

# Singapore's Logistics Industry Development Experience

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When Singapore gained its independence in 1965, it was a low income country with limited natural resources, infrastructure, investment and jobs. Today, the small city-state is home to the world's largest transshipment container port, and boasts the world's best airport, connecting to 380 cities in some 90 countries. Dr Zhang Qingyu and Zhang Kaiyun, Economic & Industrial Planning, trace the history of Singapore's logistics industry and factors owing to its success.

## Introduction

Connecting suppliers to manufacturers, and merchants to consumers, the logistics industry is being regarded as a critical enabler of the Singapore's economy by the Ministry of Trade and Industry (MTI). As the vision for the Logistics Industry Transformation Map, "to strengthen Singapore's position as a leading global logistics hub underpinned by operations excellence, innovation, and strong Singaporean enterprises and talent pool", this statement encapsulates the vital role of the logistics industry in Singapore.

Being one of the catalysts for other industries, the logistics sector has been a key contributor to the growth of Singapore's GDP per capita, which increased from USD428 in 1960 to USD52,960 in 2016. On one hand, the development of the logistics industry is reliant on the economic performance and demands of other industries. On the other hand, goods and services producing industries rely on the quality and efficiency of the logistics industry to enhance their competitiveness. This article provides for a concise summary of Singapore's logistics industry development history, the country's logistics industry performance, as well as its key factors of success.

## Brief Development History of the Logistics Industry

The development of the logistics industry started to speed up in 1967 when the Association of Southeast Asian Nations (ASEAN) was formed. With a 639 million-strong ASEAN population (based on 2016 statistics), Singapore's hinterland expanded. The subsequent implementation of free trade agreements between the ASEAN body and other countries facilitated the growth of goods and services producing industries, which in turn promoted the growth of the logistics industry. In 2015, the logistics industry had over 5,000 firms and is a part of the Transportation and Storage sector which contributed 7.4% of GDP and employed 8.7% of the total workforce.

A key link between the Pacific and Indian Oceans, Singapore is strategically located along the Straits of Malacca. Its geographical advantage at the nexus of major shipping lanes is one of the critical factors spurring the development of the logistics industry since the 1950s. This is even more important in recent and future times with the launch of China's Belt and Road Initiative (BRI) and with Singapore being a key node along the 21st Century Maritime Silk Road.

Nevertheless, the growth of the logistics industry was only made possible with corresponding industrial

development and logistics infrastructure. Singapore underwent several key industrial upgradings from labour-intensive industries (e.g. traditional handicrafts, textiles and garments, rubber), skills-intensive industries (e.g. electronic parts, shipbuilding), capital-intensive industries (e.g. petrochemical, aviation), technology-intensive industries (e.g. biomedical, IT) to knowledge and innovation-intensive industries since the 1950s. With different industry focus, logistics demand, and requirement for logistics efficiency, the logistics industry was compelled to improve its system and enhance operational efficiency to meet changing needs.

Improvement in logistics efficiency, reduction in delivery cost and increase in cargo throughput spelled the need for rapid development of internal and external transport infrastructure. Internally, the investment and development of logistics infrastructure is evidenced by about 164 kilometres increase in length of expressway from the 1950s to 2015. Singapore’s external transport connectivity mainly depends on seaports, airports and road connectivity between Singapore and its direct hinterland, Malaysia. From being a mere gateway to Malaysia, Singapore has transformed into an international shipping hub. Annual seaport cargo throughput increased from 130 million tonnes in 1987, when Singapore was known as a Southeast Asia shipping hub, to 626 million tonnes in 2017; while annual seaport container throughput grew to reach 33.67 million TEU in 2017. Globally recognised as one of the best airports in the world today, Singapore’s Changi Airport handled just 8.19 million passengers and 200,060 tonnes of airfreight throughput back in 1981. This grew to 62.2 million passengers and 2.13 million tonnes of airfreight throughput in 2017. The improvements in transport connectivity has indeed supported the growth of the logistics industry by providing the necessary infrastructure for the industry to flourish. There are currently nine Free Trade Zones (FTZs) demarcated in Singapore that enjoy temporary suspension of duties and Goods and Services Tax (GST) on goods. Supporting the development of the logistics industry, these FTZs are strategically located around airports, seaports/ferry terminals, as well as Distriparks and Logisparks. Please refer to Figure 1 for key logistics facilities distributed across Singapore.



Figure 1: Key logistics facilities distributed across Singapore

In 1989, Singapore became the first country in the world to establish an integrated ICT logistics system, TradeNet, a single-stop online platform for trade declaration, with improved time and cost efficiency in trade documentation by allowing various parties from both the public and private sectors to exchange trade information electronically. With resources being used more efficiently, activities that once took two to seven days can now be done in less than a minute. Figure 2 summarises and compares the benefits from establishing TradeNet.

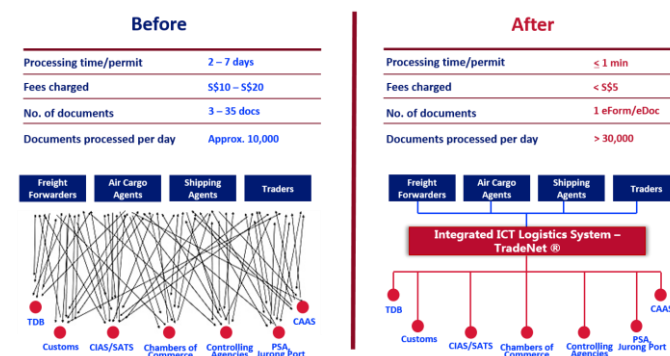


Figure 2: Comparison of the trade declaration system before and after the establishment of TradeNet

### Performance of the Logistics Industry

Singapore enjoys consistent strong performance in the logistics industry, claiming the title of the Number 1 Logistics Hub in Asia under the World Bank’s 2016 International Logistics Performance Index (LPI) Global Ranking. With six key performance indicators, LPI is a scoring system that assesses the quality of logistics infrastructure, management, and efficiency along the logistics supply chain. Notably, Singapore received the highest score globally for the ‘customs’ performance indicator, which rates countries based on the efficiency of the clearance process (i.e. speed, simplicity and predictability of formalities) by border control agencies. Singapore also topped the list in Asia for the ‘infrastructure’ indicator, demonstrating relatively advanced and comprehensive trade and transport-related infrastructure.

## Key Success Factors of the Logistics Industry

The successes enjoyed by the logistics industry of Singapore are mainly attributed to the following key factors (please refer to figure 3):

**Global Connectivity of Singapore** - Singapore's strategic location in the heart of Asia and key trade flows have been leveraged on. Emphasis has been placed to enhance the country's global connectivity through the excellence of Changi Airport and the Port of Singapore since the early days. Changi Airport, voted the World's Best Airport for five consecutive years, currently boasts flight connections to 380 cities in some 90 countries and territories around the world. The Port of Singapore has shipping routes which connect to over 600 seaports across 123 countries. In recent years, its container throughput is ranked second in the world.



Figure 3: Factors contributing to the success of Singapore's Logistics Industry

**High Degree of Logistics Professionalism** - Singapore's attractiveness can be seen in how 17 out of the world's top 25 third-party logistics company have established their regional headquarters or operations in Singapore. These include multinationals such as DHL and TNT. A high degree of logistics professionalism is exhibited in the ability to provide high technical content, and the ability to operate a global network such as medicine logistics, cold chain logistics and international express delivery. Providing an enabling environment and efficient climate for other goods and services producing industries, most of the enterprises in Singapore have engaged third-&-fourth-party logistics services.

**Comprehensive Logistics Value-added Services** - Singapore has developed a range of comprehensive, high quality logistics value-added services - from finance and insurance, logistics skills development and vocational training, to a strong legal system. The

ability to offer services along the entire supply chain caters to the various needs of consumers, enhances competitiveness and increases firms' willingness to locate here.

**Forefront of Technology Advancements** - Being at the forefront of technology advancements for the logistics sector is in line with the country's goal of becoming a Smart Nation. By constantly keeping up with the latest technology advancements and embracing changes, Singapore is an early adopter of the one-stop customs clearance service with the introduction of TradeNet, the first trade facilitation electronic platform launched in the world.

**Complementary Development with Goods and Services Producing Industries** - As logistics is key to the goods and services producing industries, the growth of the logistics sector is largely attributable to them. Singapore is not only one of the top global financial powerhouses, but also the third largest petrochemical and refining hub in the world. With Singapore's direct hinterland boasting of strong economic foundation and advanced manufacturing accounting for approximately 20% of total GDP, this spurs the continuous need for logistics services and growth of the industry.

## Conclusion

Logistics is a product of economic and industrial development, and is also an ingredient for economic growth with a key role in attracting foreign investments. From Singapore's experience, we identified five success factors which are key in spurring the growth and robust performance of the logistics industry. As goods and services producing firms accord greater importance to logistics quality and efficiency to gain greater profits, logistics firms which have undergone in-depth supply chain integration and demonstrated higher degree of logistics professionalism enjoy greater opportunities in the world market.

*This article is co-created by Surbana Jurong Academy.*

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