

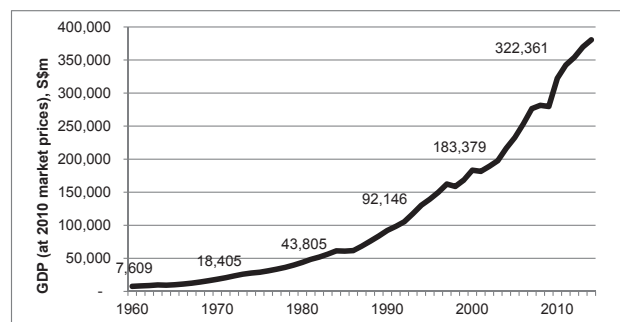
Building Global Competitiveness the Singaporean Way

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Fifty years ago, Singapore was thrust into independence when it separated from the Federation of Malaysia. Just two years earlier, the Singapore government had been convinced that it had to merge with Malaysia for economic survival.² Merger would provide Singapore's manufacturers with a common economic market of 10 million people, and access to abundant natural resources.³ But due to political differences between the Singapore and Kuala Lumpur governments, Singapore - then a 587 square kilometres island,⁴ lacking in natural resources, an industrial capital class and industrial skills⁵ - became an independent state on 9 August 1965.

Singapore's historical circumstances and geographical limitations have shaped its economic priorities. With the loss of the Malaysian hinterland, Singapore had to produce for regional and global markets. At independence, export-led industrialisation joined the existing entrepot trade as a growth engine. This twin growth strategy paid off; between 1960 and 2000, Singapore's real gross domestic product (GDP) doubled almost every decade (see Figure 1). In 2012, Singapore's GDP per capita (adjusted for purchasing power parity) was the sixth highest in the world at US\$60,500, putting it ahead of all G7 countries.⁶



Source: Department of Statistics of Singapore
Note: JPY/SGD = 90.4

Figure 1: Singapore's GDP at 2010 market prices, 1961-2014 (in S\$million)

How did Singapore do it? In this article, we explain the government's role in building Singapore's global competitiveness. Singapore is, in fact, well regarded as a globally competitive economy. For instance, in 2014, the World Economic Forum ranked Singapore as the most competitive country in the Asia-Pacific region, and second globally (behind Switzerland).⁷ In 2012, the Economist Intelligence Unit ranked Singapore third for global city competitiveness (behind New York, and London).⁸ We focus, in particular, on how the government's pro-development mindset, agencies, and infrastructure have impacted Singapore's global competitiveness. We conclude by examining some future challenges that Singapore might face.

¹ The authors thank colleagues from the Centre for Liveable Cities, and Singapore Economic Development Board (EDB) for their useful suggestions and comments. EDB also provided the images used in this essay.

² S. Dhanabalan, "I was a 'Rookie' at EDB," in Heart Work ed. Koh Buck Song (Singapore: Singapore Economic Development Board, 2002), 24-25.

³ "I was a 'Rookie' at EDB," 25.

⁴ Richard Marshall, "New Downtown - Ideas for the City of Tomorrow," in Emerging Urbanity: Global projects in the Asia Pacific Rim ed. Richard Marshall (London: Spon Press, 2003), 152.

⁵ Goh Keng Swee, "Why Singapore Succeeds," in *The Practice of Economic Growth* (Singapore: Marshall Cavendish Academic, 2004), 19.

⁶ Index Mundi, "Country Comparison= GDP-per capita (PPP)," updated on 1 January 2012, <http://www.indexmundi.com/g/r.aspx?v=67> (cited on 25 May 2015).

⁷ World Economic Forum, "The Global Competitiveness Report 2014-2015," <http://reports.weforum.org/global-competitiveness-report-2014-2015/report-highlights/> (cited on 15 May 2015).

⁸ Economist Intelligence Unit, "Hot Spots: Benchmarking global city competitiveness," <http://www.economistinsights.com/sites/default/files/downloads/Hot%20Spots.pdf> (cited on 8 June 2015).

Pro-Development Mindset

Most governments strive for economic development and none more so than the Singapore government. In the early days of independence, even the Defence Ministry acknowledged that Singapore's Economic Development Board should have its share of Singapore's best returning public sector scholars. As the argument went, "what was there to defend if we did not have economic development?"⁹ In a similar vein, the greening of Singapore, initiated by founding Prime Minister Lee Kuan Yew to improve the quality of the urban environment, also had a pro-development angle. To Mr. Lee's mind, "well-kept trees and gardens were a subtle way of convincing potential investors in the early crucial years that Singapore was an efficient and effective place".¹⁰

Given the emphasis on economic development, it is not surprising that the Singapore government has cultivated a pro-growth environment. It has put in place pro-business policies such as a transparent and predictable legal system; strong government institutions and good infrastructure; competitive tax rates; and made significant investments in education, skills training and R&D. At the same time, the government balanced growth with other key considerations. For example, it rejected investments in iron ore smelting, and in paper and pulp industries that would have imposed high environmental costs.

Agencies

One of the pro-growth measures the government undertook was establishing economic agencies and state-owned enterprises (SOEs). Together, these organisations support industrialisation, trade, tourism, and ensure peaceful industrial relations.

Industry

The Economic Development Board (EDB) was, perhaps, the most critical of all economic agencies. It was established in 1961 to attract investments by creating and promoting a pro-business environment in Singapore.

In the early days, EDB fulfilled its mandate in four main ways. First, it led the development and management of industrial infrastructure. Second, it provided commercial loans and tax incentives to investors. Third, it started training programmes for workers to upgrade their skills. Fourth, it undertook a vigorous overseas promotion programme to inform foreign companies about the opportunities in Singapore. It did this by establishing overseas offices in places such as Hong Kong and New York City to convince foreign businessmen to invest in Singapore. It also served as a one-stop shop for investors, providing assistance with loans and tax incentives, industrial land and infrastructure as well as training of manpower.¹¹

By 1968, the scale of work had grown to such an extent that two other organisations were carved out from EDB. The Jurong Town Corporation (now known as JTC Corporation) took over the development and management of industrial infrastructure. It later expanded its role to include innovation in industrial infrastructure. The Development Bank of Singapore Limited (DBS) took over loan financing.

Today, EDB, JTC and DBS remain important institutions in Singapore's economic development. EDB and JTC have continued their close collaboration to develop strategic economic projects such as Jurong Island (petrochemicals), one-north (biomedical), Seletar Aerospace Park and Cleantech Park (an eco-friendly business park).

Trade

Trade remains an important growth engine, and is worth three times Singapore's GDP. It has been supported by government agencies that maintain world-class port facilities, and that help local businesses to internationalise.

The Port of Singapore Authority (PSA) was established as a statutory board in 1964 to manage and develop Singapore's shipping ports. In 1972, Singapore became the first port in Southeast Asia to accommodate third-generation container vessels when PSA opened its first container berth. As container traffic grew in the 1980s, PSA embraced automation and computerisation for its port operations. PSA was corporatised in 1997 to ensure

⁹ "I was a "Rookie" at EDB," 31.

¹⁰ The Straits Times. "The selling of S'pore: How even trees matter," August 1, 1996, 1.

¹¹ "Experience and Prospect of Singapore's Economic Development: Strategy Formulation and Execution," 38.

that the port remained responsive to developments in the shipping industry. Today, Singapore is connected to more than 600 ports in 120 countries, and its port is one of the busiest in the world.



Picture courtesy of Singapore Economic Development Board

Image 1: Singapore's maritime port remains one of the busiest in the world

By the 1980s, the government recognised that it had a role to play in promoting local businesses overseas. The Trade Development Board (TDB) was established to serve this function. In the early days, the government took the view that the onus was on local businesses to decide if and when they wanted to exploit external markets. TDB supported these companies by organising trade fairs, and by helping them navigate foreign bureaucracies. But in 2002, the government undertook a more active role in building globally competitive local companies. TDB was renamed IE Singapore. Today, it helps local companies by providing expert advice, financial assistance, and capability and manpower development.

Tourism

On the eve of independence, tourism was a thriving sector. The government took the view that it needed to work with the private sector to fully exploit the growth opportunities in that sector. In 1963, the Singapore Tourist Promotion Board (STPB) was established to serve this purpose. Among other functions, the STPB promoted Singapore and its attractions, coordinated and regulated the activities of tourist-related businesses, and improved the quality of Singapore's tourist attractions.

The STPB has since been renamed Singapore Tourism Board (STB). Today, STB continues to leverage government and business expertise to grow Singapore's tourist sector. In recent years, for example, STB has worked closely with other government agencies, and businesses to develop new

tourist attractions such as the two Integrated Resorts – Marina Bay Sands, and Resorts World Sentosa. STB has also contributed tremendously to the growth and change in Singapore's retail and dining scene. These developments have made Singapore attractive not only to tourists, but also to locals and the global creative class.

Government-linked companies

Apart from statutory boards, the government also established state-owned enterprises, or government-linked companies. These companies usually championed industries that the private sector did not have the capacity to participate in. Some examples include the air, marine and offshore, telecommunications, and other capital-intensive industries. Unlike typical state-owned enterprises, Singapore's were not coddled, but were expected to be internationally competitive. Today, some of these enterprises – Singapore Airlines, ST Engineering, Keppel Corp, SembCorp Industries, DBS – are market leaders in their respective industries.

Manpower

The abovementioned agencies and companies were complemented by organisations promoting industrial peace. One such organisation is the National Wage Council (NWC), established in 1972 as a tripartite body for formulating wage adjustments. It comprises representatives from trade unions, employers' organisations, and the government. The NWC ensures that wage adjustments – which can be contentious – balance the interests of workers, employers and the broader economy.

Industrial Infrastructure

Another pro-growth policy has been to provide efficient and innovative industrial infrastructure. This infrastructure has had to evolve in tandem with Singapore's economic policies. In the 1960s, the priority was to support labour-intensive production that would absorb the unemployed and low-skilled workers. During this period, EDB led in the development of the Jurong Industrial Estate. To do this, EDB undertook comprehensive planning. It worked with other government agencies such as the Public Work Department, Public Utilities Board, Housing and Development Board, and PSA to provide roads, electricity, water supply, workers' housing, and an industrial port to

Jurong.¹² These measures rapidly expanded the supply of serviced and developable land, making it easy for labour-intensive firms to set up in Jurong. Indeed, Singapore was so successful in this regard that by 1972 it needed to accept low-wage immigrants from abroad to support the labour-intensive manufacturers.

It was during this time that the EDB began to look to high value-added production for growth. For example, it nurtured a capital-intensive chemical industry, and after the 1985 recession – the first in Singapore’s post-independence history – it focused on growing the services sector. These new priorities gave rise to a new generation of industrial infrastructure. For instance, JTC built business parks to accommodate non-manufacturing activities. One example is the Science Park, a specialised business park for R&D.

JTC also innovated. The new generation of infrastructure facilitated clustering so that companies operating within an industry could benefit from industry-wide economies of scale. Jurong Island is an early example of this. Jurong Island was developed to accommodate the growing petrochemical industry. It was formed by joining seven offshore islands using land reclamation. Common pipelines connect the petrochemical companies on the Island to each other, enabling them to pipe feedstock or finished products directly to one another. This reduces their transport costs.



Picture courtesy of Singapore Economic Development Board

Image 2: Jurong Island is an example of how JTC developed industrial infrastructure that supported clustering.

The Island also offers shared services such as warehousing, and waste treatment. By outsourcing these non-essential services, companies can focus on their core operations.¹³

Today, JTC develops industrial infrastructure that supports Singapore’s objective of being a globalised, entrepreneurial and diversified economy. The knowledge economy has led JTC to develop industrial infrastructure that supports new forms of hyper-connectivity between knowledge workers. As a result, social, commercial, and residential nodes surround office towers enabling knowledge workers to not only work in a township, but also to live, play, learn and in the process make new connections there. One notable development that does this is one-north, a 200-hectare site accommodating new growth industries such as biomedical sciences as well as infocomm and media. The development is located close to several universities to facilitate collaborations between businesses and academia too.¹⁴



Picture courtesy of Singapore Economic Development Board

Image 3: one-north provides knowledge workers with a live, work, play, learn environment. It comprises three purpose-built hubs – Biopolis (biomedical R&D facility), Fusionopolis (above, R&D in Infocomms, Media, Science and Engineering), and Mediapolis (digital media).

As industrial land expands into areas that were previously used for other purposes, JTC has also had to negotiate a balance between the conservation of built heritage and greenery and redevelopment and intensification. After all, conservation supports the tourism industry, and makes Singapore more attractive to locals and global talent. When the Seletar Aerospace Park was developed, JTC worked

¹² “Experience and Prospect of Singapore’s Economic Development: Strategy Formulation and Execution” , 39.

¹³ Chan Chin Bock, “How Singapore Became a Newly Industrialised Economy,” in *Heart Work 2: New Frontiers for the Singapore Economy*, eds. Chan Chin Bock et. al. (Singapore: Straits Times Press, 2011),18-19; and “Markets and Government: Striking a Balance in Singapore” .

¹⁴ Manohar Khaitani, “Infrastructure Innovation,” in *Heart Work 2: New Frontiers for the Singapore Economy*, eds. Chan Chin Bock et. al. (Singapore: Straits Times Press, 2011), 111-116.

with the Urban Redevelopment Authority – Singapore’s land use and conservation authority – to preserve 204 of the 378 colonial buildings in the area. JTC also worked with the National Parks Board, and a civic group, Nature Society, to identify 30 trees for preservation.

Government agencies have also partnered private businesses to develop iconic infrastructure; one-north, for instance, was co-developed by JTC and the private sector. The two Integrated Resorts (IRs) – Marina Bay Sands (by Las Vegas Sands) and Resorts World Sentosa (by Genting Singapore) were developed using private capital, and capabilities to grow Singapore’s competitiveness as a tourist destination. Both comprise lifestyle, leisure and tourist attractions such as casinos, concert spaces, hotels, world-class restaurants, convention and exhibition spaces, public spaces and gardens.

Looking Ahead

Fifty years on from 1965, Singapore’s economy and environment have been dramatically transformed. Singapore is thoroughly urban, and integrated into global markets. These have certainly supported economic development. But they have and will continue to pose challenges. We highlight three challenges.

The first challenge is sustainable growth. Generally, an economy grows when its level of inputs grows, or when it becomes more productive. But there is an important caveat: economists are of the view that input-driven growth is unsustainable in the long run. To use Singapore as an example, adding more labour and capital to its scarce land might result in congestion, which usually leads to escalating land (and property) prices, as well as wage competition for scarce skilled labour. This raises the cost of doing business in Singapore, which can erode its competitiveness if the growth in productivity fails to keep up with the increase in cost. It is for this reason – and others such as an ageing population, and the strains of rapid immigration on society and infrastructure – that the Singapore government has provided incentives to increase labour productivity.

The second challenge is maintaining inclusive growth. Like other cities, Singapore too faces problems such as

rising income inequality and concerns about affordability. As a matter of fact, the strong demand for skilled workers relative to their supply threatens to worsen inequality everywhere. In addition, the US and UK demonstrate that automation can replace middle-income workers, forcing them into low wage jobs. To prepare Singaporean workers, the government has increased access to and spending on education and skills training. The government has also increased the quantum of various subsidies given to lower and middle income households as well as the elderly to ensure that basic necessities like housing and healthcare remain affordable.

The third challenge is land use. As Singapore matures and its population grows, it may become increasingly harder to set aside adequate land for industrial use. This is because more land may be needed for housing, transportation, military use, public utilities, and other purposes. New ways to intensify industrial land use will be needed. There is also a need to continue to balance the demand for more industrial space with the desire to conserve the natural and built heritage.

To conclude, the competition among cities is intensifying, not only for investment dollars but also for tourists and global talents. Moreover, today, the competition is not just amongst global cities such as New York, London and Tokyo, but also emerging cities in developing countries. Unlike most cities, Singapore has thrived without the support of a hinterland, and will continue to make the most of the hand that it is dealt.

About Centre for Liveable Cities

Set up in 2008 by the Ministry of National Development and the Ministry of the Environment and Water Resources, the Centre for Liveable Cities (CLC) has as its mission “to distil, create and share knowledge on liveable and sustainable cities” . CLC’s work spans three main areas – Research, Capability Development and Knowledge Platforms. Through these activities, CLC hopes to provide urban leaders and practitioners with the knowledge and support needed to make our cities better. www.clc.gov.sg