The role of the state in Singapore: Pragmatism in pursuit of growth

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This paper looks at how government intervention shapes the evolution of the Singapore economy and accounts for its successes and failures over the past 50 years. Compared with other dynamic Asian economies, the Singapore government’s approach to intervene in the economy is both more extensive and more intrusive, but with a narrow focus on GDP growth and surplus accumulation as the primary objectives. The ruling government’s near complete dominance in politics has enabled it to mobilize resources to create the preconditions for strong GDP growth and high savings. But the impact on the broader development of the economy and the long term sustainability of growth is less obvious. High GDP growth and strong savings have been achieved without developing the inherent production and indigenous innovation capacity, securing a larger hinterland and providing a less skewed income distribution and higher quality of life for residents. As the economy enters a new phase where more complex and multi-faceted development is needed, the Singapore government will require more than its vaunted competency in mobilizing resources to deliver the outcome.

**Keywords**: State role; economic development; Singapore; growth model.

**JEL Classification**: E6

1. **Introduction: The State in Singapore’s Economic Development**

Much has been written about the pervasive presence of the state in the Singapore economy and the various forms that government intervention in the economy takes. The government played a pivotal role not only in mapping out the strategic direction for the economy, but also in driving much of its structural transformation over the past 50 years. Hardly any major strategic or structural change in Singapore in the past five decades took place without the involvement of or a strong push from the government. Unlike other economies,
the presence of the state (which includes not only the public sector but also the various statutory boards and government linked companies or GLCs) in the Singapore economy has remained pervasive over time, even as the economy became more mature and markets and institutions became more developed. To a large extent, the story of Singapore’s economic development success can be seen as the story of the government’s successful interventions in the economy. Likewise, the weaknesses or failures in the economy also reflect, in many ways, the failures of government intervention.

The state-driven development model has been widely credited for the success of the Singapore economy until the late 1990s. From 1965 till 1998, with the exception of the recession year of 1985, the Singapore economy expanded at near double-digit rates of growth, raising per capita GDP to one of the highest in the world. Strong economic growth and the resources generated allowed the government to invest massively in infrastructure and social amenities that not only improved the living standard of the people but also helped increase the efficiency of the economy and crowd in private investment. The government was not averse to using GLCs to undertake investments that might intrude into the space of the private sector but which it considered strategic for the long term growth of the economy. This robust growth was achieved with persistently high savings and a very strong fiscal position for the government, resulting by the late 1990s in Singapore having one of the highest per capita foreign reserves in the world, providing a strong shield against external shocks.

Together with the other Asian Tigers, Singapore’s economic success attracted worldwide attention and was seen as a model for development. Many commentators found Singapore’s success particularly fascinating because of the odds that the country had to overcome. As a small city–state with no meaningful resources or hinterland, Singapore had few natural competitive advantages besides its strategic location and the facilities that had been built up during the British colonial times for its role as a regional transport, logistics and trading center.

Compared to the situation in the 1990s, the picture is somewhat different at the half-century mark of nationhood in 2015. Over the past 10 to 15 years, there has been a major strategic shift to transform Singapore into a “global city”. While the average GDP growth rate remained high during this period and the per capita income of the country continued to surge, developments in other areas of the economy have been less satisfactory. Today, Singapore has one of the most unequal income distributions (as measured by the Gini coefficient) among developed countries, a large segment of the population suffers from long years of wage stagnation, and productivity growth performance is dismal compared with that of other dynamic Asian economies. Despite the nation’s wealth and the high level of savings at the macroeconomic level, there are serious concerns about the adequacy of savings for retirement at the individual level. Meanwhile, the quality of life is seen to have declined significantly over the past 10 to 15 years when the population rose sharply without the necessary increase in provision of public services, infrastructure and public goods in general.

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2 See Bhaskaran et al. (2012) and Low et al. (2013) for a fuller discussion of these issues.
3 In a study on the gap between per capita GDP and well-being of the people, Singapore was found to have the greatest gap of all the 134 countries studies. That is, Singapore’s per capita GDP figures were the least accurate in measuring the well-being of its people. Singapore had a welfare score of less than half of Hong Kong, despite having a slightly higher per capita GDP. See Jones and Klenow (2010), as cited by Lim (2014).
progressed “from the Third World to the First World” and moved close to the frontier of production efficiency, there is also less clarity on where future sources of economic growth are likely to come from.

Many of the challenges that confront the Singapore economy today can be seen as a direct result of specific measures taken over the past 10 to 15 years, but some can also be traced to the economic growth strategy pursued in earlier periods. While the economy’s growth orientation and the challenges it faced changed over 50 years, the government’s basic approach of intervention in the economy has remained consistent. This basic approach is made up of three elements. First is the belief that the government should play an active role in the economy and that such intervention would make a big difference to the performance of the economy and the well-being of citizens. As a small city–state with no hinterland to fall back on, the PAP government lives with an acute sense of vulnerability to the vagaries of the global economy. In its view, taking a laissez faire approach and leaving the fate of the economy to free market forces, as Hong Kong does, would be too risky. The government needs to intervene and forcefully steer the economy in a certain direction. The success of government intervention in the early years of independence reinforced this belief which has since become part of the government’s DNA.

Compared with the other dynamic Asian economies, government intervention in the economy in Singapore is both more intrusive and more extensive. Not only does it use the traditional fiscal revenue raising and spending tools to reallocate resources, it also makes extensive use of GLCs to carry out business and economic activities that have significant impact on the private sector. Right from the beginning, the government has not shied away from investing in industries that it deems important to the economy or those that are seen to be “sunrise” industries. In earlier days, state ownership was generally restricted to strategic sectors of the economy such as banking, telecommunications, transportation, defense, infrastructure, airport and port, as well as ownership of land which the government felt had to be treated as a scarce strategic resource in a land scarce country. Through corporations such as DBS Bank, Singtel, Singapore Airlines and ST Engineering, among others, the public sector played a leading role as an investor and catalyst for Singapore’s development, and led innovation in nascent but promising fields. In more recent times, GLCs have been used to further Singapore’s ambition to grow an “external wing” to its economy by investing directly in the faster growing regions of Asia. State ownership came about as a response to the challenges the government encountered rather than as a result of ideologically driven nationalization.

Second, the government has maintained a near obsessive focus on GDP growth and accumulation of surplus (both of the government and of the nation) as the primary objectives of economic policy. It sees GDP growth as the main measure of economic success and the key to a “better life” for the people. At the same time, it is almost paranoid about the need to save to prepare for rainy days, running large budget surpluses year after year even without including certain revenues (e.g., proceeds from land sales), which underestimates the size of the surpluses.

The primacy of economic growth means that it often takes precedence over other development objectives. Specifically efficiency was prized over equity: discussion of “equity” and “income distribution” was often shunned as it was seen as detrimental to the
pursuit of efficiency and economic growth. This has resulted in “producer surplus” being
given much greater priority over “consumer surplus”. Fiscal policy tends to concentrate on
the supply side, to help corporates increase production, rather than be used as counter-
cyclical measures to manage fluctuations in aggregate demand. Policy incentives tend to
favor large corporates such as multinational corporations (MNCs) and GLCs as they are
seen to be able to generate greater producer surplus through economies of scale. Small and
medium enterprises (SMEs) complained for many years that they were neglected by the
government. While a Competition Act was adopted in 2004 to help promote market
competition and efficiency, a large number of industries were excluded from coverage,
effectively giving the firms in these industries a high degree of monopoly power.4 As the
government pointed out, the law aimed to promote market efficiency, not necessarily to
enhance consumer surplus. Other than the Consumer Association of Singapore (CASE)
which is usually headed by a Member of Parliament from the ruling party, there has been
no effort to promote a strong consumer protection and advocacy movement in Singapore.5

Third, the government is willing and able to mobilize all resources in the nation to
achieve its economic objective. Economic growth takes center stage and social policies are
often designed or modified to support the pursuit of economic growth. Social policy
objectives would often be subordinated to that of economic growth if the two were in
conflict. The near complete dominance that the ruling party enjoys in the political sphere
has allowed it to push through growth-centric policies and legislation without much re-
sistance. Strong political control also allows it to take pragmatic and at times unconven-
tional and controversial approaches toward policy making without having to be concerned
about political costs or accusations of inconsistency. The decision to build two casinos in
2005, despite strong opposition from many social groups and the government’s own
longstanding objection to such a move, was a case in point. The casinos (or what the
government prefers to call “Integrated Resorts”) were seen as an important component in
the effort to transform Singapore into a global city, to provide new sources of growth for
the economy.

The decision to peg the remuneration of political office holders and senior civil servants
to very top private sector pay, despite disagreement from many quarters, is another example
of the government’s ability to push through what it considers pragmatic policy measures
undeterred by considerations of political costs.6 Given the important and pervasive role that
the government plays in the economy, it argues that the public service sector must be
staffed with high caliber people who are equal to the best in the private sector. Matching
remuneration to that in the private sector is needed in order to attract and retain such talent
without the risk of infesting the system with corruption.7

The need to be pragmatic and the ability to experiment with new policies did help foster
certain innovativeness in the policy making process. For example, certain key institutions

4See the List of Sectoral Exclusion in the Competition Act 2004, Ministry of Trade and Industry, Singapore.
5The government tends to discourage the formation of mass grassroots organizations other than those approved by the ruling
party. A strong consumer advocacy group could be seen as such a mass organization. See Tan (1995).
6See the White Paper on Ministerial Salary, 1994 and various revisions subsequently.
7The topic continues to be controversial and has been the subject of debate in Parliament a few times over the years.
such as the Housing Development Board (HDB), the Central Provident Fund (CPF) and the Economic Development Board (EDB) were encouraged to think out-of-the-box to tackle the unique problems that Singapore faced early on. Their experiences have provided a new benchmark and models for other countries to adopt.

The government’s pragmatism is manifest in its willingness to continually calibrate the balance between state intervention and preservation of market discipline. While the government is heavily involved in investment and production activities and competes directly with the private sector in many cases, it is conscious of the need to avoid the inefficiency and wastage associated with many state owned enterprises elsewhere. Efforts are made to ensure sufficient competition (by allowing more than one player in an industry) while providing adequate support for GLCs. The approach was to intervene in the economy forcefully when needed but to leave the rest to the market so long as the balance leads to high economic growth and accumulation of surpluses.

To some extent, this basic approach to government intervention was shaped by the experience in the early days of independence. Singapore’s economic prospects looked bleak as it risked losing its traditional hinterland when abruptly forced out of the Federation of Malaysia in 1965 while also subject to near-war or “Confrontation” with Indonesia. There was also capital flight, labor strife, a communist insurgency and ethnic tensions. In the words of a former senior civil servant, Singapore was in 1965 a “stagnant entrepot economy and a crumbling city, with a large slum area and an unemployment rate of over 10%” (Ngiam and Tay, 2006). Thus, as a matter of survival, the PAP government had to urgently create jobs and provide housing, schooling and other basic urban amenities for the people. This required a major role for the state in creating the preconditions for economic growth. In the words of Singapore’s first Prime Minister Mr Lee Kuan Yew, the experience not only instilled a “siege mentality” in policymakers, but also forced the government to be pragmatic in managing economic and social problems. It had to adopt whatever policies that worked, even if they ran counter to the conventional wisdom of the day. Hence the decision to adopt an export-oriented policy and embrace MNCs as the driver of economic growth in the 1960s, when the prevailing conventional wisdom was for newly independent countries to follow import substitution policies to develop indigenous productive capacity.

This basic approach to state economic intervention led the Singapore government to run the economy almost like a corporate in relentless pursuit of bottom line figures — in this case, the GDP growth rate and accumulation of surpluses. Political office holders and senior civil servants are even remunerated, in part, according to the GDP growth that they deliver, much like corporates reward their senior management with bonuses linked to profits made. Once the objectives of high economic growth and surplus accumulation are clearly defined, they are implemented efficiently by a task-oriented government bureaucracy. In this single-minded pursuit of short run objectives, certain long term structural issues can get overlooked, and their neglect lies at the root of some of the challenges that the economy faces today.

This paper looks at how government intervention shapes the evolution of the Singapore economy and accounts for its successes and failures. Section 2 shows how the pragmatic
approach helped overcome the constraints that Singapore faced in the early phase of economic development. Section 3 explains how the pragmatic approach was again employed to restructure the economy in the early 2000s so that innovation could take center stage as a driver of growth. Section 4 discusses the problems that the pragmatic growth-centric approach to managing the economy have brought about and what this means for the future of the economy. Section 5 concludes.

2. Providing An Efficient Business Environment for Foreign Investment and Economic Growth

Broadly speaking, the evolution of the Singapore economy can be divided into two phases: Phase One, from 1965 to the late 1990s, could be characterized as a period of “foreign investment driven” growth, and Phase Two, from the early 2000s to date, could be described as one of “foreign talent driven” growth (Tan and Phang, 2005). In the first phase, foreign direct investment (FDI) was seen as the key driver of economic growth and job creation. The government sought to attract MNCs by providing an efficient environment for their operations. In the second phase, the government set out to transform the economy from an efficient “MNC hub” to a “global city”, one where growth is derived mainly from innovation and creativity. A more creative workforce was seen necessary to support such a growth strategy, so the policy focus shifted from attracting foreign companies to attracting creative foreign talent. Much effort was devoted to making Singapore an attractive living and working environment for such creative workers.

The heavy reliance on inflows of foreign investment and foreign talent reflects the basic constraint that Singapore faces as a small city–state: the lack of economic space, including natural resources and a sizeable domestic market. Even today, despite its strategic location and relatively well-educated workforce, as a city–state economy, Singapore remains “small” relative to other major regional and global cities (see Table 1). How to overcome the constraint of size and expand economic space to achieve sustained GDP growth has been the key question that policymakers in Singapore have had to grapple with from the beginning.

The government’s main response to this lack of scale is to try to make a virtue out of necessity by treating the regional and the global economy as its “hinterland”, leveraging on their strengths to make up for the lack of economic space in Singapore. It does so by embracing wholeheartedly the policy of “economic openness”, openness not only in goods and services trade but also in the movement of capital and labor. Free trade in goods and services helps expand the market for Singapore’s products while a liberal policy on factor flows enlarges the supply base of capital and labor that Singapore needs.

While free trade in goods and services is widely considered the optimal policy for small economies, the decisions to open Singapore’s door wide to FDI in the 1960s and to allow a liberal inflow of foreign talent in the early 2000s were unconventional and controversial at

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8There is no consensus on the definition of a “global city”, a term that was first coined by Saskia Sassen. See Phang (2015) for a summary of such views.
the time they were made. In the 1960s many developing countries erected protectionist barriers against foreign capitalists who were often vilified as economic imperialists. Singapore, however, went out of its way to woo large foreign companies, enticing them with incentives to locate in Singapore. The Economic Expansion Incentives Act of 1967 granted the EDB, the main government agency charged with bringing MNCs to Singapore, the right to give “pioneer” status to foreign corporations, with five-year tax breaks that were continually extended in the late 1970s.

Likewise, in the early 2000s, when development economists were still debating and disputing Richard Florida’s work on The Rise of The Creative Class (Florida, 2002), and there were widespread concerns about the consequences of allowing large-scale cross-border mobility of skilled and unskilled workers, Singapore decided to relax its immigration and foreign worker policy, to allow a massive inflow of creative foreign workers, in a bid to become a “global city”.

These decisions to liberalize capital and labor flows despite the controversial nature of the moves were another example of the Singapore government’s pragmatic bent, with decisions taken based on the practical needs of the economy as it defined them. They also reflected the political dominance of the ruling party which allowed it to downplay complaints from citizens about the costs that such policies imposed on them. Such negative externalities became especially obvious when not just a large influx of highly skilled “foreign talent” was allowed but, as it turned out, a large number of low skilled foreign workers as well.

The Singapore government’s pragmatic approach to intervention in the economy turned out to be enormously successful in attracting FDI in the 1960s. Many MNCs from the U.S., Europe and Japan, because of rising costs at home or the need to find new markets, were looking to relocate to countries that could provide an efficient and low cost operating environment. Building on the country’s strategic location and its superior regional and global connectivity, the Singapore government was able to make a series of quick changes to major economic and social policies, as well as a few key strategic investments, to enhance its efficiency edge over other countries in the region, making Singapore the favored regional production and distribution site for MNCs. This approach was refined in subsequent years to help maintain Singapore’s attractiveness to MNCs, even as the type of

<table>
<thead>
<tr>
<th>City</th>
<th>Nominal GDP (USD bn)</th>
<th>Population (mn)</th>
<th>Physical Size (sq.km)</th>
<th>Stock Market Capitalization (USD bn)*</th>
<th>International Airports</th>
<th>Universities</th>
</tr>
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<td>697</td>
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<td>6</td>
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<td>Hong Kong</td>
<td>350</td>
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<td>1108</td>
<td>1108</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>London</td>
<td>731</td>
<td>8.6</td>
<td>1572</td>
<td>3019</td>
<td>6</td>
<td>47</td>
</tr>
<tr>
<td>New York City</td>
<td>1210</td>
<td>8.4</td>
<td>790</td>
<td>18,668</td>
<td>3</td>
<td>35</td>
</tr>
</tbody>
</table>

Source: Collated by Centennial Asia Advisors using CEIC database and various sources.* 2012 figures.
investment targeted changed over time. The government was able to provide the following preconditions to make Singapore an efficient operating environment for MNCs.

### 2.1. Creating the political framework for sustained economic growth and development

A critical precondition for sustained economic growth is a certain level of social stability. The PAP government sought to achieve this by establishing, early in the days of independence, a “social contract” between the government and the governed in which some civil rights were traded off against the state powers and political control that it felt were needed to pursue high economic growth. High GDP growth then enabled the PAP to deliver various public services and public goods and legitimize its rule. By maintaining near complete dominance in the political arena, the PAP government was able to continue with such a “social contract” for most of the first 30 years of nationhood, following the single-minded pursuit of GDP growth without being distracted by equity issues and other political concerns.

The state’s approach to labor relations is a good example. In the 1960s, labor relations were volatile and industrial strikes were commonplace.\(^9\) In response, the PAP government passed the Industrial Relations Amendment Bill in 1968, limiting the powers of the Industrial Arbitration Court and strengthening the management’s rights over the hiring, firing, promotion and transfer of employees.\(^10\) Along with the Employment Act (1968), the Industrial Relations Amendment Bill (1968) cemented government control over the workforce which became more compliant. This helped to reduce labor unrest and thus labor costs for employers, especially MNCs. Labor woes for employers were virtually eliminated. In 1968, over 11,400 man-days were lost in four work stoppages but from 1978 onwards, there was hardly any sign of industrial unrest in Singapore.

At the same time, then Prime Minister Lee Kuan Yew also clamped down on left wing unions, effectively breaking the independent labor movement. The pro-PAP faction of the defunct labor movement formed the National Trade Union Congress (NTUC) which was eventually institutionalized as the only official labor union federation in Singapore. This in turn allowed the government to setup the framework of a “tripartite industrial relations” system (involving employers, employees and the government) including the National Wages Council (NWC) which helped to set wages for the economy. The tripartite system played a large role in minimizing friction among the three parties, helping to preserve the industrial peace important to foreign investors. In the 1985 recession, the government’s control over the labor unions allowed it to impose wage cuts to help the economy regain competitiveness. Smooth passage of the industrial relations laws and change in the labor movement were possible because of the PAP’s near monopoly of parliamentary seats.

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\(^9\) According to a speech by then Minister for Foreign Affairs and Labour S. Rajaratnam in Parliament on 10 July 1968, a total of 1,284,029 man-days were lost as a result of work stoppages between 1960 and 1967, undercutting Singapore’s appeal to the MNCs that were the primary foreign investors Singapore needed to promote rapid growth.

The social contract worked well for the PAP which has remained in power since 1959 without interruption. This was because it ensured that the basic needs of the population were met at a pace that far exceeded the citizenry’s expectations. The economic strategy produced jobs at such a dynamic pace that full employment was reached by the early 1970s. A massive public housing construction program brought homes of high quality to the vast majority of the population such that by the mid-1990s more than 90% of Singaporeans owned their own homes. A huge effort was made to expand educational opportunities at primary, secondary, vocational and tertiary levels, giving citizens the opportunity for upward social mobility that they had not imagined possible. Such extraordinary success by the PAP government in meeting the citizens’ basic needs and aspirations enabled it to retain the support of citizens despite the tough policies pursued. The party’s long stint in government also allowed for stability and predictability in national policies and long term planning and continuity in governance, which contributed to the success in attracting FDI and realizing the FDI-driven growth strategy in the first phase of its economic development.

2.2. Pragmatic foreign policy to maintain Singapore’s strategic position

Given its need to expand its economic space by leveraging on the strengths of other economies (both as markets for Singapore’s products and as sources of raw materials and other production inputs), Singapore needs to maintain a foreign policy that allows it to be on the best possible terms with as many nations as possible. Dispensing with the anti-colonial rhetoric of other newly independent ex-colonies, the Singapore government developed good relations with advanced economies, helping to ensure an inflow of technology, capital and management skills to Singapore. This inflow of resources came through various technical assistance schemes extended by foreign governments, and through the entry of MNCs which were partly encouraged by the friendly ties that Singapore maintained with their home countries, which helped to reduce perceived political risks.

Singapore was also active in cultivating strong ties with developing countries through various political and economic groupings such as the British Commonwealth and the Non-Aligned Movement. Within Asia, Singapore was one of the key drivers in establishing the Association of Southeast Asian Nations (ASEAN), which plays a critical role in promoting friendly relations among the now 10 member countries, and maintaining regional peace and stability in the region, laying the foundation for sustained regional economic growth and development. Maintaining good ties with as many countries as possible remains a cornerstone of Singapore’s foreign policy and it has been a welcomed member of many bilateral and multilateral free trade arrangements in recent years (see Table 2). Even in foreign policy, the streak of pragmatism remains: policymakers have made clear their desire to not rely excessively on a single market for export demand and economic growth, and to constantly look to diversify the country’s external dependence. While access to the American and Chinese markets has played an important role in Singapore’s export-led growth over the decades, it continues to recognize the relevance of enhancing trade ties with ASEAN, Japan and Korea, among others. Such diversified export markets help
Singapore to manage fluctuations in global and regional demand: When one regional market slows down, it can be balanced by demand in other regions.

2.3. Maintaining macroeconomic stability through prudent fiscal and monetary policies

Effective management of prudent fiscal and monetary policies helps maintain stable interest rates, exchange rates and inflation, providing the policy predictability that MNCs need for their long-range planning. This helps prevent Singapore from succumbing to a major financial crisis that could set economic development back by many years (Parrado, 2004), as happened to many previously promising countries which then failed to break out of the “middle-income trap”. Such policies increase the resilience of the economy when faced with sudden external shocks. In successive regional and global crises — the 1997–1998 Asian financial meltdown, the 2001 bursting of the dot.com bubble, the 2003 SARS crisis and the more recent 2008 global financial crisis — the government intervened heavily through a plethora of measures, including some unconventional ones (see Table 3).

Table 2. Singapore’s Free Trade Agreements

<table>
<thead>
<tr>
<th>FTAs</th>
<th>Year of Implementation</th>
</tr>
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<tbody>
<tr>
<td><strong>Multilateral agreements</strong></td>
<td></td>
</tr>
<tr>
<td>ASEAN Free Trade Area (AFTA)</td>
<td>1993</td>
</tr>
<tr>
<td>Singapore-European FTA (ESFTA)</td>
<td>2003</td>
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<tr>
<td>ASEAN-China (ACFTA)</td>
<td>2005</td>
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<tr>
<td>Trans-Pacific SEP (TPFTA)</td>
<td>2006</td>
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<tr>
<td>ASEAN-Korea (ACFTA)</td>
<td>2007</td>
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<tr>
<td>ASEAN-Japan (ACFTA)</td>
<td>2009</td>
</tr>
<tr>
<td>ASEAN-India (ACFTA)</td>
<td>2010</td>
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<tr>
<td>ASEAN-Australia-New Zealand FTA (AANZFTA)</td>
<td>2010</td>
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<tr>
<td><strong>Bilateral agreements</strong></td>
<td></td>
</tr>
<tr>
<td>New Zealand (ANZSCEP)</td>
<td>2001</td>
</tr>
<tr>
<td>Japan (JSEPA)</td>
<td>2002</td>
</tr>
<tr>
<td>United States</td>
<td>2004</td>
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<tr>
<td>India (CECA)</td>
<td>2005</td>
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<tr>
<td>Jordan (SJFTA)</td>
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<td>Korea (KSFTA)</td>
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<td>Panama (PSFTA)</td>
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<td>Peru (PeSFTA)</td>
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<td>Australia (SAFTA)</td>
<td>2011</td>
</tr>
<tr>
<td>Costa Rica (SCRFTA)</td>
<td>2013</td>
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<td>Gulf Cooperation Council (GSFTA)</td>
<td>2013</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Event</th>
<th>Impact on Singapore</th>
<th>Policy Response</th>
</tr>
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</table>
| **The Seventies** 1973: Quadrupling of oil prices and 1979 oil crises. | • Singapore’s inflation surged to nearly 30% in 1H74.  
• Global economic slowdown, Singapore faced stagflation. | **Monetary Policy**  
• MAS imposed credit ceilings and more stringent credit guidelines on financial institutions.  
• MAS allowed the Singapore Dollar trade-weighted exchange rate to appreciate by 30% during the 1973–1980 period. |
| **The Eighties** 1985–1987: First recession as global demand weakened just as internal imbalances appeared. | The slump in the construction sector, high domestic savings rate and rigidity in the domestic economy weakened Singapore’s competitiveness. | **Fiscal Policy**  
• Public sector wage restraint.  
• Business costs reduced by cutting employer CPF contributions plus wage restraint for two years.  
• Increased depreciation allowance for capital expenditures.  
• Rebates on personal, corporate and property taxes as well as government fees.  
**Monetary Policy**  
• Downward adjustment in the trade-weighted exchange rate. |
| **The Nineties** 1997–1998: Asian Financial Crisis | • Singapore Dollar appreciated significantly against collapsing regional currencies.  
• Collapse in regional demand and in local business confidence. | **Fiscal Policy**  
June 1998: S$2bn off-budget package, with three broad objectives:  
1. Reduce business costs through property tax, rental and utilities rebates.  
2. Accelerate development projects; provide funds to SMEs and skills-upgrading programs to strengthen economic infrastructure.  
3. Stabilize property sector by suspending government land sales, deferring stamp duty on uncompleted properties, rental rebates and mortgage rescheduling. |
<table>
<thead>
<tr>
<th>Event</th>
<th>Impact on Singapore</th>
<th>Policy Response</th>
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</thead>
<tbody>
<tr>
<td>November 1998: additional S$10.5b package to further reduce business costs by 15%. Key measures included:</td>
<td>- Cutting wages by 5–8%.&lt;br&gt;- 10% corporate tax rebate for 1999.&lt;br&gt;- Further cuts in government rates and fees.&lt;br&gt;- Further cut of 10% in CPF contribution rate.</td>
<td></td>
</tr>
<tr>
<td>Monetary Policy</td>
<td>July 1997: MAS allowed the SGD to fall against the USD.</td>
<td></td>
</tr>
<tr>
<td>The 2000s</td>
<td>GDP contracted 2.0% in 2001 as manufacturing sector contracted by 12% in 2001 compared to 15% in 2000.</td>
<td>Fiscal Policy</td>
</tr>
<tr>
<td>2000–2001: Recession due to global tech slump</td>
<td>Tourism, travel-related industries severely hit. Visitor arrivals, hotel occupancy fell. Weakness in manufacturing and trade-related services, together with ailing global IT market demand compounded the negative effects of SARS, resulting in GDP growth contracting sharply by 7% y/y in 2Q03.</td>
<td>Fiscal Policy</td>
</tr>
<tr>
<td>2003: SARS</td>
<td></td>
<td></td>
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<tr>
<td>Event</td>
<td>Impact on Singapore</td>
<td>Policy Response</td>
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<tr>
<td>-------------------------------</td>
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<tr>
<td></td>
<td>2008: Global Financial Crisis</td>
<td></td>
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<tr>
<td></td>
<td>• Debt refinancing was a problem for corporates that had highly illiquid assets and high gearing.</td>
<td></td>
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<tr>
<td></td>
<td>• Business and economic activity froze as banks refused to lend while consumers feared a run on banks.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fiscal Policy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• S$20.5b Resilience Package.</td>
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<tr>
<td></td>
<td>• Jobs Credit Scheme provided businesses with a cash grant based on the wages of resident employees, set at 12% on up to the first S$2500 of wages per month. This scheme was only paid out if the workers were still employed by the firm at the end of a 3-month period.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Special Risk-Sharing Initiative: Bridging Loan Programme and a trade finance module. Government took 80% of the loan default risk up to S$5m, and 75% of the trade financing risk. Together with participating financial institutions, these schemes sought to increase credit availability across the entire supply chain.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Monetary Policy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MAS adopted an accommodative monetary policy that addressed regulatory financial reporting standards, liquidity problems, and property lending limits in order to soften the impact of the GFC.</td>
<td></td>
</tr>
</tbody>
</table>
2.4. Heavy investment in strategic infrastructure to increase the efficiency of the business environment

To serve as an efficient production and distribution hub for MNCs, the government invested heavily (in part through GLCs) in a wide array of infrastructure including transportation, logistics, telecommunications systems etc. Such infrastructure was critical to preserving the main natural competitive advantage that Singapore enjoys: its strategic

The government’s “siege mentality” leads it to continually scan the horizon to pre-empt and nip potential problems in the bud. It carries out large scale scenario planning exercises regularly, to stay alert to potential short run and long run risks to the economy.
location and its strong regional and global connectivity. For example, the seaport and the airport in Singapore are consistently ranked among the most efficient in the world.

Equally important is public investment in human resources. The government’s push to install English as the main official language helped to improve the global competitiveness of the workforce. But more critical were the resources put into vocational and skills training. In the 1960s and 1970s, the EDB’s manpower development unit was put in charge of developing vocational training programmes which took place mainly in polytechnics and vocational institutes: these ensured that the workforce was equipped with the right skills for jobs in export-oriented manufacturing industries. Technology transfers from MNCs also played a big role in developing human capital; the government actively leveraged on the training capability of MNCs and their home governments by setting up joint training institutes to provide training in different skills that were in demand.\textsuperscript{11} It responded to the changing needs of MNCs (and the economy) by investing in training for different skills over time. For example, in 1981 the National Computer Board (NCB) was created to drive the learning and application of IT-related skills among companies.

Investment in education and skills training continued even after the economy moved into its second phase, that of foreign talent and innovation driven growth, at the turn of the millennium. The Ministry of Education (MOE) realigned its focus and revised the school curriculum to concentrate on developing students’ creativity and critical thinking. A new university, the Singapore Management University, was established to provide a different pedagogical approach to tertiary education.\textsuperscript{12} Other new educational institutions were setup to provide for human resource needs in specific industries: for example, a School of the Arts was established to develop the arts and performance industry.

2.5. \textit{Use of state enterprises to lead development of strategic sectors}

The government intervened in industries it felt were important but which the private sector either did not have the capability or the resources to develop. GLCs were instrumental in taking the lead in developing nascent and strategic sectors of the domestic economy — banking, telecommunications, industrial estates, port, airport, air and sea transportation, shipbuilding and repair, defense technology, etc. — and continue to have a significant presence in some of these sectors. These investments were important in enhancing the efficiency of the business environment and reducing operating costs for MNCs. State-run enterprises such as Singapore Airlines and Neptune Ocean Lines were started to promote Singapore’s international connectivity and trade links while the Development Bank of Singapore (now DBS Bank) was established as a financing institution for development spending. The Post Office Savings Bank (now POSB) served as the main retail bank for the local population; through its deposit-taking activities, it also allowed the government to

\textsuperscript{11} These include for instance, Japan–Singapore Technical Institute, Japan–Singapore Training Centre, Japan–Singapore Institute of Software Technology, French–Singapore Institute, German–Singapore Institute, Philip-Government Training Center, Tata-Government Training Center and Rollei-Government Training Center etc.

\textsuperscript{12} Started initially as a collaboration with the Wharton School of the University of Pennsylvania, SMU adopts a US liberal arts approach to tertiary education, marking a departure from the British educational system followed by the other two main universities (National University of Singapore and Nanyang Technological University).
mobilize high levels of savings for public spending on productive projects. Other GLCs also played and continue to play important roles in increasing the efficiency of the economy. While many GLCs have been privatized, Temasek Holdings — one of Singapore’s two sovereign wealth funds — retains a significant and sometimes controlling minority ownership stake in them, creating the possibility of encouraging or directing investments in projects that could generate substantial positive externalities for the economy.

Statutory boards and GLCs are also mobilized to develop the new clusters of economic activity that might not make Singapore more attractive to MNCs, but are seen as important to the realization of the government’s vision for the economy. These projects have not always turned out to be resounding successes, pointing to the risks of having the state invest beyond public good provision. Two examples of the state-led development of industrial clusters are described in the Appendix A: while Jurong Island has successfully grown into a globally important cluster of chemical industries, the biotechnology initiative remains a work in progress.

2.6. Effective state institutions to implement government policies

The government has counted on a strong civil service and a system of statutory boards, together with other state institutions, to implement its policies. In general, these institutions, based on meritocratic management and low corruption, have been effective in delivering the desired outcomes. A carrot and stick approach was taken to minimize corruption in the public service. Senior policymakers including Ministers were charged in court for corrupt practices, and a few high profile cases in the 1970s served to deter others. At the same time, wages for civil servants were made comparable to private sector wages, to help the government recruit and retain talent, and reduce the incentive to engage in corrupt practices.

Statutory boards provided the government with added flexibility in using the public sector to help achieve its goal of high economic growth. To increase their effectiveness and to reduce bureaucratic inertia, many statutory boards were given significant autonomy to carry out their tasks, with rewards to the officers being aligned with their performance. This flexibility allowed the EDB, the statutory board responsible for attracting MNCs and providing them with one-stop service to set up operations in Singapore, to be successful, which in turn contributed to the success of the FDI-driven growth strategy (Chan, 2002). When first set up, the EDB was granted extensive powers, initially entrusted with the financing of industries, workforce development and provision of incentives as well as development of industrial estates. This allowed foreign firms to start up in Singapore relatively quickly. To instill confidence, the EDB entered into joint ventures with foreign investors in certain industries. It also took charge of skills training and upgrading of Singaporean workers, investing in the development of human capital to meet the higher skills needs of foreign companies. As the chief marketing agency for Singapore, the EDB set up offices in major cities which it saw as likely sources of target investment; EDB officers were given considerable latitude in their marketing approach, much like marketing
in the private sector, and were often able to enlist the help of political office holders in their marketing efforts. The flexibility and resources that the EDB enjoyed provide yet another example of the government’s pragmatic but relentless pursuit of its FDI-driven growth strategy.

3. Building an Innovation-Driven Economy

This FDI-driven growth strategy was largely successful in helping to generate growth and create jobs during the first 35 years of Singapore’s history as an independent nation. The large and continuous inflows of FDI helped transform Singapore from a trading and logistics hub in the 1960s into a major manufacturing hub by the 1980s. There was also significant skill upgrading in the economy during this process. Over the years, with the inflow of the relevant MNCs, Singapore was able to shift its core manufacturing activities from labor-intensive manufacturing industries such as textiles and electronics to capital-intensive industries like petrochemicals, and then technology-intensive industries such as semiconductors and telecommunications. At the heart of such success was the government’s commitment and ability to maintain Singapore’s efficiency edge over other Asian countries.

By the late 1990s, however, the government appeared to have come to the conclusion that the “foreign investment driven” growth model might have run its course, given the changing comparative advantages in the region, the rapid pace at which neighboring countries were catching up with Singapore in providing efficient infrastructure (such as world-class international airports), rising costs in Singapore itself, and the increasingly “footloose” behavior of MNCs. There was general agreement that infrastructure and regulatory efficiency alone would not suffice to sustain Singapore’s economic competitiveness in the long run and that the next phase of development had to center on creativity and innovation. Growth should be driven by industries characterized by rapid innovation and productivity increase, with significant agglomeration effects.

The Economic Review Committee, a government committee setup to map out the medium term growth strategy for the economy, identified bioscience, global banking and finance, wealth management, lifestyle industries, arts and culture, media and design, education and healthcare, among others, as examples of such industries (ERC, 2003). Manufacturing would continue to be a key pillar of the economy and was envisaged to account for 20% to 25% of GDP, though the emphasis was on encouraging manufacturing with higher innovation content. Greater emphasis was placed on the development of services industries especially exportable services with the capacity to leverage on the size of the global market.

There was also a belief that to attract and build up such innovation-driven industries, efficiency still matters, but even more important is the presence of a critical mass of creative talent. If there was not a sufficient supply of creative talent domestically for the many clusters being simultaneously targeted, then Singapore should be prepared to again leverage on the global economy by sourcing the talent required from abroad. The implicit assumption was that, in an innovation economy, the existence of a critical mass of creative
talent would attract companies, rather than the other way round: companies engaged in innovative work would only setup in a location with an established adequate supply of creative talent.

Indeed, the Reports of both the Economic Review Committee (ERC, 2003) and the Economic Strategy Committee (ESC, 2010) emphasized the importance of making Singapore “a leading global city, a hub of talent, enterprise and innovation” and “the most open and cosmopolitan city in Asia, and one of the best places to live and work in”.13 This decision marked a fundamental shift in Singapore’s growth strategy: from attracting MNCs to attracting foreign talent. To successfully attract the creative foreign talent it needs, Singapore would have to position itself as a “global city”. Instead of investing only in efficiency enhancing infrastructure and policies, the new focus was to increase Singapore’s cosmopolitan appeal so that international creative talent would choose to live and work here. The objective of economic policy remained unchanged — high GDP growth and accumulation of surplus — but growth would now be driven by foreign talent instead of foreign investment.

With its pragmatic approach, the Singapore government moved quickly to make a number of major policy changes. First, the immigration and foreign worker policy was substantially liberalized, with the approval criteria and processes for employment passes, permanent residence and citizenship considerably relaxed. The liberalization specifically targeted creative talent, entrepreneurs, professionals, High Net Worth Individuals (HNWIs), and students. A new category of employment pass, the S-Pass, was introduced to speed up the inflow of foreigners who might have the potential to be part of the entrepreneurial and creative class. The number of foreign workers and new residents shot up sharply. Between 2004 and 2014, the size of the nonresident workforce rose 121%, while resident workforce grew by 26% (Ministry of Manpower, Singapore, 2014).

The government also embarked on massive investments in infrastructure to make the business environment more conducive for innovation activities. Intellectual property rights laws were strengthened and government spending on R&D activities substantially increased. The government stepped up its investment in a wide array of industries such as the bioscience industry (e.g., construction of the massive One North project at Buona Vista Road, generous offers of scholarships, job opportunities and permanent residency status for R&D personnel and their spouses, and subsidies, co-investment and other incentives for pharmaceutical companies), wealth management (e.g., farming out state funds and providing generous fiscal and financial incentives to fund management companies, setting up a wealth management institute to increase supply of the relevant skill sets), education (e.g., the EDB’s Global School House project to attract well-known foreign academic institutions to setup campuses in Singapore, through generous subsidies and other incentives), among others.

Substantial resources were also poured into the “make-over” of the city, to offer creative talent similar lifestyles that they could enjoy in other global cities like London, Boston and

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New York. There was extensive renewal of the city landscape and construction of various “iconic” projects e.g., Esplanade, Gardens-by-the-Bay, F1 and Integrated Resorts. There were also efforts to relax the rules for doing business and even attempts to relax political and social rules to allow for more diverse lifestyles. All these policy shifts were aimed at changing Singapore’s image as a boring “nanny state”, making the city–state a more exciting place to live in.

15 years after the launch of the “foreign talent driven” growth strategy, the results have been mixed at best. The government was able to achieve its GDP growth target: the average annual growth rate from 2000 to 2014 was about 5.4%, higher than in most developed economies. The country’s production pattern and industrial landscape did undergo a significant change. Services now account for a larger share of the economy (67% of GDP in 2014 compared with 61% in 2000), and industries such as pharmaceuticals, banking and finance, wealth management (especially private banking), education and creative industries have significantly increased their presence in the economy.

With respect to the objective of surplus accumulation, the government reported smaller fiscal surpluses in this latter period, but this was based on an accounting approach that differed from other countries’ which the International Monetary Fund favored. Despite these smaller reported surpluses, the assets owned by the government expanded from $615.9 billion as of March 2009 to $833.7 billion as of March 2014, suggesting that the actual fiscal surpluses were indeed quite large. The country’s foreign reserves rose from US$80 billion in 2000 to US$257 billion in 2014. There has also been a significant change in both the physical landscape and the social milieu. Singapore in 2015 is much more cosmopolitan, more of a global city, offering a more diverse culture and lifestyle than in 2000. As in the earlier period, the government’s approach to intervention in the economy, with decisive changes in various economic and social policies, helped bring about such a fundamental transformation within a relatively short period of time.

However, the glowing picture at the macroeconomic level masked some worrying trends that emerged during this period, which could also be attributed to the government’s approach to managing the economy. First, while the number of high income, creative foreign talent did surge, there was an even bigger increase in the number of low skill, low income foreign workers. The number of employment passes increased from 99,200 in 2007 to 178,900 in 2014, while work permits rose from 757,100 to 991,300, and 887,600 S-passes were issued (Ministry of Manpower). Not surprisingly, the 15-year period saw dismal performance in productivity growth, with labor productivity growth falling from 3.4% a year in the 1990s to 1.1% a year from 2000–2009 (Monetary Authority of Singapore, 2010). From 2009 to 2014, labor productivity grew by only 0.3% a year on average if the exceptional sharp recovery of 2010 is excluded; and in 2014, it declined by 0.8% (Ministry of Trade and Industry, 2014).

Why did the government allow such a sharp inflow of low skill, low productivity foreign workers when the explicit objective of the foreign talent driven growth strategy was to attract only innovative, high-productivity foreign talent? A major reason, as Prime Minister Lee Hsien Loong noted, was that the government did not want to miss out on
growth opportunities when they arose.\textsuperscript{14} It did not want to turn down demand for work permits for foreign workers in industries such as construction and food and beverages, for fear that doing so would curb production and affect the GDP growth performance. In short, the problem was one of basic “policy inconsistency”: the government did what was good for the short term objective of high growth even if this ran counter to its long term objective of structural transformation to an innovation driven economy. This outcome could be attributed to a large extent to its near exclusive focus on yearly GDP growth as the primary objective of economic policy.

A second worrying trend that emerged since 2000 is a sharp rise in income inequality and wage stagnation among lower income groups. This made Singapore (together with Hong Kong and the U.S.) one of the most unequal of developed economies. Singapore’s Gini coefficient rose sharply from 0.442 in 2000 to 0.478 in 2012, before falling to 0.464 in 2014. Transfers from government benefits and taxes somewhat moderated this deterioration in inequality: post transfers, the Gini coefficient rose from 0.430 in 2000 to 0.432 in 2012 and fell to 0.412 by 2014. Meanwhile, the ratio of average incomes between the top quintile of employed households and the bottom quintile increased from 10.1 in 2000 to 12.9 in 2010 (Department of Statistics, Singapore, 2011).

Many factors could have contributed to this increase in income inequality. External factors like the forces of globalization and technological change played a large part. But so did domestic factors, most of which could be attributed to the government’s approach to intervention in the economy.\textsuperscript{15} Its fiscal strategy has generally been to favor the supply side, with a tax regime targeted at increasing the incentives for more work. The shift in policy focus to attract more creative talent added to the pressure to reduce income tax rates given competition for talent from other cities such as Hong Kong. Personal income tax rates were aggressively reduced, from a top rate of 28\% in 2002 to 20\% in 2007. Combined with increases in the Goods and Service Tax (GST), which is regressive in nature, this made the tax system less progressive. Increased government spending on lower income groups has not been sufficient to offset the regressive effects of changes in the tax regime.

Pursuit of the “global city” vision and the foreign talent driven growth strategy probably also contributed to rising inequality. The inflow of high income talent raised average incomes at the top of the income distribution, while the inflow of low-skilled foreign labor depressed wages at the bottom, leading to wider income disparity. This trend might have been accentuated by the government’s spending priorities during this period, which focused on making Singapore attractive to the global elite. This could have added to “agglomeration effects” which raise incomes at the higher end of the labor market faster than at the middle and lower end. In addition, there are the negative externalities resulting from the more liberal immigration policy, such as congestion and rising costs of living (Bhaskaran et al., 2012).

\textsuperscript{14}At the IPS Year in Perspective Conference, 2013, Dialogue with Guest of Honour Prime Minister Lee Hsien Loong, PM Lee said, in response to a question by Leon Perera on managing public infrastructure and population size, that he wanted the country to “make up for lost time” and thus the population, including foreigners, grew faster than expected, placing a strain on infrastructure.

\textsuperscript{15}See Bhaskaran et al. (2012) for more detailed discussion on this issue.
A third worrying trend is greater growth volatility in the economy. Between 1998 and 2009, Singapore experienced four recessions. As others have pointed out, the new industries the government bet on to be the leading drivers of growth (e.g., pharmaceuticals, banking and finance) tend to be of the high growth, high volatility type (Choy, 2010; Tan and Phang, 2005). Furthermore, adopting an investment approach almost akin to that of a private equity investor — putting bets on many new industries with the expectation that some would pay off handsomely even if others fail — limited the likelihood of developing sufficient depth and globally competitive scale in any of these industries, since all would be competing for already extremely scarce resources (including skills, thereby pushing up the skill wage premium and contributing to rising inequality).

Fourth, high economic growth since 2000 has been accompanied by a noticeable deterioration in the quality of life as infrastructure provision failed to keep pace with the increase in population, congestion worsened while inflation (especially asset price inflation) rose sharply, arguably reducing the attractiveness and affordability of life in the city-state. Policy and planning failures were to blame here: failure to build up adequate infrastructure before letting in the large number of new immigrants and foreign workers, and poor coordination among various government agencies. More importantly, the near exclusive focus on economic growth rather than on broader measures of citizen well-being, and the ability to shield itself from political pressures due to tight political and media control — which had previously facilitated the government’s basic approach to managing the economy — lie at the root of the problem.

Fifth, if the ultimate aim of economic strategy since 2000 was to build an innovation led economy, the results have yet to be seen. Table 4, which summarizes recent trends in the INSEAD ranking of innovation in countries across the world, shows that Singapore’s overall ranking has actually slipped since 2011. More importantly, the ranking still appears

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<th>Table 4. INSEAD Innovation Ranking — Singapore</th>
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<td>Overall Ranking</td>
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<td>Overall Innovation Input</td>
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<tr>
<td>Institution</td>
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<td>Human Capital and Research</td>
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<td>Market sophistication</td>
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<td>Overall Innovation Output</td>
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<td>Knowledge and technology output</td>
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<td>Creative output</td>
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<td>Innovation Efficiency</td>
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high only because Singapore has done well in mobilizing the inputs for innovation. The innovation outcomes were not as impressive, with the net result that in terms of innovation efficiency, Singapore ranks an abysmal 110th in the world. One possible consequence of this weak innovation capacity is the desultory performance of productivity growth. Ultimately, raising productivity requires an ability of companies to innovate, to re-engineer themselves so as to perform as well with fewer inputs. Charts 1 and 2 in Figure 1 point to Singapore’s less-than-satisfactory productivity performance in recent years.

4. Problems with the Singapore Model of State Intervention

The Singapore model of state intervention in the economy has been successful in delivering high growth and transformation into a fairly developed economy. However, as time progresses, some of the weaknesses are becoming apparent. In addition to the challenges highlighted in the previous section, in recent years, other problems that result from the growth strategy adopted in the earlier phase of development have come to the surface. The dissatisfaction expressed by voters in the 2011 general elections, and continued vocal demands for policy changes across a wide range of areas, point to some fundamental flaws in the government’s approach to managing the economy. They also raise serious questions about the sustainability of the same approach in the coming years.

4.1. Objective of economic growth

The government’s narrow economic policy objective of maximizing GDP growth is arguably at the root of many of the problems that the Singapore economy faces, since focusing on too narrow an objective could lead the state into policy errors. Economic growth can come with costs, and the fruits of growth could be poorly distributed. For example, Singapore’s share of wages in GDP is much lower than in developed OECD countries, and a significant portion of the higher share of profits in GDP is repatriated to the home countries of MNCs, a result of relying on them as the engine of growth.


Figure 1. Labor Productivity

![Chart 1: Weak productivity](chart1.png)

![Chart 2: Growth driven by inputs not productivity](chart2.png)
(Bhaskaran *et al.*, 2012). Thus the benefit to the average Singaporeans is much less than GDP growth and per capita GDP would suggest.

The government might have done better if its economic policy objective had been broader, such as maximizing the well-being of Singapore citizens in a manner that can be sustained well into the future. A broader set of indicators which would have better served the interests of the average Singaporean could have been used to measure economic performance, including, for example: (a) median real household income or consumption, with emphasis placed on enhancing the well-being of the most disadvantaged elements of society, such as the bottom quartile with reference to a well-researched poverty line defining a minimum basket of goods services including adequate human capital investment; (b) adequate social security against the volatility of an open global economy, including ensuring adequate funding for retirement and healthcare for all Singaporeans (Stiglitz *et al.*, 2008).\(^{16}\)

If the objective of economic policy had more truly reflected the overall needs and desires of the citizens of Singapore, then the angst that many Singaporeans now feel over a range of issues might have been avoided. In this regard, a quality of living index reflecting key aspects of well-being for the average citizen would have been useful. It is difficult to see how a growth approach that ignores inequality and other issues that matter to the well-being of citizens can be sustainable in the long term, both economically and politically. As has been pointed out, “a more comprehensive measure of the well-being of Singaporeans which incorporates these various economic and social indicators would also help government gauge the impact of its policies on citizens’ well-being” (Low *et al.*, 2013). The long-established incentive structure for political office holders and other policymakers (e.g., linking their remuneration to GDP growth rates) would have to be modified to reflect the importance of achieving broader objectives in public policy making.

### 4.2. Building “inherent production capacity” and developing strong local enterprises

There are also questions about the relevance and effectiveness of the government’s current approach in ensuring future economic growth. One outcome of relying excessively on foreign companies and foreign talent to drive the growth of the economy is a serious lack of indigenous production capacity, which could pose challenges for the long run sustainability of the growth process, given the likelihood of “footloose” behavior on the part of foreign entities and individuals.

Economic development goes beyond just achieving a certain level of per capita income: for example, resource-rich countries may have high per capita incomes but would not qualify as “developed”. A core part of economic development includes developing the inherent capacity of citizens and locally-owned companies to create value on a sustainable and durable basis. Inherent capacity could be defined generally as the critical “software” that incorporates the blueprints for successful economic activity held by a country’s

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\(^{16}\) Economists have made various proposals to improve on the measure of economic well-being beyond GDP growth rate. See for example, the report by the Commission on the Measurement of Economic Performance and Social Progress (Stiglitz *et al.*, 2008).
indigenous workers and companies. This includes accumulated financial capital, workers’ skills, locally-owned intellectual property and capacity for innovation, the accumulated intangible experience, management and operating processes, knowledge of markets etc. stored in Singapore-owned companies or other entities such as universities, research centers and industry associations. It would also include the adapted cultural habits and institutions in society that enable economic agents to work together to produce results, including, more broadly, social resilience and cohesiveness.

A growing body of research has discussed the rising importance of elements of “intangible capital” in accounting for the greater part of growth in advanced economies like the United States (Corrado et al., 2006). Such “intangible capital” includes skills, research and development, brand equity etc. which are located within companies. Some argue that it should not matter whether economic value is created by foreign rather than local companies. This is questionable. First, broadening and deepening inherent capacity is important because it makes it more likely that Singapore workers and companies would prosper over the long run, despite unforeseen structural changes in the global economic environment. Second, a diversified economy including local as well as foreign enterprises in a varied range of activities increases structural resilience, enabling a faster recovery to shocks since the economy would not be depending just on MNCs.

There are two key problems that Singapore faces in developing its inherent capacity: possible distortions in an ecosystem that might be hindering local enterprises, and lack of economies of scale. Singapore’s industrial ecosystem in export manufacturing consists primarily of foreign-owned MNCs with local enterprises forming an essentially supporting industry infrastructure. This contrasts with the export manufacturing structures in Germany, Switzerland, Scandinavia, Japan, Korea or Taiwan, where a core ecosystem of globally competitive SMEs (e.g., Germany’s Mittelstand) continually give rise to a few globally competitive national giants. This domestically-owned, medium-sized manufacturing ecosystem has proved its durability and competitiveness over the decades, especially in Germany where it has been the backbone of the world’s foremost high value-added export economy since the 1950s. German SMEs account for 40% of German manufactured exports, 85% of industrial output, 75% of industrial patents, and train 80% of German apprentices (Venhor and Meyer, 2007). Similarly, Singapore needs to develop a mixed ecosystem in its globally competitive services sector. Important complementarity exists between manufacturing and services: for example, Hong Kong’s domestic manufacturing ecosystem has largely migrated to Shenzhen, but continues to be serviced by Hong Kong-based sales and business services operations, allowing Hong Kong to earn important investment income. This underlines the importance of an industrial hinterland for developing globally competitive local firms and linkages over time.

The view that Singapore is simply too small to provide economies of scale for local enterprises is not necessarily correct. The Singapore economy is not small, with a GDP almost as large as that of countries with substantially larger populations, such as Pakistan. But Singapore’s state dominated economic model has tended to produce an extraordinarily

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17 German businesses generated a trade surplus of US$200 b in 2006, greater than those of China and the U.S.
low ratio of private consumption to GDP, thus reducing the potential scale economies for local enterprises that address the domestic market. Using analysis from input–output tables, some economists have argued that stimulating private consumption can have larger multipliers and less import leakage than conventionally assumed (Kapur, 2009). Further, consumption constitutes less than 40% of GDP in Singapore, but over 60% in Hong Kong, another equally small and open economy. Singapore’s large current account surplus, which for decades was above 25% of GDP though it has recently fallen slightly to about 20%, also suggests that local consumption potential is underdeveloped. Another limitation is local enterprises’ weak access to neighboring countries’ domestic markets: if there were greater ASEAN economic integration, Singapore’s local enterprises would have more opportunity to scale up their activities.

The government has setup various committees over the years to promote the growth of SMEs in Singapore, with limited success. One reason for this might be that the actual and effective assistance provided to SMEs paled in comparison to that offered to MNCs and GLCs because of the latter’s perceived ability to expand GDP on a larger scale. Following the Economic Strategies Committee (ESC) Report in 2010, a renewed effort has been made to “kick start” the growth of SMEs, with a wider range of assistance being made available to them and a government agency, Spring Singapore, tasked to develop the SME sector. For example, the Productivity and Innovation Credit (PIC) and PIC+ have been rolled out to help SMEs restructure as the supply of foreign workers is reduced. These schemes offer tax deductions and/or cash payouts on qualifying expenditures which boost innovation and productivity. Spring Singapore also partners with third-party investors and co-invests in promising enterprises. It helps SMEs attract talented personnel by sponsoring their studies and guaranteeing them a job after graduation: Participating SMEs are eligible for up to 70% funding support covering the student’s tuition fees, monthly allowance and a sign-on bonus for final-year students. Successful students are then bonded to the sponsoring SMEs for two years after graduation (Tan and Gan, 2012).

4.3. Linkages with the hinterland

While Singapore sees the global economy as its hinterland, both as a market for its products and as a source of supply of capital, talent and labor, there is a strong argument for deeper integration with its closer regional neighbors. The right linkages to the right hinterland offer local businesses expanded business opportunities, potential scale economies, and a way to become more cost-competitive.

First, expanded regionalization can provide supply-side economic and social infrastructure for the development of Singapore as a global city, and expand the economic space available for local enterprise. For example, complementary land and labor resources may be available from the neighboring Iskandar region of Malaysia, and land- and labor-intensive parts of port services and manufacturing could be relocated there, releasing valuable land and scarce labor for higher value uses that would produce a net increase in incomes in Singapore. The availability of a cheaper place for retirement or even to live and
commute from could directly increase the welfare of Singaporeans as would the availability of cheaper and more diverse recreation facilities, as is increasingly the case in Hong Kong’s relationship with the Pearl River Delta area.

Second, regionalization would provide Singapore with a larger, longer-term market for goods and services. The Iskandar region and Riau Islands of Indonesia would give Singapore an effective domestic market of 7 to 8 million, on par with Hong Kong and some highly successful sub-regions in Europe and North America. This would otherwise be impossible to achieve over a similar time frame, even with rapid immigration of unskilled labor and without the attendant social integration problems (Yusof, 2007). A network of more comprehensive free trade arrangements could link Singapore with the larger population centers and future large economies of Indonesia (population 230 m), Indochina (150 m), and even the Greater Mekong Sub-Region (400 m to 500 m, including Southeast China). Development of the Greater Mekong Sub-Region shows the importance of (a) building a wide network of transportation infrastructure so that connectivity is substantially improved; and (b) a comprehensive effort to identify and eliminate bureaucratic and other regulatory impediments to the free flow of goods and services. Appropriate government policies could help Singapore improve its linkages with the regional hinterland. These would include (a) improving relations with Malaysia and Indonesia to the point where all three countries could cooperate on the basis of trust and confidence that mutual benefits would flow,18 (b) stepping up infrastructure construction and streamlining border controls to improve physical connectivity between Singapore and the Iskandar Region on the one hand and with the Riau Islands on the other.

5. Conclusion

This review of the role of the government in Singapore’s economic development highlights a number of issues. First, a state-driven economic development model like Singapore’s can succeed in delivering superior economic growth where the government has strong political authority sustained by ensuring that the benefits of such economic development are delivered to the citizenry. Second, the efficacy of such a model of development appears to wane after some time: in the second phase of Singapore’s development, economic growth slowed while improvements in living standards appear to have plateaued.

Third, in Singapore’s case this decline in economic performance results from a failure to go beyond mobilizing resources and directing them to a narrow objective of economic growth. In a phase of growth where more complex and multi-faceted development is needed, the Singapore state’s vaunted core competencies in mobilizing resources has so far not appeared sufficient to the task. These tasks — developing inherent capacity (the skills and capacity of citizens and citizen-owned businesses), tackling a widening income gap, generating an indigenous innovation capacity, and finding bold strategies to secure its neighbors’ cooperation in creating a larger hinterland for the Singapore economy — are more complex and may well require skill sets not adequately developed in the government system.

18 In recent years, the government has succeeded in building a stronger relationship of trust with Malaysia, with the result that more efforts are underway to ensure a more seamless integration of Singapore’s economy with the Iskandar Region.
Appendix A

A.1. Case study 1: Development of Jurong Island

One of the most recognized results of the rapid industrialization of Singapore would be the establishment of Singapore’s energy and chemicals industry on Jurong Island. In 2012, this key pillar of Singapore’s economy contributed an estimated S$100bn or 35% of Singapore’s total manufacturing output. More than 100 companies, including ExxonMobil, Shell and Chevron, are located on the man–made island, focused on petrochemicals and specialty chemicals. The industry has attracted cumulative fixed asset investments of more than S$47bn, and reflects Singapore’s determination in sharpening its competitive edge with aggressive investments in physical infrastructure to create new synergies.

The success of the Jurong Island development stems from deep collaboration between businesses and government, the ability to execute large, integrated projects, and a keen eye trained on the far horizon to ensure that Singapore is able to ride the waves of global megatrends. Rex W. Tillerson, ExxonMobil’s chairman, values the “stable policy course that encouraged international investment, teamwork and advanced technologies”. Singapore currently accounts for up to a quarter of ExxonMobil’s global chemicals capacity, and will rank as its largest specialty chemicals manufacturing site once two new plants come online.

These qualities are still constantly refined today. Integration of facilities was crucial to Singapore’s ability to establish sizeable infrastructure. S$7bn of reclamation work was invested to unite seven small offshore islands into one; physical reclamation work started in 1995 and was completed in 2009, two decades earlier than the initial target completion date of 2030. This tripled the original landmass to 3200 ha, enabling realization of the German concept of Verbundstandort, or composite site, where companies could share common facilities, and output from one facility would become the inputs of another. This is crucial for an industry whose margins are affected critically by its feedstock costs. The current flux of energy prices has, however, been challenging. Companies such as Lanxess and Shell have voiced concerns over Singapore’s rising costs. The United States is becoming an increasingly attractive location for manufacturing sites due to significantly cheaper feedstock options, while Saudi Arabia has also positioned itself as another destination from which to meet the chemical demand of Asia-Pacific nations.

The government works hard to stay ahead of the curve. The Energy Market Authority is seeking to appoint two more liquefied natural gas (LNG) importers to increase competitiveness, while increasing the capacities of LNG terminals on Jurong Island. The government has also launched initiatives such as the Energy Efficiency Improvement Assistance Scheme and Grant for Energy Efficient Technologies to help bring down relevant costs. This has not been the first display of the government’s immense willingness to meet the evolving needs of businesses through the years. When ExxonMobil wanted to build a second plant beside its first, the government spent S$100m over two years diverting 1 km of the Jurong Island Highway, and 17 pipes carrying industrial water, carbon monoxide and natural gas. Besides actively wooing investments by the chemicals industry in Jurong
Island, the government goes the extra mile to ensure that these companies have the competitive edge they need to ensure that Singapore remains a premier global chemicals hub.

Moving downstream into specialty chemicals has been a critical development for Singapore’s industry positioning. Margins are more stable in this low volume but high margin sector, and the high technical expertise required has translated into well-paying skilled jobs. Government coordination of the construction of mega-complexes helps deepen synergies. The Jurong Town Corporation (JTC) Chemicals Hub at Tuas View will house multiple companies, including local SMEs, involved in further processing of chemicals. Incorporating safety-compliant features and shared facilities will reduce both capital investments and setup time for chemical companies, and increase the accessibility of input materials.

At the same time, the government is implementing productivity improvement schemes. The Process Construction and Maintenance sector (PCM) has teamed up with plant owners and relevant government agencies, forming six working groups to boost productivity further. This will be accomplished through relatively simple initiatives, such as the construction of a dormitory near Jurong Island to reduce travelling time for workers whose increased rest time would in turn lead to higher on-site productivity.

The government’s active role in cultivating industry-wide partnerships has been critical in ensuring that the industry remains progressive. A quote from Vince Sinclair, Wood Mackenzie’s Asia head of chemicals research, captures the government’s mission: “Singapore is different in that the hand of the state is there in enabling things, but not directly involved. It probably makes it more efficient.”

A.2. Case study 2: The biomedical industry in Singapore

Singapore’s reputation as a manufacturer of high quality and complex goods has contributed to the development of the Biomedical Sciences (BMS) industry, with the participation of global pharmaceutical corporations, and partnerships with local enterprises. The government has committed S$3.5b to enhancing current research and development infrastructure, largely by expanding the flagship Biopolis at One North, which houses key research institutes. The BMS industry has seen manufacturing output increase from S$6b in 2000 to S$29.4b in 2012, when it accounted for 25.2% of total manufacturing value-added. Employment also increased from 6000 to 15,700.

Spring has implemented various schemes to involve home-grown medical technology SMEs in the industry. Private Sector Translators, AITbiotech and IPTech work together with the agency to help identify, develop and commercialize intellectual property via a pay-per-use model. This helps to reduce firms’ capital expenditure and the incubation period through provision of R&D services such as validation and feasibility studies. The Research, Innovation and Enterprise (RIE) 2015 plan commits S$70m to four accelerators with established records in various medical technologies: they are to identify, and co-invest with Spring Seeds Capital, Spring’s investment arm, on a 1:1 basis, in start-ups. A multitude of tax and non-tax incentives have also been lavished on the industry to nurture start-ups. Angel investors who invest a minimum of S$100,000 in start-up companies for
a holding period of two years receive a 50% tax deduction, while start-ups receive tiered tax exemptions in their first three years. Investment allowances, cash grants and reimbursements under various support schemes also reduce research and development expenditures. It is hoped that Singapore’s healthcare industry, which requires innovation-led growth to deal with the challenges of an ageing population, will provide a great test-bed for locally-developed technologies.

References


