



The Future Singapore Economy: An Innovative Economy

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Summary

This essay will argue that an innovation-driven economy is central to overcoming the current limitations and future challenges facing Singapore's growth model. Challenges facing Singapore include namely poor productivity performance, an over-reliance on foreign MNCs and foreign labour, as well as an aging population. Singapore's lack of innovative capacity not only exacerbates these problems, but is also at the heart of her productivity conundrum. Since Singapore's productivity and innovation problems are interlinked, their respective solutions cannot be discussed and evaluated in isolation and instead need to be formulated as a coherent economic strategy.

With this in view, this essay will propose that changes and reforms be aimed at building an innovation-driven economy. The Singapore government firstly needs to spur and develop potential and existing local enterprises by acting as a "venture capitalist". Complementing such reforms, a regional outlook is arguably required to better capitalize and maximize the economic potential of regional emerging markets.

Secondly, creating conditions conducive to an innovative economy cannot be understated. Economic security, as manifested by stronger social safety nets, can help incentivise risk-taking. Additionally, cultural and mindset changes are necessary for developing an innovative workforce and economy. Such changes can be achieved by an education system that encourages creativity, tolerance for failure and an entrepreneurial spirit as well as reforms to meritocracy. Furthermore, liberalizing Singapore's socio-political climate should be seriously considered as an important reform, which has potential positive economic spinoffs.

Finally, in order to circumvent the productivity challenge, local businesses need to innovate. In addition, specific productivity reforms targeted at improving workplace conditions for older workers through a tripartite framework linking private firms, research institutions and the government should be implemented. This will enable Singapore to turn its demographic challenge into an opportunity for growth.

(298 words)

What are the limitations and challenges facing Singapore's current growth model? What changes and reforms do you think necessary, particularly in terms of raising productivity and the innovation capacity of the Singaporean economy?

By exploring necessary economic reforms, this essay will highlight the limitations and challenges faced by Singapore's current growth model. Recognising that Singapore's productivity and innovation problems and their respective solutions are interlinked, an innovation-driven economy is arguably needed to increase Singapore's productivity capacity.

To overcome Singapore's economic challenges, long-term economic reforms and mind-set changes are necessary. To foster a conducive environment in which indigenous comparative advantages can develop, there needs to be shift from the current state interventionist approach towards a facilitative approach. This facilitative approach identifies growth clusters through the power of creative destruction¹ and encourages domestic industries to leverage on regional emerging markets. This has to go hand-in-hand with changes in Singapore's education system, so as to develop a less risk-averse and creative populace.

As cost advantages are being lost to emerging markets², the importance of creating indigenous comparative advantages cannot be understated. One such step taken in recent years towards creating comparative advantages is the identification of

¹ Creative destruction, a term coined by Austrian American economist Joseph Schumpeter, describes the "process of industrial mutation that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one" (Schumpeter, 1942). Simply put, it is the process in which old firms, products and processes are replaced by newer, more innovative and more efficient ones.

² Rising business costs in Singapore, in terms of rental and labour costs, are considered as major business constraints and a reason to relocate to other relatively low-cost countries such as China, India and Vietnam (Asian Business Outlook Survey, 2013)

growth clusters (Budget 2015, 2015). While growth clusters might potentially help create comparative advantages based on Singapore's current infrastructure and expertise advantages, it does not solve the problem of dependence on foreign MNCs in the long-term. This is because MNCs might choose to relocate as emerging markets catch up with such current advantages³. Furthermore, growth clusters arguably contribute little to the development of a truly indigenous comparative advantage because spillover effects on the growth of potential and existing local enterprises are not guaranteed.

With such limitations in view, Singapore should take a new direction towards spurring and developing local innovation. The Singapore government needs to move away from the interventionist approach of forming Government-Linked Companies, which dominate the local entrepreneurial space. The new facilitative approach involves the government acting as a "venture capitalist" and growing Singapore as a entrepreneurial hub with a regional orientation. The government will act as a "venture capitalist"⁴ by initiating a regional start-up fund for local and foreign entrepreneurs to build start-up enterprises together. However, the government should not exert control over these firms' operations and allow them to grow independently.

In view of Singapore's economic integration with ASEAN⁵, a regional orientation complements Singapore's broader focus on maximizing the potential of emerging

³ Dependence on foreign multi-national corporations (MNCs) renders Singapore susceptible to exogenous investment flows and hinders indigenous growth, which ensures that a larger portion of profits benefit Singaporeans rather than foreign companies.

⁴ Given the dearth of private venture capital investment in Singapore (Ananthalakshmi, 2012; Cheok, 2014), the Singapore government should act as a venture capitalist to encourage the growth of local enterprises and businesses. These new enterprises should have the freedom to pursue self-directed growth strategies, product innovation and marketing blueprints.

⁵ Singapore's push towards a common market in ASEAN is evidenced by her participation in the ASEAN Economic Community (AEC), ASEAN Free Trade Agreement (AFTA) and the 2020 ASEAN Banking Integration Framework.

markets as a means of economic growth. This hub enables foreign ASEAN innovators, entrepreneurs and talents network and work with Singaporeans to start-up businesses and new creative enterprises. Such cooperation and convergence of human capital allows for the sharing of different experiences and perspectives so as to create goods and services that meet different and increasing consumer needs in different markets within the region.

This enables Singapore to acquire indigenous-regional comparative advantages, thereby reducing its dependence on foreign MNCs and developing our own specialized industrial capacities. The success of this new direction refutes the assumption that the only way to reduce Singapore's dependence on foreign MNCs is through indigenous comparative advantages when regional comparative advantages can also help to do so. Also, this change sees Singapore's relationship with regional markets as mutually beneficial rather zero-sum and cooperative rather than competitive.

Furthermore, the regional start-up fund benefits existing local enterprises by providing capital to tap on regional markets and diverse ideas for branding and marketing of new products. It also benefits potential enterprises, which can benefit from linking with regional entrepreneurs and innovators.

However, an innovative economy is not easily borne without creating the conditions to encourage innovation, which are adequate social safety nets and a less risk-averse mindset.

Social safety nets can help foster a more innovative society as they arguably act as guarantees for innovators to take up more risk. As innovation entails risks of financial

ruin, economic security, manifesting as stronger social insurance, encourages individuals to attempt entrepreneurship and entrepreneurs to pursue bold, new initiatives. Case studies⁶ support this link between economic security and innovation. This is not to champion a welfare state and in fact, the incentive mechanism of this reform is in line with existing social security schemes⁷.

Social safety nets are necessary but insufficient as a policy in creating an innovative economy. This is because the innovation problem is not solely economic in nature. Instead, it can fundamentally be traced to socio-political issues. Innovation implies a willingness and bold capacity to invest time and resources in an activity that does not necessarily guarantee success. However, a risk-averse mindset, coupled with the lack of a creative culture, has been the fundamental barrier to fostering an innovative entrepreneurial economy. The preference for economic stability to risk-taking has disincentivised many Singaporeans to pursue enterprising albeit economically uncertain paths.

This problem can be attributed to the nature of Singapore's education system. While Singapore's merit-based education system was first conceptualized as a means to serve its nation-building goal of economic mobility, it has since become an impediment to Singapore's current policy agenda of creating an innovative economy.

⁶ A study (Fairlie, et. al., 2011) found that business ownership rates amongst male workers in the US just over the age of 65 in which they qualify for state-provided health insurance increase from just before the age of 65. Another study (Hombert et. al., 2014) found that increased access to unemployment insurance in France in 2001 increased the rate of entrepreneurship.

⁷ Such schemes include the Workfare Income Supplement Scheme (WIS) and the Workfare Training Support Scheme (WTS).

Singaporeans' mindsets are heavily influenced by the societal expectation that success equates to academic success and eventual financial success. This expectation, perpetuated by the education system, places pressure on parents and students to conform to the ideal, rather than seek different paths towards success. This is evident from the crowding out effect of human talent in private sector by the public sector (Quah, 2010). Should more human capital be diverted into the private sector, there can potentially be positive spinoffs on the innovative economy.

Another consequence of such pressure is that while Singaporean students go on to become experts in their own field, they often fall short of becoming innovators. The capacity and freedom of students to think originally and creatively is further inhibited by the examination-oriented education system, where grades, rather than academic exploration, is of utmost importance. This system then produces workers who excel at meeting given expectations and benchmarks but are unwilling to explore, experiment and innovate. Thus, this merit-based rat race not only stifles Singaporeans' freedom to take paths not trodden but also their ability to think creatively.

Furthermore, Singapore's meritocratic system harshly penalizes those who take risks but fail. Due to the nature of high-stakes examinations that categorizes students by academic performance, students are fearful of failure. This is because one's performance in examinations often determines the opportunities available to them in the future. As students move to the workforce, they often stick to tried and tested methods, rather than explore new ways that might leave them exposed to failure. By inhibiting the ability of workers and businesses to take risks, this limits Singapore's innovative capacity and adaptability to changes. The lack of innovative spirit has resulted in local

SMEs' reluctance to explore productivity-enhancing methods⁸ and unwillingness to pursue overseas expansion (Seah, 2015).

Singapore should implement a system-wide change from primary to tertiary education, aimed at creating a risk-taking culture in schools. Schools should function as open spaces conducive for personalised learning, creativity and the embracing of risks, so as to encourage innovation and tolerance for failure. Furthermore, there should be a reduction in the stakes of primary and secondary national examinations⁹ and increased flexibility in switching education pathways. This reduces the fear of failure and ensures that late-bloomers have continued opportunities that maximise their potential as future productive workers.

However, the intended outcomes of such changes might be uncertain and too long-term in nature. This is problematic because the government of the day faces pressure from a public that wants to see immediate results. Additionally, such changes might face long-standing implementation problems, as standards are much more difficult to be determined in a personalised education system. This is not to argue that such changes are impossible for other countries¹⁰ have mustered the political will to do so. It can also be argued that the conservative Confucian nature of Singapore's society, which breeds the "adhere to obedience, respect for authority, hierarchical structures and insistence on conformity" (Yahya, 2014) limits the success of such liberal education

⁸ Local SMEs have protested against tighter restrictions on foreign labour in 2013 (Tan, 2013) due to higher business costs and the inability to find suitable workers. This masks the SMEs' dependence on cheap foreign labour as a means of generating revenue and an unwillingness to adapt new innovative changes to their operations.

⁹ These include Primary School Leaving Examination (PSLE) and O Level Examinations.

¹⁰ For instance, countries such as Finland have mustered the political will to implement what were once considered radical reforms, such as phenomenon-based teaching and collaborative learning.

reforms. However, Singaporeans are increasingly modern and open-minded, and such values might not have as much influence on society as it did in the past.

Another inhibition to an innovative economy lies in the nature of immigrants Singapore tends to attract, namely low-skilled labour and highly-skilled expatriates who seek work rather than to innovate here. The limits of Singapore in attracting entrepreneurs, creative artists and innovators can be attributed to the perceived restrictive environment towards controversial ideas, creative thought and bold conjectures. Censorship and curtails on freedom of speech¹¹, press¹² and assembly¹³ have deterred these innovators who are "generally very individualistic and even eccentric, and like to live in environments where diversity rather than conformity is the daily ethos" (Ho, 2014). Reforming such political restrictions is difficult because they conflict with broader policy agendas of racial and religious sensitivity in a multicultural context. However, in the long-term, political reforms can be both economically and politically beneficial. As Singapore faces a more contested political environment over differing value systems (Low, 2015), such disagreements would be better managed by open debate rather than sweeping them under the carpet.

The problems obstructing an innovative economy have ramifications on productivity. For example, societal expectations of desired career paths have unintended ramifications on labour allocation, and hence productivity. The merit-based rat race towards high-tier jobs has led to a shrinking local workforce pool in low-

¹¹ This is evident from the Sedition Act, which restricts speech of a seditious tendency

¹² The 2015 Worldwide Press Freedom Index ranked Singapore 153 out of 175 nations in press freedom. Additionally, the MDA Performance Bond of \$50,000 for online sites has been criticised as restrictive to freedom of press.

¹³ In Singapore, the Public Order Act of 2009 restricts assembly in public spaces. Protests are restricted to designated areas such as the Speakers' Corner, more commonly known as Hong Lim Park.

productivity sectors (Figure 1) because of the stigma attached to a career in these sectors. Additionally, the education system has limited focus on developing productive and technically-skilled workers in such sectors where Singapore needs productive and innovative workers. Ultimately, higher wages and mind-set changes are required. Reduction in foreign labour to push up wages, creating a positive social image of these career paths and being proud of one's job are needed to change incentives and hence, boost productivity.

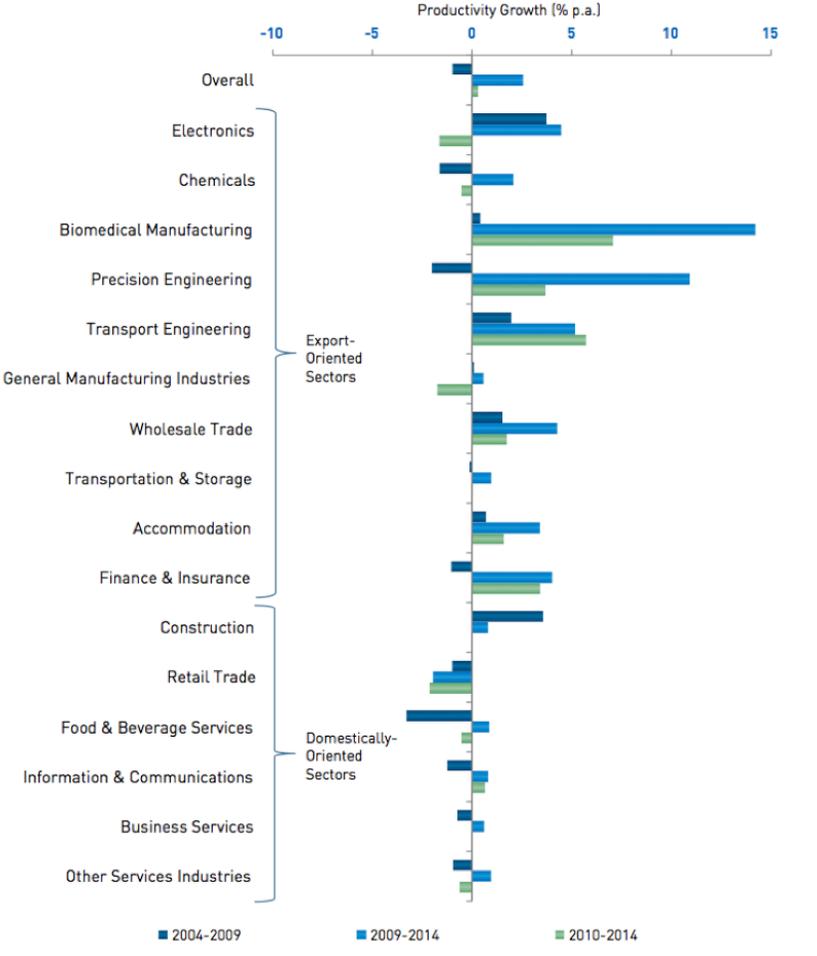


Figure 1: Average Sectoral Productivity Growth - Domestic sectors experiencing low productivity growth

In fact, it could be argued that at the heart of the productivity problem is the inability of the domestic sector to innovate. As previously mentioned, the inertia exhibited by SMEs towards proposed foreign labour restrictions is arguably a symptom of the incapacity to explore novel methods to cope with a smaller labour market. An absolute reduction of the number of foreign workers or even improvement in their welfare may not necessarily solve the productivity problem as the root cause lies in the limited innovative capacity of the domestic sector.

Improving public-private collaboration can boost productivity. Linking financial grants given to SMEs with the technological and technical know-how of universities and polytechnics tailors productivity improvements to suit the needs for these enterprises (Figure 2). Additionally, productivity-enhancing technologies should also be linked to making productive processes friendly for older workers. By maximizing the productive capacity of Singapore's aging population, this will circumvent the demographic constraint (MTI Occasional Paper on Population and Economy, 2012) facing Singapore labour force.

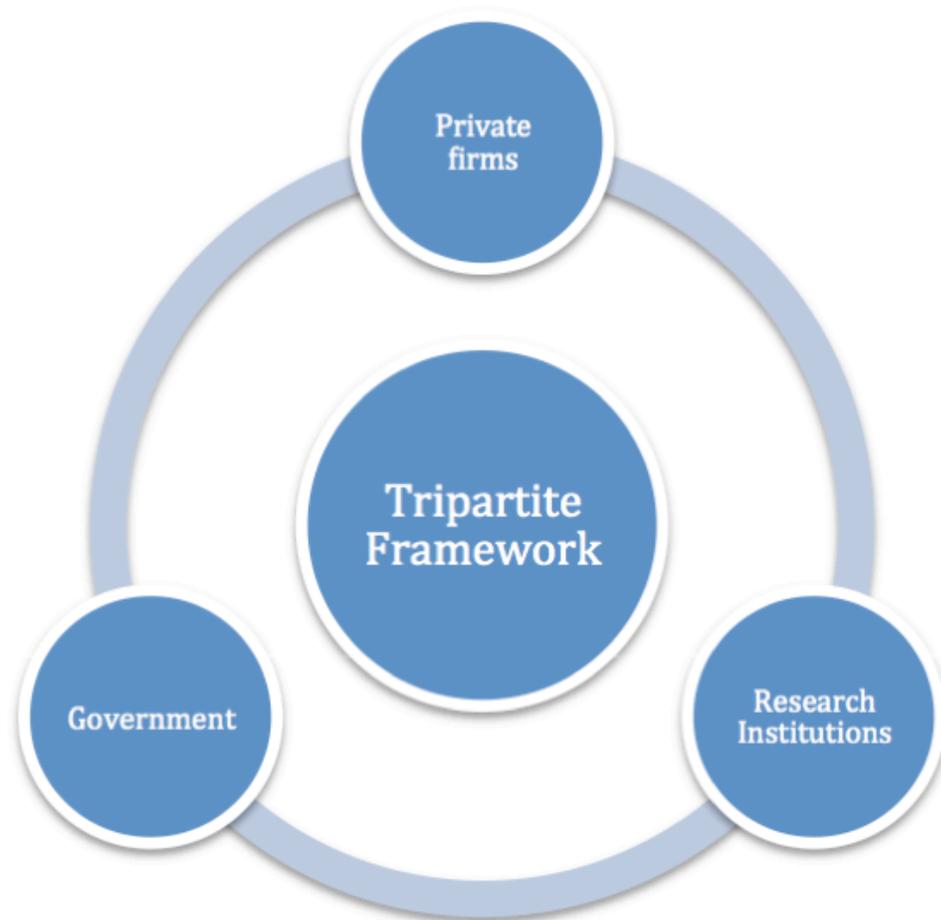


Figure 2: Tripartite Framework to increase SME productivity

Understandably, an innovative economy might worsen income inequality, as the impact of creative destruction and exposing SMEs to regional and international competition implies lessened financial security. Along with stronger safety nets, a more inclusive definition of meritocracy can mitigate this trade-off. It is essential to creatively evolve meritocracy as a tool for economic success and a means for social mobility and empowerment. A more inclusive definition of merit, which provides opportunities for non-academic strengths, is needed to encourage individuals to take risks to pursue and

develop their talents. Furthermore, a shift from relative meritocracy¹⁴, which "could promote a selfish, "me first" mentality and erode norms of trust and cooperation" (Low, 2013), can boost innovation by encouraging a collaborative culture. Studies have shown that people working in groups "tend to innovate faster, see mistakes more quickly and find better solutions to problems." (Duhigg, 2016)

Underpinning the proposed changes and reforms is the objective of spurring innovation. Innovation enables Singapore to achieve a sustainable and productive economy in the long-term while maintaining short-term GDP growth. As Singapore's short-term GDP growth is contingent upon the inflow of cheap foreign labour and MNCs, pursuing innovation does not mandate the need to stop or reverse such inflows, instead innovation is a long-term process that can accommodate a gradual reduction of our dependence on these two factors. An even greater challenge facing Singapore is mustering the entrepreneurial spirit to implement bold yet necessary reforms to secure a sustainable economy in the future.

Word Count: 1,999 [Excludes charts, tables, footnotes, references and appendices]

¹⁴ A relative meritocracy recognises and rewards individuals based on their performance relative to others and success depends on whether one performs better than others (Low, 2013).

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