

The background image shows an aerial view of the Port of Singapore. In the foreground, there are several large yellow port cranes and shipping containers stacked along the waterfront. A large cargo ship is docked at a pier. In the middle ground, a wide body of water reflects the sky. The background features the dense urban skyline of Singapore, with numerous skyscrapers of varying heights under a cloudy sky.

COVID-19 AND THE PORT OF SINGAPORE

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Agenda

Context

Research Question

Data Exploration

Data Analysis

Concluding Remarks

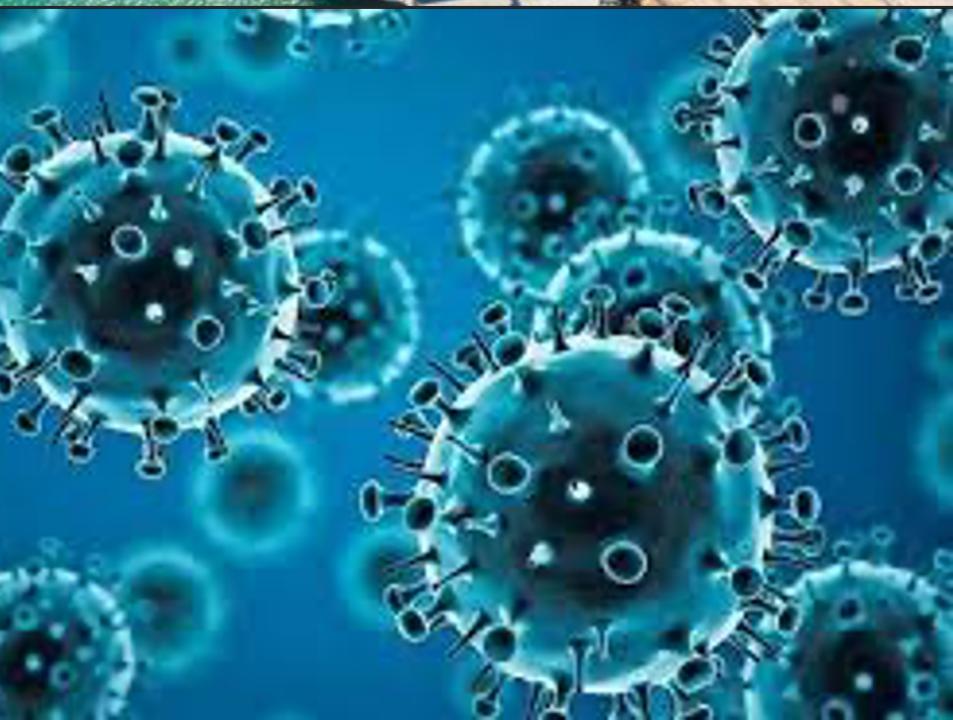


Context

- Second largest port in the world
- Gateway between Asia and the west
- COVID-19 hits in early 2020
- Offers connectivity to more than 600 ports in 123 countries.
- Managed by the Maritime and Port Authority of Singapore (MPA)

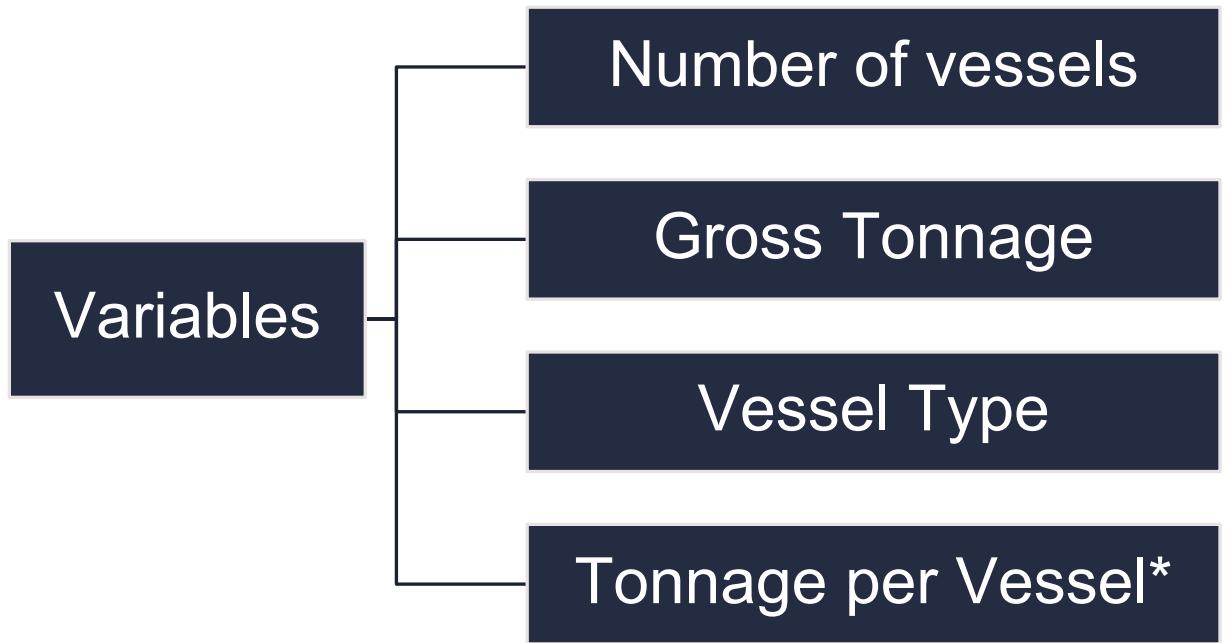
Research Question

- What impact did COVID-19 have on Singapore's port operations for passenger and non-passenger traffic?



Data

- Dataset: Vessel Arrivals greater than 75 GT
- Maritime Port Authority of Singapore



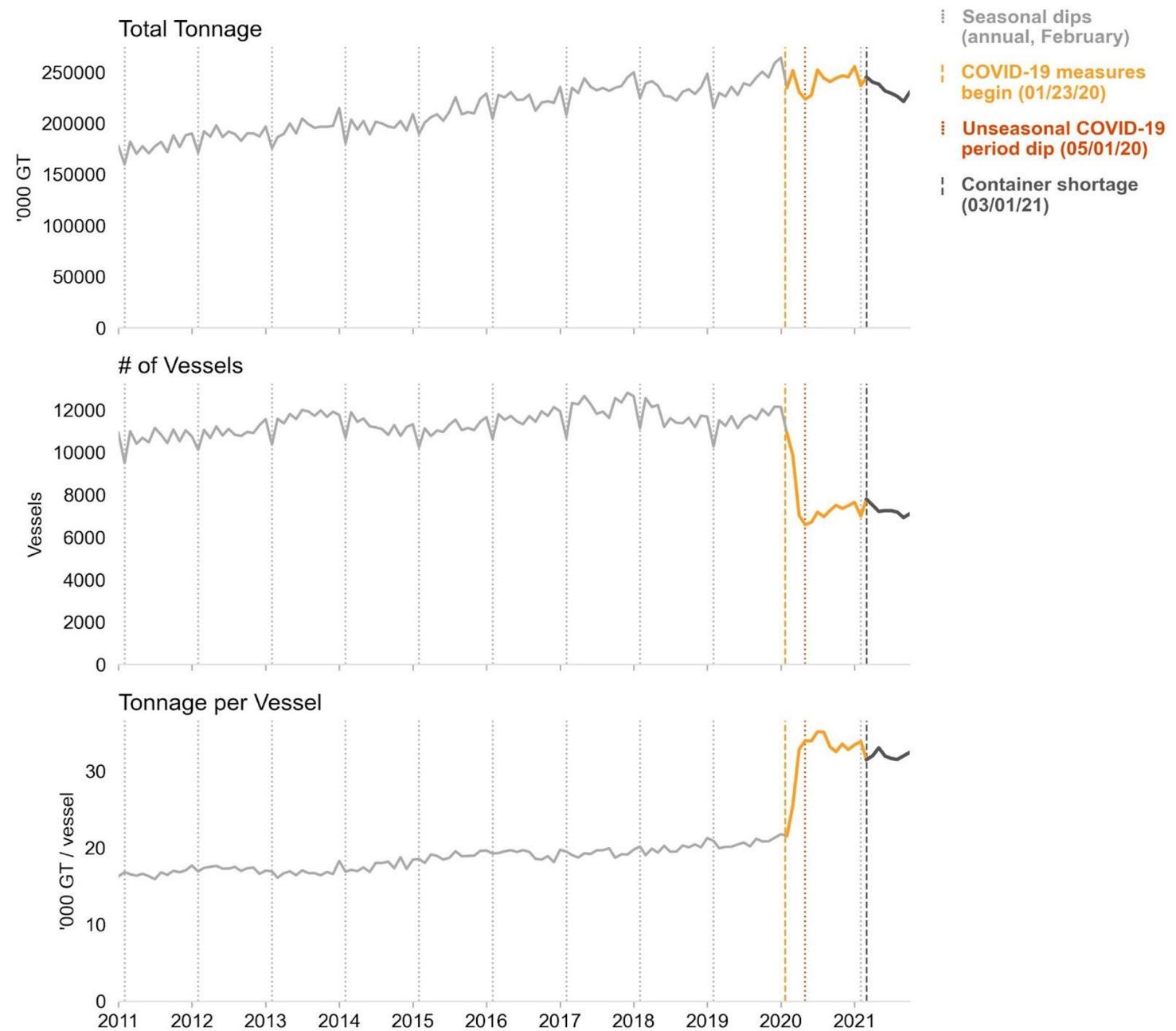
Data Exploration

- Started with six datasets
- Each person explored 2 datasets
- Sanity checks, descriptive statistics, quick visualizations
- Interesting pandemic story?
- Challenges in finalizing our research question
- Result: Vessel Arrivals



All Vessel Traffic

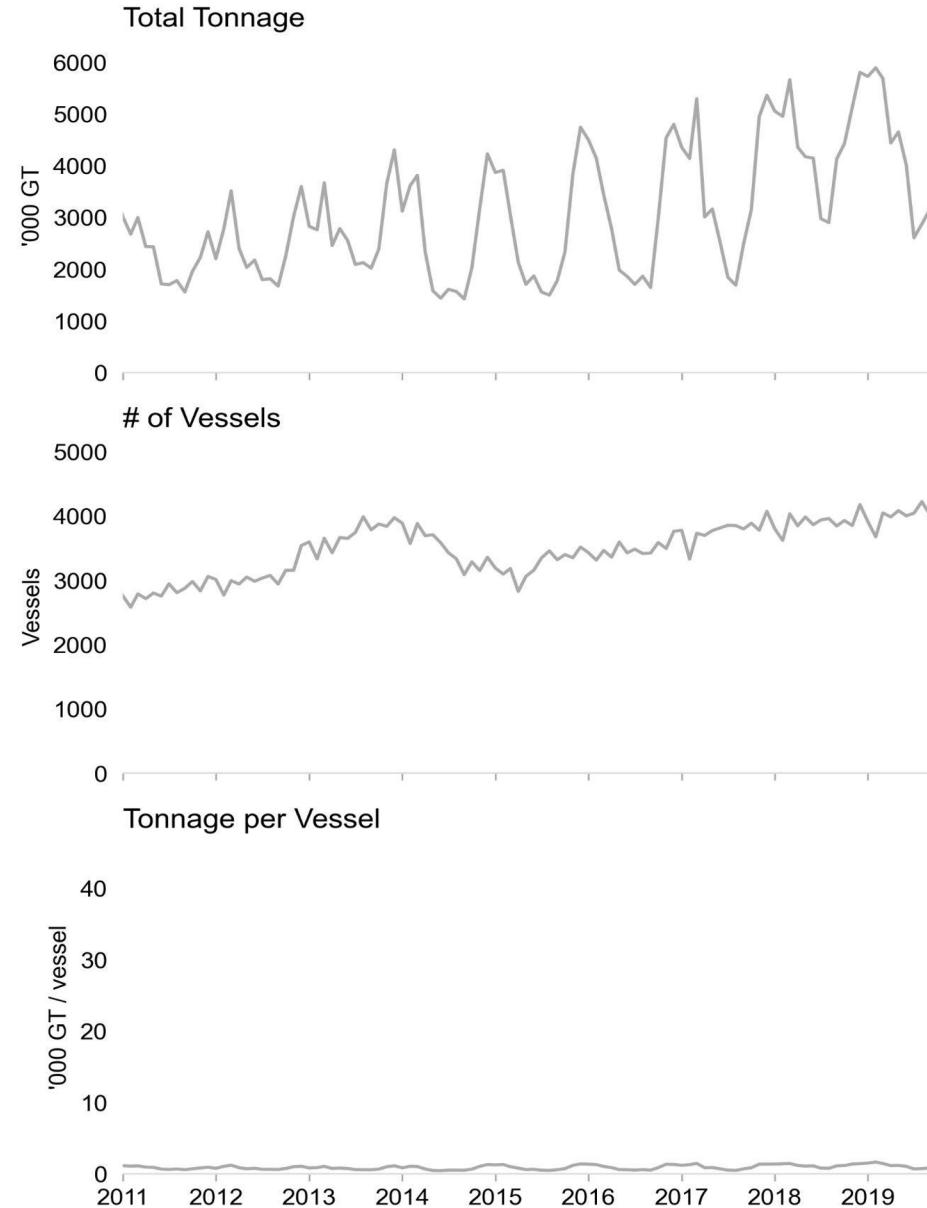
- Seasonal industry
- COVID-19 and unseasonal dip
- Passenger vs. Non-passenger Traffic



Passenger Traffic

Pre – COVID-19

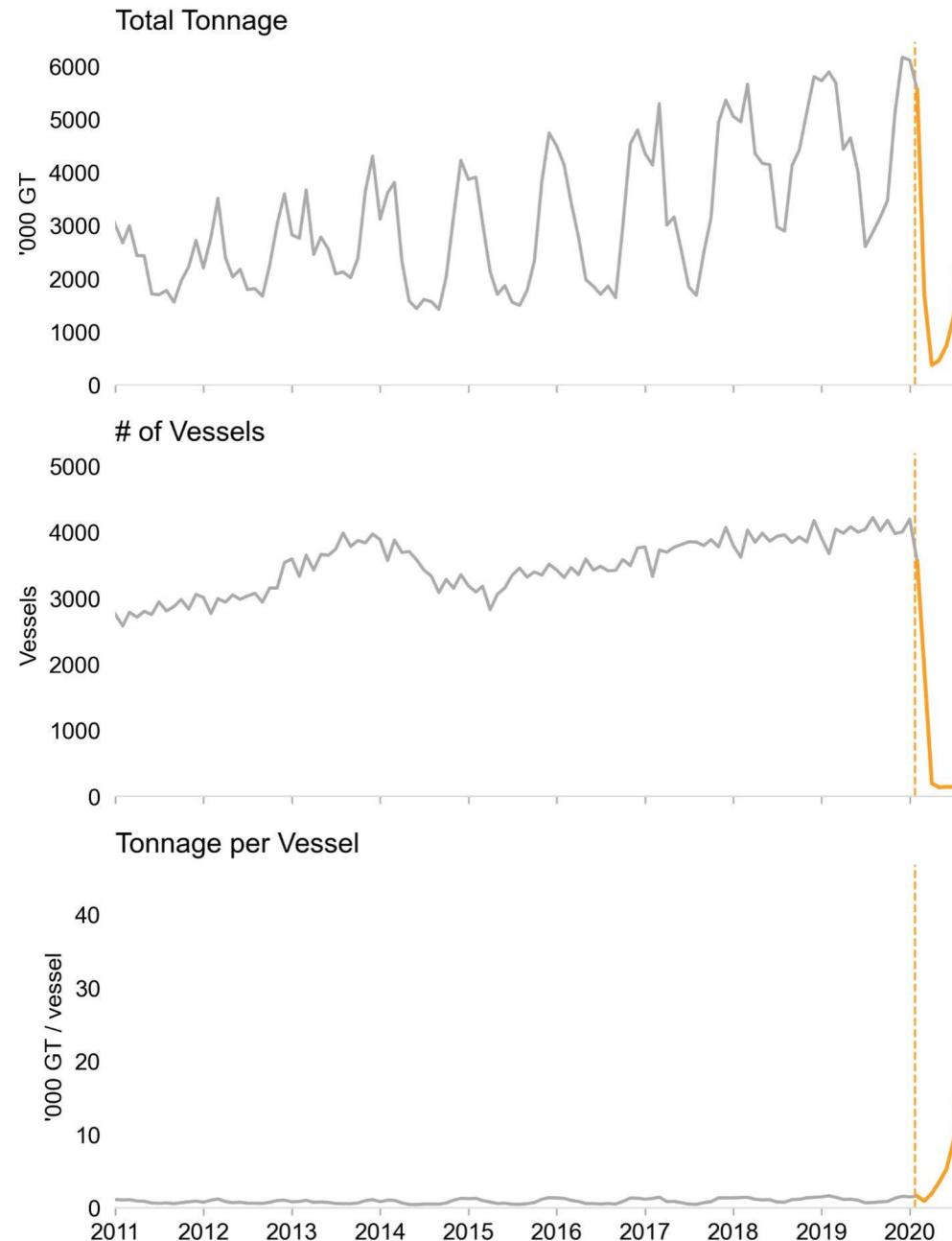
- Cyclical passenger traffic, steadily increasing
- Similar trends in total tonnage, # of vessels
- Low tonnage per vessel



Passenger Traffic

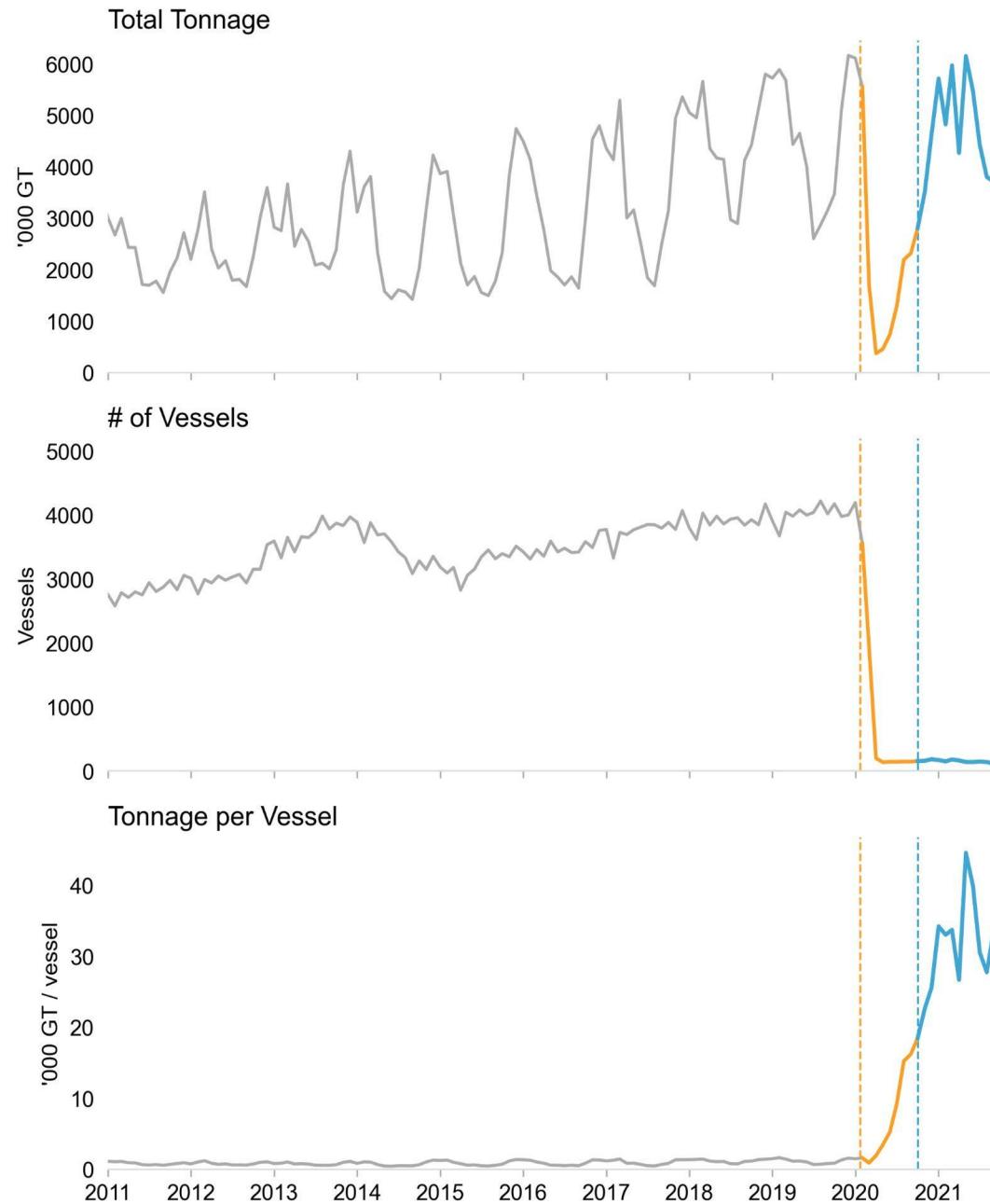
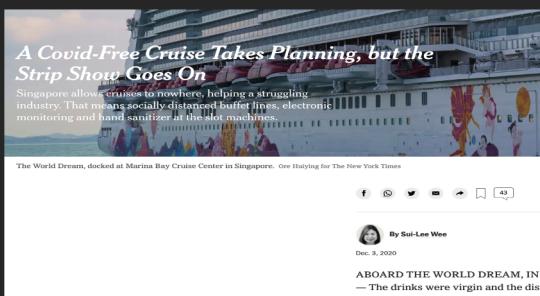
Early COVID-19 Period (Jan 2020 - Oct, 2020)

- Immediate post-COVID drop in tonnage and vessels
- Tonnage begins to recover, but # of vessels does not
- Ahistorical trend in tonnage/vessel



Passenger Traffic

“Cruises to Nowhere”
(Oct, 2020 - Present)

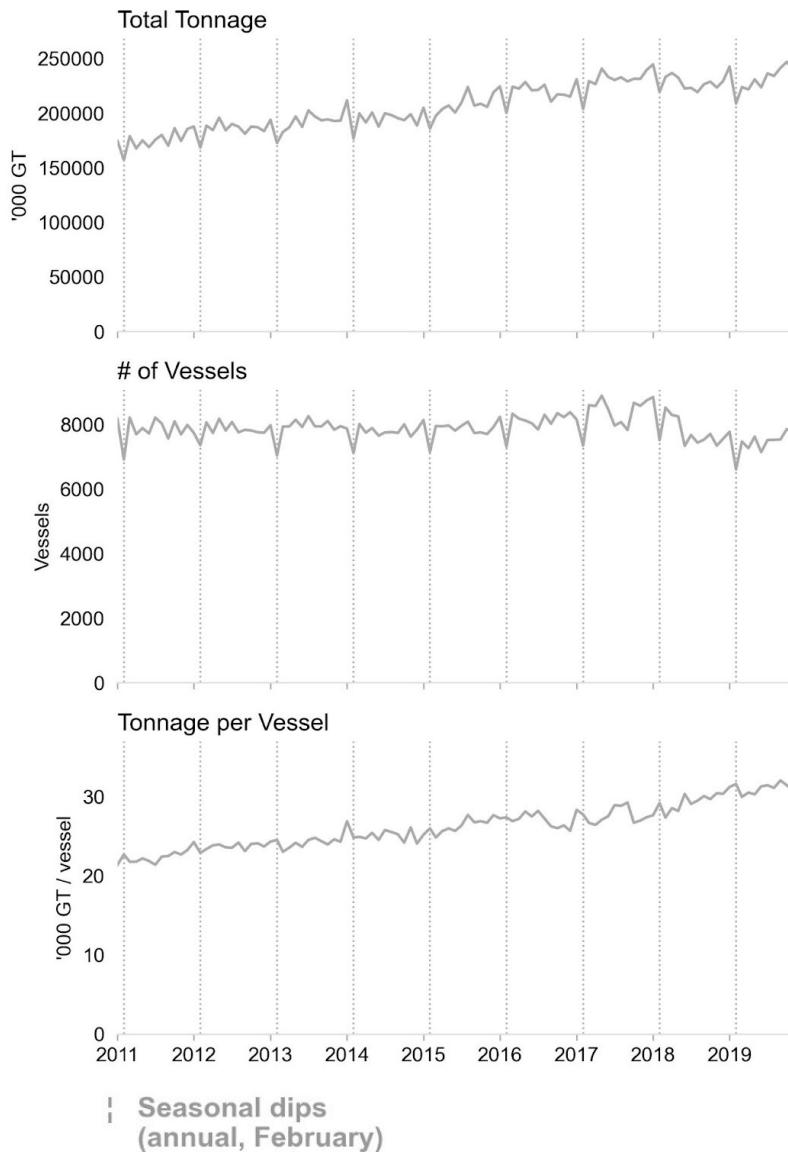


Non-Passenger Traffic

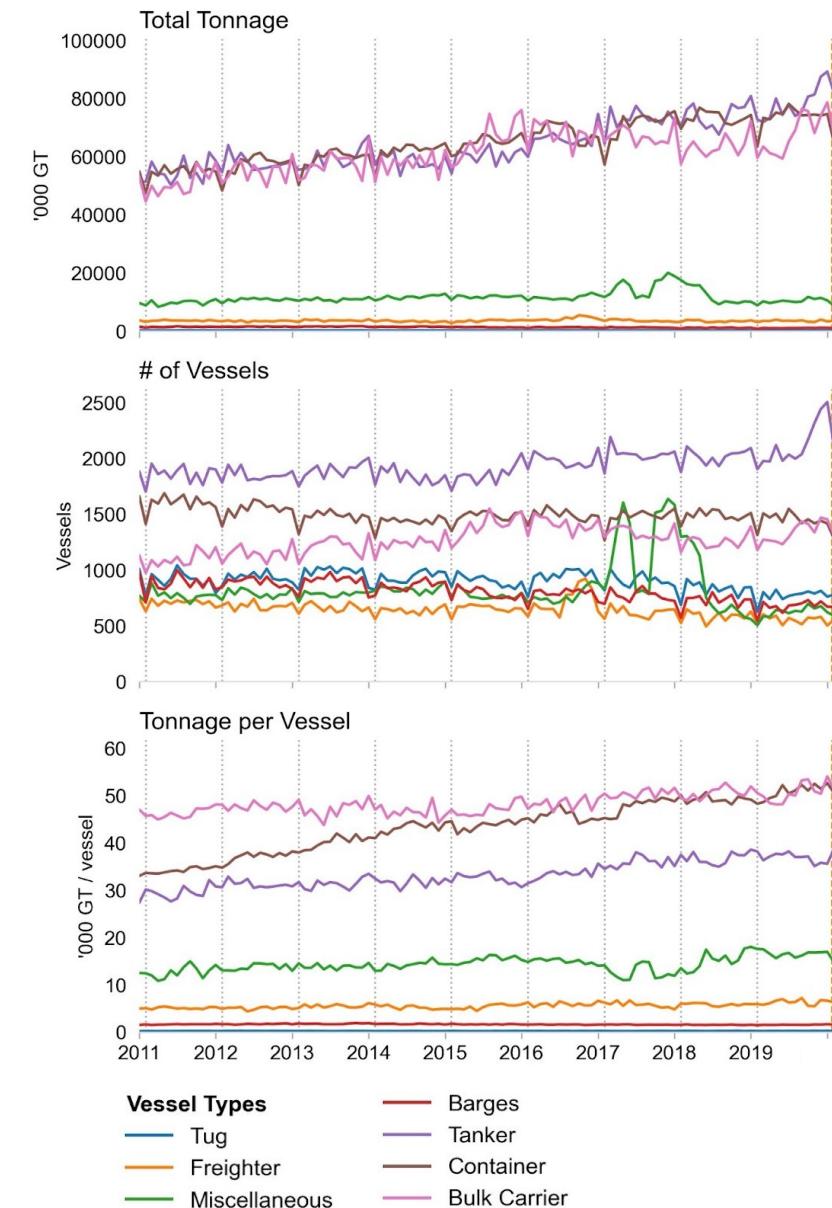
2011-2019

- Cyclical pattern
- Growth in total tonnage and tonnage per vessel
- # vessels relatively stable

Total Non-Passenger Traffic



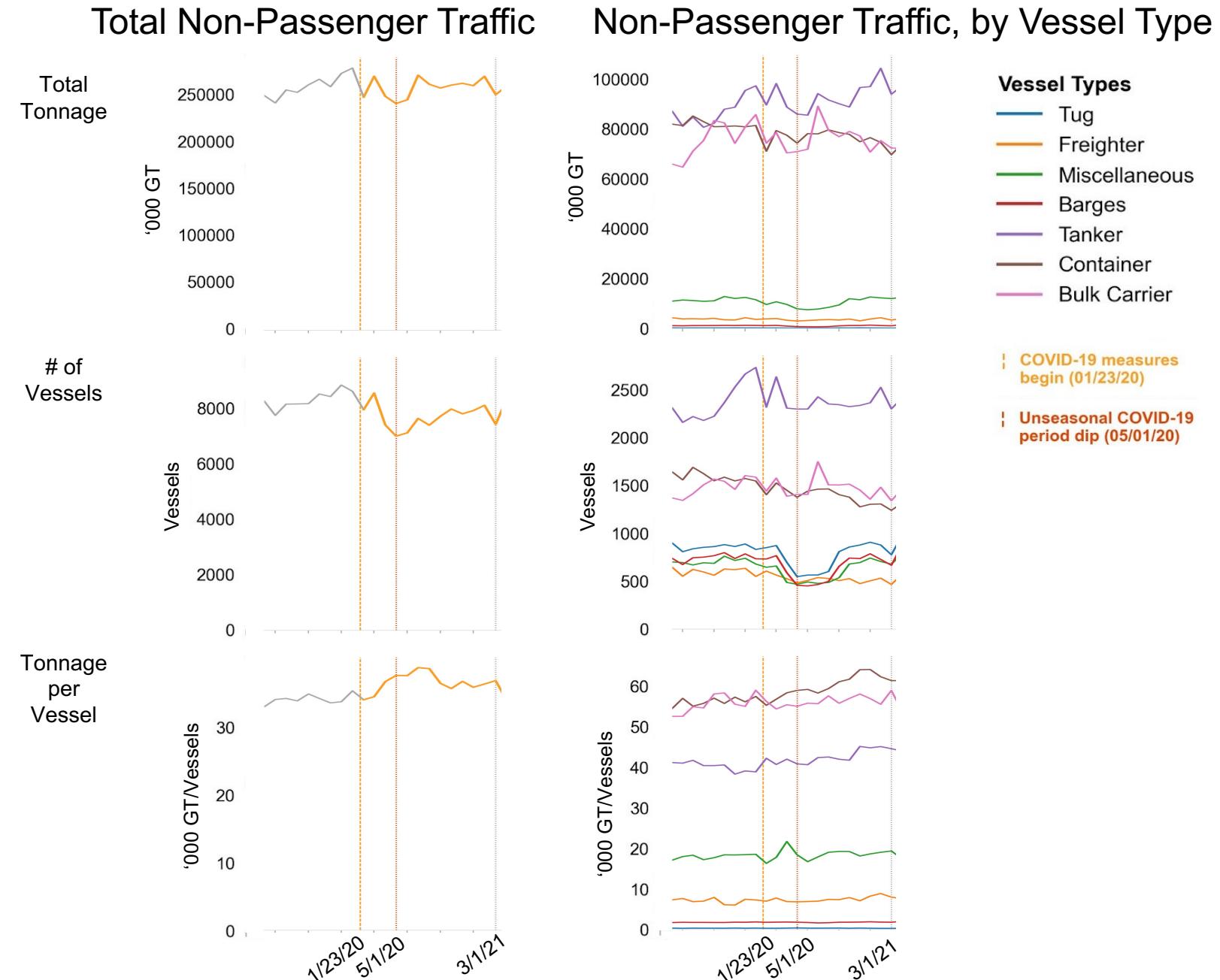
Non-Passenger Traffic, by Vessel Type



Non-Passenger Traffic

March 2020-21

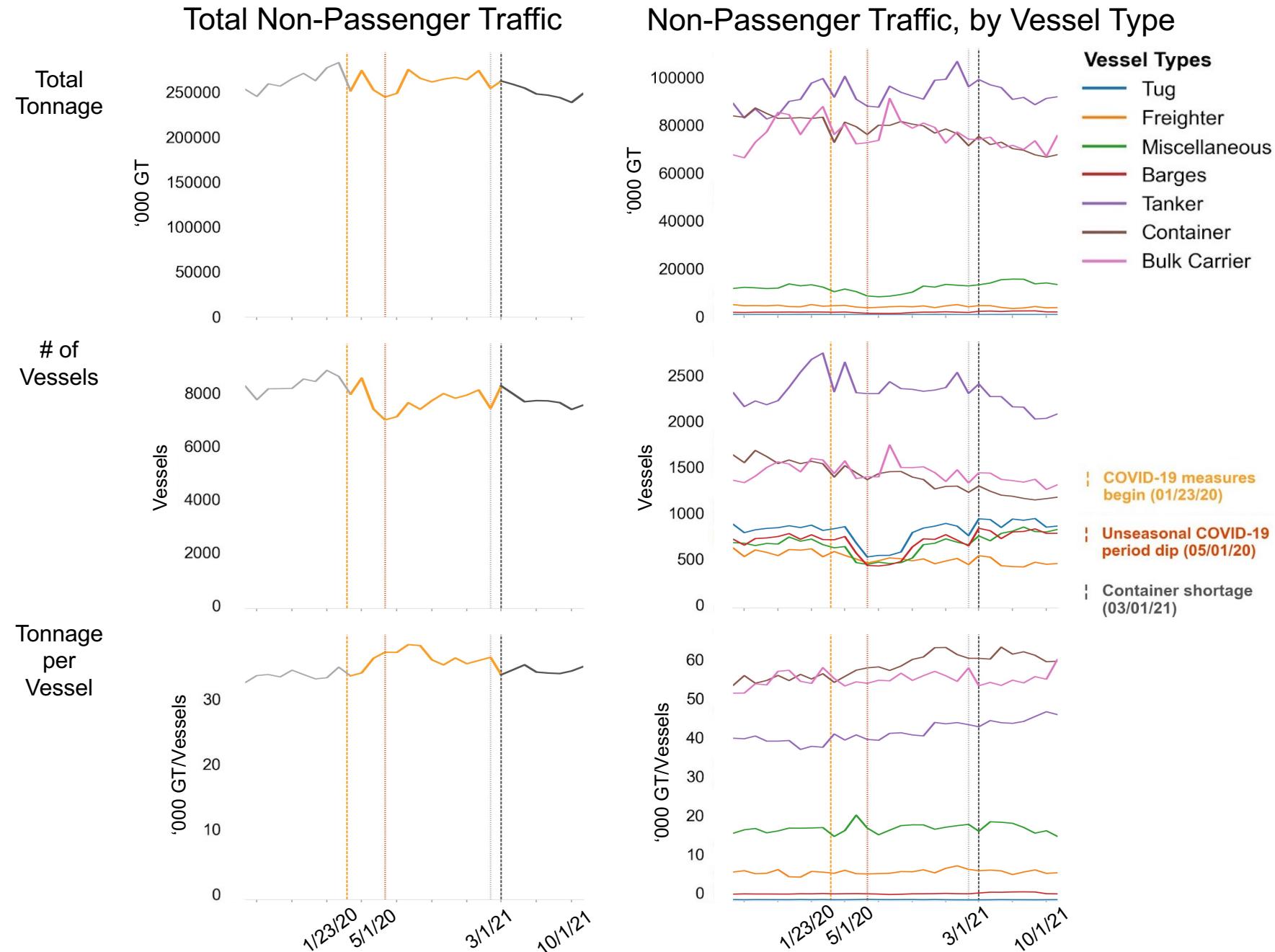
- March-May drop
- Initial expectation of shipping demand
- Evolved expectation of shipping demand
- Attempts to keep up



Non-Passenger Traffic

Post March 2021

- Decline in container and bulk carriers
- Container shortage
- Increased congestion
- Singapore increasing capacity
- Some recovery in October 2021



Conclusion

- There are peak seasons for both passenger and non-passenger traffic
- The pandemic has impacted port operations in many ways. But the Singaporean government has taken actions to help cope with the effects, which also shows in the data as well.
 - Given the importance of Singapore's port in the global supply chain, this is positive news.
 - The current path of the pandemic will be important in informing how Singapore's Port will continue to grow.



Questions?
