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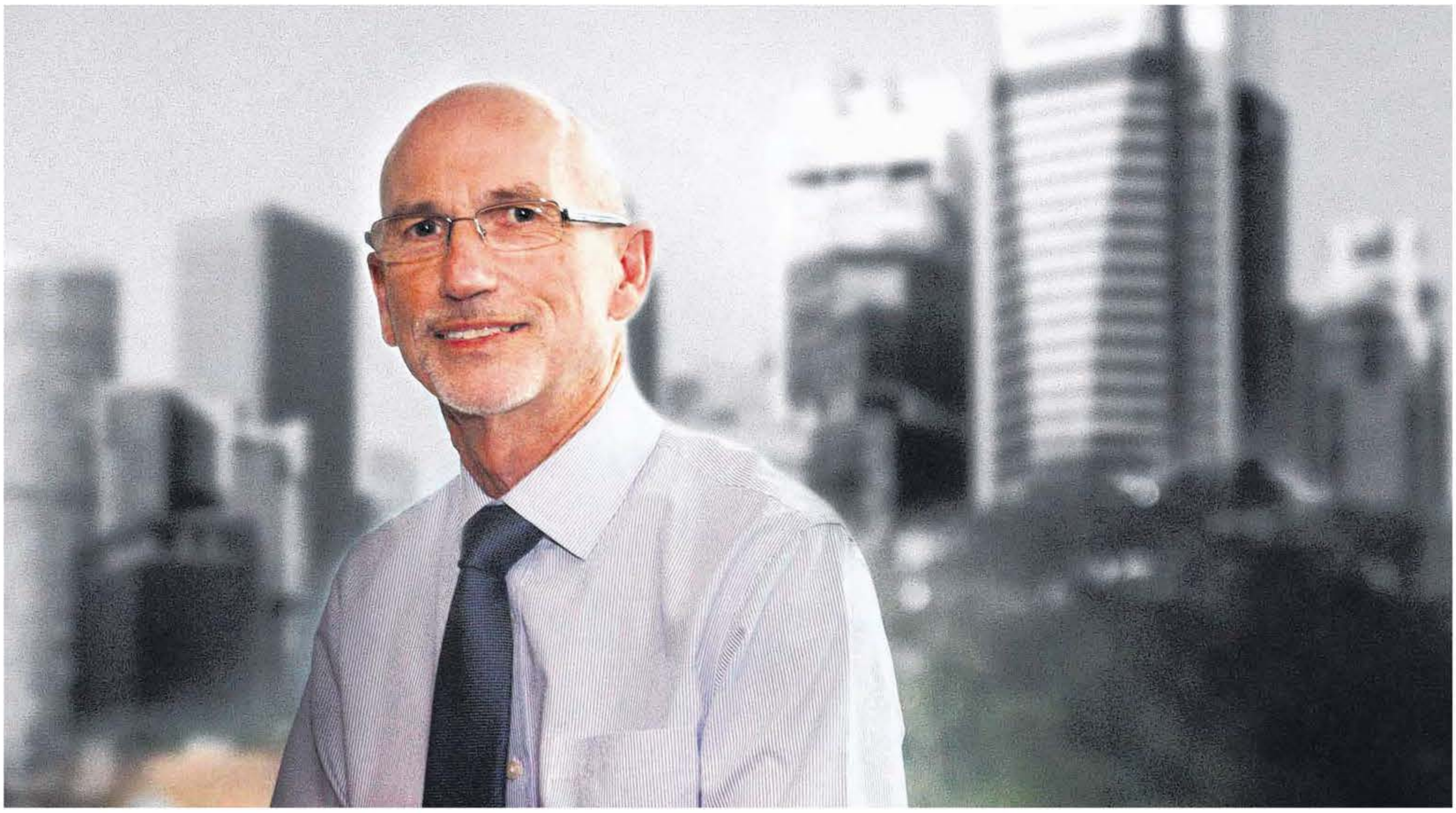

The economics of ageing

Moving away from simplistic models of a greying population is the first step in unlocking the true potential of a dynamic workforce

SINGAPORE is by no means alone in facing the prospect of a "silver tsunami" – the impact of a rapidly ageing population on both economic growth and social well-being. But it certainly has more reason for concern than most economies.

After all, Singapore is ageing more rapidly than any other country in the world, says Professor Bryce Hool, Dean of the School of Economics at the Singapore Management University.

Its resident population has one of the lowest total fertility rates in the world – 1.29 children born to every female in 2012. And life expectancy at birth rose to 82.3 years last year, according to the Singapore Department of Statistics.

"This combination of factors – the growing number of elderly and shrinking replacement of older workers by young people – is greater in Singapore than anywhere else," Prof Hool says. Many other countries in Asia and Europe are concerned about their ageing populations but demographic change elsewhere is "not nearly as dramatic as it is in Singapore".

Between now and 2050 – in less than 40 years or less than two generations from now – the number of elderly relative to the working population is going to quadruple, Prof Hool adds.

A pressing issue

"These are staggering facts. The age dependency ratio is going to rise from 14 per cent today to almost 60 per cent by 2050." By then, he says, the only country with a higher dependency ratio than Singapore will probably be Japan – whose population has been ageing for a longer time now and at a more gradual pace.

"This makes the issue urgent for Singapore, particularly because of the economic implications," Prof Hool says.

This is so both at the level of the macro economy, as well as at the level of households.

At the macro level, this demographic phenomenon is occurring at a time when the baby boomers are hitting retirement. "That bulge in the working age population, which was an important contributor to Singapore's economic growth, is now moving out of the workforce. The low fertility rate means these workers are not being replaced adequately to maintain the domestic labour force," says Prof Hool.

That poses a serious challenge to economic growth and also means that policymakers have to figure out the trade-offs, in terms of replacing exiting workers. "It relates directly to immigration policy – this is clearly a sensitive issue but it is essential that the economic realities be recognised."

But what worries individuals, naturally, are questions such as whether they will continue to fit into society when they hit retirement and whether they have sufficient resources to maintain their current standard of living.

There are also the related issues of access to healthcare facilities and services, healthcare costs, and whether public transport, housing and community centres are elderly-friendly.

All these concern households but are also matters of macro policy planning that will rely heavily on projections into the future. This is where the research being undertaken at the Centre for Silver Security under SMU's Sim Kee Boon Institute for Financial Economics, comes in.

The central focus of its research into the economics of ageing is retirement readiness. "The hypothesis would be that a significant number of Singaporeans are not adequately prepared for retirement, economically. You could put it the other way around. The hypothesis could be that they are. It's a matter of finding out one way or the other," says Prof Hool.

Other kinds of hypotheses being investigated relate to questions of policy: whether change makes things better or does not.

"There is no simple answer to this. You cannot just look at what has happened historically and project it into the future. The entire environment is different. People going into retirement now will be in a very different situation when they're 80 years old, compared to the people who are currently 80."

Take the contradictory findings from recent studies on whether the Central Provident Fund (CPF) provides Singaporeans with an adequate retirement, for example. "The shortcoming of these studies is that they have been quite simplistic," Prof Hool says. They tend to make assumptions about earnings trajectories, asset returns, savings behaviour and the spending needed after retirement. But projecting the future based on history in a mechanistic way is "not a solid foundation" and depends on the assumptions made.

It is also not enough to know what the average person's situation will be. "We're not all the average person. It's important to know at a much more disaggregated level, what fraction of the ageing population is going to be at high risk of running out of resources: either falling below the poverty line, or going bankrupt, or not being able to maintain their previous standard of living – and what their underlying circumstances are."

A more sophisticated model of human economic behaviour is thus needed. "We've got to take into account not just what CPF does, what its parameters are and whether or not that system can be enhanced. We've got to take into account other factors that will have a bearing on adequacy of retirement resources," he says.

> 'People are healthier, they are living longer. This means that they are also going to work longer. It helps both for saving for retirement and shortening the post-retirement period that needs financing.'
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> **– Professor Bryce Hool (above), Dean of the School of Economics at the Singapore Management University, on the change in mindsets needed towards Singapore's ageing population**

Healthcare is a huge one. The longer people live, the more aware they need to be of the likelihood of chronic diseases: dementia, diabetes and other health shocks that may be a large expenditure risk for retirees.

In Singapore, housing is another key factor. With the vast majority of Singaporeans owning their own homes, retirement adequacy has to consider their access to their own housing wealth. Here, cultural and social factors weigh in heavily too. Many people do not wish to give up ownership of their homes to unlock that wealth, or may not wish to downsize.

Greater granularity

"At the moment, Singapore's looking asset-rich and cash-poor. Obviously, people are sitting on substantial retirement savings in the form of housing. Housing as an asset has been a good financial investment but there is exposure to the risk of a downturn in housing prices. For those now in retirement or approaching retirement, this would alter their economic position fundamentally," says Prof Hool.

The advantage of a complex model is the ability to change any of these parameters, simulate the effects and analyse the impact of potential policy or behavioural changes.

SMU's research programme is now centred on building such a behavioural model. "That's the laboratory we're creating so that we can essentially simulate any of these changes. Whether they are counterfactual or not, we can examine the impact of any change in environment on these outcomes."

He stresses that it's not all bad news that will be fed into the model either. "People are healthier, they are living longer. This means that they are also going to work longer. It helps both for saving for retirement and shortening the post-retirement period that needs financing." That too, has implications for public policy. Policies to make it easier for people to work longer may be needed, he adds.

To build such a model, researchers at SMU will have to collect the right data. Apart from gathering data that is comparable to what is used in health and retirement studies conducted in other countries, Internet-based, high-frequency surveys are being explored.

"It's the latter that particularly enables us to get at key behavioural issues," says Prof Hool. Surveys conducted every two to three years do not provide sufficient granularity.

"If you ask people about their spending every month, you can identify changes related to events. They may have lost their job. Their spouse may have died. They may have been told they've got diabetes. And you can see how the spending patterns adjust, how people adapt their economic behaviour," he says.

SMU does not intend to conduct "off-the-shelf" research either, but is developing its own methods and models. "We're actually pushing the frontier both in terms of methodology at the fundamental level – the econometrics – as well as the data."

He expects that it will be another four to five years before fully Singapore-specific results can be reaped. "Progress depends on access to the relevant data. Without data, you can't do social science research. The data fuels the model; the model is the engine that does the work. With no fuel, it's not going to run," he says.

But from the outset, once Singapore data starts to become available, it can be combined with information available from studies done in other countries, to produce preliminary results within two years, he adds.

Prof Hool reiterates that Singapore is by no means the first to study the web of issues related to a rapidly ageing population. And so some knowledge about these issues can be imported into Singapore, but only on the understanding that there are features which make Singapore unique.

"There is a lot to be learnt from what other countries have been doing and it is important to examine their innovations and how they might be usefully adopted or adapted for the Singapore context."

But any change needs to be considered in light of how it would interact with a multitude of other factors – analysis that the behavioural models intend to facilitate. "We are addressing what is clearly a very complex situation. But unless we take these complexities into account, we won't have credible answers to inform decision-making in Singapore," Prof Hool concludes.

This is the third in a monthly series by the Singapore Management University. Next month's feature in August will examine accounting productivity in Singapore.