How Singapore can sharpen its innovative edge

Speaking at an Institute of Policy Studies lecture on Wednesday, Monetary Authority of Singapore managing director Ravi Menon focused on the reasons why the country needs to build up an innovative economy and some ways that can be done. Here are edited excerpts from his lecture.

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In today's lecture, I will focus on what it means to be an innovative economy.

Our labour force participation rates are now amongst the highest globally; further gains will be limited. Assuming no net migration and no increase in foreign workers, the overall labour force will decline gradually from next year onwards. This means it can no longer contribute to GDP growth.

The source of economic growth will then be productivity growth, which in turn depends on the growth in capital-to-labour ratio; growth in human capital; and innovation.

Singapore's physical capital intensity and educational attainment levels are already high; there is still room for some more growth, but it will not be much. That leaves innovation as our main source of future growth.

If we do not innovate, we will stagnate, especially given our demographic drag. One of Singapore's great strengths is its ability to adapt best practices from elsewhere to our local context. But increasingly, we must now dare to be a first mover, with the full knowledge that we will occasionally fail in some of our endeavours.

Innovation must be at the heart of the new economy. Today, I want to highlight three areas where we can be truly innovative:

• Make our domestic services exportable;

• Transform our economy to be digital end-to-end; and

• Take the lead in Asia as the vanguard of a green economy.

Exportable domestic services

To be a truly innovative economy, innovation needs to be pervasive.

Singapore does not have a productivity problem at the overall level. Our problem is that productivity levels and growth are highly uneven across sectors.

Singapore has a dual economy: an internationally competitive, highly productive, well-paying tradable sector; and a domestically focused, non-tradable sector with low productivity. By tradable sector, I mean manufacturing; wholesale trade; transport and storage; hotels; ICT (information and communications technology) services; professional services; and financial services. Together, they account for about 70 per cent of GDP but only about 50 per cent of resident employment.

The non-tradable sector includes construction; real estate; retail trade; food services; utilities; rental, leasing and administrative services; and other services. Most of Singapore's productivity growth over the last decade was due to productivity gains within sectors, and mostly within the tradable sector.

It is unlikely that the highly productive export-oriented sectors will be able to significantly raise their employment share.

We are likely to see continued strong employment growth in some non-tradable domestic services. Some domestic services have high income elasticities of demand, meaning the demand for these services grows faster than growth in incomes - services like education and continuous training, healthcare, social services, entertainment and recreation. These domestic services are not small. Together, they make up 8 per cent of Singapore's GDP, bigger than the banking industry and almost as big as the electronics industry. They account for one out of every seven resident jobs.

We should promote more innovation to increase productivity and wage growth in these domestic services. For a start, we should progressively reduce our reliance on lower-skilled foreign labour in these sectors and allow wages to gradually rise to attract more Singaporeans. This will no doubt imply higher costs, but it could be mitigated in part by a more skilled workforce and higher investment in technology and innovation. Some fiscal support may be necessary to ensure affordability of essential services for lower-income households.

The Oxbridge and Mayo of Asia

We should strive to make education and healthcare major exportable services. A large external market will provide the scale necessary to make sizeable investments in technology and human capital, thereby raising productivity and wages.

Can Singapore be the Oxbridge of Asia for education and the Mayo of Asia for healthcare? Given the trust premium Singapore enjoys and the high quality of our education and healthcare systems, coupled with the rise of a more discerning Asian middle class, the stars might be aligned for such a pivot. The key concern in making such a pivot is of course whether the drive to serve overseas customers and raise wages in these sectors will increase education and healthcare costs for Singaporeans.

We will need some creative way to ensure that Singaporeans continue to have access to affordable education and healthcare services.

The export intensity of our education and healthcare services has not improved over the years. In 2017, about 13 per cent of the output in education services was exported, just a tad higher than the 12 per cent in 2010. Meanwhile, the export intensity of healthcare services fell from 15 per cent to 10 per cent during this period. The question for us is this: Should the export intensity of two of our high-quality services sectors which employ a large number of Singaporeans not be even higher?

We cannot hope to be a high-wage, low-cost economy. One man's cost is another man's wage. To escape the dual economy trap, we need to become a high-productivity, high-wage, high-cost economy, where most people can bear the higher costs because they have higher wages, and can earn higher wages because they have higher productivity.

There will of course be a group whose wages will not be high enough to bear the higher costs. This is a group whose incomes the state should consider supplementing.

There is somewhat of a fear in Singapore - both among businesses and in government circles - that high wages will translate into a loss of competitiveness. But 35 years later, as a high-productivity economy, that calculus while still relevant is somewhat less compelling. Country experiences bear this out. According to the economist Paul De Grauwe, on average, countries with high labour costs are also highly competitive - think of the countries in northern Europe. Likewise, we should aim to create a self-reinforcing virtuous cycle of higher wages and costs accompanied by higher productivity, as well as higher purchasing power and willingness to pay for higher-quality domestic services. It will not be easy and the transition has to be carefully managed. But it is worth trying.

Digital end-to-end

The second key to an innovative economy is to be digital end-to-end. This means two things: digitalising the business processes within a firm end-to-end; and ensuring that digital systems across firms are interoperable.

Digitalising only part of a business value chain does little to increase efficiency. Adopting e-payments while invoicing remains in paper form and reconciliation of accounts requires printing statements is hardly transformative. The front-end operations of sales, purchases and payments must be fully integrated with the back end, financial accounting, tax filing, inventory management, and supply chain monitoring.

The second gap in the digital economy is the lack of interoperability. While a variety of digital solutions has proliferated, their services and solutions are often not interoperable. As a result, we are not able to exploit the full efficiency benefits of digitalisation. It also means that the digital economy is not as inclusive as it should be, with users segmented by walled gardens built by providers of digital services.

A comprehensive digital ecosystem is key to creating a truly digital economy. This means collective governance, common standards, open architecture and interoperable infrastructure, so that network effects can be maximised and the full potential of individual innovations realised. We need collaboration across government, industry, research institutions, and the technology community at large.

Vanguard of the green economy

The third dimension of an innovative economy is for Singapore to be the vanguard of a green economy revolution in Asia.

We sometimes think of the green economy as a sector - a collection of green industries and activities. Rather, a green economy should be viewed as the state of the economy itself. It is like the digital economy. The digital economy is not the 5 per cent of GDP made up by the ICT services sector but a horizontal that cuts across all sectors. The same is with a green economy.

Greening the economy is not necessarily a drag on growth but can potentially be a new engine of growth. Equally important, it can be a net generator of good jobs. According to the World Economic Forum, the global shift to a green economy could create 18 million new jobs by 2030. At the same time, an estimated six million jobs in coal-powered electricity, petroleum extraction and other sectors could disappear by 2030.

Singapore should aim to be the vanguard of a green economy revolution in Asia. As a country, we have always been committed to the idea of sustainable development. We embedded greenery in our urban landscape. We were one of the earliest countries in the world to limit our car population. We can not only green our own economy but also contribute to the greening of Asia's economies, creating new business opportunities and jobs.

Let me touch on two critical success factors for a green economy where Singapore needs to considerably step up: measurement and disclosure and carbon pricing.

Measure and disclose: A prerequisite for greening the economy is to first measure how brown it is.

To be a credible green economy, our companies must identify, measure and disclose their carbon footprints, set emissions reduction targets, and report progress.

The availability of trusted sustainability data remains a big challenge. There is also lack of transparency in the verification and reporting process. These challenges are not unique to Singapore, they are universal. But we have an opportunity to be a first-mover solution provider.

Singapore cannot afford to lag behind international efforts towards a global sustainability reporting standard. The Group of Seven countries have expressed support to move towards mandatory climate-related financial disclosures. The Monetary Authority of Singapore is playing an active role in these international efforts. The key question is whether our companies can step up to the emerging sustainability reporting standards.

Carbon taxes: Carbon pricing is gaining momentum globally.

A meaningful price for carbon is the cornerstone for a successful transition to a green economy. Estimates of what that price should be in 2030 vary considerably but the lower end of the estimates, at US$75 (S$102) per tonne of carbon dioxide equivalent, is above the carbon taxes of most countries. According to the World Bank, less than 5 per cent of the emissions covered by a carbon pricing initiative are priced at a level consistent with achieving the goals of the Paris Agreement, namely, US$40-80 per tonne of CO_2 by 2020 and US$50-90 per tonne of CO_2 by 2030. Among jurisdictions that have introduced a carbon price, Singapore is an outlier at US$3.75.

Carbon taxes in Singapore will have to move to a steeper trajectory. The original intention was to gradually raise the carbon tax from 2023 onwards to $10-15 (about US$7-11) per tonne of CO_2 equivalent by 2030. The Government is now reviewing both the post-2023 trajectory and the level of the carbon tax to ensure that they provide sufficient impetus for emissions reduction and restructuring towards a greener economy. Higher carbon taxes will of course impose a short-term drag on the economy but I think fears of a loss of competitiveness are overstated. Empirical work on the European experience over the period from 2005 to 2020 finds no robust evidence of carbon taxes reducing employment or GDP growth.

The Swedish carbon tax is today by far the highest in the world, at €110 (S$176) or US$123 per tonne of CO_2 emitted. During the period between 1990 and 2017, Sweden's GDP increased by 78 per cent, while domestic greenhouse gas emissions decreased by 26 per cent. Of course, Sweden also had real alternatives to fossil fuels, such as nuclear and hydro-electric power. Singapore does not have these options, so the trade-off will be sharper. But we do not need to go anywhere near a carbon tax of US$100. The important point that these country experiences are conveying is that

Singapore can afford significantly higher carbon taxes than currently envisaged and still remain competitive as an economy.

A carbon tax is in a way like the GST. The fact that the GST is regressive does not make it a bad tax. Singapore has found a novel way of giving GST offsets to lower-income households to mitigate the impact of the GST on them. Similarly, part of the proceeds of carbon taxes could be distributed to lower-income households through carbon dividends. This retains the desired allocative effects of higher carbon taxes while dampening its distributional consequences.

Singapore core with global talent

Ultimately, to enable the strategies I have outlined to become an innovative economy, we need a strong Singaporean core working alongside the best of global talents. This means going the extra mile to build a strong Singaporean core to anchor and grow new businesses. It also means remaining open to expertise and skills from abroad that we are in short supply of.

This two-pronged talent strategy is, however, coming under strain.

Among some segments of the local population, there is growing unhappiness over job competition from foreigners. At the same time, segments of the expatriate community here have been feeling increasingly unwelcome.

We need to resolve this affective divide. Singapore cannot afford to be seen either as lacking in opportunity for our own citizens or unwelcoming of foreigners.

There is growing interest by global MNCs and financial institutions to invest or expand in Singapore. Our skilful handling of the Covid-19 pandemic, sound approach to policymaking, and progressive stance towards innovation and technology, coupled with heightened uncertainty over global economic conditions, have prompted several international firms to consider rebalancing their regional and global footprint towards Singapore.

The Economic Development Board (EDB) is attracting strong investment commitments to set up cutting-edge manufacturing facilities in Singapore. These include building electric vehicles, producing vaccines, and fabricating advanced semiconductor chips.

There is strong interest among MNCs and global financial institutions to expand their regional headquarters activities here.

There is increased interest from international firms to shift their technology and innovation functions to Singapore. At EDB's urging, many of these manufacturing firms are recruiting fresh graduates from our universities, polytechnics and ITEs, but they will need to relocate senior engineers from abroad to support the ramp-up of the new teams and development of local capabilities.

Likewise, various financial institutions have designated Singapore as their global IT hub or Asian technology centre. Many of the apex jobs in these centres require deep domain knowledge in areas such as blockchains, cyber security, machine learning and cloud computing, where there are not enough Singaporeans. But these apex jobs create many other jobs that provide opportunities for the Singaporean workforce to gain experience and skills in these areas.

Opportunities like these do not come often. But a key question that many of these firms ask is whether Singapore will remain open to foreign talent.

Singapore's value proposition as an innovative business hub will be at serious risk if we restrict the flow of talent and expertise. A weakening of Singapore's hub status will have adverse medium- to long-term implications not only for local jobs and wages, but also Singapore's standing in the world.

But the anxieties that some Singaporeans feel about the influx of foreigners are real and need to be addressed.

First, the minimum qualifying salary for special pass holders and employment pass holders should continue to be raised over time. In fact, should we consider raising and pegging the minimum qualifying salary for special pass holders at somewhere closer to the median monthly income (currently about $4,500)?

Second, we should more directly target the issues relating to discriminatory hiring in favour of foreigners in some firms. Today, firms which breach the Fair Consideration Framework face the prospect of a freeze on their employment pass privileges. But rather than curtail the inflow of foreign workers and thereby restrain business growth and job opportunities for locals, we might want to consider directly punishing the individuals in the firm found to have engaged in discriminatory hiring. Measures could potentially include imposing financial penalties, reducing bonuses and freezing promotions.

Being an international hub is the only way a small country like Singapore can aspire to First World standards of living. Singapore attained its current level of prosperity by being an international centre tapping international talents and serving an international market. But this also means that we must accept a higher foreign presence in Singapore than is the case in other countries. We can accept this as long as the foreigners who come here are of high quality, help to expand economic activity, and thereby help to create job opportunities for Singaporeans… and Singaporeans are always treated fairly.

If we can make this compact work, with all the opportunities coming our way, Singapore has a bright future as an innovative, digital and green economy, at the heart of a dynamic South-east Asia, creating good jobs and meaningful careers for us all.