing needs of individuals.

This is particularly important in areas of education, where much age segregation occurs implicitly or explicitly. It also occurs around retirement-related issues. As the government extends the retirement age, it needs to recognise that not everyone will be able to work for longer or in similar ways; conversely, those aged 67 or 73 may want to continue working. Governments and corporates need to shift to a system that is less definitively based around chronological age to one that supports a greater diversity of outcomes, so that those over 73 who wish to continue working can do so, and those who are unable to work until 65 can also receive some form of financial support.



Concluding Thoughts

Singapore has achieved remarkable economic success over past decades. It has also managed the fantastic achievement of ensuring that most Singaporeans can expect to live much longer than their parents, and mostly in good health.

In adjusting to an ageing society and also to a longevity agenda, Singapore is already at the international frontier, frequently defining best practice. However, given the scale and long-lasting nature of the longevity and ageing agenda, this is an area where policy and behaviour will need to continually evolve in the years ahead.

Given how the population of Singapore is ageing, it needs to place considerable emphasis on improvements in how we age. This requires a focus not just on old age, but on all of life. As Singapore rewires the life course to deal with the potential prospects of a 100-year life, it has to create a positive narrative around longer lives that helps encourage individuals to prepare for and take steps to ensure they age well and support society.



