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## SIGNIFICANCE OF THE PORT OF SINGAPORE AGAINST THE COUNTRY'S ECONOMIC GROWTH

**Summary.** The economy of Singapore is characterised by a stable political environment, favourable business conditions and very well-developed infrastructure attracting foreign direct investment, being the driving force of the economy. It is highly dependent on export, as well as on the dynamic sectors of transport, business and financial services. Singapore's natural deep-sea ports and the geographical location at the crossroads of important shipping channels makes its trade a major economic sector, next to production and services. There are currently more than 5,000 maritime companies operating in Singapore, including over 130 international shipping groups, which constitute an important pillar for the international maritime transport hub. This article discusses Singapore's economic situation by analysing the dynamic GDP growth over the years 1960–2016 as well as other economic indicators achieved in 2004–2017, including the dynamics of foreign trade. This research covers the port's ownership and organisational structure, and its terminals have been reviewed in terms of their location, infrastructure and functions by taking into account the new generation terminal of the port of Tuas, currently under development. Over the years, the port has seen a steady increase in revenue from transshipment, which is confirmed by the dynamics of the container volume growth over the years 1972–2017, the transshipment volume over the years 2007–2018 and the number of container ships

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calling at the port along with their total capacity over the years 2007–2017, as elaborated in the article.

**Keywords:** port of Singapore, economy, terminals, transshipment

## 1. INTRODUCTION

The Singapore seaport is the busiest transshipment hub in the world. Located at the southern end of the Malay Peninsula, 30 km southwest of the port of Johor in Malaysia, it provides connectivity to more than 600 ports in 123 countries.<sup>2</sup> The island nature of the city-state of Singapore (besides the main island of Singapore, it contains 60 small coastal islands) determines the dynamic development and excellent maintenance of both linear and point infrastructure of transport, and maritime transport in particular.



Fig. 1. Geographical location of Singapore

Source:

[https://www.google.pl/maps/place/Singapur/data=!4m2!3m1!1s0x31da11238a8b9375:0x887869cf52abf5c4?sa=X&ved=2ahUKEwil\\_ZGf7qHhAhUj\\_SoKHYzdA0sQ8gEwAHoECAkQA](https://www.google.pl/maps/place/Singapur/data=!4m2!3m1!1s0x31da11238a8b9375:0x887869cf52abf5c4?sa=X&ved=2ahUKEwil_ZGf7qHhAhUj_SoKHYzdA0sQ8gEwAHoECAkQA)

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For centuries, Singapore performed the important role of a transshipment hub for regional and international trade as the economic capital of the Malay Peninsula. However, once Singapore gained full independence in 1965 (in 1963, following its merger with Malaysia, it ceased to be a part of the British Empire), the port was forced to compete with others in the region. Along with its progressing revival, the economy was being oriented towards obtaining raw or semi-processed products from regional and global markets as well as exporting the processed products back to these markets.<sup>3</sup>

<sup>2</sup> Port of Singapore; <https://www.ship-technology.com/projects/portofsingapore/>

<sup>3</sup> Heng, Derek. "Continuities and Changes: Singapore as a Port-City over 700 Years". *Biblioasia*. Singapore: National Library Board. (1): 12-16. ISSN 0219-8126.

In the late 1960s, a decision was made to build a container terminal in East Lagoon (today's Tanjong Pagar) in the port of Singapore, being the first in Southeast Asia, even though container ships were not yet widespread means of freight transport at that time. As the transport of containerised cargo developed and the volume of bulk cargo increased, the port's facilities have been successively expanded since the 1980s in order to increase its capacity. In terms of the number of transshipped containers counted in TEU, Singapore is only second to Shanghai among the world's largest ports (with 36.6 million TEU transshipped in 2018; Shanghai's volume being 40.2 million TEU).

The transformation of a small regional port into one of the busiest ports in the world has undoubtedly been determined not only by its favourable geographical location at the crossroads of important trade routes but also by the courageous and visionary plan to build the first container terminal.

2. ECONOMY OF SINGAPORE

In only a few decades, Singapore has advanced from a poor post-colonial region to the rank of the largest Southeast Asian centre of business, commerce and finance with highly developed and successful free-market economy. The city primarily owes its high level of development to the highly advanced industrial production based on the latest technologies.

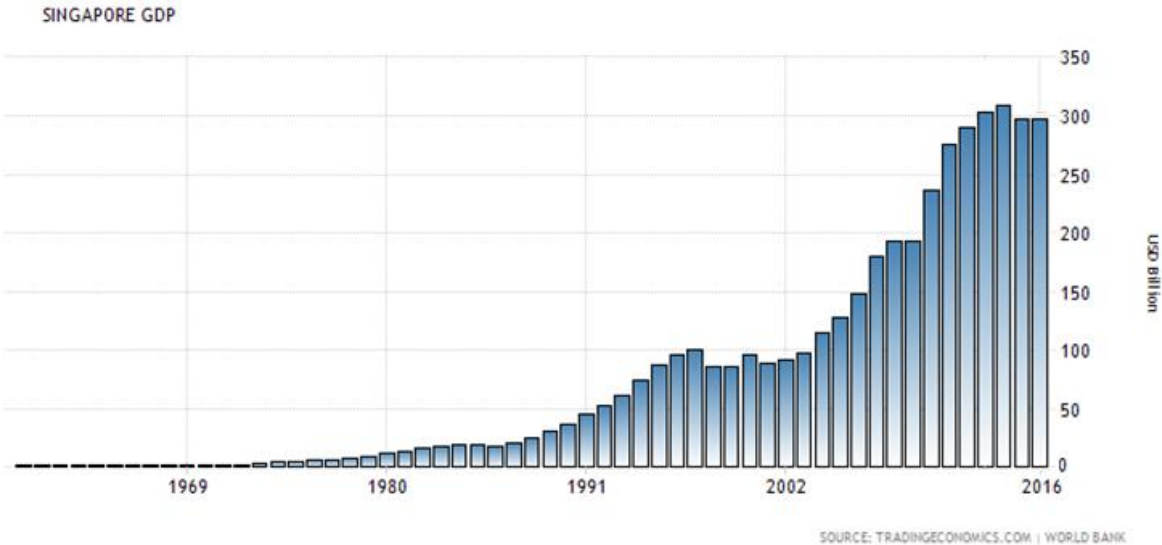


Fig. 2. Trends in the GDP of Singapore over the years 1960–2016  
Source: <https://tradingeconomics.com/singapore>

The economy of Singapore is characterised by a stable political environment, favourable business conditions and very well-developed infrastructure attracting foreign direct investment, being the driving force of the economy. The *Doing Business 2018* ranking on the ease of doing business ranks Singapore second among 43 countries of the Asia-Pacific region. The service sector generates nearly 70% of the GDP, while the industry and the construction – more than 30%. The maritime industry accounts for 7% of the GDP and employs more than 170,000 people. The agricultural sector does not contribute significantly to the GDP. It is for

the lack of arable land that in terms of employment the agriculture accounts for a mere 1.3% of the total labour force.

Tab. 1

## Indicators of Singapore's economy for the years 2004–2017 (in per cent)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
GDP	13.7	8.1	8.8	12.1	0.4	0.5	15.2	5.4	3.4	4.4	2.9	2.0	2.4	3.6
Private consumption	5.1	4.3	6.2	10.5	8.5	0.2	9.8	8.1	6.8	4.3	2.8	3.7	4.1	3.9
Unemployment rate (%)	3.4	3.1	2.7	2.1	2.2	3.0	2.2	2.0	2.0	1.9	2.0	1.9	2.1	2.2
Inflation rate	1.7	0.5	1.0	2.1	6.6	0.6	2.8	5.2	3.6	2.4	1.0	-0.6	-0.5	0.6
Export	20.5	14.0	12.8	4.4	5.8	-18.0	22.4	7.5	4.2	8.0	3.6	-6.8	-3.1	10.3
Import	23.6	13.6	13.7	4.5	13.9	-21.0	18.8	8.6	5.9	9.8	1.2	-11.1	-4.9	12.1
Total investment	12.5	-9.2	12.4	-15.3	16.9	-39.3	103.1	29.6	1.0	19.8	3.6	5.4	-15.6	14.1

Source: Ministry of Trade and Industry, Singapore; <https://www.mti.gov.sg/>

In 2017, Singapore's GDP increased by 3.6% compared to 2016 and was twice as high as forecasted. The greatest impact on such results of the Singaporean economy, being particularly sensitive to global economic fluctuations, was exerted by the increased global demand for electronic products, which was also one of the most important growth drivers in 2018.

Singapore's unemployment rate is very low, as it ranged between 2.1 and 3.4% in the years 2004–2009, however, it has remained at a fixed level of ca. 2% since 2010.

Immediately after the global financial crisis, Singapore was struggling with high inflation exceeding 5% in 2011. However, this record-breaking level was drastically reduced to 0.6% in 2017.

The Singaporean economy is highly dependent on exports, especially of electronics, petroleum products, chemicals, medical and optical equipment, pharmaceuticals, as well as dynamic sectors of transport, business and financial services.<sup>4</sup>

In 2017, following two consecutive years of decline, Singapore's foreign trade regained its typical dynamics, as the trade volume increased by 11.1%, the imports grew by 12.1% and the exports by 10.3%. The aforementioned trade revival was mainly driven by an increase in the trade of electronics. Singapore's main import partners are China (14.2%), Malaysia (11.2%), the European Union (10.2%), the USA (8.3%) and Hong Kong (7.2%), while the most important export markets are China (14.5%), Hong Kong (12.3%), Malaysia (10.6%), the EU (8.4%) and Indonesia (7.5%).

The dynamic development of international trade in commodities is by no means limited by Singapore's lack of natural resources or shortage of land. Its natural deep-sea ports and geographical location at the crossroads of important shipping channels make its trade a major economic sector, next to production and services.<sup>5</sup> There are currently more than 5,000

<sup>4</sup> <https://www.forbes.com/places/singapore/>

<sup>5</sup> <https://www.internations.org/singapore-expats/guide/29457-economy-finance/the-economy-of-singapore-16045>

maritime companies operating in Singapore, including over 130 international shipping groups, which constitute an important pillar for the international maritime transport hub.<sup>6</sup>

### **3. OWNERSHIP STRUCTURE VS PORT MANAGEMENT**

The port of Singapore is administered and supervised by the state, in terms of both financing and development. It is managed by a government agency, the Maritime and Port Authority of Singapore (MPA), established in 1996 by the merger of the Marine Department, the National Maritime Board and the regulatory departments of the former Port of Singapore Authority (PSA), which was transformed into a holding company in 2004.

The MPA operates on behalf of the state government in the areas of maritime transport as well as port management, development and promotion. Some of its tasks are as follows:

- collaboration with the government and maritime partners to ensure that the port develops on a continuous basis and strengthens its position in the global market,
- supervision of the marine traffic, safety and the navigation system, coordination of terminals, implementation of measures to reduce the negative environmental impact of shipping,
- undertaking initiatives to encourage major ship-owners and operators to commence operations in Singapore,
- representing the interests of the Singaporean maritime transport sector abroad<sup>7</sup>.

The port operations performed in both general cargo (container and conventional) and ro-ro terminals are handled by two port groups: PSA Singapore (established by way of transformation of the Port of Singapore Authority) and Jurong Port. Both groups belong to Temasek Holdings, owned by the state treasury and providing funding for the port's continuous development. Temasek Holding also controls a significant number of other companies operating in Singapore, including the DBS bank (the Development Bank of Singapore Limited) and Singapore Airlines.<sup>8</sup>

The bulk cargo terminals are predominantly managed directly by their users, such as refineries, chemical industry companies, etc. (companies such as LANXESS, BASF, BP, SHELL or EXONN MOBIL run their plants in Singapore).

### **4. PORT ORGANISATION AND INFRASTRUCTURE**

There are two main port groups functioning in Singapore: PSA Corporation Limited, with its subsidiary company, PSA Singapore, primarily responsible for container transshipment, and Port Jurong, handling general, bulk and container cargo. Both ports are suitable for all types of vessels. Container handling services are the port's key activity, with approximately 85% of the containers arriving in Singapore being transshipped onto vessels bound for another port of call. The handling capacity of the port of Singapore is 50 million TEU per year.

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<sup>6</sup> Ministry of Transport Connecting Singapore; <https://www.mot.gov.sg/about-mot/sea-transport/advancing-the-maritime-industry>

<sup>7</sup> <https://www.mpa.gov.sg/web/portal/home/about-mpa>

<sup>8</sup> <https://www.temasek.com.sg/en/who-we-are/about-us.html>



Fig. 3. Arrangement of ports and their respective terminals in the port of Singapore  
 Source: <https://www.straitstimes.com/singapore/full-steam-ahead-for-new-tuas-mega-port>

## 5. PSA SINGAPORE

PSA Singapore currently offers 67 quay berths at its container terminals in Tanjong Pagar, Keppel, Brani and Pasir Panjang, being operated as a single and undivided integrated facility. In 2018, PSA Singapore handled 36.31 million TEU of containers. This transshipment hub accounts for nearly one-seventh of the total container transshipment capacity worldwide and for more than 4% of the global container handling capacity.

There is one of the world's largest warehouse parks on the premises of PSA Singapore, offering more than 12,000 refrigeration units (more than 1.3 million TEU of refrigerated containers were handled there in 2016). The integrated refrigeration monitoring system (iRMS) is linked to the CITOS® system, which enables cargo to be tracked on a real-time and online basis at every stage of operation. It allows customers to monitor the condition of their cold stores wherever they actually are in the world by means of PSA Portnet® via the internet. The Reefer Maintenance & Repairs (RMNR) system, on the other hand, keeps track of all failures, enabling quick response whenever refrigeration units require repairs, as they may contain sensitive and valuable cargo.

PSA Singapore handles more than 0.5 million TEU of dangerous goods per annum. Some of the services rendered in this scope include processing of dangerous goods (DG), leakage/damage control to ensure safe shipment, labelling for containers with missing mandatory warning labels or ones that do not conform with the IMDG codes, as well as handling and storage of highly dangerous goods for local delivery or onward shipment. At the same time, PSA supplies full sets of spare parts for each refrigerated container type.

Moreover, a full range of standard storage warehousing is available at docking stations for empty containers. PSA operates as the main transshipment hub for collecting empty containers from ships or for sending them out.<sup>9</sup>

The flagship PSA Singapore terminal is Pasir Panjang, featuring the most technologically advanced transshipment machinery and equipment. The terminal is currently used for testing a fully automated electric crane system, 30 automatic-control vehicles, eight hybrid and 22 battery-powered electric vehicles.<sup>10</sup> It is expected that the solutions tested at Pasir Panjang will be implemented at Singapore's Tuas mega port, currently under construction, which is described below.

In the second half of 2016, the transport group of CMA CGM-PSA Lion Terminal Pte. Ltd. (CPLT), established by CMA CGM S.A. (CMA CGM) and PSA Singapore Terminals Pte. Ltd. (PSA), commenced its operations in Pasir Panjang. The company has four berths for mega container ships at its disposal on the premises of Pasir Panjang Terminal (PPT), which has been extended under phases 3 and 4 (Fig. 3). CPLT uses the most highly advanced port infrastructure and the latest technologies, and they also provide long-term terminal services for CMA CGM and its shipping service divisions.

Another joint venture operating in the port, namely COSCO-PSA Terminal Pte Ltd (CPT), was established by COSCO Shipping Ports Limited (CSP) and PSA. Founded in 2003, CPT was functioning as the main container transport hub in the region until 2017 when it moved from the formerly managed two-berth terminal to one with three mega-ship berths completed under phases 5 and 6 of the expansion. In November 2018, CSP and PSA signed an agreement on the commissioning of two new berths and rendering them available to the company. This means that CTP will control five berths in total, which will increase its annual handling capacity from 3 to approximately 5 million TEU. The new mega-ship berths, similar to the existing ones, will be supported by the shipyard's highly automated technology.

In March 2006, MSC-PSA Asia Terminal (MPAT) was officially opened as a joint venture between the world's second largest shipping line, the Mediterranean Shipping Company (MSC) and PSA International. The berths owned by MPAT are fully integrated with other berths in Pasir Panjang. MPAT is capable of handling mega-ships with a capacity exceeding 14,000 TEU.

The Pacific International Lines (PIL) dedicated container terminal is located in Keppel. The joint management and operation of the terminal for PIL and PSA Singapore (PSA) is performed by the joint venture company PIL-PSA Singapore Terminal Pte Ltd (PPST). Both the terminal and the berths in Keppel are fully integrated with other facilities operated by PSA.

The first Singaporean terminal dedicated to cars, that is, the Asia Automobile Terminal (Singapore) (AATS), was launched in January 2009. It is a joint venture of PSA, Nippon Yusen Kabushiki Kaisha (NYK) and Kawasaki Kisen Kaisha Ltd (K Line).

Next to the terminals managed by joint ventures in Pasir Panjang, there are also multifunctional terminals. These are Pasir Panjang Automobile Terminal (PPAT), which commenced its operations in January 2009, and the multi-purpose terminal of Sembawang Wharves. PPAT is a ro-ro vessel transshipment hub, featuring three separate quay berths. The unroofed car parking yard and the multi-storey car park provide a total of approximately 20,000 parking spaces. The multi-purpose Sembawang Wharves terminal handles general and speciality cargo, including heavy equipment, steel products and cables. There are numerous

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<sup>9</sup> <https://www.singaporepsa.com/about-us>

<sup>10</sup> The Maritime Executive; <https://www.maritime-executive.com/article/two-new-berths-planned-for-cosco-psa-terminal-singapore>

storage facilities, including open ones, at the Sembawang wharf for long and short-term rental.

## 6. TUAS PORT

Like many other ports around the world, the port of Singapore has developed into a city, which used to serve as a focal point for trade and cargo shipping operations in the past. The lease of three terminals originally sited on municipal territories, that is, Tanjong Pagar, Keppel and Brani, expires in 2027. The Singaporean authorities have decided to revitalise the vacant areas as a part of the Greater Southern Waterfront project assuming that a quayside district with futuristic residential buildings, entertainment, recreation and tourist attractions will be built in this place, providing access to numerous green areas and the sea itself.<sup>11</sup>

The relocation of port facilities as well as the personnel from the Tanjong Pagar, Keppel and Brani terminals to newer facilities with deeper basins in Pasir Panjang, to be operated by PSA for at least another 20 years, began in 2016. The target is to move all operations to a new generation terminal on a new artificial peninsula, known as the port of Tuas, which is due to be completed in 2040 (phase 1 is scheduled for completion in December 2020, with the port to be gradually commissioned starting from 2021).<sup>12</sup> The PSA Singapore container terminals will eventually be consolidated in a single location.<sup>13</sup> The new port of Tuas will be capable of handling the largest container ships in the world, and it will become the world's largest automated container terminal with an annual capacity of 65 million TEU.<sup>14</sup> It is, by all means, an adequate location due to its sheltered deep waters and the proximity to both international shipping routes as well as major industrial areas in the western part of Singapore. The decision-makers responsible for the port construction and development intend to make the port of Tuas a part of a larger ecosystem integrating various stakeholders in a logistic community, both digitally and physically, and to enable deployment of integrated intermodal supply chain solutions that will result in more reliable and faster delivery of goods to their destinations.

The new port will feature such infrastructure as automated quay cranes and automatic-control vehicles. New systems are to be deployed to enable synchronised negotiating between all port facilities. The future dispatch centre will combine the functions of control and coordination of the terminals, ensuring the organisation of all automated port operations and maintenance. It will be capable of remotely servicing and diagnosing the equipment.

## 7. JURONG PORT

The port of Jurong was commissioned in 1965 to function as a port for handling of bulk and general cargo, intended to meet the needs of the industrial development of Singapore's

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<sup>11</sup> The week in Asia; <https://www.scmp.com/week-asia/business/article/2148878/singapores-tuas-mega-port-plain-sailing-ahead>

<sup>12</sup> Maritime Singapore Connect; <https://www.maritimesgconnect.com/features/spotlight/5-things-you-should-know-about-new-tuas-mega-port>

<sup>13</sup> The Straitstimes, <https://www.straitstimes.com/business/an-icon-of-the-port-of-singapore>

<sup>14</sup> The Straitstimes, <https://www.straitstimes.com/business/tanjong-pagar-terminal-cleared-ahead-of-schedule>



Jurong district. Its main terminal located in Singapore currently receives more than 15,000 vessels per year, both from the region and from abroad.<sup>15</sup>

Jurong Port hosts the world's largest cement terminal serving more than 90% of Singapore's bulk cement imports. The annual handling capacity of a terminal arranged on a 5.3 ha plot of land exceeds 7.5 million MT. The terminal features a state-of-the-art infrastructure and equipment to ensure safe, efficient and environmentally friendly cement discharge. Cement terminals 1 and 2 are situated at deep-water quay berths of up to 12.9 m in length, and they can accommodate ships with a capacity of up to 50,000 DWT. They feature 5 screw unloading machines, and their closed-loop air transport system enables cement to flow freely into storage silos.

Steel Terminal is specialised in handling all kinds of steel products (sheets, wire coils, reinforcing bars, pipes, beams, rollers, etc.). The terminal offers storage yards and warehouses with an area of 484 thousand m<sup>2</sup> and can handle vessels of 15.5 m in draught.<sup>16</sup>

Owing to its excellent connectivity solutions and excellent modern port infrastructure, Jurong Port Combi Terminal provides for transhipment of different types of containers and general cargo on multipurpose vessels.



Fig. 4. Visualisation of the Tuas mega port

Source: <https://www.straitstimes.com/singapore/spore-plans-to-keep-port-attractive>

<sup>15</sup> Jurong Port; <http://www.jp.com.sg/our-expertise/terminals/cement-terminal/>

<sup>16</sup> <http://www.jp.com.sg/our-expertise/terminals/steel-terminal/>

There is a project being implemented at Jurong Port to build Jurong Tank Terminal, a state-of-the-art liquid bulk cargo handling terminal equipped with 19 tanks for storage and handling of clean petroleum products and chemicals. With the estimated value of 140 million USD, the project is a joint venture of Jurong Port Singapore Holding and Oiltanking Investment Holdings. The new terminal, sited on 16 hectares of land, is facing the Jurong Island petrochemical centre in Singapore, both to be connected by pipelines. It will have quay berths capable of accommodating vessels of 16 m in draught and up to 120,000 tonnes in deadweight. The terminal's initial capacity will come to ca. 232,000 m<sup>3</sup>, while after phase 2 of the project is completed, it will potentially rise to 470,000 m<sup>3</sup>.

There are two terminals in Jurong Port, which play a key role in the domestic ship supply sector, namely, Penjuru Lighter Terminal intended to service lighter ships, and Marina South Wharves used to supply ships with spare parts and food. These terminals handle a total of 800,000 MT of cargo per year. They provide quay services, berth and ancillary services.

## 8. PORT'S TRANSHIPMENT SERVICES

The port of Singapore is a multi-purpose port with an area of 752 ha and a quay length of 21,630 m, handling transshipment of general cargo (containerised and conventional), bulk cargo (liquid and dry) as well as ro-ro vehicles. The port is capable of handling 1,000 ships entering or leaving the port per day in 10-minute intervals.<sup>17</sup>

Over the years, the port has seen a steady increase in revenue from transshipment. In 2018, the volume of container transshipment increased from 33.7 to 36.6 million TEU, that is, by 7.2% compared to the previous year. The dynamics of the container volume growth is shown in Fig. 5.

As the world's demand for goods transported by sea increases, shipowners are using larger and larger container ships capable of carrying enormous quantities of cargo in order to reduce shipping costs. Due to meticulous planning and continuous improvement of its infrastructure, Singapore has become one of the few ports in the world that can serve the largest vessels.

Tab. 2

Number of container ship arrivals at the port of Singapore over the years 2007-2017

Year	Container ship arrivals	Number of transshipments ('000 TEU)
2007	19,946	27,935.5
2008	20,589	29,918.2
2009	18,005	25,866.6
2010	18,967	28,431.1
2011	19,290	29,937.7
2012	18,567	31,649.4
2013	17,798	32,578.7
2014	17,219	33,869.3
2015	17,722	30,922.3

<sup>17</sup> Maritime Singapore Connect; <https://www.maritimesgconnect.com/explore/industry-overview/port>

2016	17,932	30,903.6
2017	17,663	33,666.6

Source: author's own materials based on <https://www.mpa.gov.sg/web/portal/home/maritime-singapore/port-statistics>.

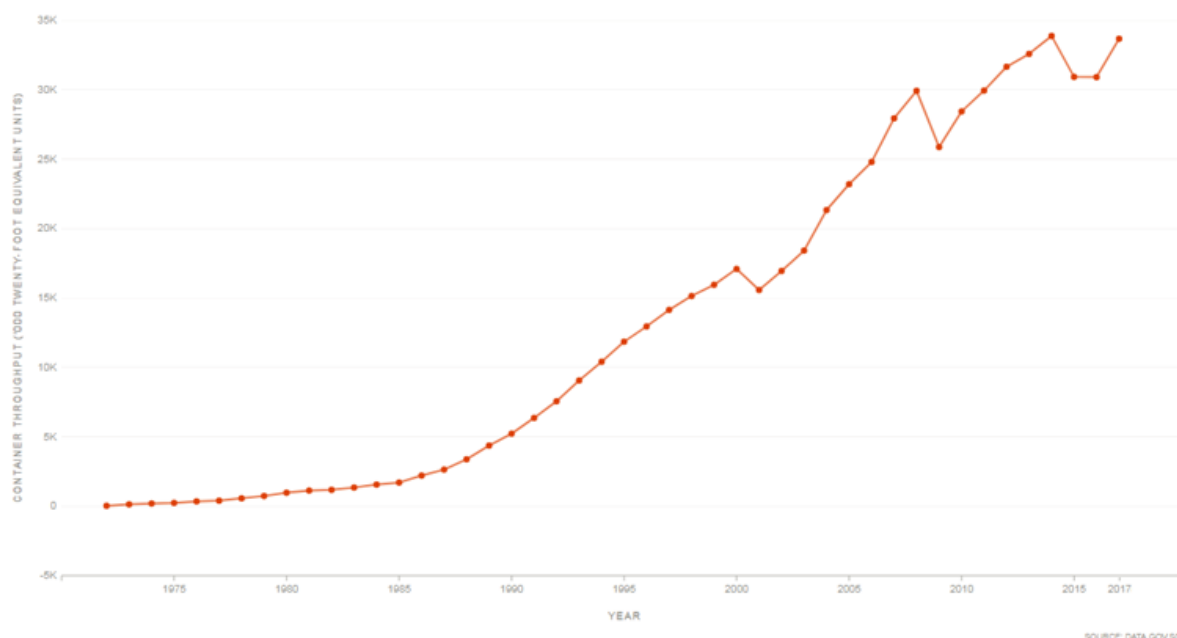


Fig. 5. Volume of container transshipment in the port of Singapore over the years 1972–2017 in million TEU

Source: [https://data.gov.sg/dataset/container-throughput-annual?view\\_id=ebe25612-f598-422e-9326-fd7dbc4c6ae0&resource\\_id=dcf81859-2a92-4ff6-a499-5356a0b82011](https://data.gov.sg/dataset/container-throughput-annual?view_id=ebe25612-f598-422e-9326-fd7dbc4c6ae0&resource_id=dcf81859-2a92-4ff6-a499-5356a0b82011)

The volume of transshipments handled over the years 2007–2018, in a breakdown into general cargo (including containerised and conventional) and bulk cargo has been summarised in Table 3.

Tab. 3

Volume of container transshipment in the port of Singapore over the years 1972-2017 according to the type of cargo in '000 tonnes

Year	General cargo		Bulk cargo		Total
	containerised	conventional	liquid	dry	
2007	289,094.2	25,823.2	157,382.3	11,316.4	483,616.1
2008	308,489.7	27,934.9	167,318.9	11,671.8	515,415.3
2009	262,896.8	17,452.1	177,323.7	14,627.2	472,300.3
2010	289,693.5	23,989.7	177,070.2	12,588.7	503,342.1
2011	309,379.9	26,130.6	183,843.3	11,821.8	531,175.6
2012	323,714.0	29,827.6	169,671.5	14,799.0	538,012.1
2013	333,049.0	32,067.3	179,160.8	15,303.9	559,581.0
2014	353,538.7	30,879.7	181,679.4	15,170.3	581,268.0
2015	331,739.7	30,118.8	195,836.9	18,150.4	575,845.8

2016	328,195.7	25,047.8	221,413.4	18,639.9	593,296.7
2017	349,101.4	26,944.3	233,038.8	18,603.6	627,688.1
2018	367,421.9	24,323.3	221,525.4	16,854.6	630,125.3

Source: <https://www.mpa.gov.sg/web/portal/home/maritime-singapore/port-statistics>

Singapore is often referred to as the leading petroleum trading hub in Asia (being the third largest in the world, after New York and London) and one of the five largest petroleum refining centres in the world.<sup>18</sup> This raw material and its derivatives constitute the main bulk cargo handled in the port of Singapore, subsequently processed by the highly developed petrochemical industry. The number of tanker arrivals at the port over the years 2007–2017, as well as the volume and type of liquid bulk cargo transported by these vessels have been collated in Table 4 (in 2018, the port received 24,165 tankers).

Tab. 4

Tanker arrivals at the port of Singapore over the years 2007-2017 according to the type of cargo shipped

Year	Petroleum and its derivatives		Chemicals		LNG and LPG		Total	
	number of tankers	cargo in '000 tonnes	number of tankers	cargo in '000 tonnes	number of tankers	cargo in '000 tonnes	number of tankers	cargo in '000 tonnes
2007	14,343	367,249	3511	29,635	1458	48,564	19,312	445,448
2008	13,756	378,629	3843	34,226	1861	71,561	19,460	484,415
2009	14,059	424,172	4337	43,854	1684	59,591	20,080	527,618
2010	15,093	467,715	4607	48,393	1655	53,286	21,355	569,394
2011	15,861	536,895	4588	49,011	1831	66,776	22,280	652,682
2012	15,702	561,785	4534	49,854	1994	82,200	22,230	693,839
2013	16,125	567,950	4493	49,833	1999	87,060	22,617	704,884
2014	15,349	555,127	4629	51,924	2240	100,413	22,218,	707,464
2015	14,676	567,341	5083	58,032	2303	94,072	22,062	719,445
2016	15,805	620,756	5209	60,336	2681	99,757	23,695	780,849
2017	16,895	702,926	4763	56,268	2753	116,642	24,411	875,837

Source: <https://www.mpa.gov.sg/web/portal/home/maritime-singapore/port-statistics>

The port of Singapore also provides supplies and repair services for vessels passing through the Strait of Malacca. In 2017, out of the total number of 216,342 port arrivals, as many as 71,682 (33%) were due to an intent to replenish fuel or food supplies or to perform repairs.<sup>19</sup>

<sup>18</sup> <https://www.export.gov/article?id=Singapore-Oil-and-Gas>

<sup>19</sup> <https://www.mpa.gov.sg/web/portal/home/maritime-singapore/port-statistics>

## 9. CONCLUSIONS

The seaport has been performing a key role in the Singaporean economy for years. The government's policy of maintaining low import tariffs affects the port's revenues, technological progress and dynamically growing trade with China, Hong Kong, Indonesia, Japan, South Korea, Malaysia, Saudi Arabia, the USA and the European Union. This small city-state has been consistently implementing the policy of free trade, perceiving it as an opportunity for further development and increasing competitiveness in relation to other dynamically developing economies of Asia.

Singapore's particularly attractive investment climate and stable political environment attract foreign direct investment from global investors and institutions. The business-friendly environment is not only conducive to investment but also boosts the economy. The service sector provides jobs for 80% of workers and creates more than 75% of the GDP, while ca. 20% of the GDP is produced by the industry and the secondary sector employs 15% of all the workforce. Additionally, a very important factor in this context is the link between the businesses operating in Singapore and state-owned enterprises. Business groups established as holdings or trading companies create a larger outlet market and provide access to foreign technologies or managerial methods. This is particularly important for the development of key economic sectors such as trade, shipping and logistics, all the more so since Singapore's economic growth is heavily dependent on exports, especially of electronics, petroleum products, chemicals, medical and optical equipment, pharmaceuticals, as well as transport, business and financial services.

Considered particularly important in Singapore is its high-end manufacturing based on the latest technologies, including semiconductors and consumer electronics, as well as machinery, transport equipment and ships. Public funds are typically allocated in sectors which may become the future of economic growth, such as aviation and aeronautics, precision engineering and life sciences, including biotechnology, medical equipment and pharmaceuticals. The Singaporean authorities are also committed to investing in infrastructure projects and new industrial parks.

It should be noted that Singapore suffered greatly from the global financial crises of 2001 and 2009, having experienced some of the most severe recessions since it gained independence. The collapse in prices in most of the world's leading stock exchanges and the abrupt drop in industrial production also exerted a negative impact on its export-dependent economy, which declined by 1-2% at the time. However, with time there was an observed rapid recovery and a return to dynamic growth, both in the years 2004-2007 and in 2010, when the annual growth rate came to 15.2%, one of the world's highest.

Singapore is an active member of NATO, ASEAN and other international trade organisations. The country has entered into numerous free trade agreements, including the one signed with the European Union in 2015 as the first ASEAN member state.

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