



THE IMPACT OF COVID-19 ON CONTAINER VOLUMES OF MAJOR WORLD PORTS

SITUATION UP TO OCTOBER 2020

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Q1 2020: THE EARLY MONTHS OF THE CORONAVIRUS

The Coronavirus emerged in China in December 2019. A full lockdown in China followed in January 2020, with an immediate effect on trade volumes as production activities were halted and ports were forced to downsize their activities. The closure of factories generated a supply shock in China. The disruptions in China and later also in other East Asian economies started to disrupt global supply chains, which made container carriers to announce a first wave of blank sailings. Given the sailing time between Asia and major markets in Europe and North America, the full impact of these blanked sailings on European and North American ports became only visible from March 2020 onwards.

In the early months of the virus, the container volume situation in individual ports was largely determined by their exposure to trade with the Far East. For example, among European container ports, Rotterdam (no. 1 in Europe) and Hamburg (no. 3) handle the highest number of containers in relation to China. Furthermore, China represents about 30% of Hamburg's container throughput and about one fourth of Rotterdam's volume. These figures are excluding intra-European transshipment flows linked to the mainline services from/to China. Europe's second largest container port, Antwerp, is less exposed to China: 12% of total TEUs handled in 2019. Valencia (no. 5 in Europe in 2019) and Bremerhaven (no. 7) show similar shares of about 10 to 12%.

Despite the fact that the effects of the

COVID-19 crisis only partially affected the Q1 2020 throughput figures, most ports recorded negative growth figures. Mediterranean transshipment hubs Gioia Tauro (+52% caused by the take-over of Medcenter CT by Terminal Investment Limited in 2019) and Algeciras (+6.6%) and the mixed transshipment-gateway port of Antwerp (+9.5%) were the only European ports posting strong growth figures in Q1 2020. The port of Antwerp recorded strong growth on all trade routes except for the Far East (-2.2%). TEU volumes in Rotterdam declined by 4.7%, Hamburg -6.6%, Bremerhaven -3.2% and Le Havre -23%. Le Havre initially was heavily affected by the French national strike during December 2019 and January 2020. In March 2020, the port's strong exposure to trade with China further affected its first quarter results.

Barcelona's container volume declined by 14% (almost fully attributable to a 27% decline in transit traffic) while Valencia had to accept a 5% volume drop.

Q2 2020: THE HEALTH CRISIS GROWS INTO A PANDEMIC

In mid-March, the World Health Organization officially declared the Coronavirus as a pandemic. At that time, the supply shock in Asia faded as factories were reopening on a massive scale. However, the sharp rise in full and semi lockdown situations in virtually all European countries and parts of the Americas generated a demand shock. This resulted in a second wave in blank sailings with container carriers withdrawing up to 20% of their network capacity on the main trade lanes and idling more than 2.5 million TEU of fleet capacity or more than 10% of the world's container fleet. For some ports, the blank sailings implied 20% to even up to 50% less vessel calls for April and May. This second wave of blank sailings negatively affected Q2 2020 volumes in main ports on the east-west trade routes.

As expected, the vast majority of the large container ports in the world recorded negative growth figures in the first half of 2020. The worst performers in H1 2020 among the large Asian container hubs included Dalian (-31%), Shenzhen (-10.8%), Port Klang (-9.3%), Shanghai (-6.9%) and Kaohsiung (-6.8%). Tianjin (+2.9%), Qingdao (+0.3%), Singapore (-1.1%), Busan (-1.1%) and Guangzhou (-1.6%) were among the least affected ports in the Far East. The situation in North America was far worse with all top ten ports of the continent recording negative growth. The situation in H1 2020 was particularly bad in Seattle/Tacoma (-18.3%), Los Angeles (-17.1%) and Norfolk (-12.4%), while Houston was able to limit the TEU drop to 2.3%. In Europe, the port of Antwerp was the only large gateway port which was able to reach a volume level in H1 2020 comparable to H1 2019 (+0.4%). Algeciras and Bremerhaven recorded a rather modest decline, while others saw their TEU throughput drop by more than 20% (i.e. Le Havre and Barcelona).

Q3 2020: SUSTAINABLE RECOVERY OF CONTAINER VOLUMES OR TEMPORARY RESTOCKING PEAK?

Figures 1 to 3 provide an overview of the year-on-year (YoY) TEU growth figures of the main ports per region for the first nine months (Europe) or 10 months (Far East and North America) of the COVID-19 crisis year 2020 and also for the financial crisis year 2009. In Europe, Antwerp remains the only large gateway port in the top 15 which was able to reach a volume level in the first three quarters of 2020 comparable to last year (-0.2%). The majority of

Figure 1. Top 15 European container ports: year-on-year TEU growth in the first three quarters of 2020 and in 2009



Figure 2. Top container ports in the Far East: year-on-year TEU growth in the first ten months of 2020 and in 2009

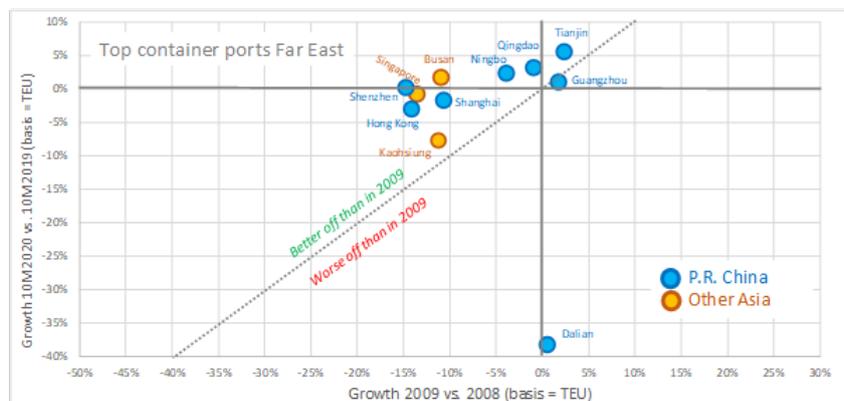
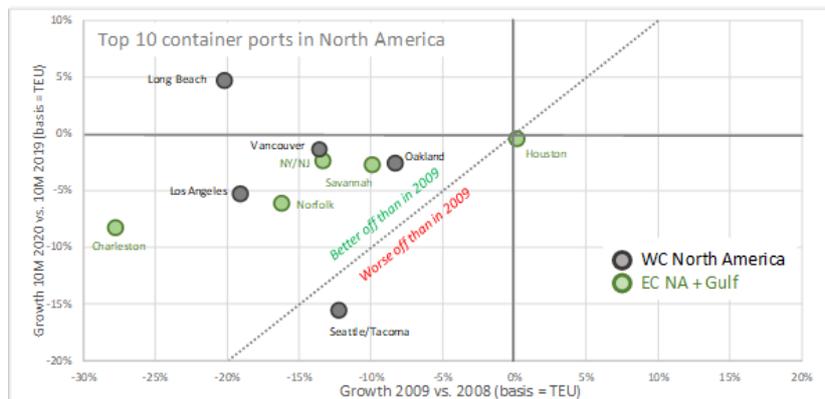


Figure 3. Top 10 North American container ports: Year-on-year TEU growth in the first ten months of 2020 and in 2009



top 15 ports still record negative growth figures, despite a modest recovery of container trade volumes in Q3 2020. Le Havre, Barcelona, Genoa and Hamburg saw their TEU throughput drop by double digits. These are all gateway ports serving mainly national hinterlands which are subjected to intense competition for transshipment

flows, and with a strong specialisation in containerised consumer products mainly originating from Asia. Cosco-owned Greek hub Port of Piraeus and the Port of Gdansk in Poland, two fast climbers in the European container port ranking in the past years, both recorded negative growth figures for the first time in many years. When com-

paring 9M 2020 growth figures to 2009 growth figures, it becomes clear the two crises had in many cases a very different impact on container throughput development in the top 15 ports in Europe. Note that Piraeus and Gdansk had recorded a remarkable growth during the financial crisis of 2008/2009, as this coincided with major governance and ownership changes in both ports.

Except for Dalian, all major ports in the Far East experienced less volume impacts in 2020 compared to the 2009 crisis. About half of the depicted ports even achieved a modest YoY TEU increase in the first 10 months of 2020, while only Dalian and Kaohsiung had to accept significant volume drops.

In North America, many ports have reported record monthly throughput figures for September, October and November 2020, mainly due to large-scale restocking taking place. Volume growth would be even higher if supply chains were not confronted with equipment shortages (empty containers) and port congestion. The recent trade volume peak has partly compensated the very negative results of H1 2020. For example, the YoY TEU loss in Los Angeles declined from 17% in H1 2020 to only 5.3% for the first 10 months of 2020. Comparable trends are observed in other ports, with Long Beach recording a 4.7% growth for 10M 2020. Just like in Europe and the Far East, there is a weak correspondence between container volume changes during the 2008-09 financial crisis and during 2020.

Overall, the ports that have been impacted the most (in terms of an initial steep decline followed by a strong restocking phase) usually have a strong orientation on consumer products and a strong position as gateways for containerised trade flows in relation to Asia. However, it remains to be seen whether the current spike in containerised trade is going to last long.

The medium to long term prospects for the underlying demand remain uncertain. Second waves in the number of infections have resulted in new lockdowns in quite a few western countries, and it is expected that the forthcoming vaccination rounds will only start to have a real broader impact on economic life in the second half of 2021. The economic aftermath of the pandemic will likely unfold in different ways across the world.

Note: For a further in-depth discussion on the impact of COVID-19 on ports, we refer to “NOTTEBOOM, T., PALLIS, A., RODRIGUE, J.-P., 2021, Disruptions and resilience in global container shipping and ports: COVID-19 pandemic vs. 2008-2009 financial crisis, Maritime Economics and Logistics, <https://doi.org/10.1057/s41278-020-00180-5>”



“THE PORTS THAT HAVE BEEN IMPACTED THE MOST USUALLY HAVE A STRONG ORIENTATION ON CONSUMER PRODUCTS AND A STRONG POSITION AS GATEWAYS FOR CONTAINERISED TRADE FLOWS IN RELATION TO ASIA.”

ABOUT THE AUTHOR

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