上海国际航运研究中心
SHANGHAI INTERNATIONAL SHIPPING INSTITUTE

Subsided by Construction Project of Shanghai University Knowledge Service Platform (ZF1209)

Global Port Review

Quarter 1·2020

——Global economy slumped dramatically and port production fell significantly.

✧ Growth Rates of Cargo Throughput of Major Ports

- **Production of global ports on a downswing.** The novel coronavirus (COVID-19) pandemic broke out across the globe in the first quarter of 2020, causing a dramatic contraction in global economy, with international trade growth stalled, manufacturing activities suspended, and various economic and trade indicators falling all the way. The resulting tightened requirements by health regulators again depressed the freight trade significantly. The port production scale shrank globally, and some ports even fell to negative growth.

- **Major global terminal operators slowed down in production.** In the first quarter of 2020, the rampant COVID-19 pandemic brought global terminal operators under multiplied pressure. The equity throughput of COSCO Shipping Ports and China Merchants Port fell by 6.6% and 4.9% year-on-year, respectively. The container throughput of DP World also slumped due to business adjustment. AP Mueller-Maersk maintained basically the same throughput as last year relying on its stable cargo sources for comprehensive logistics.

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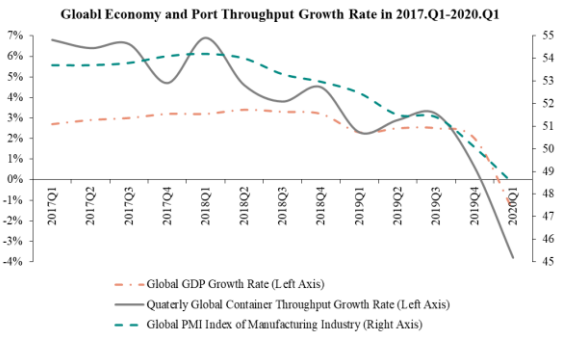
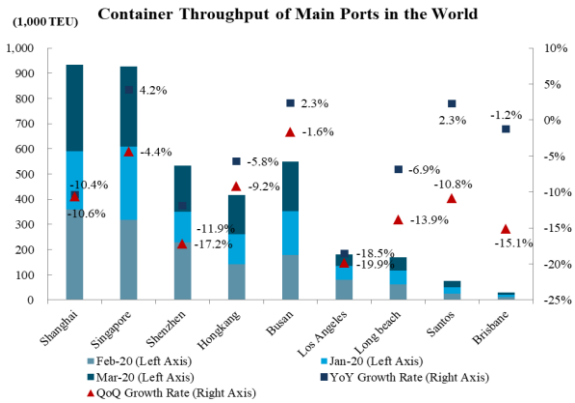
- Impact of Deglobalization on Port Industry
- Global Port Production and Development Challenges amid the Pandemic

Panorama on Global Ports ▶▶▶





Side Products ▶▶▶

- Fastest-growing Global Container Ports in Investment and Scale
- Comments on comprehensive services of coastal container ports in China

Port Development Dept.▶▶▶

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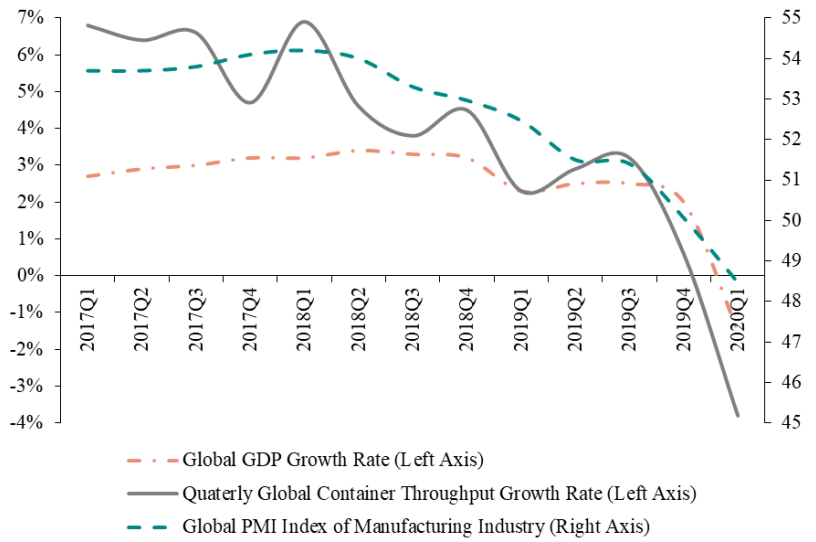
Chapter 1 Comments on Global Port Production in Q1

1.1 Analysis on Cargo Throughput of Global Ports

The COVID-19 pandemic broke out across the globe in the first quarter of 2020, causing a dramatic contraction in global economy. In the World Economic Outlook report released in April 2020, the International Monetary Fund (IMF) looked to -3.0% global economic growth in 2020. Meanwhile, the global trade growth continued to slump. In the first quarter, the global import and export value stood at US$9.3 trillion, a year-on-year rise of only 0.7%. Affected by the global economic and trade situations, the cargo throughput of global major ports [1] fell by 3.9% year-on-year to 4.3 billion tons in the first quarter. Except Australia where the cargo throughput of major ports grew by 4.1% year-on-year, Asia, North America, South America, and Europe all recorded declines in cargo throughput growth of major ports.



Source: Websites of JPMorgan, Drewry shipping report and China Bank.

Figure 1-1 Global Economy and Port Throughput Growth Rate (2017.Q1-2020.Q1)

1.1.1 Ports in Asia posted discrepant production performance

In the first quarter, the global COVID-19 pandemic dealt a heavy blow to the Asian economy. The Chinese economy was under huge pressure and China's GDP growth dropped to -6.8%. After contraction for three consecutive quarters, the economic growth of Hong Kong, China, declined further in the first quarter of 2020, and its GDP growth dropped to -8.9%. Singapore's economic and trade performance has been sluggish since 2019, and its GDP growth in the first quarter of 2020 dropped to -2.2%. Although Korea was among the first economies hit by COVID-19, the pandemic's

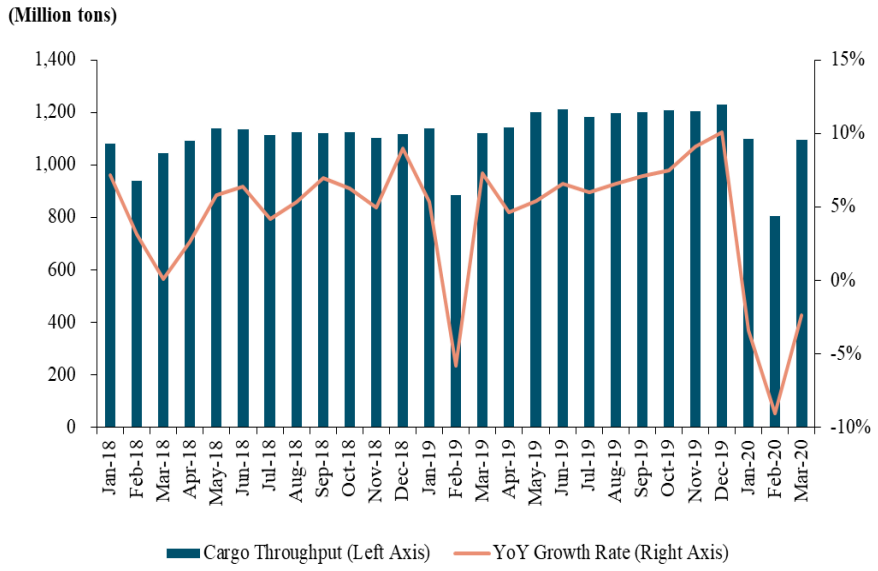
[1] Major global ports refer to the ones listed in the appendix; ports with their statistical data currently available. In comparison with the statistical data of the United Nations and the World Bank as well as the seaborne trade statistics of the Clarksons, the total throughput of the ports covered in this report accounts for around 65% of the global total.

overall impact on its foreign exports was not obvious. It was not until March when the pandemic spread accelerated in the United States and Europe when the impact on Korea grew.

- **Ports in East Asia showed discrepant production statuses**

(1) Cargo throughput growth of China's ports narrows

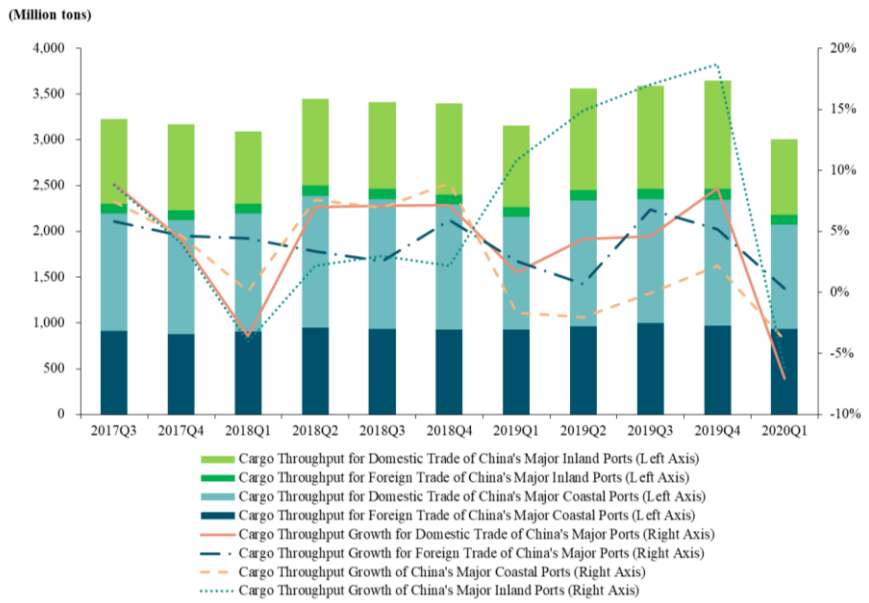
China's ports recorded a cargo throughput of 3 billion tons in the first quarter, dropping by 4.6% year-on-year. In the first two months of 2020, the COVID-19 pandemic suffocated the production resumption of upstream and downstream port enterprises, resulting in a decline in the shipping demand. Major ports in China witnessed sharp declines in cargo throughput. As the pandemic prevention and control situation improved, China's ports successively resumed production. By March, the cargo throughput of China's ports picked up month-on-month.



Source: The Ministry of Transport of People's Republic of China, sorted by SISI.

Figure 1-2 Cargo Throughput and Growth Rate of China's Ports during Jan-18 to March-20

In the first quarter, China's ports handled 1.04 billion tons of foreign-trade cargoes, up by 0.3% year-on-year, and the domestic-trade throughput declined by 7.1% year-on-year to 1.97 billion tons.



Source: The Ministry of Transport of People's Republic of China, sorted by SISI.

Figure 1-3 Cargo Throughput and Growth Rate of China's Ports (2017.Q3 -2020.Q1)

Ningbo Zhoushan Port, Shanghai Port, Qingdao Port, Tangshan Port and Guangzhou Port are the top five among China's coastal ports. Except Qingdao Port which maintained a high growth rate of 4.1%, all other ports in the top five recorded negative growth in cargo throughput, especially Shanghai Port which recorded a fall of 16.8% year-on-year. The cargo throughput of inland river ports showed divergent trends, and Zhenjiang Port and Nantong Port posted sound growth in throughput. Zhenjiang port handled 71.5 million tons of cargoes in the first quarter, a rise of 10.1% year-on-year against the sudden pandemic outbreak. Nantong Port recorded a cargo throughput of 69.64 million tons in the first quarter, up by 7.7% year-on-year, due to the robust growth of its dry bulk throughput (8.2%). Due to the weak coal demand, the dry bulk throughput of Suzhou Port dropped significantly (-15.9%) in the first quarter, resulting in a 12.3% year-on-year decline in cargo throughput to 115.39 million tons.

Table 1-1 China's Port Cargo Throughput Rankings in 2020.Q1

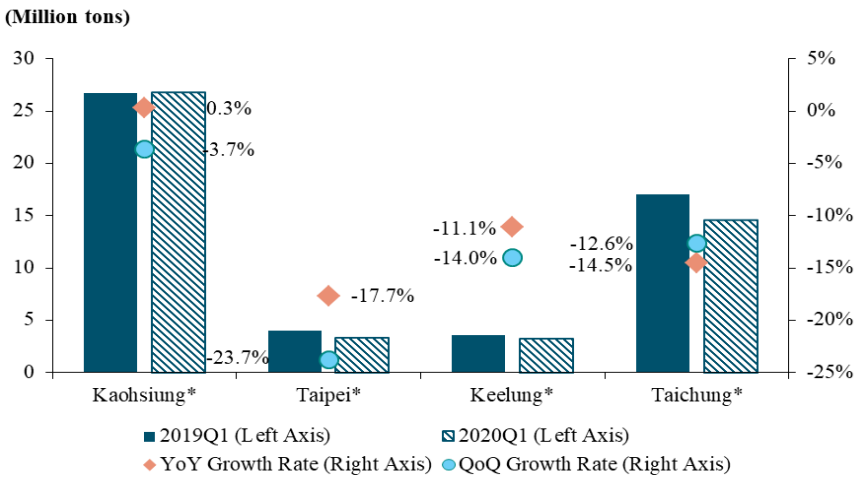
Ranking	Port	2020Q1 (Million tons)	YoY Growth Rate
1	Ningbo Zhoushan	250.42	-1.9%
2	Shanghai	145.69	-16.8%
3	Qingdao	143.87	4.1%
4	Tangshan	141.65	-12.5%
5	Guangzhou	135.48	-4.6%
6	Rizhao	118.95	4.6%
7	Suzhou	115.39	-12.3%
8	Tianjin	111.12	5.4%
9	Yantai	92.19	-1.9%

10	Dalian	82.55	1.5%
11	Zhenjiang	71.50	10.1%
12	Nantong	69.64	7.7%
13	Huanghua	66.88	-1.2%
14	Beibu Gulf	64.38	14.5%
15	Taizhou	61.48	-1.4%
16	Lianyungang	60.84	3.9%
17	Yingkou	55.60	-16.5%
18	Nanjing	55.22	-5.9%
19	Zhanjiang	54.63	-3.2%
20	Shenzhen	52.28	-8.9%

Source: The Ministry of Transport of People's Republic of China, sorted by SISI.

(2) Throughput of Chinese Taipei ports declined significantly

Affected by the COVID-19 pandemic, the throughput of Chinese Taipei ports dropped significantly in the first quarter. Due to the pandemic outbreak at the beginning of the year, refinery plants reduced workloads and suspended production temporarily for maintenance. This has resulted in the sluggish lubricating oil demand from downstream companies and caused the base oil import and export trade of Chinese Taipei to fall by 20.0% year-on-year in January and February. As a result, Taipei Port was expected to record a cargo throughput of 3.33 million tons in the first quarter, down by 17.7% year-on-year, Taichung Port may complete a cargo throughput of around 14.6 million tons, down by 14.5% year-on-year, and Keelung Port was expected to record a decline of 11.1% year-on-year to 3.23 million tons.



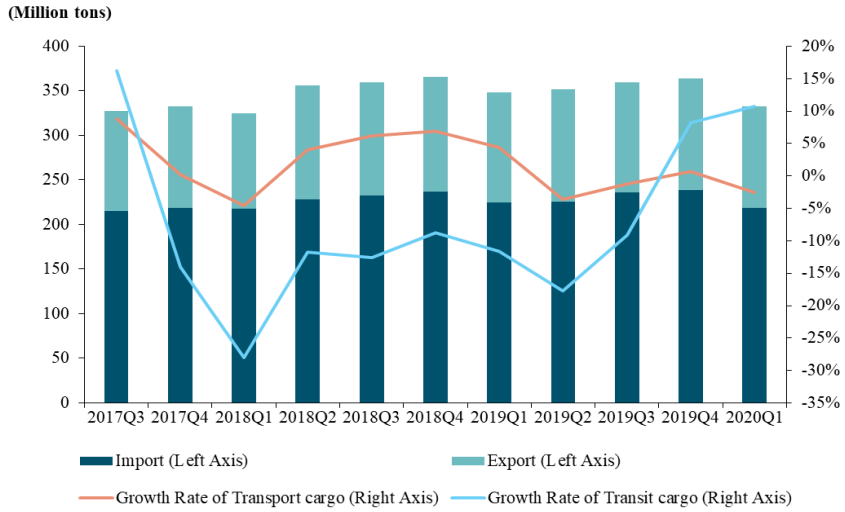
Note: * indicates projections.
Source: Websites of various port authorities, sorted by SISI.

Figure 1-4 Cargo Throughput and Growth Rate of Taiwan's Major Ports in 2020.Q1

(3) Production of Korea's ports stayed sluggish

In the first quarter of 2020, Korea's economy contracted by 1.4% quarter-on-quarter, driven by a sharp decline in private spending, with the total import and export volume hitting 332.72 million

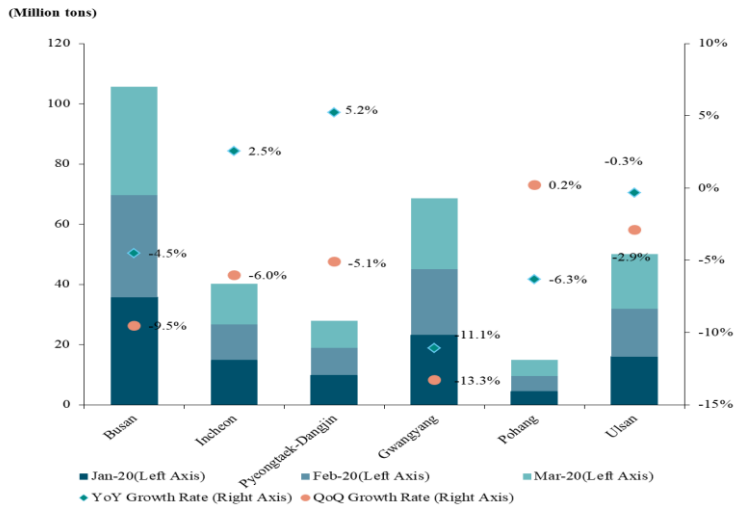
tons, down by 2.5% year-on-year. Korea's import and export volumes both declined, by 2.7% and 7.6% year-on-year, respectively. In terms of export trade, its semiconductor exports continued to improve, but such improvement failed to offset the impacts of reduced exports of automobiles, machinery, and chemical products. In terms of import trade, the Korean government gradually advanced the coal use restrictions to address pollution problems. In the first quarter, its coal imports recorded 29.04 million tons, down by 15.2% year-on-year, with the total imports on a decline.



Source: Websites of Korean Port Authority, sorted by SISI.

Figure 1-5 Cargo Throughput and Growth Rate of South Korea's Major Ports (2017.Q3 -2020.Q1)

Port-wise, the cargo throughput growth of major ports in Korea in this quarter fell across the board. Except Port of Pyeongtaek-Dangjin and Port of Incheon which maintained positive growth, all other ports showed negative growth in cargo throughput growth. Due to the declining trade volume of coal, automobiles and other products, Port of Gwangyang recorded the sharpest decline of 11.1%, with its cargo throughput falling to 68.64 million tons.

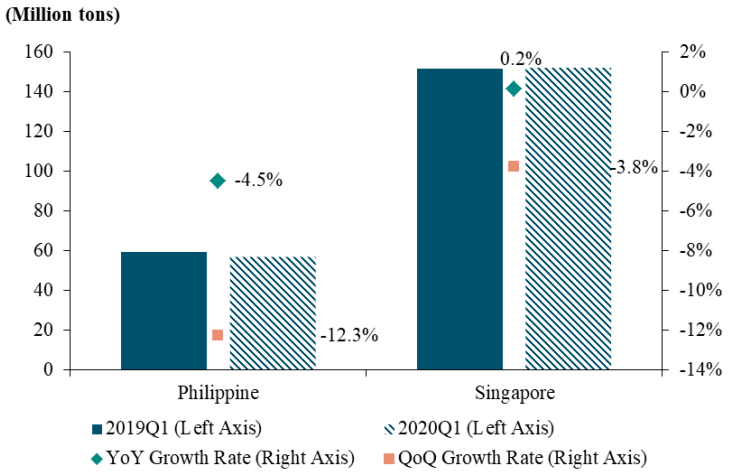


Source: Websites of Korean Port Authority, sorted by SISI.

Figure 1-6 Cargo Throughput and Growth Rate of South Korea's Major Ports in 2020.Q1

- **Cargo throughput growth of ports in Southeast Asia slowed down**

In the first quarter, due to the shrinking global trade and the COVID-19 pandemic, the cargo throughput growth of Southeast Asian ports slowed down. The Philippines rolled out blockade measures in the last two weeks of March, and major importers of the Philippine products such as Japan, China, Korea, and the European Union didn't implement import tightening policies in the first quarter. This has weakened the impact of the adverse economic and trade environment on the Philippine port production, and ports in the Philippines recorded a throughput of 56.71 million tons, down by 4.5% year-on-year. Affected by the pandemic, Singapore's economy contracted by 2.2% in the first quarter, and multiple economies imposed restrictions on trade of cargoes other than medical materials. This has greatly affected the transit volume of the Port of Singapore, bringing the port's cargo throughput to 152.15 million tons in the first quarter, a rise of mere 0.2% year-on-year.



Source: Websites of various port authorities, sorted by SISI.

Figure 1-7 Cargo Throughput and Growth Rate of Major Southeast Asian Ports in 2020.Q1

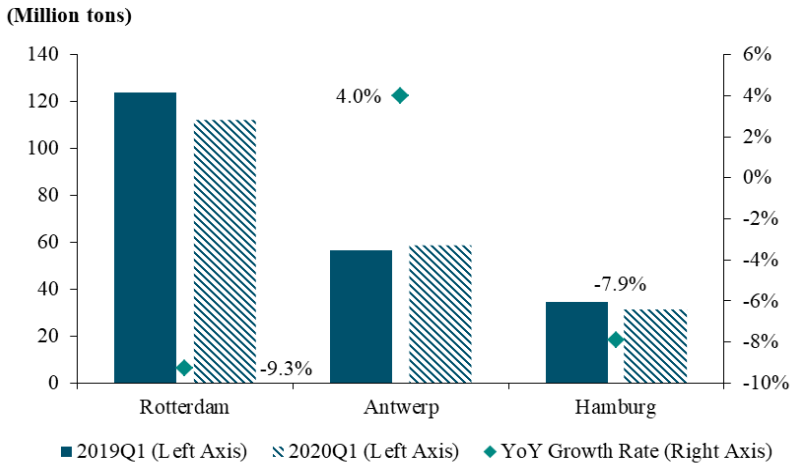
1.1.2 Cargo throughput of European ports edged down

To prevent the spread of the COVID-19 pandemic, many European economies have taken strict control measures at the cost of economic activities. In the first quarter, the Euro Area's GDP fell by 3.3%, and its economic growth reached a decade low. The production situation of European ports was impacted to varying degrees. In this quarter, except Port of Antwerp, Port of Algeciras and Port of Tallinn which maintained slight growth in throughput, all other ports presented negative growth.

- **Ports in Western Europe showed divergent trends of production**

Ports in Western Europe posted divergent performance in the first quarter. Port of Rotterdam recorded a significant drop in coal throughput by nearly 3 million tons (-39.6%), and its total cargo throughput in the first quarter fell by 9.3% year-on-year to 110 million tons. In the first quarter, the

cargo throughput of Port of Antwerp rose by 4% to 59.1 million tons against the trend. This is due to the global connectivity and trade diversity of Port of Antwerp, which has resulted in its lower dependency on specific markets. The seaborne cargo throughput in the first quarter of Port of Hamburg was 31.9 million tons, a decline of 7.9% year-on-year. This was caused by global shipping and supply chain suspension due to the COVID-19 pandemic. The resulting cancellation of some routes also reduced the cargo throughput of Port of Hamburg.

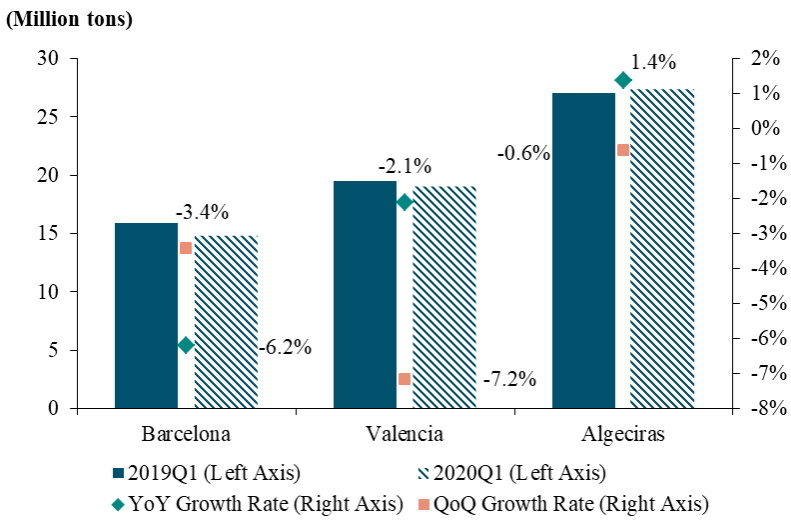


Source: Websites of various port authorities, sorted by SISI.

Figure 1-8 Cargo Throughput and Growth Rate of Major Western European Ports in 2020.Q1

- **Production of Southern European ports depressed**

Ports in Southern Europe faced large downside pressure in the first quarter. While Port of Algeciras which recorded slight growth in cargo throughput, Port of Barcelona and Port of Valencia both posted lackluster performance in production. Port-wise, the Spanish economy contracted by 3.8% year-on-year in the first quarter due to the impact of the COVID-19 pandemic. Port of Algeciras recorded a cargo throughput of 27.06 million tons in this quarter, a rise of 1.4% year-on-year, primarily due to the strong growth of liquid bulks. In addition, Port of Barcelona and Port of Algeciras both posted negative growth in production, with their cargo throughput falling by 6.2% and 2.1% year-on-year, respectively.

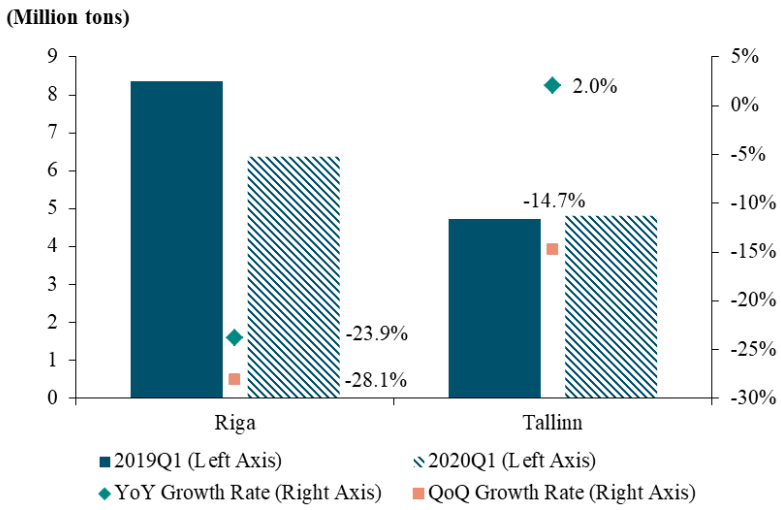


Source: Websites of various port authorities, sorted by SISI.

Figure 1-9 Cargo Throughput and Growth Rate of Southern European Ports in 2020.Q1

- **Ports in Eastern Europe posted lackluster performance**

The production performance of some ports in Eastern Europe in the first quarter was also unsatisfactory. Port-wise, the cargo throughput of Port of Riga in the first quarter declined by 23.9% year-on-year to 6.36 million tons due to the sharp declines in its dry bulks and liquid bulk throughput. Port of Tallinn recorded a cargo throughput of 4.82 million tons, a rise of 2.0% year-on-year, due to the robust growth of liquid bulks.



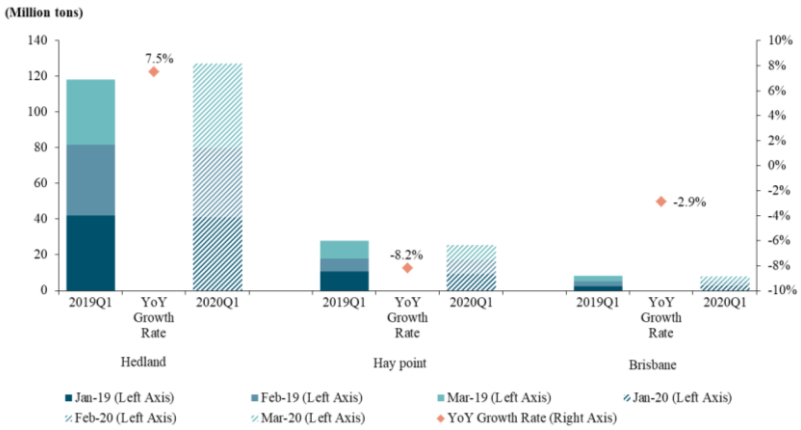
Source: Websites of various port authorities, sorted by SISI.

Figure 1-10 Cargo Throughput and Growth Rate of Eastern European Ports in 2020.Q1

1.1.3 Cargo throughput trends of ports in Australia varied

In the first quarter, Australia's economic growth continued to slow down, with its major ports totaling a cargo throughput of 160 million tons, a rise of 4.1% year-on-year. With the increased

production of several important projects in the Pilbara region of Australia, Port of Hedland welcomed favorable growth in throughput, handling a total of 127.39 million tons of iron ore in the first quarter, a year-on-year rise of 7.5%. Affected by the global COVID-19 spread, Australia's coal clearance efficiency declined. Port of Hay Point recorded a coal throughput of 25.71 million tons, a year-on-year fall of 8.2%. Port of Brisbane handled 7.99 million tons of cargoes in this quarter, a fall of 2.9% year-on-year.



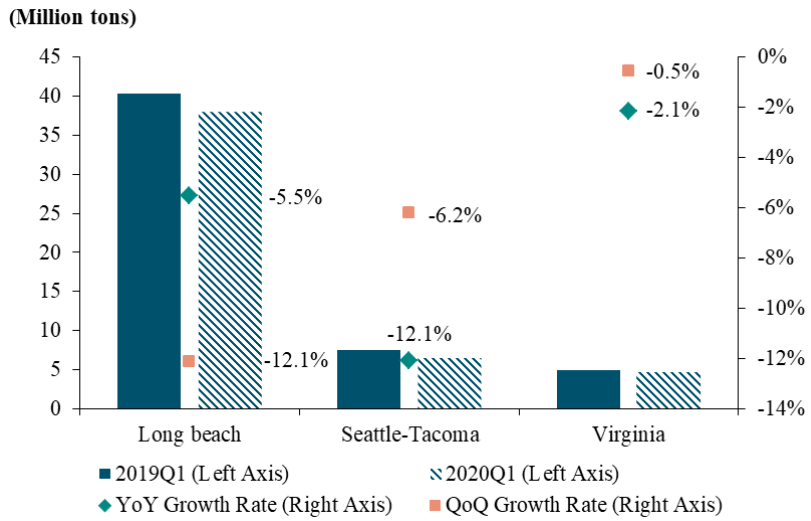
Source: Websites of various port authorities, sorted by SISI.

Figure 1-11 Cargo Throughput and Growth Rate of Australian Ports in 2020.Q1

1.1.4 Production situations of ports in the Americas did not bode well

- **Ports in North America post sharp declined in production**

In the first quarter of 2020, the United States' economy shrank by 4.8%, casting a significant adverse impact on the throughput growth of North American ports. The pandemic affected the import and export trade of ports in the United States, and the production of North American ports such as Port of Long Beach and Seattle-Tacoma Seaport posted sharp declines in production. The cargo throughput of Port of Long Beach fell by 5.5% to 38.03 million tons, and Seattle-Tacoma Seaport recorded a cargo throughput of 6.61 million tons, a fall of 12.1% year-on-year.

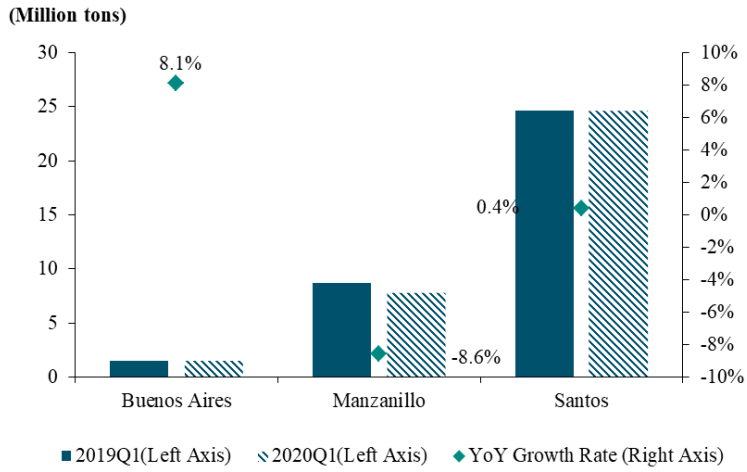


Source: Websites of various port authorities, sorted by SISI.

Figure 1-12 Cargo Throughput and Growth Rate of Major North American Ports in 2020.Q1

- **Ports in South America showed divergent trends of production**

Ports in South America post divergent performance in production in the first quarter. Brazil's port throughput posted a slight decline in growth, down by 1.1% year-on-year to 250 million tons. The strong growth of liquid bulk throughput (15.5%) has weakened the impact of the COVID-19 pandemic and the decline in dry bulk throughput (-8.0%) on the throughput of Brazil's ports. In the first quarter, the cargo throughput of the Port of Buenos Aires rose against the trend at a rate of 8.1%, while the Port of Manzanillo only recorded 7.91 million tons of cargo throughput, a year-on-year decline of 8.6%.



Source: Websites of various port authorities, sorted by SISI.

Figure 1-13 Cargo Throughput and Growth Rate of Major South American Ports in 2020.Q1

1.1.5 Rankings of global top 20 ports by cargo throughput

In 2020, the growth rates of the global top 20 cargo ports as a whole remained stable, recording

a total cargo throughput of 2.24 billion tons in the first quarter, a year-on-year decline of 2.6%. Among the ports in China, Ningbo Zhoushan Port secured the first place in the world with an absolute advantage of 260 million tons of throughput. Beibu Gulf Port recorded a growth rate of 14.5% year-on-year in cargo throughput. Zhenjiang Port also posted strong growth, with its cargo throughput growing by 11.8% year-on-year to 71.5 million tons. Clouded by the COVID-19 pandemic, Shanghai Port recorded only 150 million tons of cargo throughput in the first quarter, down by 16.8% year-on-year. Among international ports, the Port of Hedland registered a cargo throughput of 130 million tons in the first quarter, an increase of 7.5% year-on-year, benefiting from the strong growth of iron ore exports. All other international ports presented negative growth.

1.2 Analysis on container throughput of global ports

In the first quarter of 2020, the COVID-19 pandemic kept ravaging the global economy. The global service trade growth momentum was undermined, producing a significant impact on the global container trade. Against this backdrop, the global container throughput growth fell to the negative range in the first quarter of 2020, namely -3.8%, a decline of 6.1 percentage points year-on-year.

Table 1-2 Global Top 20 Ports by Cargo Throughput in 2020.Q1

Ranking	Port	2019Q1 (Million tons)	2020Q1 (Million tons)	YoY Growth Rate
1	Ningbo Zhoushan	255.27	250.42	-1.9%
2	Singapore	151.91	151.76	-0.1%
3	Shanghai	175.12	145.69	-16.8%
4	Qingdao	138.20	143.87	4.1%
5	Tangshan	161.89	141.65	-12.5%
6	Guangzhou	142.01	135.48	-4.6%
7	Hedland	118.45	127.39	7.5%
8	Rizhao	113.72	118.95	4.6%
9	Suzhou	131.57	115.39	-12.3%
10	Rotterdam	123.87	112.39	-9.3%
11	Tianjin	105.43	111.12	5.4%
12	Busan	110.65	105.65	-4.5%
13	Yantai	93.98	92.19	-1.9%
14	Dalian	81.33	82.55	1.5%
15	Zhenjiang	64.94	71.50	10.1%
16	Nantong	64.66	69.64	7.7%
17	Gwangyang	77.19	68.64	-11.1%
18	Huanghua	67.69	66.88	-1.2%
19	Beibu Gulf	56.23	64.38	14.5%

20	Taizhou	62.35	61.48	-1.4%

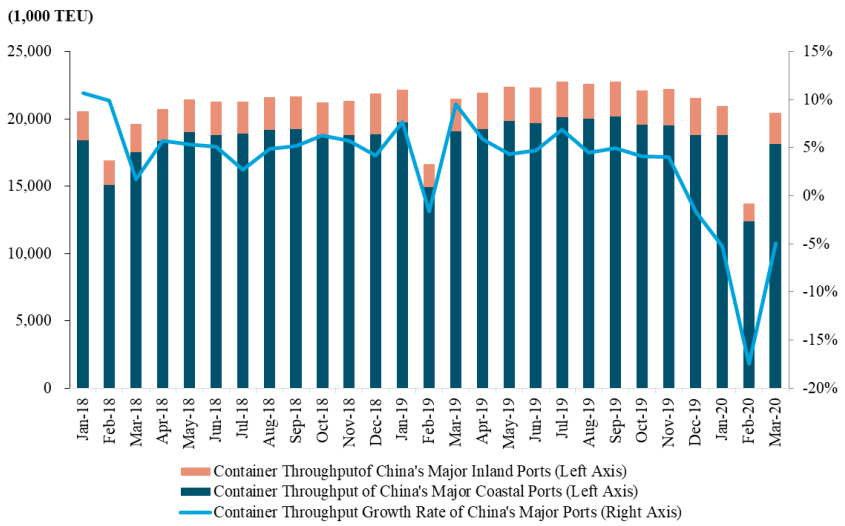
Source: Websites of various port authorities, sorted by SISI.

1.2.1 Container throughput growth of Asian ports falls

- **Container throughput growth of East Asian ports fell across the board**

(1) Ports in mainland China fellow a "V-shaped" curve in container throughput growth

Due to the impact of the COVID-19 pandemic and the Spring Festival, the container throughput growth of ports in mainland China fell to a negative range in the first quarter of 2020. Ports above a designated scale recorded a total container throughput of 55.18 million TEUs, down by 8.5% year-on-year.



Source: The Ministry of Transport of People's Republic of China, sorted by SISI.

Figure 1-14 Container Throughput and Growth Rate of Chinese Mainland Ports(Jan-2018 to Mar-2020)

From the port rankings by container throughput, the rankings of ports in mainland China in the first quarter of 2020 didn't change much year-on-year. The COVID-19 pandemic has impacted the container throughput of all ports in China to varying degrees. It is worth noting that among the top 15 ports, only Qingdao Port, Rizhao Port, Beibu Gulf Port, and Yantai Port maintained positive growth in container throughput, and all other ports recorded declines in container throughput growth to different degrees. Most of them recorded double-digit declines in this regard.

Table 1-3 Container Throughput of Chinese Mainland Ports in 2020.Q1

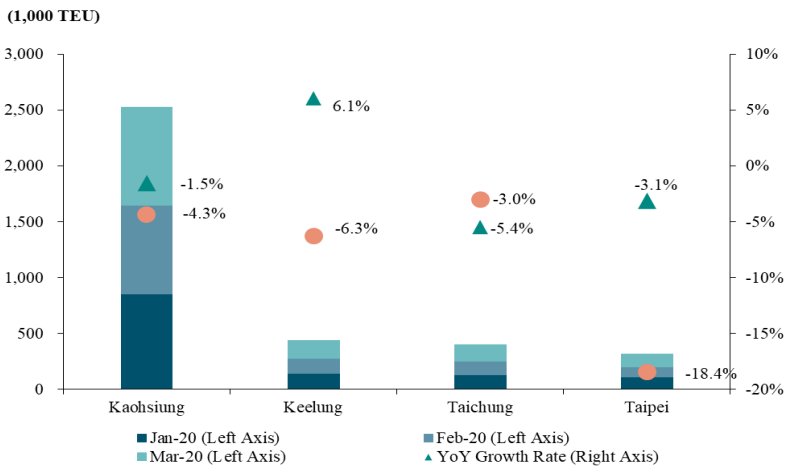
Ranking	Port	2020Q1(1,000 TEU)	YoY Growth Rate
1（1）	Shanghai	9330	-10.4%
2（2）	Ningbo Zhoushan	6150	-8.2%
3（3）	Shenzhen	5330	-11.9%
4（5）	Qingdao	5040	2.2%

5（4）	Guangzhou	4740	-10.3%
6（6）	Tianjin	3710	-1.9%
7（7）	Xiamen	2520	-6.5%
8（8）	Dalian	1530	-27.7%
9（9）	Suzhou	1270	-18.5%
10（10）	Yingkou	1180	-15.4%
11（11）	Lianyungang	1170	-2.2%
12（12）	Rizhao	1030	4.7%
13（17）	Beibu Gulf	920	32.6%
14（13）	Foshan	800	-15.0%
15（16）	Yantai	790	5.1%

Source: The Ministry of Transport of People's Republic of China, sorted by SISI.

(2) Chinese Taipei ports presented divergence in container throughput growth

The COVID-19 pandemic in the first quarter of 2020 has impacted Chinese Taipei economic growth to a certain extent. The GDP growth of the region in the first quarter stood at 1.5%, a new single-quarter low in four years. The container throughput growth of major ports in Chinese Taipei exhibited divergence. Kaohsiung Port recorded a container throughput of 2.52 million TEUs in the first quarter, a fall of 1.5% year-on-year. The container throughput of Chinese Taipei Port decreased by 5.4% year-on-year to 397,000 TEUs. The container throughput of Keelung Port dropped by 3.1% year-on-year to 320,000 TEUs.



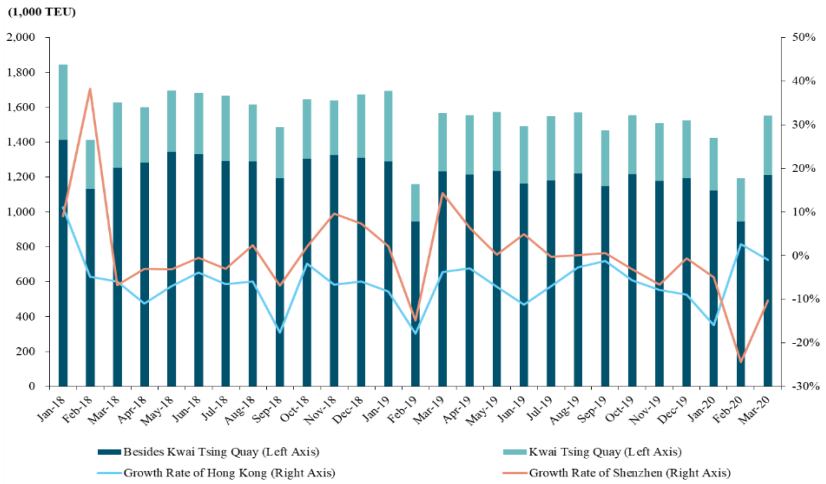
Source: Websites of various port authorities, sorted by SISI.

Figure 1-15 Container Throughput and Growth Rate of Major Ports in Taiwan Province of China in 2020.Q1

(3) Container throughput growth of Hong Kong Port of China continued to slide

In the first quarter, the COVID-19 pandemic severely hurt Hong Kong's economic activities and regional supply chain. Coupled with the increased social instability, the Hong Kong economy suffered a faster decline in the first quarter of 2020, with its economic growth fell by 8.9% year-on-year. At the same time, Hong Kong Port's cargo exports fell by 9.7%, services exports fell by 37.8%,

and private consumers' expenditure fell by 10.2%, all being record-high declines, along with a 13.9% drop in investment expenditure. In addition, Hong Kong's unemployment rate in March was as high as 4.2%, a new high in the past nine-plus years. Against this backdrop, the container throughput of Hong Kong Port in this quarter slumped by 5.8% year-on-year to 4.17 million TEUs.

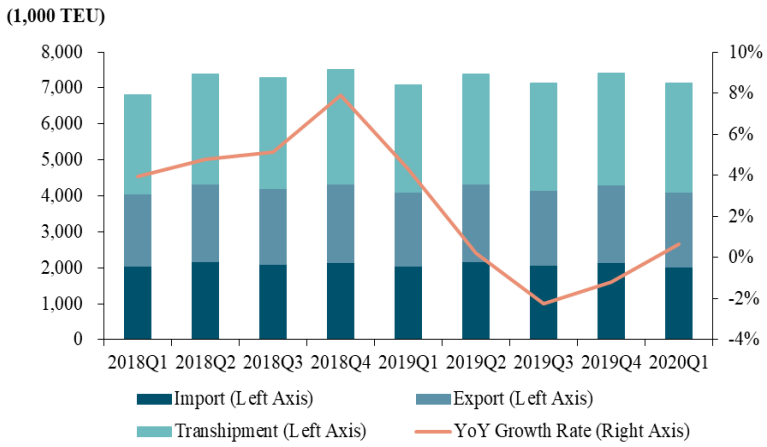


Source: Hong Kong Port Development Authority.

Figure 1-16 Container Throughput and Growth Rate of Hong Kong and Shenzhen during Jan-18 to Mar -20

- **Container throughput growth of South Korea's ports slowed down**

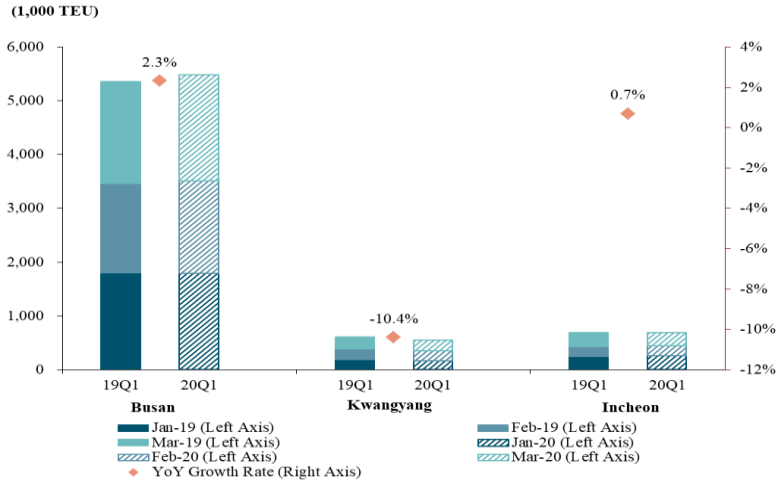
In the first quarter of 2020, the COVID-19 pandemic contributed to a 1.4% decline of Korea's GDP quarter-on-quarter, the biggest contraction since the financial crisis. Residents' consumption and production in the service sector suffered heavy setbacks. The growth of construction investment and equipment investment slowed down significantly, and industries such as chemicals and automobiles were depressed. Against this backdrop, the container throughput growth of ports in Korea remained low, recording a container throughput of 7.14 million TEUs, a rise of 0.7% year-on-year, or a drop of 3.7 percentage points quarter-on-quarter.



Source: Websites of Korean Port Authority, sorted by SISI.

Figure 1-17 Container Throughput and Growth Rate of South Korea's Major Ports (2018.Q1- 2020.Q1)

Port-wise, as Hyundai Merchant Marine left 2M to join THE, the shipping services of Port of Gwangyang declined to some extent. The port recorded a container throughput of 553,000 TEUs in the first quarter, a drop of 10.4% year-on-year. Due to the operation suspension of major ports in China in the early period of COVID-19 outbreak, liner companies called at the Port of Busan temporarily, which drove the port's container throughput to grow by 2.3% year-on-year to 5.48 million TEUs. In addition, the container throughput of Port of Incheon in the first quarter increased by 0.7% year-on-year to 696,000 TEUs, the rate being at the same level as that of Korean ports overall.



Source: Websites of Korean Port Authority, sorted by SISI.

Figure 1-18 Container Throughput and Growth Rate of South Korea's Major Ports in 2020.Q1

- **Container throughput of ports in Southeast Asia declined**

(1) Container throughput of ports in Thailand fell

The global economy was in recession in the first quarter of 2020. As a result, the overall demand for Thai cargoes in the international market slipped. Coupled with the stagnation of production chains as a result of the "blockage" measures implemented by multiple economies in the world, the Thai import and export trade was severely hurt. Its cargo import value declined by 1.9%, and its border and cross-border trade fell by 7.6% year-on-year in the first quarter. Against this background, the container throughput of major ports in Thailand fell year-on-year. Specifically, Port of Laem Chabang, as Thailand's largest port, recorded a container throughput of 1.97 million tons in the first quarter, a drop of 2.4% year-on-year. The container throughput growth of Port of Bangkok dropped by 1.3 percentage points. In addition, the container throughput of Port of Lat Krabang dropped by 9.2% year-on-year, while the declines of other ports all exceeded 10%.

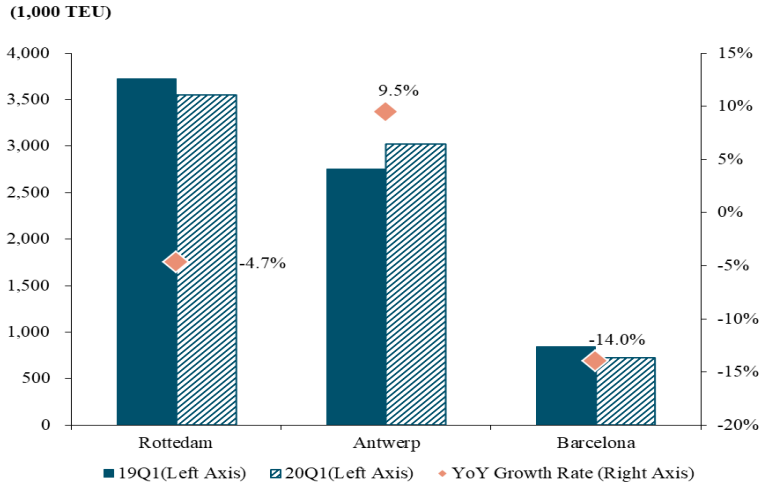
(2) Container throughput growth of Port of Singapore slowed down

The COVID-19 pandemic in the first quarter of 2020 has weakened the internal and external demands. As a result, Singapore's GDP fell by 10.6% quarter-on-quarter in the first quarter. The sluggish economic and trade activities curbed the container trade development. Against this

backdrop, the container throughput of the Port of Singapore in the first quarter was 9.28 million TEUs, a rise of 4.2% year-on-year, the rate being 4.4 percentage points lower than that of last quarter.

1.2.2 Container throughput growth of European ports dropped

Clouded by the COVID-19 pandemic, the European economy shrank dramatically, the demand for manufacturing products fell sharply, and the service sector suffered a severe setback. According to Drewry, European ports handled 33.68 million TEUs of containers in total in the first quarter, a drop of 2.2% year-on-year. Port-wise, benefiting from the significant increase in traded medicines and e-commerce commodities, the Port of Antwerp recorded a container throughput of 3.02 million TEUs in the first quarter, a rise of 9.5% year-on-year. Clouded by the pandemic, Port of Barcelona recorded a container throughput of 725,000 TEUs in the first quarter, a drop of 14.0% year-on-year. The weak economy in Europe and intensified trade conflicts, as well as the reduced cargo volume of China because of the COVID-19 pandemic in February jointly contributed to the 4.7% year-on-year reduction in container throughput of the Port of Rotterdam in the first quarter, with the port's total throughput standing at 3.55 million TEUs.



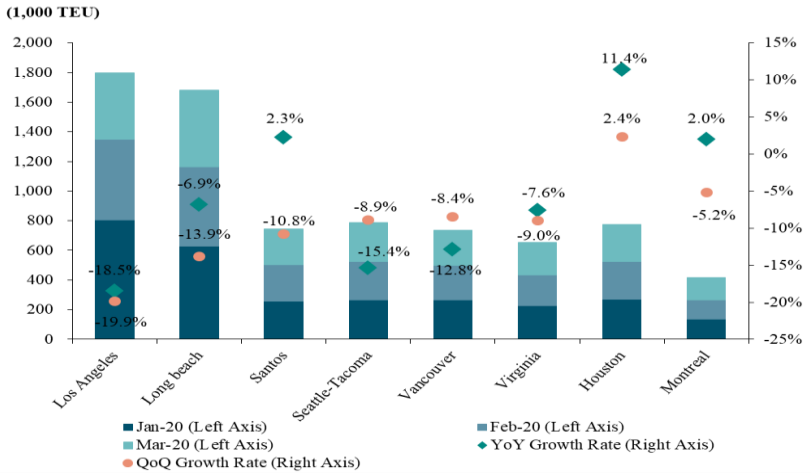
Source: Websites of various port authorities, sorted by SISI.

Figure 1-19 Container Throughput and Growth Rate of Major European Ports in 2020.Q1

1.2.3 Container throughput of North American ports fell significantly

The container trade of ports in the United States was heavily hurt in the first quarter of 2020, due to the combined impacts of liner companies' massive suspension of operation and the aggravated spread of the pandemic in the United States among other factors. Against this backdrop, ports in North America recorded a total container throughput of 16.42 million TEUs in the first quarter, a drop of 0.8% year-on-year, the growth rate marking a decline of 6.7 percentage points year-on-year. Port-wise, due to the adverse impact of the U.S.-China trade frictions and the COVID-19 pandemic, the container throughput of the Port of Los Angeles dropped significantly by 18.5% to 1.8 million TEUs in the first quarter. As the liner carrier cancelled multiple voyages, the container throughput

of the Port of Long Beach also fell sharply in the first quarter, with a total container throughput of 1.68 million TEUs, a decrease of 6.9% year-on-year. The Northwest Seaport Alliance (NWSA) was also negatively impacted by the global supply chain disruption and widespread cancellation of container voyages among other factors. In the first quarter, the alliance's container throughput decreased by 8.9% year-on-year to 789,000 TEUs. In addition, Port of Vancouver and Port of Virginia both posted container throughput declines to varied degrees due to the impact of the pandemic.



Source: Websites of various port authorities, sorted by SISI.

Figure 1-20 Container Throughput and Growth Rate of Major American Ports in 2020.Q1

1.2.4 Analysis on rankings of global top 20 container ports

The container throughput growth of the global top 20 container ports fell across the board in the first quarter of 2020 due to the raging COVID-19 pandemic globally. The overall rankings of the top 20 container ports changed little, except fluctuations in the places of a few ports. The container throughput growth of most of China's ports declined by varying degrees. Among international ports, the Port of Antwerp and the Port of Busan posted eye-catching performance. Among the ports on the west coast of the United States, Port of Los Angeles and Port of Long Beach were also impacted by the pandemic, with their container shipping voyages falling significantly, and import and export containers plunging. Specifically, the Port of Los Angeles recorded the sharpest decline among the top 20 container ports.

Table 1-4 Global Top 20 Ports by Container Throughput in 2020.Q1

Ranking	Port	2020Q1(1,000 TEU)	YoY Growth Rate
1	Shanghai	9330	-10.4%
2	Singapore	9280	4.2%
3	Ningbo Zhoushan	6150	-8.2%
4	Busan	5480	2.3%

5	Shenzhen	5330	-11.9%
6	Qingdao	5040	2.2%
7	Guangzhou	4740	-10.3%
8	Hong Kong	4170	-5.8%
9	Tianjin	3710	-1.9%
10	Rotterdam	3550	-4.7%
11	Dubai	3370	-3.4%
12	Kelang	3250	1.7%
13	Antwerp	3020	9.3%
14	Kaohsiung	2520	-1.5%
15	Xiamen	2520	-6.5%
16	Hamburg	2200	-6.6%
17	Tanjung Pelepas*	2160	-2.7%
18	Laem Chabang	1970	-2.4%
19	Los Angeles	1800	-18.5%
20	Long Beach	1680	-6.9%

Note: * indicates projections.
Source: Websites of various port authorities, sorted by SISI.

1.3 Analysis on dry bulk throughput of global ports

The international dry bulk market was sluggish in the first quarter of 2020. Due to the sudden outbreaks of the COVID-19 pandemic, China's Spring Festival holiday was extended, production was suspended on a large scale, and the demand for coal and steel fell significantly. The supply side also suffered setbacks. The pandemic, coupled with the weather, led to sluggish coal and iron ore production in Brazil and Australia, and both the supply and demand were weak. Under the double-whammy, the dry bulk market continued to decline. In the later period, with the recovering demand for faster resumption of production and the faster recovery of minor bulks shipping, the market began to pick up slowly in mid-to-late February, but the growth was still far below the level of the same period in 2019.

Table 1-5 Dry Bulk Cargo Throughput of Global Major Ports in 2020.Q1

Port	2019Q1 (Million tons)	2020Q1 (Million tons)	YoY Growth Rate
Hedland	117.29	126.01	7.4%
Santos	12.03	12.12	0.7%
Antwerp	3.15	3.19	1.2%
Rotterdam	19.45	16.74	-13.9%
Hay Point	28.00	25.71	-8.2%

Source: Websites of various port authorities, sorted by SISI.

Dry bulks ports in China showed discrepant production trends. Specifically, the grain and metallic ores throughput of Zhenjiang Port increased significantly, which boosted its dry bulk throughput to grow strongly by 11.8% overall. Tangshan Port's coal throughput dropped by 31.7%

year-on-year, causing its dry bulk throughput in the first quarter to drop by 12.8% year-on-year to 136.18 million tons. Due to the substantial decline in coal and mineral building materials, Suzhou Port's dry bulk throughput decreased by 15.9% year-on-year to 84.17 million tons.

Table 1-6 China's Top 10 Ports by Dry Bulk Cargo Throughput in 2020.Q1

Ranking	Port	2020Q1 (Million tons)	2019Q1 (Million tons)	YoY Growth Rate
1	Ningbo Zhoushan	121.58	130.36	-6.7%
2	Tangshan	118.74	136.18	-12.8%
3	Suzhou	70.80	84.17	-15.9%
4	Rizhao	68.69	64.29	6.9%
5	Huanghua	63.79	64.62	-1.3%
6	Zhenjiang	63.25	56.59	11.8%
7	Yantai	53.51	56.73	-5.7%
8	Qingdao	52.12	50.61	3.0%
9	Taizhou	52.01	51.49	1.0%
10	Nantong	51.92	48.00	8.2%

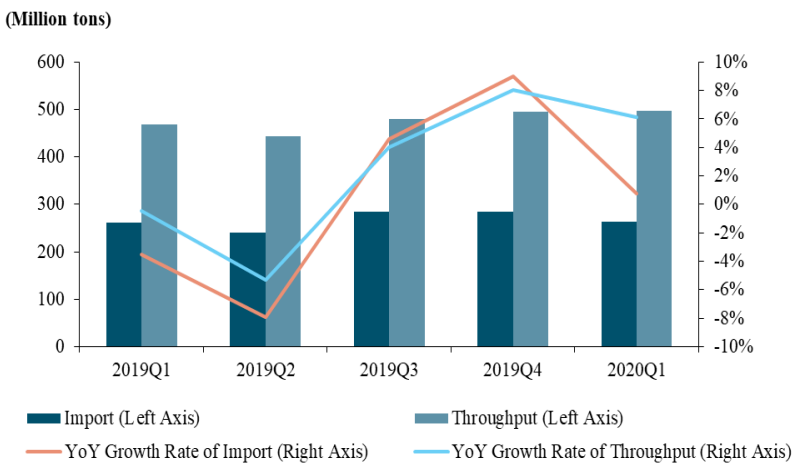
Source: The Ministry of Transport of People's Republic of China, sorted by SISI.

1.3.1 Global iron ore throughput showed different trends

The COVID-19 pandemic in the first quarter of 2020 has led to widespread suspension of production, and further to a significant drop in steel demand. Meanwhile, the supply side also suffered setbacks. Brazil's main mining areas were flooded due to the heavy rainfall. The hurricanes that hit the west coast of Australia once caused temporary shutdown of multiple ports, resulting in depressed iron ore production in Brazil and Australia. However, the situation began to improve slowly in mid-to-late February, especially as evidenced by Australian ports' strong growth in iron ore throughput.

- **China's iron ore import volume growth slowed down**

The sudden COVID-19 outbreak in the first quarter forced downstream infrastructure, automotive machinery and other sectors into production suspension for a prolonged period of time. The steel demand fell significantly, contributing to China's 262.75 million tons of iron ore import volume in the first quarter, a rise of only 0.8% year-on-year.

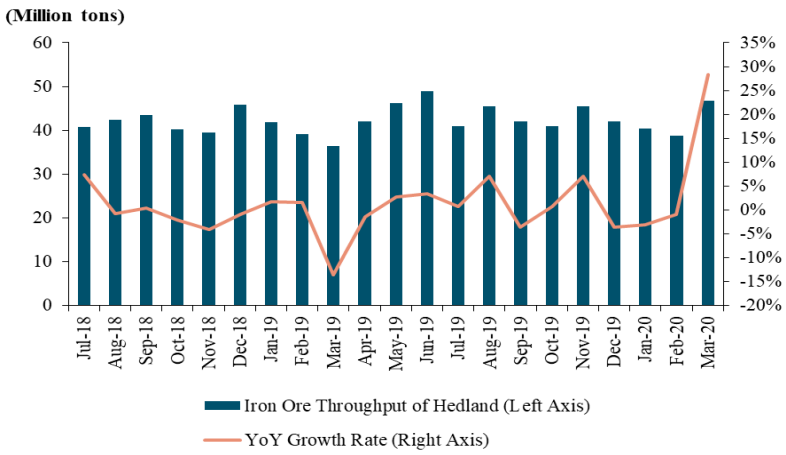


Source: Websites of China Customs, sorted by SISI.

Figure 1-21 Iron Ore Imports and Growth Rate of China (2019.Q1-2020.Q1)

- **Iron ore throughput growth in Australia remained robust**

With the increased production of several important projects in the Pilbara region of Australia, Port of Hedland welcomed favorable growth in throughput in the first quarter, handling a total of 127.39 million tons of iron ore, a year-on-year rise of 7.5%.



Source: Websites of Hedland Port Authority, sorted by SISI.

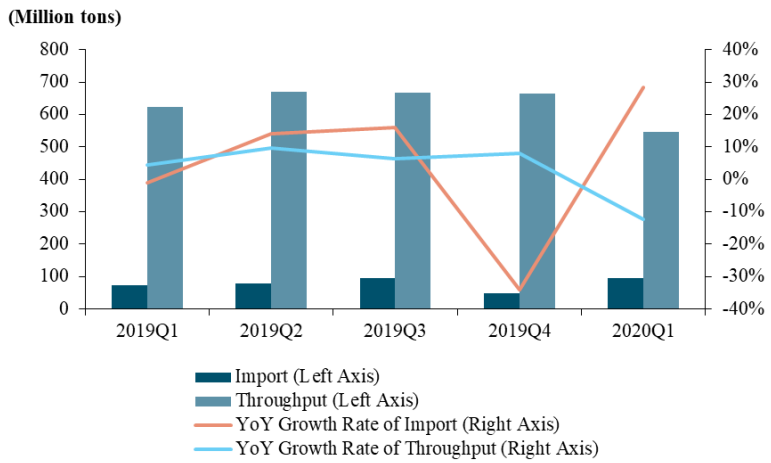
Figure 1-22 Iron Ore Throughput and Growth Rate of Hedland during Jul-18 to Mar-20

1.3.2 Coal demands of global coal ports sluggished

The coal demand in the first quarter of 2020 was weak due to the Spring Festival holiday and the COVID-19 pandemic among other factors, and China's coal prices fell significantly. As the pandemic spread globally, the international coal supply and demand were weak, and international coal prices also fell. In terms of industrial applications, although the metallurgical coal consumption in China and other economies increased year-on-year in the first quarter, the global industrial coal consumption still went down.

- **China posted robust growth in coal import volume, yet its throughput growth plunged**

China imported 95.89 million tons of coal in the first quarter, a rise of 28.5% year-on-year. However, its coal and coal product throughput was only 546.23 million tons, a drop of 12.4% year-on-year. Main reasons included the Spring Festival holiday which is a traditional off-season for coastal shipping, and the impact of the COVID-19 pandemic, which jointly contributed to the extreme depression of the coastal coal shipping market. After the Spring Festival, the pandemic situation was not put under full control and some workers returning to work were isolated. As a result, the coal demand recovery was not as fast as expected.

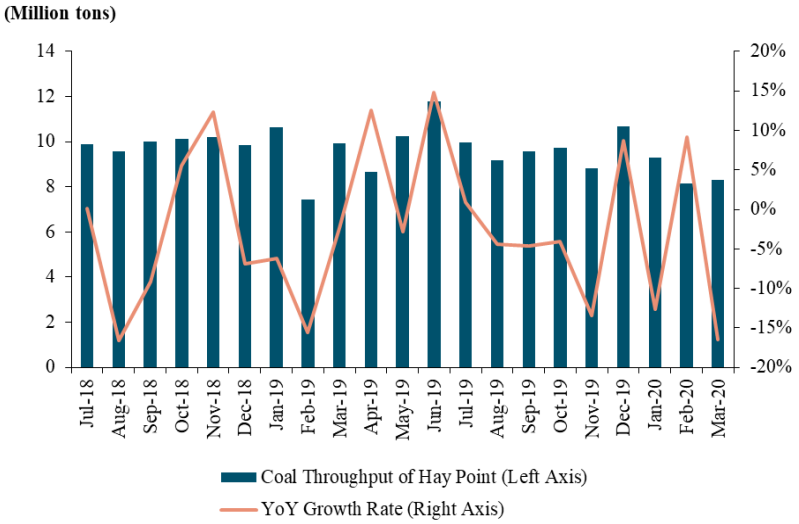


Source: Websites of China Customs, sorted by SISI.

Figure 1-23 Coal Imports and Growth Rate of China (2019.Q1-2020.Q1)

- **Coal throughput of Australia in negative growth**

The global coal demand in the first quarter was weak due to the global pandemic. Meanwhile, Australia imposed temporary restrictions on ship shipping, resulting in slower customs clearance of coal cargoes. Due to the COVID-19 pandemic, Port of Hay Point recorded a coal throughput of 25.71 million tons, a drop of 8.18% year-on-year.



Source: Websites of Hay Point Port Authority, sorted by SISI.

Figure 1-24 Coal Throughput and Growth Rate of Hay Point during Jul-18 to Mar-20

1.4 Analysis of liquid bulk throughput of global ports

In the first quarter, with the risk of global spread of COVID-19 intensified, the market was pessimistic about the expected growth of global economy and crude oil demand. Coupled with the price war between Saudi Arabia and Russia, crude oil prices plummeted. Major liquid bulk ports handled a total of 230 million tons of liquid bulks in the first quarter, a drop of 2.7% year-on-year. The throughput of China's top 10 liquid bulks ports maintained stable growth, totaling 190 million tons, a year-on-year increase of 9.0%.

Table 1-7 Liquid Bulk Cargo Throughput of Global Major Ports in 2020.Q1

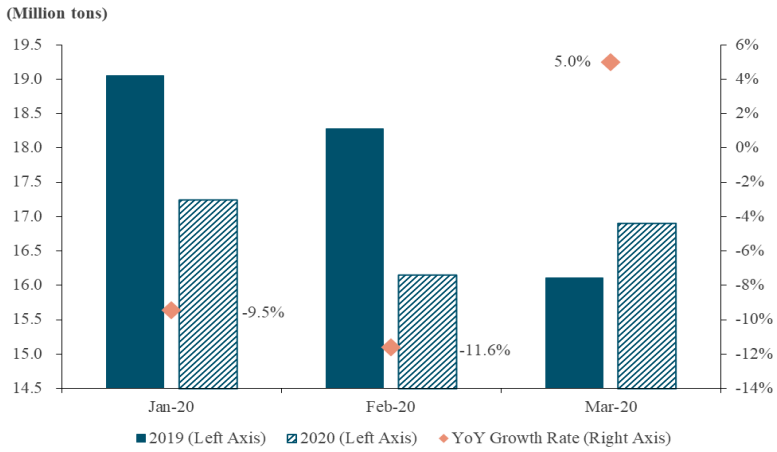
Port	2020Q1 (Million tons)	2019Q1 (Million tons)	YoY Growth Rate	2019Q4 (Million tons)	QoQ Growth Rate
Rotterdam	50.35	58.51	-13.9%	51.73	-3%
Singapore	50.31	53.44	-5.8%	53.21	-5%
Ulsan	35.99	30.43	18.3%	35.52	1%
Gwangyang	32.62	36.14	-9.7%	35.08	-7%
Dashan	15.77	15.00	5.1%	12.72	24%
Incheon	18.52	16.60	11.6%	17.94	3%
Antwerp	17.20	17.04	0.9%	18.19	-5%
Santos	3.24	3.20	1.3%	3.46	-6%
Barcelona	3.59	3.57	0.4%	3.40	5%

Source: Websites of various port authorities, sorted by SISI.

- **Oil product throughput of Port of Singapore dipped**

In the first quarter, the COVID-19 pandemic dampened the shipping and transportation, and

the trade and shipping demands plummeted, in addition to China's Spring Festival holiday at the end of January and in early February. As a result, marine oil consumption fell sharply, and the marine fuel sales of Port of Singapore fell significantly. In addition, the IMO's 2020 sulfur limit was officially rolled out in January, resulting in a sharp decline in high-sulfur fuel consumption in shipping. In this context, Port of Singapore's oil product throughput in this quarter recorded 50.31 million tons, a drop of 5.8% year-on-year.

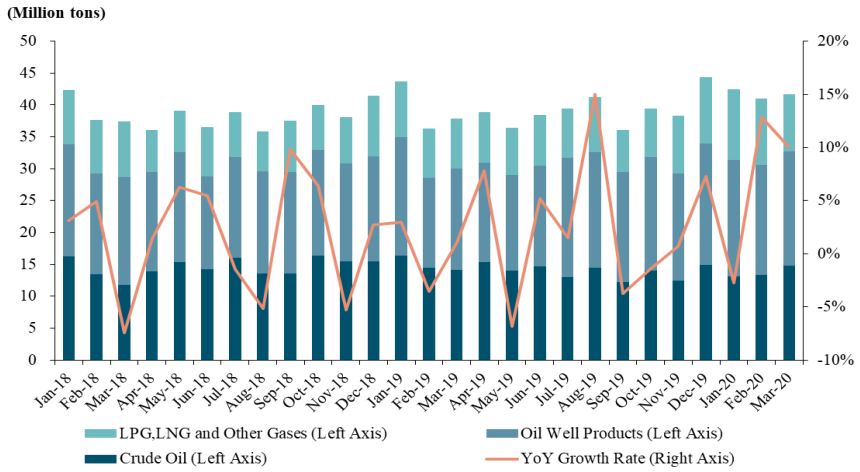


Source: Singapore Port Group, sorted by SISI.

Figure 1-25 Oil Bulk Throughput and Growth Rate of Singapore in 2020.Q1

- **Oil cargo throughput in South Korea grew faster**

Ports in Korea recorded a total oil cargo throughput of 120 million tons in the first quarter, a rise of 6.2% year-on-year. Korea's major oil bulk ports exhibited differentiated performance in terms of oil bulk throughput. Specifically, Port of Ulsan posted strong performance in the quarter with an oil bulk throughput of 35.99 million tons, a rise of 18.3% year-on-year. Port of Incheon and Port of Taesan also recorded a growth rate of 5.1% and 11.6%, respectively, while Port of Gwangyang's oil bulk throughput declined by 9.7%.

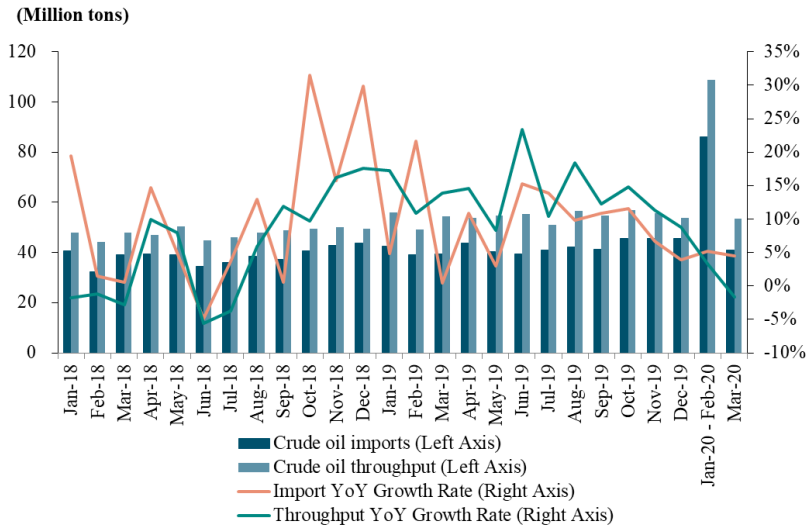


Source: Website of Korean Port Authority, sorted by SISI.

Figure 1-26 Oil Bulk Throughput and Growth Rate of South Korean Ports in 2020.Q1

- **China's crude oil imports grew steadily**

In the first quarter, the international crude oil prices fell sharply, and China's crude oil imports grew steadily. Although China's fuel demand declined and the COVID-19 pandemic caused lower utilization of refineries, Chinese refineries rushed to buy the cheap energy sources as oil prices plummeted and China's crude oil imports have increased as a result. In the first quarter, China imported 127.19 million tons of crude oil in total, a rise of 5.0% year-on-year. China's ports above a designated scale handled 300 million tons of oil, natural gas and their products, the throughput rising by 2.2% year-on-year.

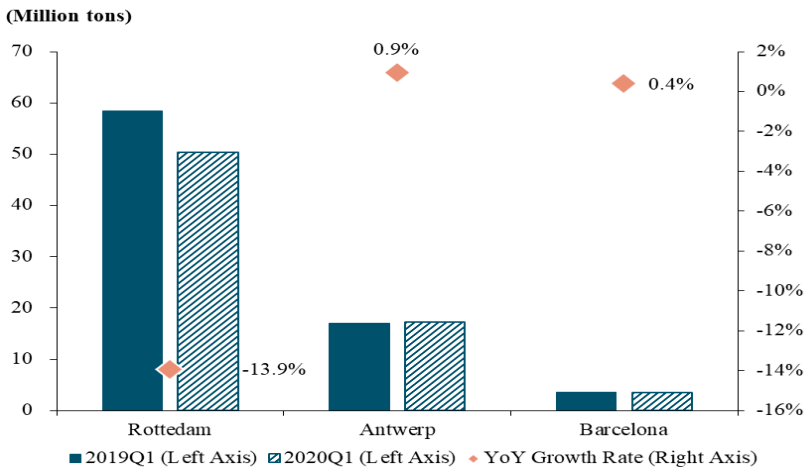


Source: Websites of China Customs, sorted by SISI.

Figure 1-27 Crude Oil Imports Volume and Growth Rate of China during Jan-18 to Mar-20

- **Liquid bulk throughput of European ports stayed low**

Affected by the continued global COVID-19 pandemic, the crude oil demand in Europe declined in the first quarter. The price of refined oil products in Europe fell to a record low in late March, and the refining margins also continued to decline. In the first quarter, the liquid bulk throughput of Port of Rotterdam dropped markedly by 13.9% to 50.35 million tons. Due to the sharp decline in fuel oil trade between Russia and Singapore, the Port of Rotterdam, as a trade hub between these two regions, recorded a decline of 32.8% in oil product throughput in the first quarter. Due to the economic growth slowdown and oil price fluctuations, the liquid bulk throughput of Port of Antwerp remained stable, up by 0.9% year-on-year to 17.2 million tons. In addition, the throughput growth of the Port of Barcelona in this quarter increased by 0.4% year-on-year to 3.59 million tons.



Source: Websites of various port authorities, sorted by SISI.

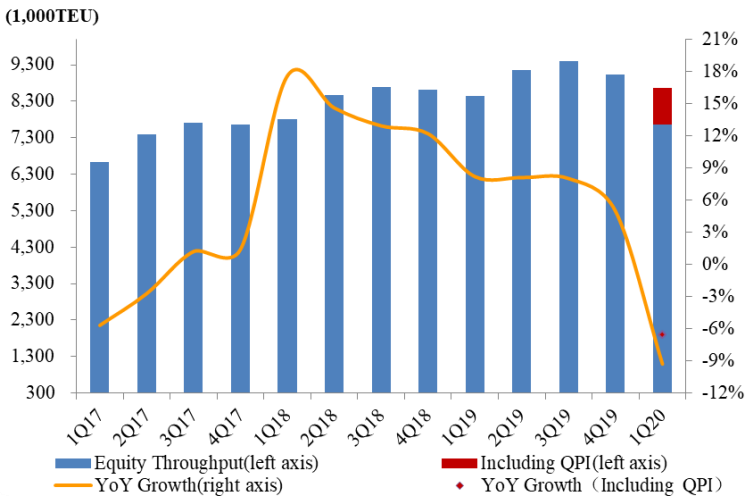
Figure 1-28 Liquid Bulk Cargo Throughput of Major European Ports in 2020.Q1

Chapter 2 Overview of Production and Operation Performance of Global Terminal Operators

Since the outbreak and spread of COVID-19 pandemic across the world, the global economy has been hit hard, with the production and consumption demands weakened and the cargo supply contracted significantly. Port operators became subjected to multiple challenges coupled with the anti-pandemic measures and mobility limitation which resulted in idle ships waiting for cargoes and cargo demurrage at ports, and they faced increasing downside pressure for business operation.

2.1 COSCO Shipping Ports production and operation performance

In the first quarter of 2020, COSCO Shipping Ports recorded a container throughput of 27.48 million TEUs due to the COVID-19 pandemic, a drop of 4.4% year-on-year, and an equity throughput of 8.67 million TEUs, a drop of 6.6% year-on-year. Despite the lackluster performance in the quarter, COSCO Shipping Ports is capable of recording a throughput recovery taking advantage of the opportunities brought about by improving demand after the pandemic, benefiting from the synergistic effect with its parent company and the Ocean Alliance and the calls of fleets of other shipping alliances.



Source: Website of COSCO SHIPPING Port, sorted by SISI.

Figure 2-1 Equity Throughput and Growth Rate of COSCO Shipping Port in 2017.Q1-2020.Q1

Region-wise, the mainland China region, as the focus of COSCO Shipping Ports' operations, was firstly impacted by the pandemic. The throughput of the region in the first quarter dropped by 6.6% year-on-year to 20.66 million TEUs, and its equity throughput dropped by 11.9% year-on-year to 5.55 million TEUs. Specifically, China's Bohai Rim region totaled an equity throughput of 2.12 million TEUs with the throughput of Qingdao Port International included, which marked a rise of

3.7% year-on-year. The Yangtze River Delta region recorded an equity throughput of 900,000 TEUs only, a significant drop of 37.4% year-on-year. The equity throughput of the southeastern coastal region declined by 14.1% year-on-year to 686,000 TEUs. The Pearl River Delta region recorded an equity throughput of 1.69 million TEUs, a drop of 10.7% year-on-year. The equity throughput of the southwestern coastal region surged by 20.1% year-on-year to 154,000 TEUs.

In the overseas region of COSCO Shipping Ports, the global supply chain was interrupted due to the COVID-19 outbreak in the first quarter of 2020, and the throughput growth slowed down. The company's overseas container throughput was 6.82 million TEUs, a rise of only 3.0% year-on-year, and its equity throughput of containers stood at 3.12 million TEUs, a rise of 4.7% year-on-year.

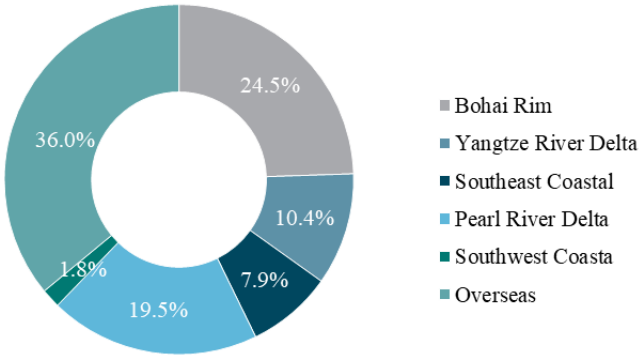


Figure 2-2 proportion of Equity Throughput of Investment Regions of COSCO SHIPPING Port in 2020.Q1

Table 2-1 Equity Throughput and Growth Rate of COSCO SHIPPING Port by Region in 2020.Q1

Area	China						Overseas
	Bohai Rim	Yangtze River Delta	Southeast Coast	Southwest Coast	Pearl River Delta	Total	
Equity Throughput/ 1,000TEU	2122	900	686	154	1689	5551	3120
YOY Growth/%	3.7	-37.4	-14.1	20.1	-10.7	-11.9	4.7

Source: Website of COSCO SHIPPING Port.

Facing the grim challenges of the global pandemic spread and economic recession, COSCO Shipping Ports continued to implement the strategic measures of optimizing terminal asset portfolios and strictly controlling costs to achieve more flexible cash flows. Meanwhile, the company continued to strengthen terminals' business capabilities and improve operational management, and it adopted unified management and operating systems to coordinate the

performance of terminals. In addition, COSCO Shipping Ports will continue to enhance cooperation with ship and port companies, and strive to build a global terminal network to seek opportunities for acquiring overseas terminals, improve customer service experience, and meet the needs of shipping alliances.

2.2 China Merchants Port production and operation performance

In the first quarter of 2020, China Merchants Port recorded a container throughput of 24.92 million TEUs, a drop of 5.6% year-on-year, and a container equity throughput of 9.44 million TEUs, a drop of 4.9% year-on-year. Due to the impact of the COVID-19 pandemic and the traditional off-season of port business, the company's ports recorded negative growth in production in the first quarter after the container demurrage in February and March this year. However, after the pandemic eased, the company actively resumed production, and launched collaboration and cooperation leveraging the company's global terminal network to improve quality and elevate efficiency. It is expected that China Merchants Port will gradually resume production and operation to achieve stable development of port businesses.

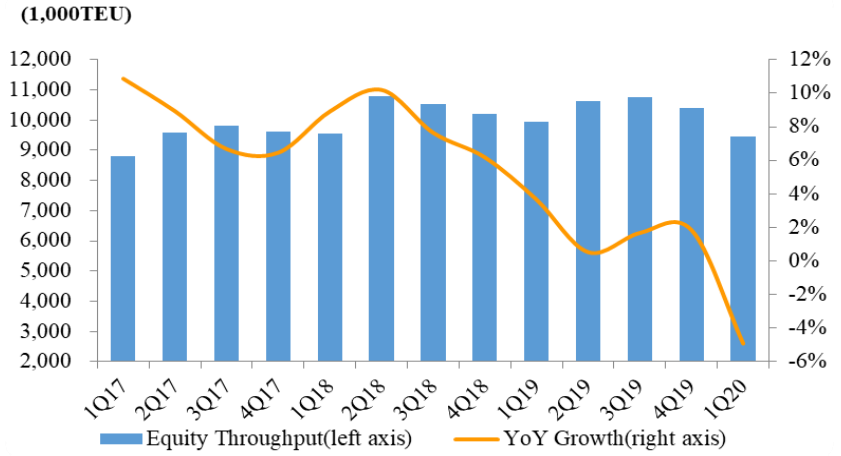


Figure 2-3 Equity Throughput and Growth Rate of CMport in 2017.Q1-2020.Q1

Region-wise, the mainland China region recorded a container equity throughput of 6.8 million TEUs in the first quarter, a drop of 5.0% year-on-year. Specifically, the Bohai Rim region benefited from the container volume contribution from the newly added foreign-trade and domestic-trade routes of Qingdao Qianwan Container Terminal, with a total equity throughput of 1.29 million TEUs, a rise of 10.3% year-on-year. The Yangtze River Delta region performed poor, recording an equity throughput of 2.61 million TEUs, a drop of 10.4% year-on-year. The southwestern coastal region benefited from the company's increased stake in Zhanjiang Port (Group) Company Limited and Zhanjiang Port's continued expansion of new routes and sea-railway intermodal transport trains, driving the region's equity throughput to 154,000 TEUs, a year-on-year rise of 51.1%. The

southeastern coastal region recorded an equity throughput of 254,000 TEUs, a drop of 2.8% year-on-year. The Pearl River Delta region recorded an equity throughput of 2.5 million TEUs, a drop of 8.1% year-on-year. The overseas regions of China Merchants Port also recorded lower production efficiency due to anti-COVID-19 measures. In the first quarter, its overseas region totaled an equity throughput of 2.64 million TEUs, a drop of 4.7% year-on-year.

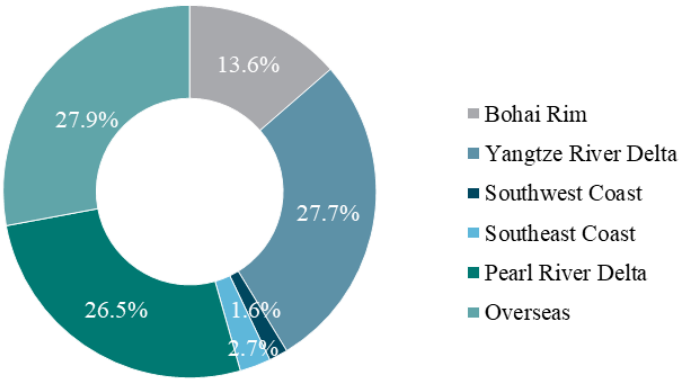
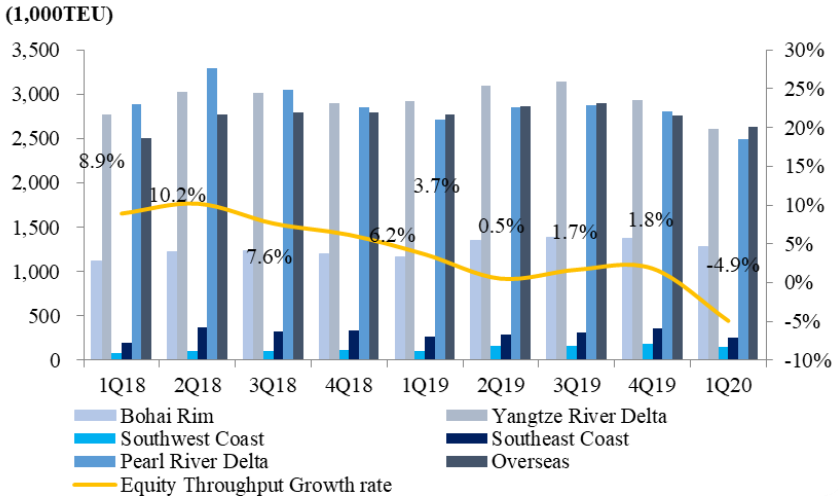


Figure 2-4 T Proportion of Equity Throughput of Investment Regions of CMport in 2020.Q1



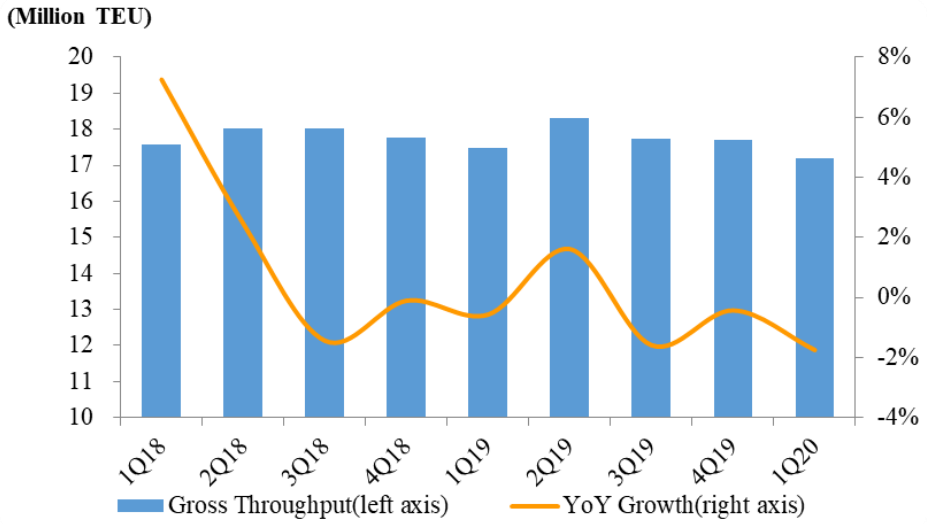
Source: Website of China Merchants port.

Figure 2-5 Equity Throughput and Growth Rate of Investment Regions of CMport in 2018.Q1-2020.Q1

In the first quarter of 2020, China Merchants Port actively coordinated with the government departments and customs to ensure smooth shipping of cargoes in response to the pandemic, and used the ePort platform to greatly improve the logistics system efficiency and reduce customer costs. In terms of overseas layout, China Merchants Port has completed the delivery of the eight terminals purchased from CMA-CGM at the end of March, expanding its global facility network to 25 countries and regions. In terms of smart port construction, the company actively developed technologies such as 5G, AI, ePort, and blockchain. The ongoing Shenzhen smart port transformation and upgrading project will be completed in 2020 and fully operational in mid 2021.

2.3 DP World production and operation performance

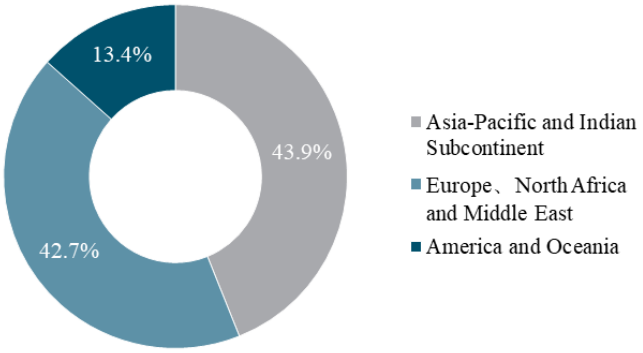
In the first quarter of 2020, DP World recorded a container throughput of 17.19 million TEUs, a drop of 1.7% year-on-year. With its terminal business strategy adjusted and loss of low-margin cargoes, the group's throughput growth remained in the negative range. In addition, as the COVID-19 pandemic gets rampant around the world since March and difficult to control in the short term, the group's operations will face greater challenges in the second quarter.



Source: Website of DP world.

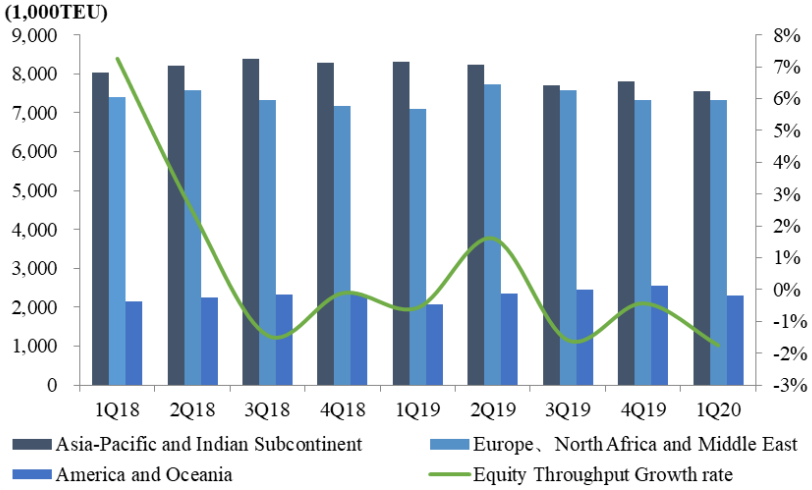
Figure 2-6 Gross Throughput and Growth Rate of DP World in 2018.Q1-2020.Q1

Region-wise, the Asia Pacific and Indian subcontinent region recorded a container throughput of 7.55 million TEUs, a drop of 5.8% year-on-year due to the impacts of the operation termination of Port of Surabaya upon concession expiration in Indonesia. In Europe, North Africa and the Middle East, the market weakness led to loss of low-margin cargoes, and the throughput of the regional slid slightly by 0.9% year-on-year to 7.32 million TEUs. In the Americas and Oceania regions, benefiting from the group's acquisition of Chile's Pulogsa terminals and the operation of the newly-built Posorja deepwater port in Ecuador, as well as the robust business development on the west coast of the Americas, the group's container throughput in the region totaled 2.3 million TEUs, a rise of 10.7% year-on-year.



Source: Website of DP world.

Figure 2-7 Proportion of Gross Throughput of Investment Regions of DP World in 2020.Q1



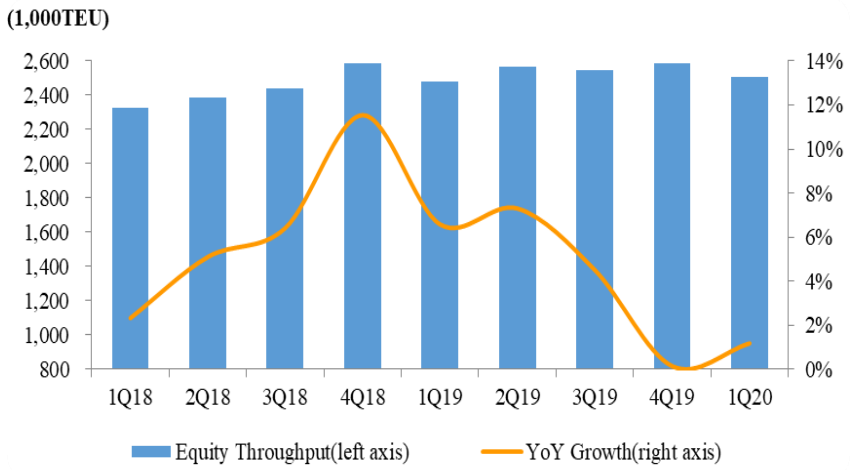
Source: Website of DP world.

Figure 2-8 Gross Throughput and Growth Rate of Investment Regions of DP World in 2018.Q1-2020.Q1

In the first quarter of 2020, DP World, on the one hand, increased investment in the global terminal network by acquiring Fraser Surrey Docks at the Port of Vancouver from Macquarie, and planning to acquire a 51% stake in TIS Container Terminal at the Port of Yuzhny, Ukraine. On the other hand, it strengthened strategic cooperation with other operators to expand its terminal network and diversify its service portfolios. In addition, as the company's parent company reduced debts by a wide margin, DP World was re-privatized. The restoration of private ownership frees the group from meeting the public market's demand for short-term returns, so that it can focus on the implementation of mid- and long-term development strategies to effectively respond to the changing market landscapes.

2.4 ICTSI production and operation performance

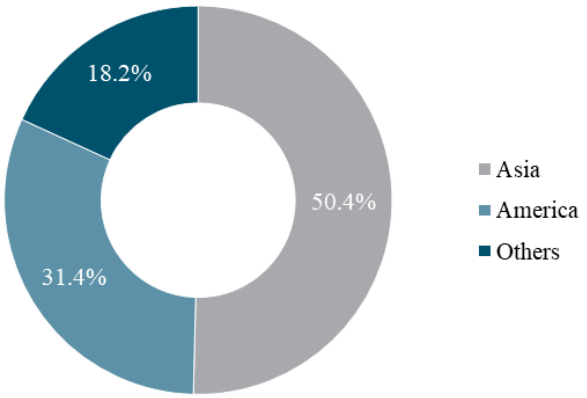
In the first quarter of 2020, trade activities were dampened and measures taken in response to the COVID-19 pandemic limited the production activities. As a result, ICTSI's equity throughput growth of containers declined to 1.2% year-on-year, with 2.51 million TEUs handled.



Source: Website of ICTSI.

Figure 2-9 Equity Throughput and Growth Rate of ICTSI in 2018.Q1-2020.Q1

Region-wise, the Asian segments and region, as the group's focus of operations, was first hit by the COVID-19 pandemic. As a result, the company's equity throughput in the region registered 1.27 million TEUs, a drop of 2.6% year-on-year. Benefiting from the new terminal construction in Rio de Janeiro, Brazil, and the expanded service scope of some terminal portfolios, the group recorded a cumulative equity throughput of 788,000 TEUs, a rise of 5.7% year-on-year. Benefiting from the expansion of the Matadi Gateway Terminal (MGT) in the Democratic Republic of the Congo and the container throughput of ICTSI's new terminals in Lae and Motukea in Papua New Guinea, the group recorded an equity throughput of 456,000 TEUs in its other segments and regions, a rise of 5% year-on-year.



Source: Website of ICTSI.

Figure 2-10 Proportion of Equity Throughput of Investment Regions of ICTSI in 2020.Q1

Table 2-2 Equity Throughput and Growth Rate of ICTSI by Region in 2019.Q1 and 2020.Q1

(Unit: 1,000TEU)

Area	1Q2019	1Q2020	YoY Growth
Asia	1297	1265	-2.6%

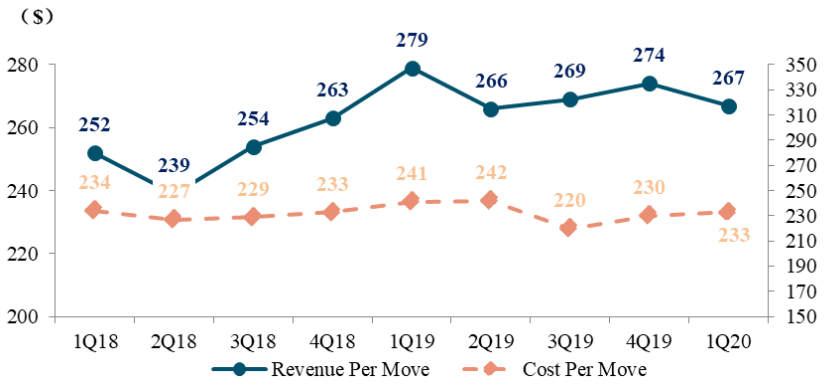
Americas	752	788	5.7%
EMEA	434	456	5.0%

Source: Website of ICTSI.

In the first quarter of 2020, the ICTSI continued to improve its terminal portfolios and strengthen the collaboration between overseas terminals and the local entities. In February, the ICTSI transferred a 30% stake in a subsidiary to a local operator to jointly manage and develop the Lae terminal and the Motukea terminal in Papua New Guinea. In addition, the group earmarked more than US$100 million for the Phase II expansion of the Matadi Gateway Terminal (MGT), which will greatly improve the efficiency of port operations, consolidating the strength of the terminal and developing it into the most competitive one in the region.

2.5 AP Moller-Maersk production and operation performance

In the first quarter of 2020, despite the severe impact of the COVID-19 pandemic on global trade, AP Mueller-Maersk continued to enhance strategic transformation, and demonstrated strong risk resilience against the grim external environment. It welcomed a sound opening in the year, registering 2.8 million moves of throughput on consolidated statement, which was roughly the same as last year, and its revenue per move was US$267.



Note: AP Moller-Maersk stopped using statistical units starting Quarter 1 2018 and use move instead.

Figure 2-11 Revenue Per Move and Cost Per Move of APMT in 2018.Q1-2020.Q1

Region-wise, the North America region was impacted by the COVID-19 pandemic and high tariffs in Los Angeles, with the region's throughput on consolidated statement in this quarter falling by 14.5% to 600,000 moves. Its Asia region performance was still clouded by the group's withdrawal from the Port of Kobe and the declining business volume at Port of Yokohama in Japan, recording a throughput on consolidated statement of 500,000 moves, a drop of 6.0% year-on-year. Its Europe region performance benefited from the business growth in Barcelona, Spain, and the contribution of container volume by the Port of Vado Ligure, Italy, and totaled a throughput on consolidated statement of 600,000 moves, a rise of 4.1% year-on-year. Its Latin America region performance benefited from the increased throughput of Port of Moin in Costa Rica, with a throughput on consolidated statement of 600,000 moves, a rise of 13.4% year-on-year.

Table 2-3 Financially Consolidated Volume of APMT in 2020.Q1

(Unit: Million Move)

Area	1Q2020	YoY Growth
North America	0.6	-14.5%
Latin America	0.6	13.4%
Europe, Russia and the Baltics	0.6	4.1%
Asia	0.5	-6.0%
Africa and Middle East	0.5	-1.1%
Total	2.8	-1.6%

Source: Website of Maersk.

In the first quarter of 2020, AP Muller-Maersk, on the one hand, augmented investment in terminal construction, planning to build a multi-purpose container terminal at Porti Seaport that can handle 1 million TEUs of containers per year. On the other hand, to further accelerate the transition to an integrated container logistics company, the group will acquire Performance Team, a warehousing and distribution company in the United States, to further complement and improve its logistics service business. In addition, for the purpose of minimizing the impact of the COVID-19 pandemic on the company's North American operations, the company strengthened cooperation with North American logistics operators to ensure production efficiency and liquidity of terminals with prudent management and avoid port congestion caused by cargo stockpiling.

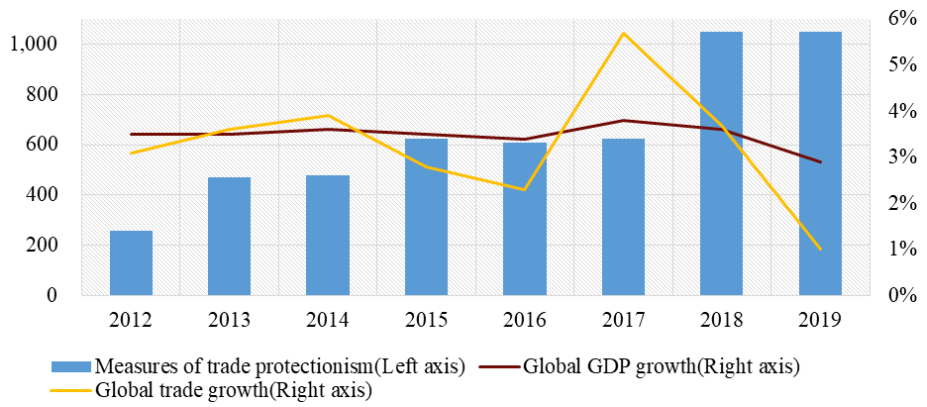
Special Topic 1: Impact of Deglobalization on Port Industry

The rise of trade protectionism and unilateralism in recent years has cast a shadow on globalization. The global economic, trade and industrial landscape has changed as a result, and port production and operation have also been affected to a certain extent. With the continuous spread of the COVID-19 pandemic worldwide, the potential risks of a globalized trading system layout became visible to all economies around the world. The deglobalization momentum may become more prominent, which will produce a profounder impact on the future development of the port industry.

1. Deglobalization ideas still surging

Globalization has greatly improved efficiency through global allocation of resources in the history. However, due to different resource endowments and national conditions, the benefits in the process of globalization vary, resulting in intensified imbalance in development across economies. Many emerging economies, represented by China, rise rapidly, with their international statuses on a rise. Some less competitive developing economies gradually become marginalized. Some Western advanced economies have witnessed ineffective domestic governance, with the biggest dividend of globalization eroded and their economic recovery being slow. Meanwhile, the widened domestic gap between the rich and the poor, the continuous cultural conflicts, and various other factors have intensified the populist anti-globalization ideas. To cater to the "public opinion", state leaders tend to tilt rightward, resulting in the rise of the deglobalization ideas.

Some economies that believe they haven't enjoyed the deserved benefits in the globalization process began to roll out anti-globalization measures. On the one hand, they are trending toward political isolationism, which has shocked the world's development pattern and greatly hindered the globalization process. On the other hand, they adopted various forms of trade protection measures such as increasing import tariffs, imposing quota restrictions, and anti-dumping, to give priority to their own national interests. The surging deglobalization ideas have produced a huge impact on the global economic and trade system. The world economy continues to stay low, and the growth of global trade volume has also suffered setbacks.



Source: Global Trade Alert (GTA) and International Monetary Fund(IMF).

Figure 1 Global GDP, Trade Volume Growth and of Numbers of Trade Protectionism Measures in 2012-2019

2. Impacts of deglobalization on the port industry

(1) Deglobalization affects seaborne shipping demand, port throughput may continue to decline

Affected by the deglobalization ideas, the inter-economy trade is under pressure, and the international trade volume is bound to shrink, thereby cutting the demand for seaborne shipping, which can in turn lead to a decline in port cargo volume. If the deglobalization trend continues to intensify, the traditional shipping network pattern of "dominated by trunk routes, supplemented by branch routes" may change to be "multi-point direct routes, supplemented by trunk routes", shaking the hub status of coastal ports. The original production situation of hub ports' massive imports and exports will also change. Smaller batches of cargoes resulting from short-distance shipping may become a main part of ports' cargo flow structures, and the ports' throughput may continue to decline.

(2) Global industrial chain restructured to promote differentiated development of ports

The globalization risks exposed by the pandemic have caused global economies to begin to value local suppliers more. To enhance the emergency response capabilities and avoid the high risks from long-distance shipping, the global industrial chain may move toward regional clustering. In the areas with developed transportation and shipping systems, stable and cheap labor resources, a favorable business environment and social environment that can host industrial chain clusters, ports can help create relatively stable prospects, while in the areas where the industrial chain moves out, ports will be undoubtedly challenged by the loss of cargoes.

(3) Supply chain contracts in structure, container cargoes increase

In the regionalization process of global industrial chains, the supply chain also becomes more simplified and compact. Cargoes on the supply chain gradually approach the two ends, the processing of primary products gathers to the origin of raw materials, and the production of

consumer-oriented finished products gathers to the place of consumption. The cargo structure in the logistics chain will tend to be like intermediate products after primary processing, and the categories of containerizeable cargoes will increase. Therefore, it is predicted that the proportion of containerized cargoes will increase in the future.

(4) Enterprises' production and marketing modes change, challenging traditional port services

Under the deglobalization trend, new modes such as "nearshore procurement, nearby production, and local sales", will increase in number, and the production organization modes of enterprises will also be oriented to customer needs, posing higher requirements on timeliness, agility, and security. In addition, different cargoes have different personalized characteristics, which requires shipping services to be more flexible. The traditional simplex, one-size-fits-all port loading and unloading services will face greater challenges.

3. Suggestions for port development in response to deglobalization

Strengthen connection with the hinterland and vertical cooperation, and develop cargo sources in depth. As the deglobalization trend intensifies, coastal ports will face relatively limited cargo sources. Therefore, they need to actively strengthen connections with the hinterland, approach from both the shipping supply and demand, and actively explore the "large end cargo owners + shipping companies + port" cooperation model to consolidate the supply of cargoes.

Refine production to transform from "quantity development" to "quality development". The traditional shipping mode will change in the deglobalization trend, gradually highlighting personalized development, which has also raised the requirements on port service quality. The inter-port competition will gradually change from a "competition in size" to a "competition in service". In future operations, ports should be more customer-oriented and launch refined production.

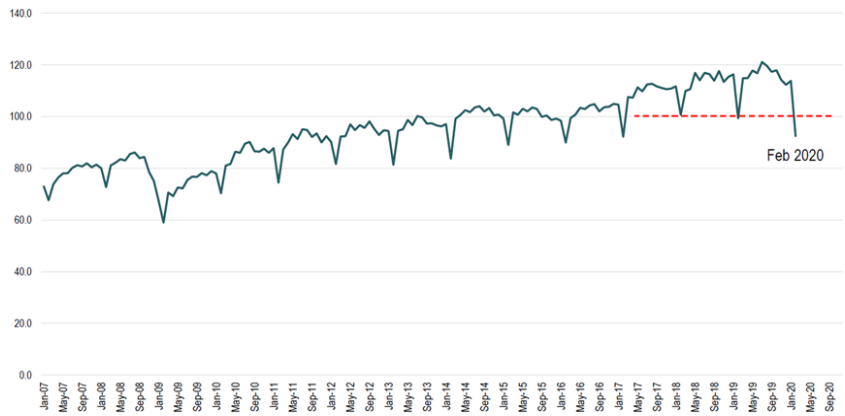
Expand port service functions and achieve diversified operations. In the deglobalization context, the traditional loading and unloading operation mode will undoubtedly face a bottleneck in profit growth. Ports should constantly expand service functions. Business diversification can hedge the risks that deglobalization poses to main businesses to a certain extent, so as to promote port sustainability.

Special Topic 2: Global Port Production and Development Challenges amid the Pandemic

In the first quarter of 2020, with the rampant COVID-19 pandemic worldwide, the economic and trade industries of Europe, the United States and other economies have been affected to varying degrees, and the port logistics industry was also hurt. Due to the deferred impact of the pandemic in terms of time and space, it didn't affect European ports until March, and the most severely affected period in the case of the American ports began in April after the second wave of outbreaks. However, the pandemic may have a greater impact on ports in Europe and the United States than on ports in Asia, gradually exposing the former's port vulnerabilities in logistics and supply chain.

1. Continuous spread of pandemic deepens impact on ports

With the pandemic brought under control, confirmed cases in China and Korea fell and stabilized, with their industrial trade recovering, and the impact on port logistics weakening. But the impact of the pandemic on global trade remains huge and far-reaching. The World Monetary Fund (IMF) adjusted the predicted global economy (GDP) growth in 2020 from 3.3% to -3.0% in January, and the international trade (including cargoes and services) growth was adjusted from 2.9% to -11.0%. Clouded by the pandemic, the container shipping demand in the market fell. It is expected that the demand in the first nine months in 2020 will plummet all the way until the fourth quarter when the fall ceases. The global supply/demand index may fall to the lowest level of 85.8 points in recent years (if the index is less than 100 points, it indicates oversupply). Meanwhile, according to the trade data in the first quarter, the growth momentum of global container throughput in 2020 has changed. In February, the global container throughput dropped to the level of July 2010. As the freight volume of global container ports continue to shrink from March to May, it is expected that the global port cargo volume may present a deeper dip in the second quarter, and won't resume growth until at least 2022.



Source: RWI/ISL.

Figure 1 Container Throughput Index (Base 100 in 2015)

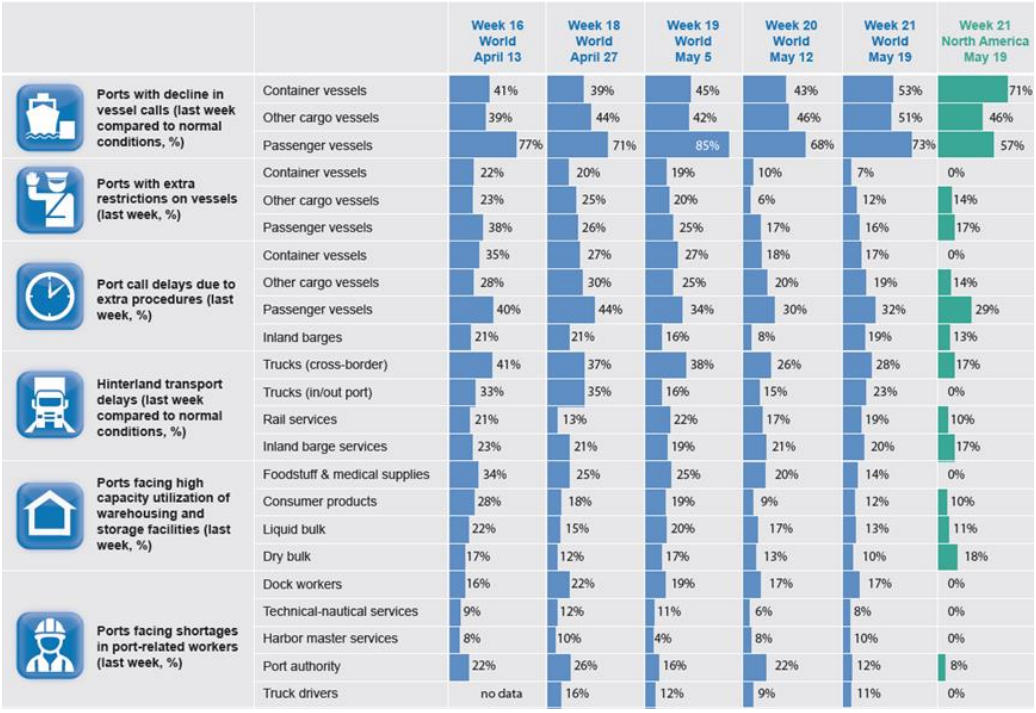
2. European ports may show poorer performance in the second quarter

COVID-19 outbreaks in the Asia region were concentrated in February and March. Europe didn't see no-load routes from the Far East resulting from plant shutdown and declined shipping volume in Asia until March. Later, international liner companies withdrew 20%, or around 2.5 million TEUs of capacity, from Europe-Asia routes to maintain supply and demand balance. The global pandemic in the first quarter only partially affected the development of European ports. Therefore, although most ports were following a downward trend, the decline was limited. Specifically, some ports such as Port of Antwerp, Port of Algeciras, and Port of Gioia Tauro still maintained sound growth.

Despite the fact that many port countries have lifted their blockade and lowered down the isolation and regulatory requirements, most international liner companies have planned to cut routes or withdraw capacity among others in the second quarter, in view of the declining trade demand. By that time, the runs between the Far East and Europe will reduce, the schedule will be longer, and more cargoes may fail to be arranged for shipping in time. The lower shipping convenience will once again be fed back to trade processes, cutting overseas purchasing demands and hindering the globalization process. Therefore, the second quarter may be a period of more depressed production for ports in Europe and other economies.

3. Impact of the pandemic on global port logistics system

According to the reports of the International Association of Ports and Harbors (IAPH) and the World Ports Sustainability Program (WPSP), container ship arrivals at ports worldwide from April to May increased from 41% to 53% of the levels in normal periods in previous years. Bulk carriers also rose from 39% to 51%, and passenger ships presented relatively stable performance, reaching 73% of that in normal periods in previous years. Ports that imposed additional restrictions on arriving container ships also dropped from 22% to about 7%, and almost all the North American ports surveyed have lifted their additional restrictions. At present, the proportion of delayed ships due to restriction measures is about 17%, and that of passenger ships is still as high as 32%, due to the more complicated inspection procedures.



Source: IAPH.

Figure 2 Survey on global port logistics production and operation amid the epidemic (Apr-20 to May-20)

Global port companies are facing challenges in cargo collection, distribution and transportation, storage facility utilization and worker dispatching at ports. Truck delays in port logistics recorded the sharpest drop, with the delay of cross-border trucks falling from 41% to 28%, and that of trucks entering and leaving the port falling from 33% to 23%. In the early stage of the outbreak, port occasionally had overloaded warehouses due to the delay of logistics companies. But after the logistics and transportation processes became smooth later, the problems of reduced cargo volumes at ports from depressed trade demand gradually surfaced. Storage utilization at ports declined across the board, and the sharp drop in consumer product transportation caused port storage utilization to stay at about 12% only.

4. Front-end trade and back-end logistics become the biggest bottlenecks

According to statistics, the calls of ships/voyages of about 45% of container ports in the world declined in the 5%-25% range, and those of about 8% of ports were in the 25%-50% range. The bulk ports and general cargo ports also suffered widespread declines in arriving ships/voyages, of which about 35% recorded a fall in the 5%-25% range, about 12% recorded a fall in the 25%-50% range, and about 4% recorded more than 50% of declines. In addition, about 61% of the cruise ports that primarily serve passengers recorded a fall of more than 50%, being even bleaker.

While global ports were struggling in trade shrinkage, the rear logistics systems were also

challenged. About 30% of in-port container trucks were delayed, mostly within six hours, and only 6% of trucks were delayed for more than 12 hours. The situation of the outside-port container trucks was relatively better, as only 3% of them were delayed for more than 12 hours against an overall delayed rate of 23%. Since railways and inland river barges are both large-scale transportation modes to a certain extent, the failure to be fully loaded for shipment amid the stagnant trade situation produced greater pressure on their operations. About 6% of railroads and 3% of barges at global ports were on the verge of suspension.

5. Intervene in logistics supply chain by information-based means

For cargo owners, on the one hand, the pandemic has impacted the supply of raw materials, and on the other hand, the demand of the consumer market was also hurt. The transportation of raw materials primarily in the form of bulk cargoes, and the transportation of finished products primarily in the form of containers, as well as the warehousing in the transportation process all depend on the support from ports. To ensure smooth logistics and transportation flows of cargo owners, ports must strengthen cooperation and intervention. Information-based means such as information platforms, paperless documents, online settlement, and remote monitoring are important ways to help ports better serve the cargoes. In particular, cuts of runs and suspension of railways and barges are common during the pandemic. Therefore, container trucks and other less-than-truckload transportation on roads need more information-based means to improve logistics efficiency, ensure the product trade of cargo owners, and provide cargo supply support for growth of port throughput.

Appendix

Appendix 1 Cargo Throughput of Global Major Ports in 2020.Q1

Region	Port	2019Q1 (Million tons)	2020Q1 (Million tons)	YoY Growth Rate
Aisa	**China's above-scale ports**	3152.83	3007.27	-4.6%
	Ningbo Zhoushan	255.27	250.42	-1.9%
	Shanghai	175.12	145.69	-16.8%
	Qingdao	138.20	143.87	4.1%
	Tangshan	161.89	141.65	-12.5%
	Guangzhou	142.01	135.48	-4.6%
	Rizhao	113.72	118.95	4.6%
	Suzhou	131.57	115.39	-12.3%
	Tianjin	105.43	111.12	5.4%
	Yantai	93.98	92.19	-1.9%
	Dalian	81.33	82.55	1.5%
	Zhenjiang	64.94	71.50	10.1%
	Nantong	64.66	69.64	7.7%
	Huanghua	67.69	66.88	-1.2%
	Beibu Gulf	56.23	64.38	14.5%
	Taizhou	62.35	61.48	-1.4%
	Lianyungang	58.56	60.84	3.9%
	Yingkou	66.59	55.60	-16.5%
	Nanjing	58.68	55.22	-5.9%
	Zhanjiang	56.44	54.63	-3.2%
	Shenzhen	57.39	52.28	-8.9%
	Singapore	151.91	152.15	0.2%
	Philippine Seaport	59.37	56.71	-4.5%
	Busan	110.65	105.65	-4.5%
	Incheon	39.17	40.16	2.5%
	Hirazawa Karatsu	26.56	27.95	5.2%
	Gwangyang	77.19	68.64	-11.1%
	Pohang	15.89	14.89	-6.3%
	Ulsan	50.30	50.13	-0.3%
	Kaohsiung*	26.71	26.78	0.3%
	Taipei*	4.05	3.33	-17.7%
	Keelung*	3.63	3.23	-11.1%
	Taichung*	17.08	14.60	-14.5%
Europe	Rotterdam	123.87	112.39	-9.3%
	Antwerp	56.72	59.10	4.0%

	Hamburg	34.64	31.90	-7.9%
	Barcelona	15.87	14.89	-6.2%
	Valencia	19.48	19.07	-2.1%
	Algeciras	27.06	27.43	1.4%
	Riga	8.35	6.36	-23.9%
	Tallinn	4.72	4.82	2.0%
North America	Port of Long Beach	40.26	38.03	-5.5%
	Seattle - Tacoma	7.52	6.61	-12.1%
	Virginia	4.92	4.81	-2.1%
South America	Brazilian port	249.81	247.10	-1.1%
	Buenos Aires	1.49	1.61	8.1%
	Manzanillo	8.65	7.91	-8.6%
	Santos	24.61	24.70	0.4%
Oceania	Hedland	118.45	127.39	7.5%
	Hay Point	28.00	25.71	-8.2%
	Brisbane	8.22	7.99	-2.9%

Note: * indicates projections.
Source: Websites of various port authorities, sorted by SISI.

Appendix 2 Container Throughput of Global Major Ports in 2020.Q1

Region	Port	2019Q1 (Thousand TEU)	2020Q1 (Thousand TEU)	YoY Growth Rate
Aisa	**China's above-scale ports**	60306	55180	-8.5%
	Shanghai	10413	9330	-10.4%
	Ningbo Zhoushan	6699	6150	-8.2%
	Shenzhen	6050	5330	-11.9%
	Guangzhou	5284	4740	-10.3%
	Qingdao	4932	5040	2.2%
	Tianjin	3782	3710	-1.9%
	Xiamen	2695	2520	-6.5%
	Dalian	2116	1530	-27.7%
	Suzhou	1558	1270	-18.5%
	Yingkou	1395	1180	-15.4%
	Singapore	8900	9279	4.3%
	Busan	5360	5484	2.3%
	Hong Kong	4423	4168	-5.8%
	Dubai	3489	3370	-3.4%
	Kaohsiung	2562	2523	-1.5%
	Incheon	691	696	0.7%
	Gwangyang	617	553	-10.4%
	Taichung	413	438	6.1%

	Taipei	420	397	-5.4%
	Keelung	330	320	-3.1%
	Laem Chabang	2022	1974	-2.4%
	Bangkok	351	347	-1.3%
	La Grab	336	305	-9.2%
America	Los Angeles	2209	1800	-18.5%
	Long beach	1807	1683	-6.9%
	Santos	729	746	2.3%
	Northwest Seaport Alliance	932	789	-15.4%
	Houston	694	773	11.4%
	Virginia	708	654	-7.6%
	Vancouver	843	735	-12.8%
	Montreal	409	417	2.0%
Europe	Rotterdam	3724	3550	-4.7%
	Antwerp	2762	3020	9.3%
	Barcelona	842	725	-14.0%
Oceania	Brisbane	303	299	-1.2%

Source: Websites of various port authorities, sorted by SISI.

Appendix 3 Equity Throughput and Growth Rate of COSCO Shipping Port

(Unit: 1,000 TEU)

	1Q18	2Q18	3Q18	4Q18	1Q19
Total Throughput	7802	8477	8699	8604	8442
YOY Growth	17.6%	14.6%	12.9%	12.2%	8.2%
	2Q19	3Q19	4Q19	1Q20	
Total Throughput	9164	9396	9031	7658	
YOY Growth	8.1%	8.0%	-3.9%	-9.3%	

Note: Qingdao International not counted in.
Source: COSCO Shipping Ports Limited website.

Appendix 4 Equity Throughput and Growth Rate of China Merchants Port

(Unit: 1,000 TEU)

	1Q18	2Q18	3Q18	4Q18	1Q19
Total Throughput	9560	10780	10535	10216	9928
YOY Growth	8.7%	12.4%	7.4%	6.2%	3.7%
	2Q19	3Q19	4Q19	1Q20	
Total Throughput	10626	10765	10404	9439	
YOY Growth	0.5%	1.9%	1.8%	-4.9%	

Source: Website of China Merchants port.

Appendix 5 Equity Throughput and Growth Rate of DP World

(Unit: 1,000 TEU)

	1Q18	2Q18	3Q18	4Q18	1Q19
Total Throughput	17591	18029	18019	17781	17491
YOY Growth	7.3%	2.5%	-1.4%	-0.1%	-0.6%
	2Q19	**3Q19**	**4Q19**	**1Q20**	
Total Throughput	18320	17732	17705	17185	
YOY Growth	1.6%	-1.6%	-0.4%	-1.8%	

Source: Website of DP World.

Appendix 6 Equity Throughput and Growth Rate of ICTSI

(Unit: 1,000 TEU)

	1Q18	2Q18	3Q18	4Q18	1Q19
Total Throughput	2326	2389	2438	2584	2479
YOY Growth	2.3%	5.1%	6.4%	11.5%	6.6%
	2Q19	**3Q19**	**4Q19**	**1Q20**	
Total Throughput	2563	2548	2588	2508	
YOY Growth	7.3%	4.5%	0.1%	1.2%	

Source: Website of ICTSI.

Appendix 7 Financially Consolidated Volume of APMT

(Unit: million move)

	1Q18	2Q18	3Q18	4Q18	1Q19
Financially Consolidated Volume	2.7	2.8	2.8	3.1	2.8
	2Q19	**3Q19**	**4Q19**	**1Q20**	
Financially Consolidated Volume	3.0	3.1	2.9	2.8	

Source: Website of Maersk.

Major data sources and references

1.IMF

2.World Economic Outlook Database

3.Drewry website

4.Clarkson website

5.OECD website

6.Ministry of Transport of the People's Republic of China

7.Hong Kong Port Authority website

8.Singapore Port Authority website

9.Rotterdam Port Authority website

10.EU organization statistics websites

11.China Ports website

12.www.snet.com

13.Shanghai Maritime University Library

14.Asia-Pacific Economic Cooperation

15.COSCO Pacific Limited financial report

16.A.P. Moller-Maersk Group

17.The Journal of Commerce

18.Lloyd's List

19.G-Port, UK

20.Port Strategy Magazine

21.Port Technology Magazine

22.Port Management Magazine

23.Container Management Magazine

24.Websites of Various Port Authorities

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