A New Economic Model for Singapore’s Next 50 Years

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Abstract

The next 50 years present Singapore with a dilemma. At the heart of this economic conundrum lies the existing debate over the best way to achieve sustainable and inclusive economic growth. There are two competing viewpoints. On one hand, some argue that Singapore needs to remain exceptional so as to sustain high levels of economic growth. In contrast, others oppose this post-independence economic consensus and instead wish to refocus Singapore towards achieving slower but more equitable growth.

However, exceptionalism and equity are not necessarily mutually exclusive and are in fact equally important in achieving sustainable and inclusive economic growth in the next 50 years. Our framework “Global Adaptivity, Collective Enterprise, Shared Prosperity” aims achieve this goal by transforming challenges into opportunities for economic competitiveness, sustainability and inclusivity. We recognize three critical future challenges facing Singapore, namely the demographic challenge, technological advancements and the possibility of Singapore losing its geographical trade advantage.

Our framework aims to create a "Globally Adaptive" labour force that is competitive, productive and whose skills are relevant to the changes in technology. This could also similarly enable Singapore to circumvent its demographic constraint. The second pillar "Collective Enterprise" aims to move Singapore beyond a mere trading hub by expanding it into a global hub of enterprise and ideas. Finally, moving
towards "Shared Prosperity" and responsibility ensures that different segments of society benefits from economic growth.

By re-examining the assumptions underpinning the post-independence economic consensus, our framework proposes a re-thinking of current policy directives and fundamental economic values, so as to keep Singapore economically relevant, competitive and inclusive in the next 50 years to come.

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The next 50 years present Singapore with a dilemma. At the heart of this economic conundrum lies the existing debate over the best way to achieve sustainable and inclusive growth. On one hand, some argue that Singapore needs to remain exceptional so as to sustain high levels of economic growth (Kausikan, 2015). In contrast, others wish to refocus Singapore towards achieving slower but more equitable growth.

The challenges of the next 50 years will highlight the importance of both exceptionalism and equity in Singapore's pursuit of growth. Singapore's future economic model will have to turn challenges into opportunities, so as to remain economically relevant, competitive and sustainable in the long-term.
Chapter 2: Background and Trends

2.1 Contemporary challenges

Singapore's current economic position remains enviable. Despite the tough economic climate of the last few years, Singapore continues to maintain sound economic growth (Figure 1). Singapore is still one of the world's largest trading ports, and unemployment remains low at 2.0% (MOM, 2014).

![Figure 1: Singapore Annual GDP Growth from 2009-2014](image)

Nevertheless, Singapore faces pressing contemporary challenges. Its dependence on trade and FDI has made it extremely susceptible to exogenous shocks, as evident from the Financial Crisis of 2008¹.

¹ Singapore was one of the first non-Western economies to enter a technical recession
Furthermore, an aging population (Appendix 1) coupled with a falling fertility rate (Appendix 2), threatens Singapore with a shrinking local labour force (Appendix 3), pressures on government expenditure, and diminution of human capital, thereby hindering both short-run and long-run growth. A pro-immigration model (Appendix 4) to meet these demographic challenges has resulted in dependence on low-wage foreign labour, worsening income inequality (Figure 2) and hindering the government's goals of raising labour productivity.

2.2 The next 50 years: Future Challenges and Opportunities

Apart from these demographic challenges in the next 50 years, Singapore also faces two critical future challenges: technological change and threats to Singapore's geographical advantage. Firstly, rapid technological advances in the
future will change the nature of jobs, thereby critically affecting the employability of Singaporean workers. Secondly, external trends such as the opening of trade routes in the Arctic (Outsiders, 2013) and possibility of the Kra Isthmus Canal (Ghosh, 2015) threaten our position as a transhipment hub. Furthermore, the economic rise of developing countries, especially in ASEAN, poses a threat to Singapore's economic exceptionalism in the region.

These future challenges reveal the limitations of Singapore's current economic model. Singapore's current education system is arguably inadequate in preparing future workers with the suitable skills needed to cope with structural changes arising from technological advancements. Additionally, threats to Singapore's trade competitiveness arising from alternative trade routes expose the limitation of Singapore's current growth strategy, which is dependent on Singapore's geographical advantage.

The next 50 years also present opportunities. Technological advancements present Singapore with the opportunity to circumvent its demographic constraint and to create a globally adaptive workfare. Similarly, external challenges present Singapore with the opportunity to capitalise on regional growth so as to create a more resilient economy less affected by external volatilities.
Chapter 3: Our Framework

In order to meet the challenges and to capitalise on opportunities in the next 50 years, Singapore needs to achieve "Global Adaptivity, Collective Enterprise, Shared Prosperity". Our framework aims to create a "Globally Adaptive" labour force that is competitive and whose skills are relevant to the changes in technology. The second pillar "Collective Enterprise" aims to move Singapore beyond a trading hub by expanding it into a global hub of enterprise and ideas. Finally, moving towards "Shared Prosperity" ensures inclusive economic growth.
3.1 Towards a Globally Adaptive Labour Force

3.1.1 Education: Long-term investment for future workers

<table>
<thead>
<tr>
<th>Manual</th>
<th>Routine tasks</th>
<th>Non-Routine tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Operating or controlling machines, sorting, repetitive assembling</td>
<td>Truck driving, personal care</td>
</tr>
<tr>
<td>Cognitive</td>
<td>Calculating, bookkeeping</td>
<td>Management, problem solving, complex communication</td>
</tr>
</tbody>
</table>

Figure 3: Categories of workplace tasks

Technological advances in the next 50 years will likely see the rise of automation, which renders routine skills less necessary. Future workers have to be equipped with the skills to solve unstructured problems and work with new information, or do non-routine manual tasks (Levy, et. al, 2013). In order to create a globally adaptive labour force, Singapore's education system needs to prepare future workers for the changing nature of jobs, which prevents structural unemployment. To achieve this goal, Singapore's education system needs to transition towards teaching non-routine skills, manual and cognitive (Figure 3).

In our framework, the education system prepares students with softer skills that help them cope with an increasingly interdisciplinary future, in which most non-routine work will involve greater complexity. Singapore’s education curriculum should provide "foundational skills in problem solving and communication that computers do
not have" (Levy, et. al, 2013, p. 4). Schools should adopt an integrated approach to learning, which incorporates interdisciplinary and problem-based modes of assessment.

Our framework also aims to better impart non-routine manual skills\(^2\) in our vocational school institutions\(^3\). Apart from emphasising applied learning initiatives through school-industry partnerships such as apprenticeships\(^4\), our framework proposes course-specific tests to select the most suitable candidates for a particular course\(^5\).

Additionally, Singapore should implement a system-wide change from primary to tertiary education to teach students critical thinking skills, which are important for fields using non-cognitive skills\(^6\). Furthermore, our framework aims to create a risk-taking culture\(^7\) in schools, in which schools function as open spaces conducive for personalised learning, creativity and the embracing of risks, so as to encourage innovation and the cognitive ability to handle unstructured problems.

\(^2\) These manual skills set cannot be replicated by automation rules such as health-care aides or food-and-beverage services.

\(^3\) These vocational school institutions include Institute of Technical Education (ITE), Polytechnics, and Singapore Institute of Technology (SIT).

\(^4\) School-industry partnerships offer students apprenticeship experiences that not only keep the students up-to-date with industries but also to apply theoretical concepts to meet the practical needs of firms. This equips students with a broad foundation of vocational skills upon which well-trained skilled workers can fulfil a variety of roles and respond to the changing needs of the business world, thereby enhancing the workers' mobility across different industries (Euler, 2013). In addition, in order to enhance the alignment of an individual's skills and his career choice, industries should be committed to the long-term development of these students by following up on such apprenticeships and internships.

\(^5\) The problem of skills-course mismatch lies in students choosing courses based on their performance in high-stakes exams rather than their aptitude for the courses they select.

\(^6\) The promotion of critical and creative thinking over mere content mastery is necessary to prepare workers for non-routine cognitive tasks such as management, public relations, healthcare and law.

\(^7\) Risk-taking culture encourages students to be willing to accept and learn from failure, by creating an environment conducive to risk-taking.
3.1.2 Circumventing the demographic constraint through a Productive workforce

Singapore's future economic framework should arguably focus on managing and circumventing its demographic limitations. Improving labour productivity is required to effectively manage this resource constraint. Our framework aims to tailor productivity policies based on the needs of different industries by harnessing technology and industry-specific restructuring measures⁸.

Our framework recognises the important role foreign labour plays in sectors that locals are unwilling to work in⁹. However, these sectors suffer from low productivity growth (Figure 4), and since we cannot reduce employment of foreign labour, the next best alternative to transform it as an engine of growth is to incentivise raising of productivity. For these sectors, our framework focuses on creating incentives for foreign workers to be more productive across the board¹⁰. Such incentives include turning foreign worker levy payments to contributions to a deferred savings account similar to the CPF (Ho, 2014), and improving the non-wage conditions of foreign workers (Low, 2015). Improving the welfare of foreign workers¹¹ can arguably improve their productivity (ibid.).

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⁸ Productivity growth requires the labour force to be receptive to such changes. While focusing on how processes for firms can be influenced to enhance productivity processes is important, mindset can hinder actual productivity growth, so long as our workforce remains unreceptive to government and employer efforts. Nevertheless, such mindset can be circumvented by incentivising profit-maximising employers and income-maximising workers.

⁹ These sectors, which locals are unwilling to work in, include construction and food and beverage services sectors.

¹⁰ This is in contrast to the current approach of raising the foreign worker levy, which has met with hostile reaction from many employers.

¹¹ Benefits attract a broader skill pool of foreign labour, and while the costs may be higher at the onset, these sectors will be more adaptive in the longer term as firms and workers are more likely to take the skills needed in these sectors more seriously as a result of the costs and benefits involved.
However, in sectors where foreign labour directly competes with local workers, reducing dependence on cheap, low-skilled foreign workers incentivises local SMEs to pursue productivity growth through the adoption of technological processes. Complementing this directive, immigration policy should be tailored...
towards encouraging agglomeration effects\textsuperscript{12} that arise from attracting better rather than more foreign workers\textsuperscript{13}. Furthermore, strong innovation output and efficiency can also drive productivity growth because the creation of new processes can improve existing processes\textsuperscript{14}.

Additionally, improving public-private collaboration can maximise efforts to boost productivity. Our framework would link financial grants given to SMEs with the technological and technical know-how of universities and polytechnics\textsuperscript{15}, through a

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\textsuperscript{12} Agglomeration effects refer to increases in output arising from a greater concentration of highly skilled workers. Since output increases by more than the increase in the number of workers, agglomeration generates higher productivity (Low, 2014).

\textsuperscript{13} One approach is to set a work visa quota for different labour markets, which will be adjusted based on information provided by private firms, as well as government projections.

\textsuperscript{14} Currently, Singapore has been unable to convert innovation inputs into outputs, as evident from Singapore's 121st rank in global efficiency despite ranking 1st in input score (The Global Innovation Index, 2013).

\textsuperscript{15} Given that Universities, Polytechnics and Research and Development (R&D) centres are in the cutting edge of research, they provide know-how on improving productivity processes of SMEs.
Chapter 3: Our Framework: "Global Adaptivity, Collective Enterprise, Shared Prosperity"

Tripartite Framework\textsuperscript{16} (Figure 5). This tailors productivity improvements to suit the needs for these enterprises. Additionally, productivity-enhancing technologies should also be linked to making productive processes friendly for older workers. This will maximise the productive capacity of Singapore's aging population.

The government can also align its productivity-maximising interests with private profit-maximising interests, by providing government aid and contracts to firms that utilise more efficient processes\textsuperscript{17}.

\textsuperscript{16} A government coordinating agency will encourage SMEs and universities to participate in industry-specific forums on productivity growth, and also sets up platforms for cooperation such as open-access laboratories

\textsuperscript{17} By acting as a signal for a firm's labour productivity, this incentivises both government-linked corporations and SMEs contracted by the government, such as those in construction and retail sectors, to adopt productive processes and to fully utilise the existing Productivity and Innovation Credit (PIC).
3.2 Beyond geography, Collective Enterprise

The idea of "Collective Enterprise" seeks to detach us from our reliance on geography\(^\text{18}\), and instead focus on driving sustainable growth through the building of an exceptional business environment by capitalising on ideas and enterprise. This represents a paradigm shift from a geographical trading hub to an enterprise hub\(^\text{19}\). This shift from trading in physical goods to trading in ideas and human capital will allow Singapore to remain competitive and exceptional, thereby ensuring long-term economic growth.

3.2.1 Growth Clusters

The creation of the entrepreneurial hub can be facilitated by growth clusters. Our framework aims to create a cluster or concentration of talent, infrastructure, capital, and networks, which is required for entrepreneurial activities to flourish (Kirchherr, et. al, 2014). Singapore arguably has the physical infrastructure to create such ecosystems\(^\text{20}\).

Our framework aims to expand existing growth clusters and create new idea clusters, harnessing on a global hinterland of ideas\(^\text{21}\). Through the development and exchange of ideas and solutions, such idea clusters can value-add to foreign and

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\(^{18}\) Singapore needs a new engine of growth that is independent of its geographical trading advantage.

\(^{19}\) Such a paradigm shift is akin to the shift from depending on Malaysia as Singapore's hinterland to the world as our hinterland.

\(^{20}\) In certain areas Singapore already has the physical infrastructure to create such ecosystems, such as in health sciences, logistics and aerospace.

\(^{21}\) In areas like IT and consultancy
local enterprises through the development of revolutionary ideas and processes in different fields. In order for these idea clusters to mature and provide a global outlook, the EDB could facilitate by actively attracting foreign enterprises and expertise in these areas to do business in Singapore, as well as promoting the growth of local consultancies and knowledge-based industries.

3.2.2 Leveraging on emerging markets

To maximise the potential of our growth clusters, Singapore needs to adopt a different approach towards emerging markets; from competition to the capitalisation of the economic potential of these emerging markets. Our framework focuses on emerging markets\textsuperscript{22}, particularly in ASEAN\textsuperscript{23}.

In order to capitalise on the dynamic human potential and capital in ASEAN, our entrepreneurial hub can take on a regional dimension\textsuperscript{24}. To achieve this, the Singaporean government should act as a "venture capitalist", by developing a regional start-up fund for local and foreign entrepreneurs to build start-up enterprises together, enabling Singapore to benefit from the potential returns from the continued growth of the region. Such cooperation and convergence of human capital allows for the sharing of different experiences and perspectives so as to create goods and

\textsuperscript{22} In contrast to the slow economic growth and performance of advanced countries, the emerging markets such as those in ASEAN, China and India have immense economic potential in the next 50 years.

\textsuperscript{23} As an emerging economic region in the next 50 years (Geoff, 2014), ASEAN stands as an alternative centre of attracting FDI. Furthermore, given the increasing connectivity between ASEAN and Singapore in the future (The ASEAN Economic Community, a direction towards regional economic integration, is expected to begin starting from the end of 2015.), Singapore's positioning as an entrepreneurial hub can allow Singapore to leverage on regional potential to drive growth.

\textsuperscript{24} An entrepreneurial hub is where foreign ASEAN innovators, entrepreneurs and talents network and work with Singaporeans to start-up businesses and new, creative enterprises
services that meet different and increasing consumer needs in different markets within the region (Figure 6).

![Share of ASEAN households in each income bracket and Annual household-income brackets](chart.png)

Figure 6: The number of consuming households in ASEAN is expected to almost double by 2025

Furthermore, our framework aims to establish growth that emanates indigenously through the growth of our local SMEs. A focus on creating an entrepreneurial hub can provide a crucial step towards SMEs developing into competitive MNCs in the long term. Growth clusters can be used to achieve indigenous growth because local enterprises can learn, adopt and improve on the practices, ideas and expertise of developed enterprises in these clusters, and firms
in the periphery of these clusters also benefit from increased demand from these growing sectors.\footnote{Additionally, the combination of such spill over effects and the aforementioned state productivity-improving measures can synergise to strengthen local SMEs by improving their competitiveness.}
3.3 Shared Prosperity through Shared Responsibility

In the next 50 years, rising healthcare costs will be a pressing economic concern for the economically insecure, especially for the lower and middle class families. Our framework proposes a risk-pooling system that allows for equal access but progressive premiums based on one's income. Risk-pooling is critical because it not only mitigates the issue of exorbitant healthcare costs, but it also is an important step towards shared responsibility. Progressive premiums ensures both equitable and sustainable provision of healthcare for all.

Through incentives, the aging population challenge can be transformed into an opportunity for inclusive growth enjoyed by the elderly. Our framework aims to incentivise employers to hire older workers aged 55-70 (Low, 2014) by reducing employer's contributions for CPF for older workers and this reduction in contributions will be compensated by the government. Furthermore, in order to incentivise older workers to stay employed or to actively seek employment, the government should arguably take a more activist role in pushing for structural changes in the workplace. Such structural changes can include the aforementioned technological changes in the workplace, continuous training to keep workers relevant and also more flexible working arrangements that suit the needs of the elderly.

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26 The lower and middle class spend a disproportionate amount of their incomes on healthcare.
27 A system of progressive premiums requires those who are earning higher incomes to pay more towards healthcare insurance.
28 Examples of how this can be implemented include the SkillsFuture plan recently introduced in the 2015 Budget.
Chapter 4: Synergies

The policies of our model serve to complement one another to better tackle the future challenges facing Singapore in the next 50 years.

![Diagram showing Global Adaptivity, Collective Enterprise, and Shared Prosperity]

Changes to the education system equip Singaporeans with the skills needed to become more entrepreneurial, which synergies our move towards indigenous growth. Our emphasis on creative thought and risk-taking arguably provides students with the skills and attitudes needed for entrepreneurship.

Changes in education enables employability of future workers in an increasingly technological society, such changes also ensure Shared Prosperity because it allows for different routes to success. Our emphasis on non-routine manual skills allows lower-income workers to stay gainfully employed.
Additionally, the focus of “Collective Enterprise” on supporting SMEs and indigenous growth can facilitate economic inclusivity, because a larger portion of GDP growth goes to locals.
Chapter 5: Conclusion

It is myopic to argue that exceptionalism and equity are mutually-exclusive. In fact, they are equally important, and can complement each other in ensuring sustainable, inclusive economic growth for Singapore. Fundamentally, Singapore needs to move towards a culture of shared responsibility and prosperity because sustainable, inclusive growth is ultimately a collective endeavour. Furthermore, a mindset and cultural change is needed for sustainable, inclusive growth in the long-term. Rethinking fundamental values, particularly meritocracy, from relative measures towards absolute standards will not only enable Singaporeans to capitalise on their own unique potentials to contribute to Singapore’s economic growth but also serves a Singapore that looks towards economic inclusivity. These changes, along with our framework, refute the false dichotomy between exceptionalism and equity, and offer the possibility of achieving both.

Word Count: 1,992
[Excludes charts, tables, footnotes, references and appendices]
References
Reference: Bibliography and Work Cited


References


The Roar of Ice Cracking; Outsiders in the Arctic. (2013, February 2). The Economist.

References

Reference: Pictures and Tables


Figure 3: Puukka, J. (2012). Post-secondary vocational education and training pathways and partnerships. Paris: OECD.


Appendices
## Declining Old Age Support Ratio
(Source: Department of Statistics Singapore)

<table>
<thead>
<tr>
<th>Year</th>
<th>Elderly Citizen</th>
<th>Citizens in working-age band of 20-64 years of age</th>
<th>Support Ratio</th>
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<td>13.5</td>
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<tr>
<td>2000</td>
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Appendix B

Total Live-Births and Total Fertility Rate (Source: 2014 Population Trends, Department of Statistics Singapore)

Note: From 1980 onwards, data on TFR pertain to resident population (i.e. Singapore citizens and permanent residents).
Appendix C

Appendix D

Singapore's Non-Resident Population from 2007-2014 (data taken as of June each year) (Source: Department of Statistics, 2015)