

# GENN:

Global Economic Neural Networks



# The Extraordinary Rise of Singapore

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# Introduction

At the time of its independence in 1965, a resident of Singapore would, on average, earn US \$500 per annum, approximately the same as a Mexican or South African worker.

Twenty-five years later, a Singaporean resident would, on average, take home a similar income as their Israeli, South Korean or Portuguese equivalents. By 2019, the average worker in Singapore could expect an annual income almost double that of a citizen in the European Union.

	1965	1990	2019	% change
Singapore	\$517	\$11,862	\$65,233	12,517
South Africa	\$585	\$3,140	\$6,001	926
Mexico	\$495	\$3,112	\$9,863	1,893
Israel	\$1,429	\$12,663	\$43,641	2,954
South Korea	\$109	\$6,610	\$31,762	29,039
European Union	\$1,245	\$15,459	\$34,843	2,697

**Source:** World Bank, GDP per capita (US\$ current)

The story of Singapore's extraordinary rise, from a small port town on the southern tip of the Malayan Peninsula to one of the wealthiest and innovative economies in the world, can be associated with a particular triad of transformative processes over the last half century. The nature of these processes indicate that the economic incumbency of longstanding global centres of trade such as London and New York cannot be sustained without continued reform and incentivisation.

Singapore is not unique in the extent of its relatively rapid economic transformation from a coastal polity to a high-income economy, not least among the high growth Asian cities from Dubai to Hong Kong. However, its early export-driven inward investment strategy; the creation of an effective incentivisation structure; and its highly trusted economic institutions comprise distinctive Singaporean features that incumbent nodal cities such as New York and London, as well as prospective emergent polities, ought to consider.

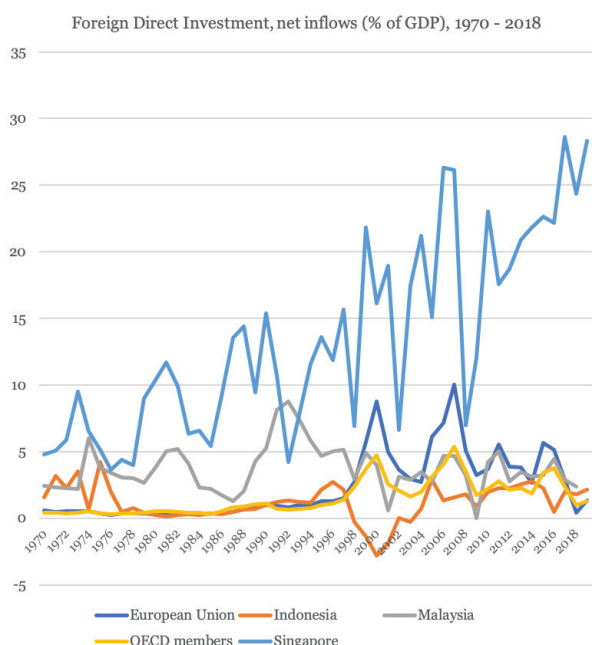


In our first of a series of such GENNsights briefings, we will examine and explain the features and processes that have made the likes of Singapore, Abu Dhabi – Dubai, and others successful over a handful of decades, and further outline how the incumbent nodal cities of the world – London and New York – can learn from these new entrants to a premier league of highly integrated, high income, leading economies.

# Export-driven inward investment

From its independence in 1965 to the late 1970s, Singapore pursued a rapid export-led economic strategy. In order to overcome its lack of natural resource endowment – relative to neighbours Malaysia and Indonesia – the early city state proceeded to develop as much of its 580 square kilometres of land for industrial use, simultaneously expanding basic and technical education and developing a flexible labour market. Strengthened by a hawkish approach to fiscal prudence to ensure investor confidence-boosting macroeconomic stability, this policy strategy was an astounding success. By 1981, Singapore saw net inflows of foreign direct investment worth 12% of GDP, amounting to almost thirty times that of the European Union and 120 times that of its energy and commodity exporting neighbour Indonesia.

reform initiative. Singaporean authorities, most notably under the stewardship of Lee Kuan Yew, recognised that future value in the Singaporean economy rested on increased capital intensity and the gradual replacement of labour-intensive production in favour of knowledge and high skill-based industries. Initial secondary sector output from early industrialisation efforts saw Singapore export low value items such as matches, mosquito coils and fishing hooks. However, by the late 1970s, high tech clusters of production emerged – through high degrees of technology transfer from first world nations – as Singapore became a South East Asian hub for the manufacture of electronic components, computer hard drives and computer-aided machine engineering. Although not widely known, such was the rapidity of technological transformation, Apple – today the world’s most valuable listed company – produced their first circuit boards in Singapore.



Overall, the export-led strategy was able to increase the value of Singaporean output over a relatively short period of time, and thereby concurrently funded a transition away from labour-intensive production to the beginnings of a high skilled, knowledge-based economy.

The lesson to note here is that governments aspiring to increase the productive value of their industries need to foster a clear and consistent economic strategy that takes into account how their factor endowments – land, labour, capital and enterprise – can best be configured to add increasing value over time. In this regard, the primary challenge for policymakers responsible for incumbent cities is to identify which of its key industries is an incubator for future increased value and thus utilise inward investment to fund the transition to its next, higher value state.

The short-term effect was an almost doubling of income from Singapore’s industrial sectors as the country’s secondary sector grew from 14% in 1965 to 22% a decade later. However, the income generated through export-led growth provided the funding for a longer-term structural

# Creating an effective incentivisation structure

As noted earlier, the combination of an export-led strategy and prudent macroeconomic management proved to be an attractive proposition for inward investment in Singapore. However, this alone cannot be seen in isolation as definitive to the Singaporean success story. Investors – whether government institutions or foreign multinational corporations – require an incentivisation structure to ensure that increasing future value is assured.

Tax competitiveness, is perhaps an obvious incentivisation indicator but without an accompanying research and development regime to drive innovation and generate greater future value, tax competitiveness alone cannot entice investors. Singapore can be described as a low tax nation with corporation tax set at 17%, the lowest in the G20. However, when compared with Ireland, a fellow high-income nation with a similar population, its significantly lower tax rate does not correspond to a stronger incentivisation structure by way of research and development.

	Corporate tax rate (2019)	R&D expenditure 2019 (%GDP)	R&D Researchers per million (2018)	FDI, net inflows 2019 (%GDP)
Singapore	17%	1.94%	6,803	28.35%
United States	21%	2.84%	4,412	1.45%
United Kingdom	19%	1.72%	4,603	0.96%
Ireland	12.5%	1.15%	5,401	-20.39%
European Union	N/A	N/A	3,994	1.38%
OECD	N/A	N/A	4,078	1.32%

Source: UNESCO Institute for Statistics, World Bank

Relative to the OECD, EU, United Kingdom and United States, Singapore has a greater proportion of its workforce involved in research and development activity and in this group is only outspent by the United States in research and development investment. Singapore's role as a magnet for global capital arose in some measure because of its traction as a highly trusted and pro-competitive regulatory environment in a region which was very different. A low tax rate by itself will not deliver these gains. However, the combination of a competitive tax rate, and the key elements of rule of law, trust, a pro-competitive regulatory environment, flexible labour market and openness to international trade, all of which Singapore has, meant that it could easily differentiate itself from the surrounding region. This is one advantage that emerging markets have over the incumbent advanced economy cities, and, like Singapore, they should take the opportunity it brings.

There are lessons here for incumbent cities at the top of the premier league, and there are lessons for other emerging markets. The lessons for the advanced economies is that their position at the top of the tree is not guaranteed. If they lose their competitiveness because they slip in any of the key indicators, which we have listed above, global capital can desert them very quickly. For the developing, emerging world it is a lesson for what can be achieved in a very short period of time provided you maximise open trade, competition and property rights protection, based on the rule of law, and do not rely solely on tax incentives.

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