

The Prognosis of Singapore's Economy

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Abstract

The next fifty years demands us to navigate through greater challenges ahead in the increasingly vertiginous tides of the global economy. Singapore is in our world's strategic region, vaunting the most promise for growth. Therein lies our key challenges: strengthening Singapore's productivity and innovation, and therefore long-run productive capacities.

In efforts to push for productivity growth, underperformance of domestically-oriented sectors is one of the major limitations faced by Singapore. Small and Medium-sized Enterprises (SMEs) in these sectors are highlighted as the focus of future economic restructuring to achieve higher productivity. After in-depth analysis of the current situations of local SMEs from both internal and external perspectives, we propose targeted solutions to tackle various limitations and challenges.

Our Framework of "Capitalising on Shared Synergies" aims at optimal capitalisation on local talent, and thus a reduction of dependence on their foreign counterparts for SMEs. Furthermore, "Born Global" calls for a fundamental mindset shift of local SMEs in becoming more open towards expanding abroad, particularly in the region, tapping on its hinterland. Singapore is in the centre of the fastest growing area in the world – Asia. Its regional neighbours have a bright future; either posing an opportunity for us, pulling us along if we are engaged or become an obstacle if we end up being left behind.

Singapore's economic growth hinges on pragmatism and emphasis on product innovation suppress other forms of innovation. Our framework of "To Fail and Let

Fail” is a three-pronged approach that aims to challenge the deep-rooted culture of risk-aversion, a tremendous obstacle towards flourishing of innovation in every possible aspect. Risk Pooling Safety Net, “failure-friendly” support schemes and entrepreneurship development are the three pillars of the framework. While targeting at different stages of the innovation process, they collectively empower entrepreneurs to embark on more innovative business adventures.

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Chapter 1: Introduction

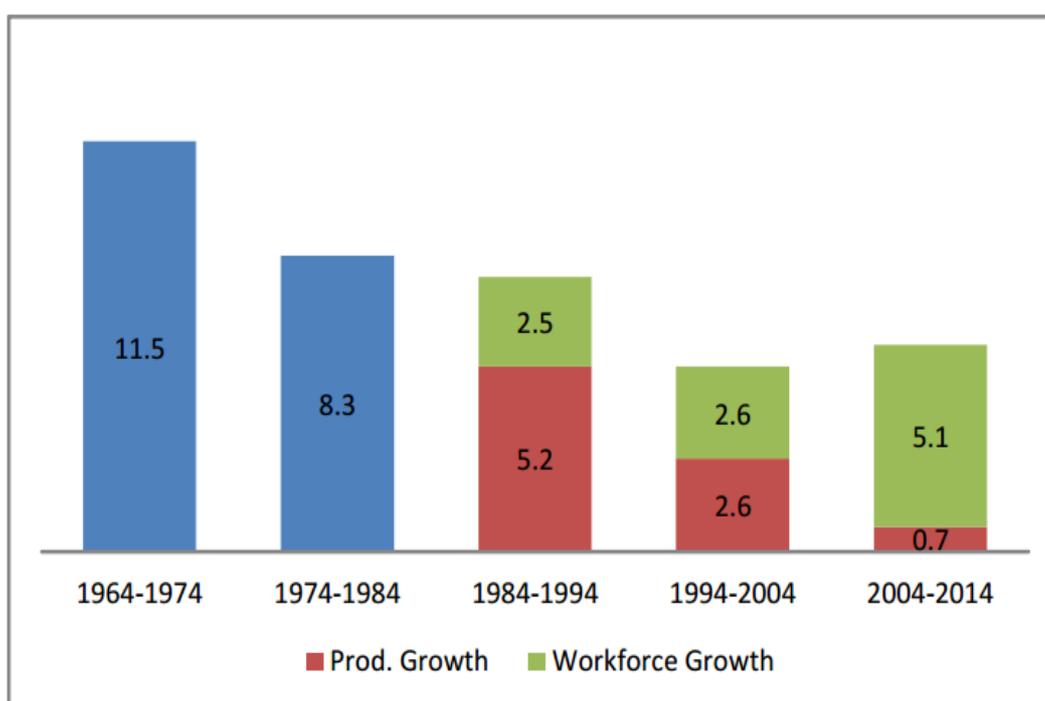
While Singapore has flourished into one of the world's finest nations, the next fifty years would demand us to navigate through greater challenges ahead in the increasingly vertiginous tides of the global economy. To set the 21st century context, Singapore faces a VUCA world¹ -- volatile, uncertain, complex and ambiguous. (AsiaOne, 2015) Therein lies our key challenges: keeping our economic growth model relevant to the world, while strengthening Singapore's productivity, innovation and long-run productive capacities.

¹ We face what has been referred to as a VUCA world - a future that is Volatile, Uncertain, Complex and Ambiguous.

Chapter 2: Background

2.1 Productivity: The Challenges for a Two-tier Economy

Productivity has been on the verge of stagnation over the past three years². (DBS, 2015) Meanwhile, productivity growth has been decreasing significantly in its share of the overall GDP growth in the last decade, according to Figure 1³.



Source: Prime Minister's Office

Figure 1: GDP Growth Per Annum, 1964-2014(%)

² Excluding 2010, which was a “rebound year” from the global financial crisis, overall productivity growth has averaged a mere 0.3% per annum. This is just one-fifth the average pace of 1.5% registered between 2000 and 2009,

³ This declining trend was again highlighted in PM Lee’s speech at the 2015 Ho Rih Hwa Leadership in Asia Public Lecture Series, where he pointed out that from 2004 to 2014, productivity growth only accounted for 0.7% of the 5.8% annual GDP growth; the rest was achieved through workforce growth.

One major reason for stagnating productivity is Singapore's two-tier economy. The underperforming domestically-oriented sectors use a larger share of labour than their contribution to GDP, resulting in a fall in overall labour productivity (as shown in Figure 2).

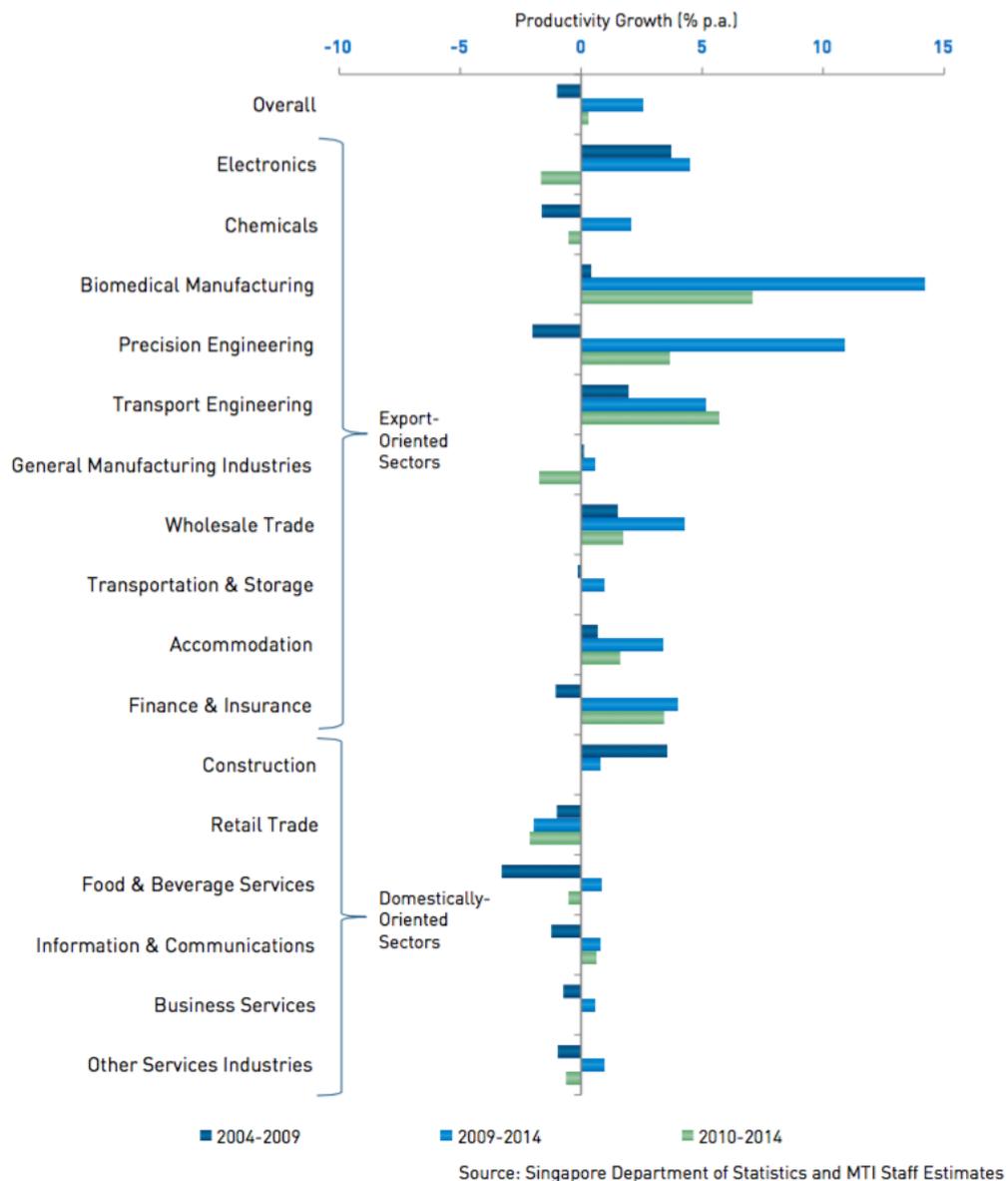


Figure 2: Productivity Growth of various sectors

In fact, productivity growth per annum for domestically-oriented sectors from 2013-2015 is -0.6%⁴. (Sim, 2016)

One limitation of our domestically-oriented sector is the underperformance of SMEs compared to other sectors. Singapore's economic growth has been mainly driven by multinational companies (MNCs) and government-linked companies (GLCs) at the core, ancillary services and support required provided by SMEs⁵. (ESCAP UN, 2003)

Given SMEs in Singapore hire nearly 70% of the workforce and make up 99% of its enterprises⁶ (CNA, 2013), yet has low productivity, it is vital to develop them in the current economic restructuring to achieve higher productivity.

Many traditional SMEs are skills-based and depend on a traditional track business model and hierarchical framework to succeed⁷ (Lee, 2015)(as shown in Figure 3).

⁴ The figures are gloomier for 2013 to 2015: 3.2 per cent versus minus 0.6 per cent.

⁵ SMEs provide vital ancillary services to large enterprises as subcontractors for maintenance, transport or as components manufacturers

⁶ In his reply to NMP Teo Siong Seng, Minister of State for Trade and Industry Teo Ser Luck said SMEs are an important part of Singapore's economy as they make up 99 percent of our companies, employ 70 percent of our workforce and contribute 50 percent of our GDP

⁷ SMEs choosing to carry on traditional business models by relying on foreign labour will face more and more challenges ahead as their competitiveness will continue to be eroded in the global marketplace.

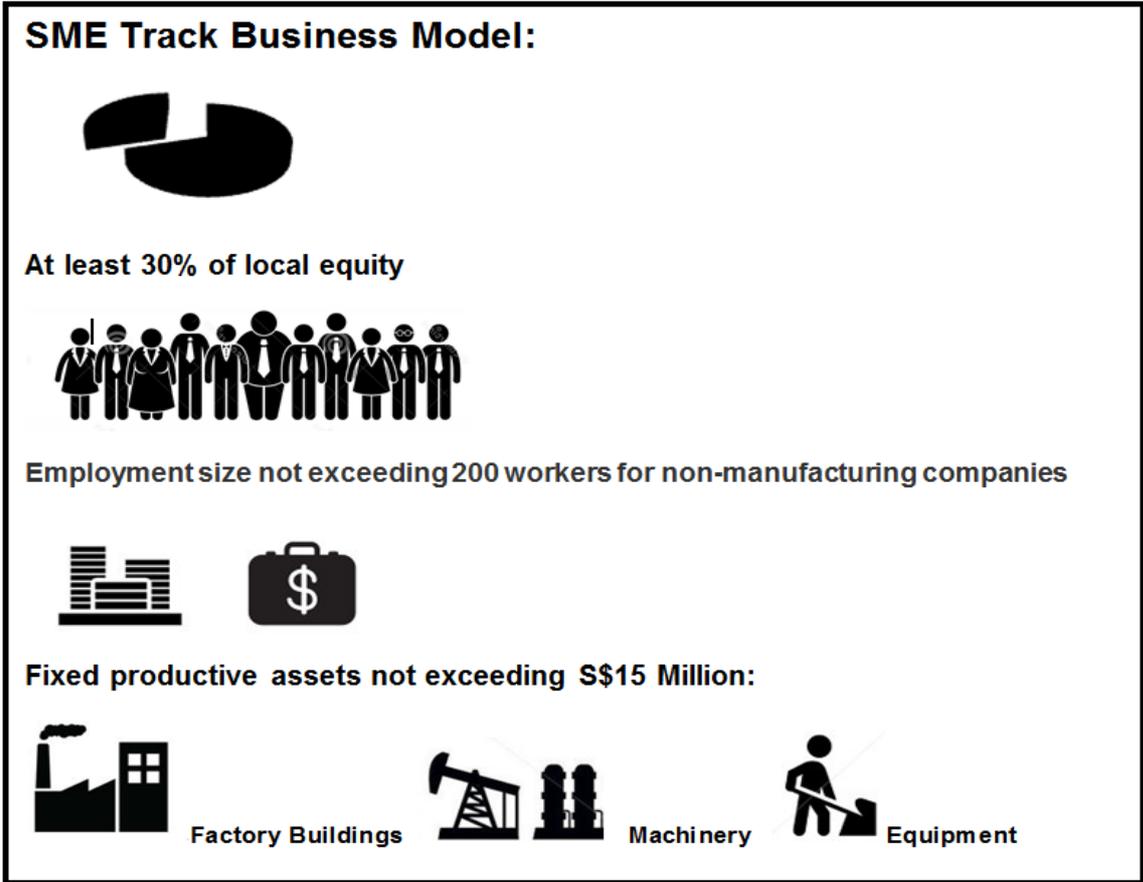


Figure 3: Information on Local SMEs

However, many are struggling to overcome the multitude of challenges arising both internally and externally.

Internally, new concerns are emerging, like their ability to perpetuate the suitable labour and skills to sustain development and expansion. SMEs choosing to rely on foreign workers to sustain their business model will face greater challenges ahead as their competitiveness will continue to be eroded in the global marketplace⁸.

⁸ Since foreign labour is a short-term solution to provide low-skilled labour for construction and manufacturing or even Food & Beverage SMEs, it has to be minimised as it is unsustainable in the long-run.

Meanwhile, SMEs currently struggle with obtaining optimal skilled labour⁹ (Liang, 2012) that matches their niche. Talent shortage issues (45%) is among the top two business concerns of SMEs¹⁰. (Deloitte, 2014) This is partly due to a missing structural link between the entrepreneurs and the right local talent, and the latter's strong preference for MNCs¹¹. (Honglin, 2014)

Externally, typical local SMEs have hampered abilities to transform into MNCs and are unwilling to step out of their comfort zones and invest in the region¹² (as shown in Figure 4). (Min, 2015)

⁹ SMEs traditionally find it hard to attract and retain talent.

¹⁰ According to Deloitte's Post-Budget Sentiment Survey, 'The top two business concerns of small and medium enterprises (SMEs) were rising business cost (55%) and talent shortage issues (45%). In comparison to the SMEs, only 8% of the MNCs indicated that talent shortage is an issue for them.'

¹¹ The employment packages offered by MNCs remain more attractive. Some of the pay offered by SMEs, spoilt by the influx of foreign workers, renders the SMEs unattractive to local talents, thus, resulting in a talent shortage.

¹² That is the view of the authors behind a new Boston Consulting Group (BCG) report, who warned that a mind-set shift is necessary for small and medium-sized enterprises (SMEs) to escape their comfort zone and tap the region's full potential.

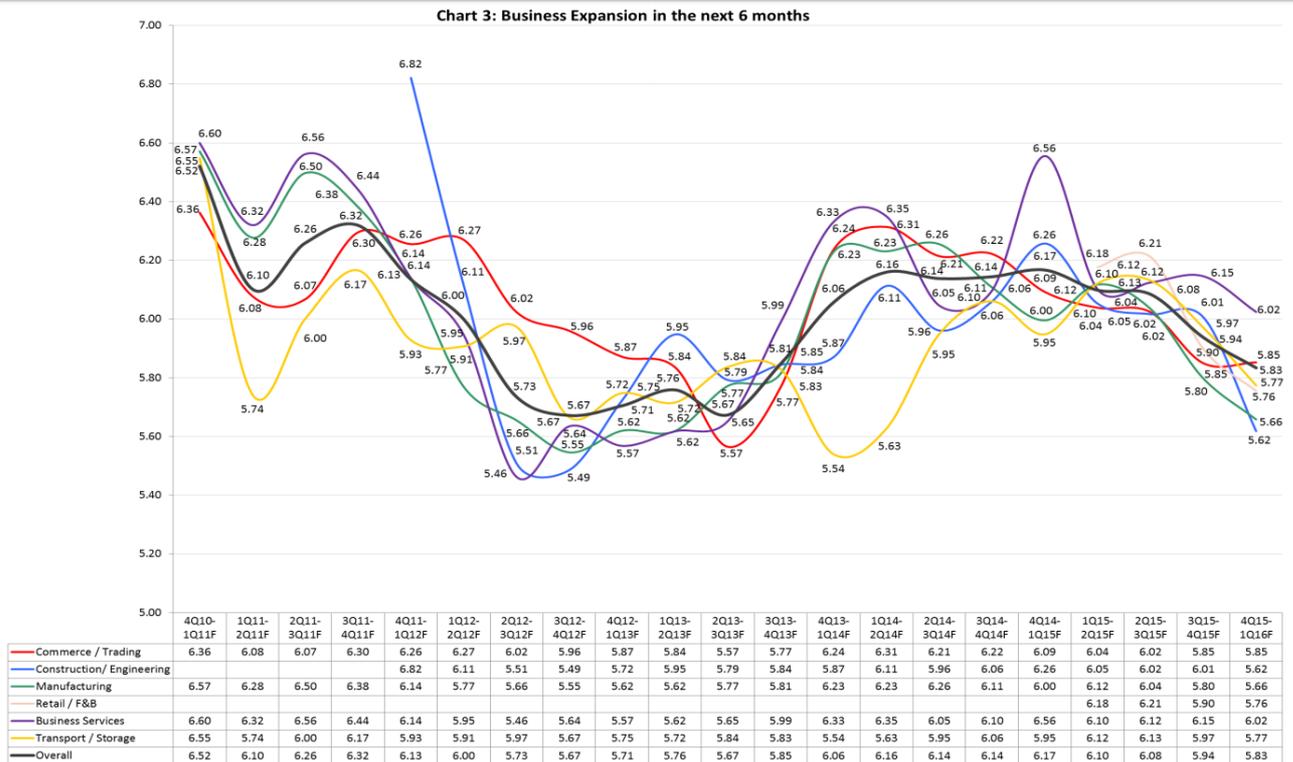


Figure 4: Falling business expansion outlook for SMEs, 2011-2016 trend

This poses as a limitation as many SMEs have useful technologies and capabilities that could otherwise enable them to continue operating profitably in a country abroad where such costs are lower.

This has to do with their entrenched mindset not only as small enterprises facing competition from native companies in the region, but miss out on vast opportunities in emerging Asia also because they are less aspirational about expansion than regional counterparts due to reluctance towards expansion in emerging cities. They prefer to be posted to leading cities like London instead of emerging ones like Ho Chi Minh, but it is these up-and-coming cities awaiting potential companies who venture there early.

Indeed, a general reluctance in Singaporeans to take on overseas regional postings is inherent. Family commitments were one of the key reasons for unwillingness to move overseas for job postings. To elaborate, difficulty of settling in a vastly different environment — for example, finding spousal employment and schooling availability for children — contributes to the reluctance.

Our framework suggests two transformations for tackling both internal and external challenges faced by SMEs, thus achieving productivity growth.

2.2 Innovation: The Backbone for Future Growth

Innovativeness generates greater value from the same inputs - in resource-scarce conditions, such products and processes are important for securing growth sustainably. So, innovation. The question now: What? And How?

In Singapore's economic model, innovation is encouraged mainly by fostering R&D and commercialisation of products (as seen from Figure 5). Recent developments like PIC, SPRING Singapore and Workfare Income Supplement also provide SMEs with a myriad of financial incentives for innovation.

Singapore: Charting the Path towards Innovation	
<p>1999:</p>  <p>Technopreneurship Innovation Fund</p>	<p>Objectives:</p> <p>Initiatives launched through co-investment with venture capitalists</p>
<p>2000:</p>  <p>National Science and Technology Board (N STB) & Techno Venture Management</p>	<p>High-tech start-ups from life-science and IT</p>
<p>2006:</p>  <p>National Research Foundation</p>	<p>Strengthen our R&D capabilities, nurture technology-based enterprises</p>
<p>2008:</p>  <p>The National Framework of Enterprise and Development</p>	<p>Commercialise cutting edge-technologies, encourage academic entrepreneurship</p>
<p>2010:</p>  <p>Angel Investors</p>	<p>Start-up ecosystem of biomedical technology and engineering</p>
<p>2011:</p>  <p>Research, Innovation and Enterprise 2015 Plan</p>	<p>Strengthen commercialisation support for societal benefit and enterprise</p>
<p>2013:</p>  <p>Innovation Cluster Programme</p>	<p>Technological organisations and economic agencies work with industries</p>

Source: National Research Foundation, Prime Minister Office

<http://www.nrf.gov.sg/innovation-enterprise/innovation-enterprise-milestones#sthash.E8Gun2B1.dpuf>

Figure 5. Summary of Innovation Enterprise Milestones in Singapore (Milestones, 2016)

However, there are two major limitations to this current model.

Firstly, over-emphasis on R&D significantly narrows the range of innovation.

Innovation can be defined as the application of new ideas to products, processes, or other aspects of firm activities leading to increased “value”¹³. (Princeton) The current model focuses on product innovation and not the rest.

Secondly, Singapore’s economic growth hinges on pragmatism and its default preference for businesses or practices already proven successful¹⁴. The aforementioned measures have limited abilities in assisting failed business owners to regain strength to re-enter the industry.

Given the inherently high failure rate of start-ups in Singapore (MTI, 2015)¹⁵, the word “failure” needs to be faced squarely and turned into success. Failure is an indispensable counterpart of the innovation process¹⁶, championed by Silicon Valley and Google¹⁷. (IDA, 2013)

Our framework suggests a three-pronged approach for a fundamental mind-set shift towards embracing failure in the economy and thus enabling innovation to flourish in all possible aspects.

¹³ *Innovation* can be defined as the application of new ideas to the products, processes, or other aspects of the activities of a firm that lead to increased “value.” This “value” is defined in a broad way to include higher value added for the firm and also benefits to consumers or other firms.

¹⁴ SPRING Singapore, for instance, prefers to support big, rich established companies with a track record, while the start-up entrepreneur is disadvantaged in seeking assistance.

¹⁵ 7 to 8 new businesses cease operation in the same year they are formed

¹⁶ Failure encompasses learning, iteration, adaptation, and the building of new conceptual and physical models through a continual learning process.

¹⁷ Ideas discussed at the Google Big Tent Event included encouraging diversity and getting people to tinker with technology.

Chapter 3: Our Framework

3.1 Rethinking Productivity Growth: The Significance of A Culture of Productivity

Productivity growth cannot be artificially grafted; it needs to be carefully nurtured.

Our objective lies in creating a new wave of SMEs which rely on refinement of skilled local talent to reduce dependency on foreign workers, while promoting regional expansion to boost the domestic productivity of SMEs.

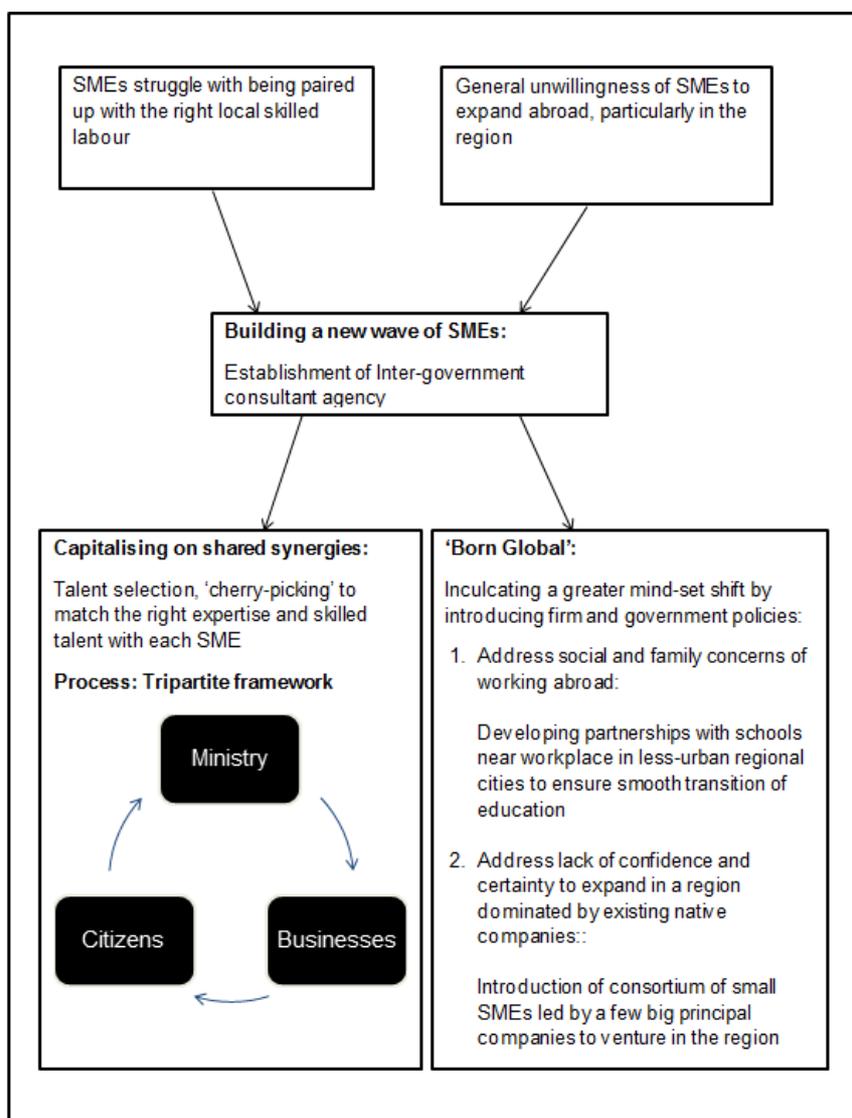


Figure 6: Summary of our approach to reform productivity in Singapore

3.1.1 Capitalising on Shared Synergies

Firstly, the potential of local talent can be harnessed to better usage through establishment of an inter-agency government consultant. This agency would focus on information sharing and gathering to select the best talents and expertise in different sectors to nurture SMEs and start-up projects of high quality.

This approach positions the Singapore government as a partner compared to leader¹⁸ (Low, 2016), streamlining the ecosystem of entrepreneurship between government and citizens. It maximises use of local talent by pairing together right combinations of ingredients (skilled talent for each aspect) for creativity and innovation to flourish. The visionary team would be able to find the corresponding group (e.g. hackathons with expertise to execute their idea). Such stakeholder engagement will lead to a tripartite collaboration between the ministry, businesses and citizens, culminating in transformational growth for the economy. Finding common ground among stakeholders and project proponents to achieve individual goals by communicating in an effective way enables projects to proceed productively and smoothly¹⁹. (Sustainet, 2014)

¹⁸ The second area in which Mr Heng has differed from his predecessor is in how he is positioning the Government as more of a partner than a leader in confronting the challenges of the future, said Mr Choo.

¹⁹ When stakeholders and project proponents find common ground and achieve individual goals by communicating in an effective way, projects are more likely to proceed smoothly. A successful and effective stakeholder engagement process is therefore essential to financial success.

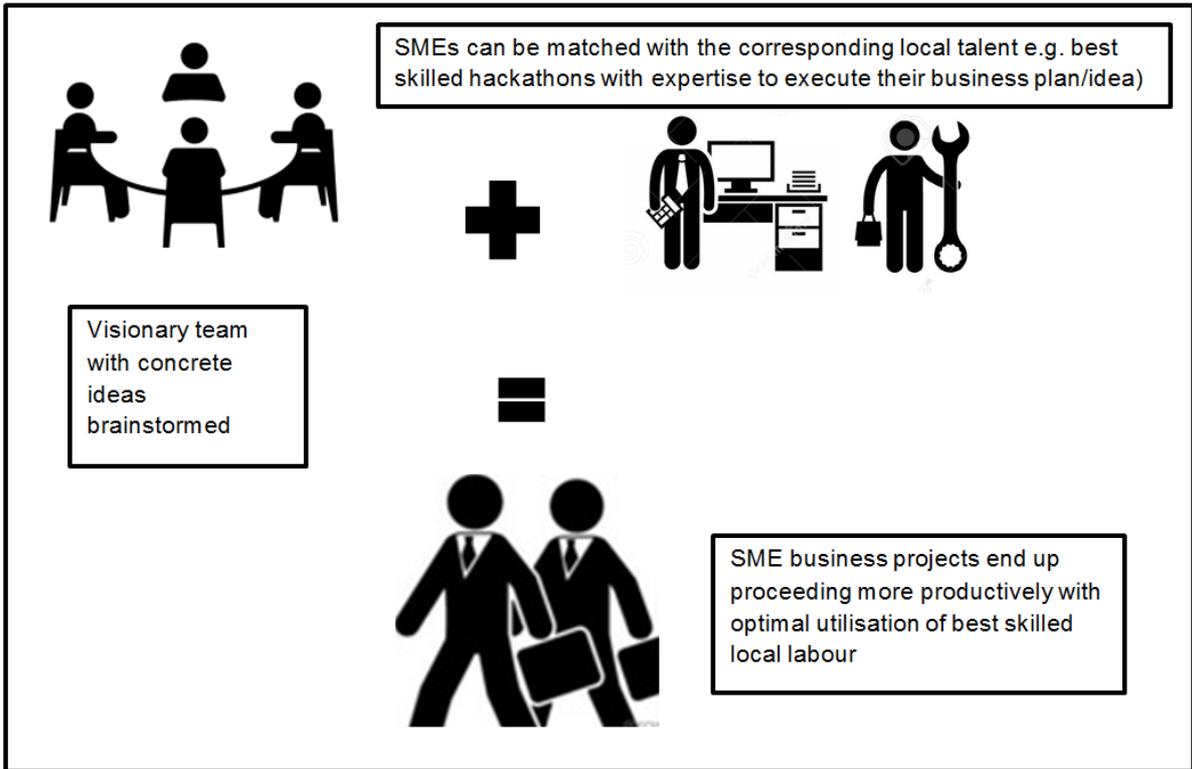


Figure 7: Summary of our framework to optimise local skilled talent for SMEs

Thinking future, this effectively ties in with Singapore’s focus on Infocomm Media²⁰ (MCI, 2016) in 2025, which has a niche focus on manpower and society to fuel economic growth. It aims cultivating a living lab to entrepreneurs, growth companies and multinationals in the Infocomm Media space to continually experiment and innovate to contribute to sustainable and quality economic growth.

²⁰ In 2025, we envision a Singapore transformed for the better by infocomm media.

3.1.2 'Born Global' : Looking Beyond Our Singapore Shores

We have to galvanise our neighbours in the region with Singapore's capital and reputation. This, we must mirror the Higgs Particle to initiate a move to give Indonesia & Malaysia the 'mass' for momentum to further reap from the fastest growing labour and consumer cluster by 2030.

To make more productive use of regional resources, the aforementioned government consultant inter-agency for SMEs will have a department specialised in exploring new frontiers and providing strategies for adapting to cultural environments in the region to reinforce our Singapore branding. To expand our small domestic market, Singaporean workers would be encouraged to open up to small firms in emerging markets like Hanoi to establish a breakthrough by shaping the regional environment around it, leveraging on the laudable reputation of quality and trustworthiness of Singapore²¹. (Min, 2015)

A strategic shift for SMEs towards expansion would require a change in mind-set. SMEs have to anticipate being out of pocket in the short term for longer term gain. SMEs could take on this new approach — 'Born Global' : entailing the aspiration to survive and expand their businesses in a highly competitive global environment, creating products or services with potential to be utilised regionally.

When SMEs invest abroad, they achieve economies of scale²² (Teck, 2012) and find it more worthwhile to invest in R&D, generating productivity growth and efficiency.

²¹ SMEs here can leverage on Singapore's reputation for quality and trustworthiness, added Mr Nettesheim.

²²Partly, this has to do with being able to achieve economies of scale

Aiding the mind-set paradigm shift, companies and the government could help lower employees' opportunity cost of working overseas by addressing social and family concerns of overseas posting for an extended time period. For example, the government could introduce policies to support seamless reintegration of the employee's children education upon returning back to Singapore and suitable job positions remain for returning employees. Also, firms can facilitate the process of delivering smooth education in less-urban regional cities by partnering with reputable schools in the workplace vicinity to secure places for employees' children.

Secondly, the government agency could provide more coordinated support encouraging overseas SME projects. A consortium of small SMEs led by a few big principal companies could be introduced to reduce uncertainty of their expansion which has been hindering their confidence in investing abroad.

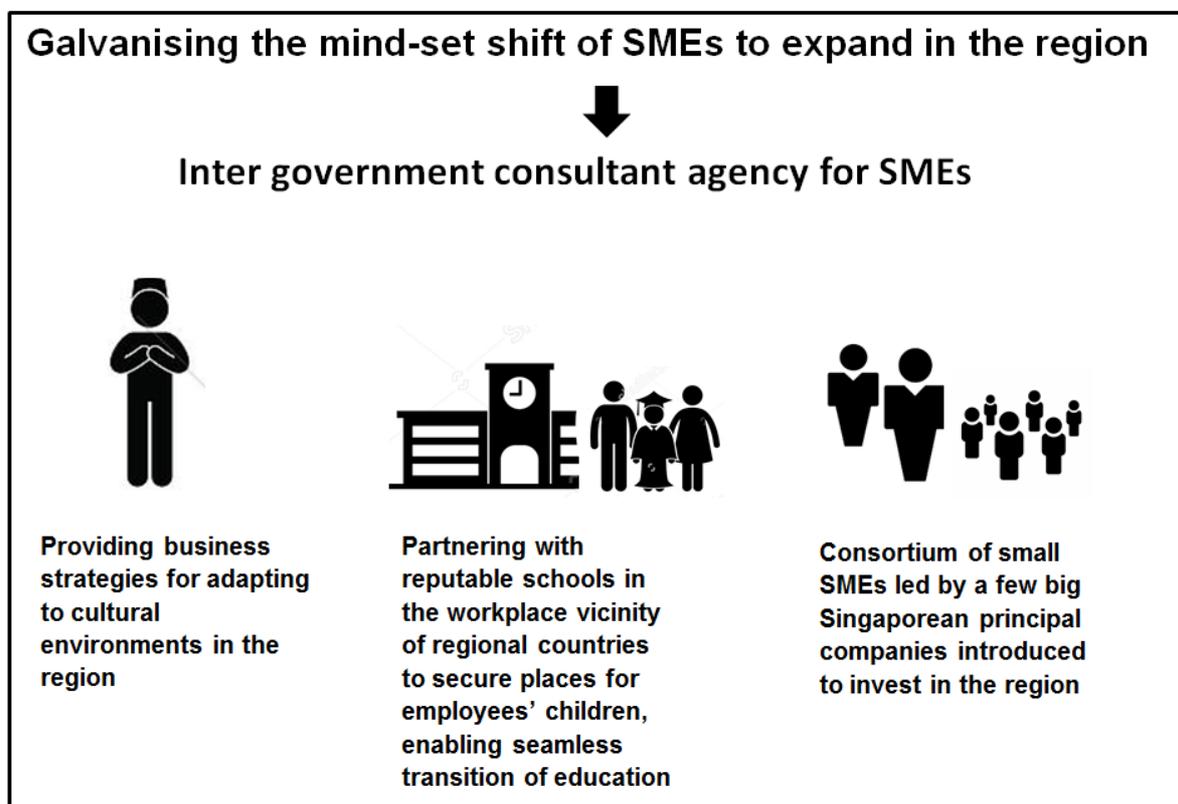


Figure 8: Summary of the government consultant agency's possible efforts to deliver mind-set shifts in SMEs

3.2 Innovation Transformation: The Sine Qua Non - To 'Fail and Let Fail'

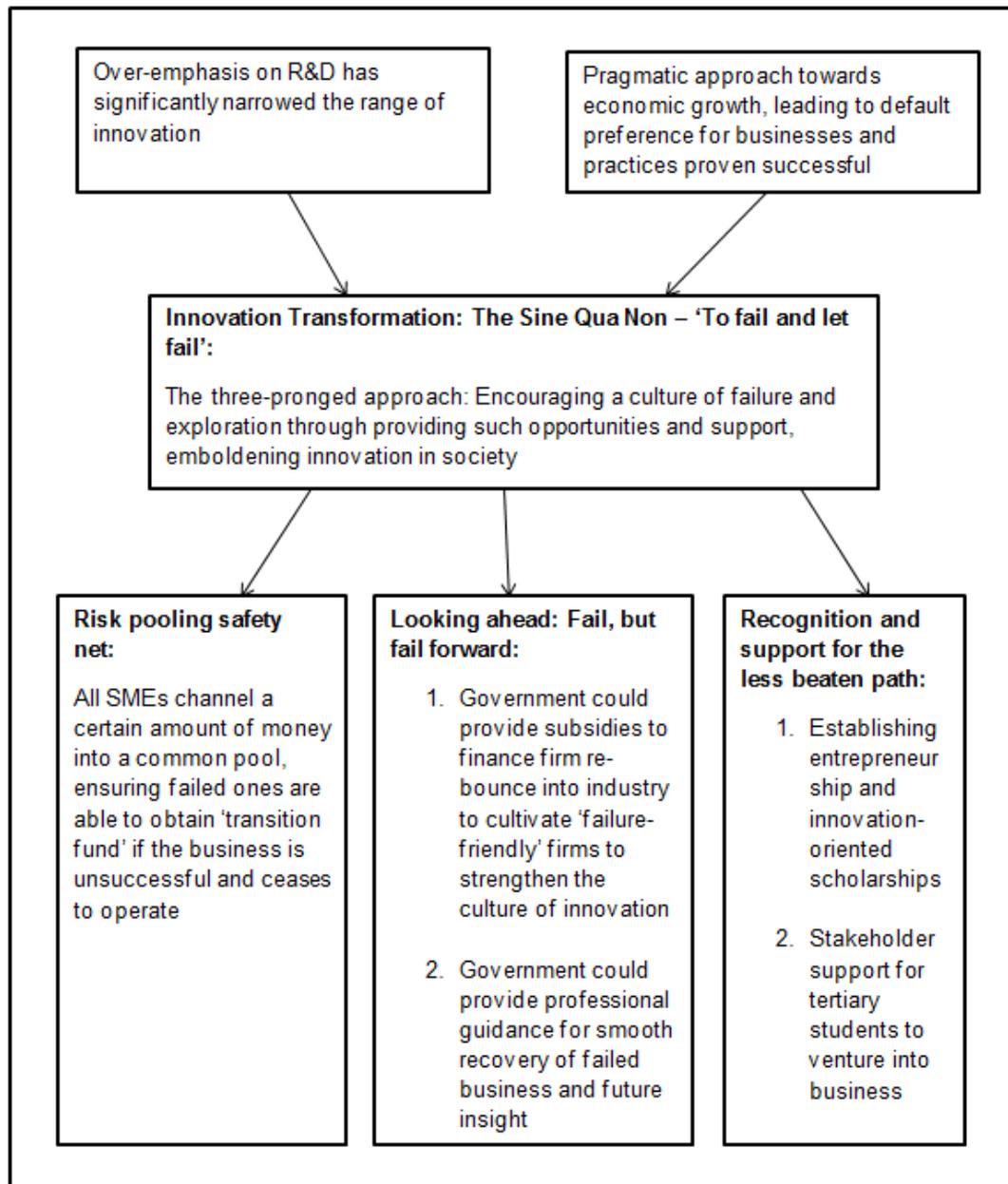


Figure 9: Summary of our approach to reforming innovation in Singapore

3.2.1 Risk Pooling Safety Net

The culture of risk aversion is one of Singapore's biggest challenges in the coming years²³ (Low, 2016). The government should actively help SMEs to mitigate the consequence of failing and facilitate their re-bound into business, creating a favourable environment for companies to actively innovate in process and other aspects of their operations.

Just like “unemployment insurance” of individual workers, SMEs can have “failure insurance” whereby all SMEs channel a certain amount of money into a common pool and failed ones will be able to get a “transition fund” from the pool should the business cease to operate.

This safety net pools the risk of failure of the SMEs and alleviates the negative consequence of failing, effectively encouraging more daring and innovative ideas and business practices.

²³ Indeed, this culture of risk aversion is one of Singapore's biggest challenges in the coming years.

3.2.2 Looking Ahead: “Fail, but Fail Forward”

The Singapore government should actively advocate the notion of “Fail, but Fail Forward”.

Firstly, in addition to a “transition fund” that firms can obtain from the common pool of money mentioned in 3.1.1, the government could provide subsidies to finance the firm's' re-bounce into the industry. Their performance would then be closely monitored, and ability to draw lessons from the previous failure by succeeding grants more subsidy and recognition to the firm. The business environment will thus become “failure-friendly” and entrepreneurs will strive to capitalise on past failure, converting it to future success, improving the culture of innovation as a whole.

Secondly, the government will also provide professional guidance for the failed businesses to systematically reflect on the reason of the failure and gain insights of running the business in more productive and innovative ways in the future.

3.2.3 Recognition and Support for the Less Beaten Path

We aim to attract more talented youth from the conventional route of success²⁴ by setting up more entrepreneurship and innovation-oriented scholarships from the government and private sectors. The criteria of awarding scholarships will be largely based on students' abilities to think out of the box and convert innovative ideas into reality, rather than academic and co-curricular excellence. The scholars will be required to start their own business under the guidance and assistance of a scholarship awarding body, instead of serving it directly.

Furthermore, for the students from tertiary educational institutions who wish to suspend their studies to venture into business, enough support should be given by all stakeholders. For example, SPRING Singapore can set up a special branch to guide the young entrepreneurs and the Ministry of Education can collaborate with institutions to grant a student leave of absence for up to two years²⁵ (NUS, 2016) to allow room for trial-and-error.

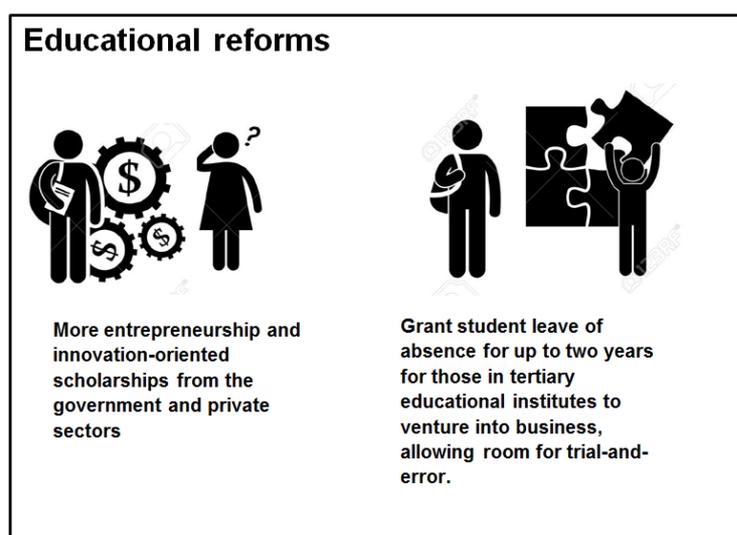


Figure 10: Summary of our reforms in the education sector to embolden innovation

²⁴the conventional route refers to: securing a place at a recognised university and graduating with a good degree, and ending the journey with a stable job with a decent starting salary.

²⁵ As of now, the National University of Singapore only grants student's leave of absence for medical, academic and other personal reasons (not including setting up business)

Chapter 4: Conclusion

We stand on the shoulders of giants, risks, as well as endless possibilities. However, we have the right advantages to propel ourselves further in terms of productivity and innovation to become a more prominent global force and attain never-before-seen levels of economic prosperity. For instance, the gravitational pull of Asia's turning tides has led us to ponder how the region can better benefit us. Innovation-wise, Singapore needs to adopt a culture of failure.

Word Count: 1998

[Excludes charts, tables, footnotes, references]

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