



Container stevedoring monitoring report

2020-21

October 2021



Australian Competition and Consumer Commission
23 Marcus Clarke Street, Canberra, Australian Capital Territory, 2601
© Commonwealth of Australia 2021

This work is copyright. In addition to any use permitted under the *Copyright Act 1968*, all material contained within this work is provided under a Creative Commons Attribution 3.0 Australia licence, with the exception of:

- the Commonwealth Coat of Arms
- the ACCC and AER logos
- any illustration, diagram, photograph or graphic over which the Australian Competition and Consumer Commission does not hold copyright, but which may be part of or contained within this publication.

The details of the relevant licence conditions are available on the Creative Commons website, as is the full legal code for the CC BY 3.0 AU licence.

Requests and inquiries concerning reproduction and rights should be addressed to the Director, Content and Digital Services, ACCC, GPO Box 3131, Canberra ACT 2601.

Important notice

The information in this publication is for general guidance only. It does not constitute legal or other professional advice, and should not be relied on as a statement of the law in any jurisdiction. Because it is intended only as a general guide, it may contain generalisations. You should obtain professional advice if you have any specific concern.

The ACCC has made every reasonable effort to provide current and accurate information, but it does not make any guarantees regarding the accuracy, currency or completeness of that information.

Parties who wish to re-publish or otherwise use the information in this publication must check this information for currency and accuracy prior to publication. This should be done prior to each publication edition, as ACCC guidance and relevant transitional legislation frequently change. Any queries parties have should be addressed to the Director, Content and Digital Services, ACCC, GPO Box 3131, Canberra ACT 2601.

ACCC 11/21_21-84

www.accc.gov.au

Contents

Glossary and abbreviations	v
Key industry insights and developments	viii
Overview	ix
Executive Summary	xii
Key stevedoring results 2020–21	xxiii
1. Introduction	1
1.1 The container freight supply chain in Australia	1
1.2 Participants in the container freight supply chain	3
1.3 The ACCC's container stevedoring monitoring program	8
1.4 Outline of the 2020–21 container stevedoring monitoring report	10
2. The current state of the container freight supply chain	11
2.1 The supply chain is not functioning effectively due to COVID-19 related disruptions	11
2.2 Australian cargo owners are incurring significantly higher costs and experiencing difficulties securing shipping capacity	15
2.3 COVID-19 induced disruptions have also affected service providers in the supply chain	20
3. Long-term trends in the container freight supply chain	21
3.1 Industrial relations	21
3.2 Large ships	22
3.3 Environmental regulations	23
3.4 Growing bargaining power of shipping lines	24
3.5 Privatisation of ports	28
3.6 Growing imbalance of empty containers	28
3.7 Vertical integration across the supply chain	34
4. Financial performance of stevedores	35
4.1 Stevedores' profitability has fallen over the past 10 years and varies significantly across ports and across stevedores	35
4.2 Greater competition between stevedores has led to increased investment in equipment and infrastructure	41
4.3 Following privatisation, the ports have become more dynamic but the land rents at Port of Melbourne have grown rapidly	43
5. Stevedore fees and charges	45
5.1 Terminal access charges	45
5.2 Other landside fees	50
5.3 Some improvements to stevedores' charging practices are needed and a number of initiatives are underway	54
5.4 Shipping lines are not providing sufficient transparency of pass-through charges	55

6.	Productivity and efficiency at Australian container ports	56
6.1	Despite some productivity gains, Australian ports are still not internationally competitive	56
6.2	Restrictive work practices and industrial actions are hampering productivity improvements and damaging operation of the entire supply chain	64
7.	Investments at Australian container ports	70
7.1	Investments being made by ports and stevedores to improve productivity and efficiency	70
7.2	The supply chain can benefit from greater rail access to the ports from joint investments	71
	Appendix A: Additional graphs	74
	Appendix B: Part VIIA, Competition and Consumer Act 2010	80
	Appendix C: Ministerial direction	81

Glossary and abbreviations

ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
All lines fast	The point when the ship is fully secured at berth, and all mooring lines are fast.
Berth	A ship's allotted space in a stevedore's container terminal.
Blank sailing	Where a shipping line cancels a scheduled service, or where certain ports are omitted along a particular route.
BITRE	Bureau of Infrastructure and Transport Research Economics
Cargo owner	Importers and exporters, also known as shippers.
CCA	<i>Competition and Consumer Act 2010</i>
CFMEU	Construction, Forestry, Mining and Energy Union, a predecessor organisation to the CFMMEU.
CFMMEU	Construction, Forestry, Maritime, Mining and Energy Union, formed from the merger of the CFMEU and the MUA.
Container exchange	The total of number of containers that are unloaded and loaded while a ship is at berth.
CPI	Consumer Price Index
Crane intensity	Total number of allocated crane hours divided by the elapsed time from labour first boarding the ship to labour last leaving the ship. Crane intensity is an input to calculating 'net crane rate' and 'ship rate'.
Crane rate	An indicator of capital productivity that reflects the intensity to which quayside cranes are worked. It is measured by dividing the total number of containers (TEUs) handled by the crane by the 'elapsed crane time'.
De-hiring	The process of returning an empty container to either an ECP or a terminal.
DP World	DP World Australia Ltd operates container terminals in Brisbane, Fremantle, Sydney and Melbourne.
EA	Enterprise Agreement
EBITA	Earnings before interest, taxation, and amortisation.
ECP	Empty Container Park. Companies whose business is to store empty containers. They may also provide ancillary services such as container cleaning, repairs and repositioning.
Elapsed crane time	The crane time allocated by the stevedores. It is computed as the total allocated crane hours less operational and non-operational delays. Elapsed crane time is an input to calculating the 'crane rate'.
Elapsed labour rate	An indicator of labour productivity. The elapsed labour rate is computed as the 'number of containers handled' divided by the 'elapsed labour time'.
Elapsed labour time	The elapsed time between labour first boarding the ship and labour last leaving the ship, less any time the labour has not worked, including non-operational delays. Elapsed labour time is an input to calculating 'elapsed labour rate'.
ESC	Essential Services Commission of Victoria
ESCOSA	Essential Services Commission of South Australia

FACT	Flinders Adelaide Container Terminal Pty Ltd. FACT is wholly owned by the South Australian port operator and is the sole container stevedore at Port Adelaide.
Freight forwarder	A freight forwarder is a person or a company that organizes shipments for cargo owners to get containerised goods from the manufacturer or producer to a market, customer or final point of distribution.
Hutchison	Hutchison Ports Australia, a member of Hutchison Ports Holdings Group. Hutchison operates terminals in Brisbane and Sydney.
Idle time (hours)	Average idle hours measures the time that a ship spends in berth, net of the average time taken by the cranes to complete the loading and unloading operations.
IMO 2020	Regulations issued by the International Maritime Organisation that limit sulphur oxide emissions.
Infrastructure access charge	Now referred to as 'terminal access charge' (see below).
L/D ratio	Load/Discharge ratio. This is the ratio of the number of (full and empty) containers loaded (for export) relative to the number of containers discharged (for import).
Land transport operators	Truck or rail operators under contract with cargo owners to transport container goods from the stevedores' container terminals to the cargo owner and vice versa.
Landside activities	Activities facilitating the exchange of containers between land transport operators and container stevedores.
Lifts	A 'lift' refers to the lifting of a single unit of container.
LNG	Liquefied Natural Gas
Monitored port	Ports under Part VIIA of the CCA subject to monitoring by the ACCC; the international container ports of Adelaide, Brisbane, Burnie, Fremantle, Melbourne, and Sydney.
MUA	Maritime Union of Australia, a division of the CFMMEU.
On-berth hours	An indicator of the time a ship spends in berth. It is the elapsed time between the time a ship arrives at berth and the time of its departure from berth.
Operating profit	Measured by earnings (revenue less cost) before interest, taxation and amortisation.
Patrick	Patrick Terminals operates container terminals in Brisbane, Fremantle, Melbourne and Sydney.
Profit margins	In this report, this is the ratio of EBITA (earnings before interest, taxes, and amortisation) to total revenue.
Quayside activities	The lifting of containers on and off container ships at berth.
Real terms	A value expressed in the money of a particular base time period (e.g. 2020-21 dollars). Values in real terms remove the impact of inflation and provide a better comparison of values over time.
Rolled cargo	Containerised cargo that is moved to a later shipping line service.
RWP	Restrictive work practices, which are provisions in Enterprise Agreements that restrict what actions a supplier can take in relation to its operations.

Ship rate	An indicator of labour and capital productivity while the ship is being serviced by stevedores.
Shipping lines	These companies facilitate the ocean-borne transport of containerised cargo from one port to another. Shipping lines may be directly under contract from cargo owners or through intermediary logistics companies. Shipping lines are the primary customers of stevedores.
Sliding	This is a strategy adopted by shipping lines where they delay their advertised sailing.
Sweeper vessel	An unladen container ship intended to evacuate empty containers from a port.
Tangible assets	The physical infrastructure used by stevedores to provide container stevedoring services e.g. cranes, straddle carriers or automated stacking cranes.
TAC	Terminal Access Charge. Previously known as Infrastructure access charge. Charges collected by stevedores on land transport operators when collecting or delivering laden (i.e. not empty) containers.
TEU	20 foot equivalent unit. TEU is the standard unit of measurement for shipping containers. One TEU is equivalent to one 20 foot shipping container. One 40 foot shipping container is equivalent to 2 TEUs.
THC	Terminal Handling Charge. THCs are charges issued by shipping lines to cargo owners to recover the costs involved in the handling of an ocean container. Different shipping line will decide differently what costs are included in its freight rate and what costs are included in its THC.
UNCTAD	United Nations Conference on Trade and Development.
VBS	The 'Vehicle Booking System'. The VBS is an online software tool that enables truck operators to book a time to pick up or drop off a container at the terminal.
VICT	Victorian International Container Terminal Ltd, wholly owned by International Container Terminal Services Inc. VICT operates a container terminal in Melbourne.

Key industry insights and developments

COVID-19

COVID-19 has caused major disruption

The pandemic has destabilised the global container freight supply chain, leading to delayed shipments and rapidly rising freight rates. Freight rates on key global trade routes are about 7 times higher than they were a little over a year ago. The situation is very challenging for Australian importers and exporters, as it is for businesses globally.



The supply chain was transforming even before COVID-19

The dynamics in the container industry have changed significantly over the past decade due to a number of concurrent supply chain trends. This has affected the operation of shipping lines, ports, stevedores, transport operators and empty container parks. Some of these trends will resolve themselves over time, but action is needed to address others.



Productivity has stagnated, despite substantial investment

Over the past decade, Australian stevedores have invested billions of dollars in infrastructure and more efficient equipment at Australian container terminals. However, recent studies have shown that Australian container ports are relatively inefficient and well below international best practice.



Industrial relations are hurting Australian container ports

Restrictive work practices and industrial actions have escalated over the past decade. This has contributed to the relatively poor performance of Australian ports and has caused ongoing disruptions to the entire supply chain.



Competition between stevedores has changed market dynamics

Enhanced competition between stevedores following the entry of Hutchison and VICT has led to reduced profits and increased investments in equipment and infrastructure. Over the past few years, stevedores have increased their landside charges, but they are not currently making excessive returns.



The shipping industry has been transformed

Excess shipping capacity and growth in vessel sizes have led to shipping lines consolidating, forming alliances and entering into other co-operation agreements. This has increased shipping lines' bargaining power. Larger vessels have adversely impacted on the productivity of ports as they require investment from ports and stevedores.



Current port regulation is inadequate

Privatisation of the 4 major container ports in Australia has improved dynamism but they are currently under-regulated. The Essential Services Commission of Victoria found in 2020 that the Port of Melbourne had exercised its market power in charging land rents to port operators.

Overview

Australia has benefited significantly from international container trade over the past 50 years. The use of containers has lowered the cost of transporting goods across the globe, allowing many Australian businesses to effectively participate in global trade despite Australia being a relatively small and isolated trading nation.

Over the past 12 months, the COVID-19 pandemic has derailed the global container freight supply chain (the supply chain). The pandemic-induced lockdowns, border closures and travel restrictions have shifted consumer demand from hospitality services towards manufactured household goods that are typically transported in containers.¹

At the same time, the pandemic set off a cascade effect, with intermittent and ongoing shocks across the supply chain draining spare shipping and port capacity. The supply chain has been kept in a continuous state of disarray, unable to cope with increased container demand.

This represents a logistical nightmare for the industry. The once efficient major overseas ports have become a cause of severe congestion and delays. The shipping line schedules that worked like clockwork are out of sync.² Shipping lines have deployed all their fleet but are unable to fully utilise their capacity as vessels are either trapped for long periods of time in port waiting queues or choose to skip ports altogether.

There is an abundance of empty containers, but they are stuck in the wrong places.³ Shipping lines are finding it easier to build new containers rather than to evacuate the existing ones. The Australian empty container parks are full, but do not always have the food quality containers that many exporters need.⁴

The state of the global supply chain has rapidly deteriorated over the past few months. Shipment delays have been mounting as shipping lines are increasingly omitting ports, rolling over cargo and cancelling bookings. Cargo owners around the world are scrambling to book scarce capacity on vessels, bidding up freight rates to unprecedented levels. Freight rates on key global trade routes are around 7 times higher than they were a little over a year ago.⁵

Australian importers and exporters are finding this situation particularly challenging. Many are struggling to get all their cargo on ships and are facing rapidly escalating freight rates. Some are paying significant premiums and surcharges to shipping lines to obtain priority loading, but even this does not guarantee on-time delivery.

A number of exporters are struggling to meet their contractual obligations, while some smaller exporters are being squeezed out altogether. Some large retailers are so concerned that their cargo will not arrive in time for the upcoming key shopping peak season that they have started to buy their own shipping containers and are chartering their own vessels to transport the cargo.⁶

The margins of Australian exporters and importers are being squeezed. Many exporters are unable to pass on their increasing costs in full due to their participation in competitive global markets. Some domestic retailers have begun to pass on the higher charges to Australian consumers.

1 K Cullinane and H Haralambides, 'Global trends in maritime and port economics: the COVID-19 pandemic and beyond', *Maritime Economics and Logistics*, 2021, 23:369-380, pp. 369-70; UNCTAD, *Global Trade Update*, UNCTAD website, May 2021, accessed 1 October 2021, p. 3.

2 Sea Intelligence, '[Schedule reliability drops to all-time low 33.6% in August 2021](#)', *Sea Intelligence*, 27 September 2021, accessed 29 September 2021.

3 N Rivero, '[A shipping container shortage is snarling global trade](#)', *Quartz*, 30 June 2021, accessed 1 October 2021; Cullinane and Haralambides, 'Global trends in maritime and port economics: the COVID-19 pandemic and beyond', pp. 374-5.

4 Associated Customs & Forwarding (ACF), '[International Trade Routes and Port Practices Fall into Disarray](#)', *ACF*, 7 December 2020, accessed 1 October 2021.

5 Data provided to the ACCC by S&P Global Platts, 'Container Index August 2017 to September 2021'. The Platts Container Index is a weighted average of Platts' key container assessments including North Asia-to-North America and North Asia-to-North Continent routes.

6 M Garland, '[Retail's new fad? Charter ships to ensure sales, even if it's costly](#)', *Supply Chain Dive*, 22 September 2021, accessed 5 October 2021.

In the midst of this, the Maritime Union of Australia (MUA) has undertaken protracted industrial actions in the course of its Enterprise Bargaining negotiations with stevedores and other port operators.⁷ These actions have exacerbated congestion and delays at Australian container ports. As an example, during 2020–21, the MUA organised a number of industrial actions at Port Botany in Sydney. This contributed to shipping lines spending, on average, 21 hours waiting idly at Port Botany in 2020–21.⁸ A number of shipping lines skipped the port altogether, preferring to unload their cargo in Melbourne instead of waiting.⁹

The COVID-19 pandemic has affected every country in the world. Once the ongoing shocks caused by the pandemic stop, the performance of the global supply chain will be restored and global freight rates will abate. Many of the issues the COVID-19 pandemic has caused for Australian importers and exporters will also subside. However, the ACCC has identified a number of longer-term trends that were adversely affecting the operation of the supply chain on Australian container trade routes even before the pandemic.

Following the global financial crisis, many Australian businesses benefited from the ‘golden age’ of containerised trade. Excess global shipping capacity created strong competitive tension between shipping lines, which enabled Australian businesses to negotiate relatively low freight rates for transportation of their goods. Australian exporters obtained access to new international markets and were able to effectively compete with their overseas rivals who are located closer to customers. Australian retailers were able to import significant quantities of final and intermediate goods at low cost, leading to more choice and lower prices for Australian businesses and consumers.

However, shipping lines have told the ACCC they have had a poor experience at the Australian container ports over the past few years. Some shipping lines have described the Australian container shipping market as characterised by high costs and major disruptions at ports, container terminals and empty container parks. These comments are supported by international studies.

A recent study by the World Bank and IHS Markit showed that even before the recent logistical issues caused by the pandemic, Australian container ports were relatively inefficient and well below international best practices. The study ranked Australia’s largest container ports, Melbourne and Sydney, in the bottom 15% and 10%, respectively, of the 351 global ports in the study.¹⁰ Data published by the United Nations Conference on Trade and Development (UNCTAD) also shows that in 2019, the median in-port time for container ships visiting Australia was 3 times longer than Japan, twice as long as China and 50% longer than Singapore or New Zealand.¹¹

Shipping lines are particularly concerned that they are spending significantly more time waiting at Australian container ports, compared to their overseas counterparts. As shipping lines employ larger vessels, the opportunity cost of vessels waiting at Australian container ports and missing their next schedule window is increasing. As a result, ongoing disruptions and delays at Australian ports are becoming unpalatable for shipping lines.

Australian cargo owners informed the ACCC that some shipping lines have already started withdrawing services from Australia. It is critical for Australia to entice more shipping lines to provide services on Australian container trade routes, while also facilitating effective competition between them. This will influence the level of container freight rates that Australian cargo owners will face in the future.

To achieve this, Australia needs to take several steps. Systemic industrial relations issues across the supply chain require attention. While this has been a challenging area for some time, restrictive work practices and industrial actions have escalated in recent years.

7 The MUA is a division of the Construction Forestry Maritime Mining and Energy Union. The MUA and the CFMMEU merged in 2018.

8 ACCC calculation based on data from BITRE Waterline 68.

9 D Sexton, ‘[Sydney congestion blamed for ship shuffling](#)’, *Daily Cargo News*, 15 September 2020, accessed 12 October 2021.

10 The World Bank and IHS Markit, *The Container Port Performance Index 2020: A Comparable Assessment of Container Port Performance*, Washington, DC, 2021.

11 UNCTAD, [United Nations Conference on Trade and Development – Data Center](#), 2021, accessed 15 September 2021.

The MUA informed the ACCC that in recent years it has taken a stronger emphasis on job security and impact mitigation for its workforce in response to significant trends in the supply chain, including privatisation, automation, increased competition between stevedores and the consolidation of shipping lines. The MUA stated that the introduction of new automated technology by stevedores has reduced productivity and noted that all industrial actions taken by the stevedoring workforce have been approved by the Fair Work Commission.

Notwithstanding that, the ACCC has observed Stevedores' Enterprise Agreements contain provisions that limit their ability to automate, reduce labour costs and control their recruitment decisions. Over the past 3 years, the MUA has used protracted industrial actions to demand that stevedores accept such provisions. These issues are hampering productivity and increasing disruptions at the Australian container ports.

Another area of concern is ensuring privatised container ports do not levy excessive land rents and other charges. While privatisation of the 4 major container ports in Australia may have improved dynamism, the current level of regulation of these ports is inadequate. This is highlighted by a finding by the Essential Services Commission of Victoria (ESC) in 2020 that Port of Melbourne had exercised its market power in charging land rents to port operators. To address this, the ESC recommended introduction of an enhanced negotiate-mediate-arbitrate framework independently overseen by the ESC.¹²

It is also time to repeal Part X of the Competition and Consumer Act 2010. Part X permits shipping lines to collaborate on prices, capacity and schedules, among other things, which would otherwise be considered as anti-competitive conduct. There does not appear to be evidence of shipping lines charging excessive freight rates before the pandemic. However, the shipping industry has become more concentrated over the past decade, so there is a growing risk that shipping lines could use Part X to artificially elevate freight rates in the future. Several other countries have already scaled back or removed equivalent exemptions. The ACCC is proposing to develop a class exemption, in place of Part X, which would allow for a more limited form of collaboration that would likely be in the public interest.

Further, industry and government need to make a range of investments in infrastructure to address broader inefficiencies in the supply chain caused by larger ships, lack of rail access to Australian container ports and shortage of space in empty container parks.

The COVID-19 pandemic has illustrated the importance of the container freight supply chain to Australia. The cost of not addressing these issues is likely to be significant for many Australian businesses and the Australian economy as a whole.

12 Essential Services Commission (ESC), [Port of Melbourne – Market Rent Inquiry 2020](#), ESC website, August 2020, pp. 41–43.

Executive Summary

About this report

This year's Container Stevedoring Monitoring Report is the 23rd report produced by the ACCC under an Australian Government direction to monitor prices, costs and profits of container stevedores at international container ports in Adelaide, Brisbane, Fremantle, Melbourne and Sydney.¹³

Given the interconnected nature of the supply chain and the significant challenges that the Australian container trade is currently facing, this report includes a broader analysis of the supply chain and identifies particular pressure points and measures needed to promote recovery beyond the COVID-10 pandemic.

Developments in the past 12 months

The COVID-19 pandemic has created a very challenging environment for Australian businesses relying on container freight supply chain

For most of the period after the global financial crisis and prior to the COVID-19 pandemic, the supply chain effectively served many Australian exporters and importers. Australian businesses had ample access to shipping capacity, container movements were predictable and reliable, while freight rates were low and stable.

Over the past 12 months, the COVID-19 pandemic has precipitated a 'perfect storm'. A combination of a surge in demand for containerised cargo and extreme congestion across the global supply chain caused demand for shipping capacity to greatly outstrip supply.

The pandemic-induced lockdowns, border closures and travel restrictions have shifted consumption patterns away from demand for services (particularly travel, recreation and hospitality) towards demand for manufactured goods that are typically transported in containers (including electronic equipment, home office equipment, home improvement materials as well as medical and health equipment).¹⁴

Prior to the pandemic, the supply chain would have likely had sufficient spare capacity to withstand this surge in containerised demand. However, the pandemic has simultaneously destabilised almost every part of the supply chain, leaving the supply chain without any spare capacity.

Port operations across the globe have become fragile. As governments employed health measures to suppress COVID-19, intermittent COVID-19 outbreaks at port operations have caused ports to shut down and required infected workers to isolate for periods of time. These closures have reduced port capacity, causing significant congestion and delays that take weeks and sometimes months to fully resolve.

The last-minute nature of these closures makes it difficult for supply chain participants to plan mitigating action. Yantian port in China, the world's 4th largest container port, closed for nearly a month in May 2021, contributing to a massive backlog of containers and a diversion of vessels to alternative ports in the region. Without any spare capacity in the supply chain, it took a long time for this backlog to be cleared.¹⁵

Simultaneous congestion at many ports around the world has severely impacted on vessel scheduling and led to an increase in schedule sliding.¹⁶ These disruptions of shipping schedules, combined with shipping lines spending an increasing amount of time waiting in port congestion queues, have drained

13 The direction also requires the ACCC to monitor Burnie, but it currently does not have a container terminal.

14 K Cullinane and H Haralambides, 'Global trends in maritime and port economics: the COVID-19 pandemic and beyond', *Maritime Economics and Logistics*, 2021, 23:369-380, pp. 369-70; UNCTAD, [Global Trade Update](#), UNCTAD website, May 2021, accessed 1 October 2021, p. 3.

15 W Water, '[Impact of Yantian disruption 'exceeds the Suez incident'](#)', *Lloyd's Loading List*, 11 June 2021, accessed 1 October 2021.

16 Schedule 'sliding' occurs when arrival date of a vessel is moved to a later date.

shipping line capacity. While the shipping lines have deployed all the vessels they can, congestion prevents the extra capacity from being efficiently utilised. In some cases, the additional vessels simply make some port queues longer.

Congestion has led to lost voyages, shipping lines omitting port calls and an increase in rolled cargo.¹⁷ In response, shipping lines have allocated additional capacity on their vessels to carry cargo already under contract to ensure they meet their contractual obligations. This has left less space available for uncontracted cargo, further contributing to the squeeze of shipping line capacity.

Congestion and delays at overseas ports have caused late arrivals of vessels in Australia and, combined with COVID-related and other domestic disruptions, are severely impacting on the Australian port operations. One stevedore told the ACCC that during the 12 months to June 2021, only 10% of the vessels calling into its terminal had arrived within the scheduled window.

Shipping lines have informed the ACCC that Australian stevedores have implemented move count restrictions on vessel exchanges to keep vessels moving through congested ports.¹⁸ This has contributed to underutilisation of shipping line capacity, as shipping lines do not have sufficient moves to load as many containers as they unload. This has been exacerbated by increase in import demand, which means more moves are taken up unloading, with fewer moves remaining for loading full containers for export or empty containers for evacuation.

The logistics issues across the global supply chain have led to global misplacement of empty containers. Prior to the COVID-19 pandemic, shipping lines used 'sweeper vessels' to evacuate empty containers, clearing local congestion and returning equipment to centres of demand. However, because of the global shortage of shipping capacity and lack of available berthing windows, shipping lines have allocated fewer vessels for sweeping operations.¹⁹ While there is no shortage of containers in the system, containers are stuck in the 'wrong' parts of the world.

This has led to container accumulation in Australia. As an import-dominated container trade, Australia is reliant on shipping lines evacuating empty containers. With shipping lines not dedicating sufficient capacity to evacuation, empty container parks have become full, which contributes to congestion issues in the supply chain. At the same time, exporters informed the ACCC that there has been a shortage of food quality containers needed for many agricultural exports at many empty container parks.

Every part of the supply chain is interconnected and issues in one part of the supply chain create flow-on effects in other parts. The COVID-19 pandemic has set off a cascade effect in the supply chain, which has pushed it to its limits. The supply chain is currently experiencing intermittent and ongoing shocks, which, combined with lack of spare capacity, exacerbate existing problems.

The effects have been felt by cargo owners all around the globe. Freight rates have soared, as cargo owners everywhere try to outbid each other to secure space on vessels. Not all are successful and delays are increasing, so there is a huge number of shipments stuck at ports or warehouses around the world awaiting a slot.

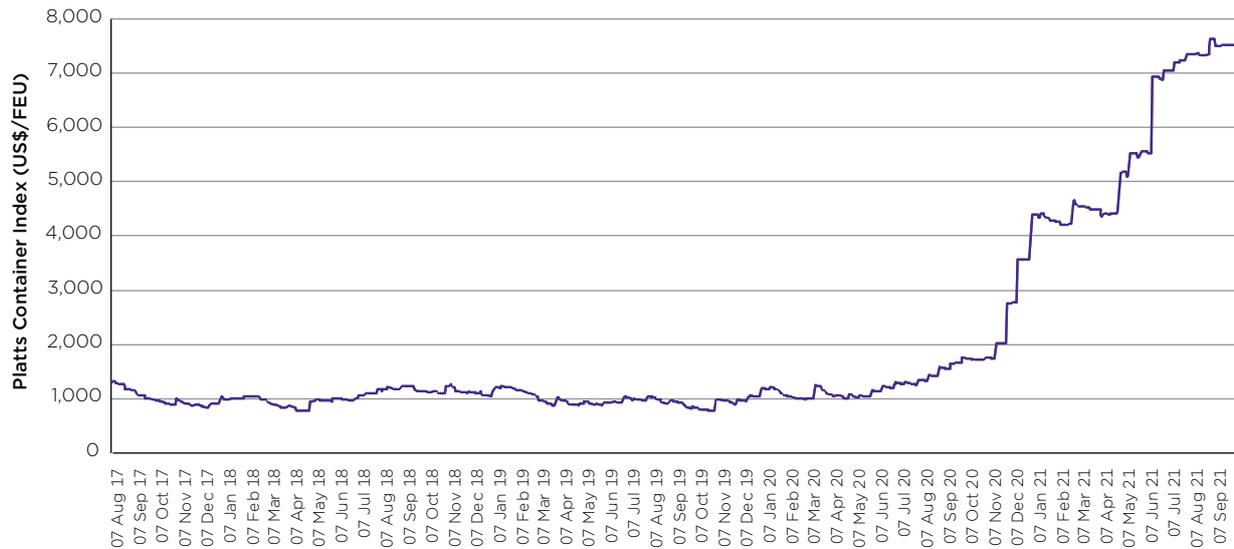
Data from S&P Global Platts shows that container freight rates on key global trade routes are around 7 times higher than they were a little over a year ago (figure 1).

17 When cargo is 'rolled', it is moved to a later shipping line service.

18 Move count restrictions limit the total number of times that a stevedore lifts containers on, and off, the vessel during each stay.

19 Associated Customs & Forwarding (ACF), ['International Trade Routes and Port Practices Fall into Disarray'](#), ACF, 7 December 2020, accessed 1 October 2021.

Figure 1: S&P Global Platts Container Index (US\$/FEU): August 2017 to September 2021²⁰



Source: S&P Global Platts.

Note: The Platts Container Index is a weighted average of Platts' key container assessments including North Asia-to-North America and North Asia-to-North Continent routes. FEU (forty-foot equivalent unit) is a measure of volume in units of 40-foot long containers.

In these unprecedented circumstances, it appears some shipping lines have shifted their focus to more profitable trade routes. As a result, some shipping lines are servicing Australian ports less regularly and some not at all. For example, Flinders Adelaide Container Terminal (FACT) informed the ACCC that over 20% of shipping services are currently bypassing Adelaide. Exporters said some shipping lines are also reluctant to send empty containers to Adelaide (a net exporting port) because they can obtain higher freight rates by exporting goods from China instead.

Australian exporters and importers told the ACCC that the cumulative effect of the disruptions in the supply chain have had an impact on their business. Exporters are struggling to get all of their container cargo on ships, sometimes competing with empty containers for limited space. As a result, they are facing delays to transport their cargo and freight rates have risen significantly. A number of exporters said that this is adversely affecting their ability to meet contractual obligations, affecting the global competitiveness of Australian exports.

Some exporters have stated that smaller exporters are being squeezed out altogether, as they are either unable to book shipping line capacity or can only do so at prices they cannot afford. Some exporters are also finding it challenging to obtain food quality containers, causing further delays and costs to their operations. Exporters have very few options to mitigate these challenges. Some have switched to transporting their cargo in smaller dry bulk vessels, but this option is inefficient and not available to all.²¹

Australian importers are also experiencing extremely challenging times. Shipping lines cannot guarantee timely delivery of any products because there are so many variables on the supply side. At the same time, many retailers are worried their cargo may not arrive on time for the upcoming shopping peak season. As a result, there is now an 'auction' between importers to obtain shipping capacity on some Australian routes, resulting in rapidly surging freight rates.

While importers are paying a range of premiums and surcharges to shipping lines, these do not guarantee on-time delivery. The payment of premium simply speeds up how quickly the importers can organise for their cargo to be loaded onto a vessel. Even those paying the highest freight rates may still have to wait 2 to 5 weeks to get their cargo loaded. The situation has become so dire that some larger retailers like IKEA have started to buy their own shipping containers and chartering their own vessels

²⁰ The Platts Container Index methodology can be found in the [Platts Global Freight Specifications Guide \[PDF 263KB\]](#).

²¹ S&P Global Platts, '[Cargo charterers switch to bulk freight as container rates surge](#)', S&P, 5 March 2021, accessed 14 October 2021.

to transport the cargo.²² Not all importers can afford to do so and available charter vessels are difficult to find.

A number of retailers have informed the ACCC that their margins are being squeezed and they have begun to pass on the higher charges to consumers. The effects on product prices have likely not yet peaked, as a substantial proportion of goods are still subject to contractual agreements negotiated prior to the pandemic.

While many of the issues experienced by Australian exporters and importers have been caused by the global logistical challenges, importers are facing additional costs upon arrival of their cargo in Australia due to port omissions and congestion created as a result of industrial actions.

Domestically, over the past 12 months, the MUA has undertaken protracted industrial actions during its Enterprise Bargaining negotiations with stevedores and other port operators. With the supply chain already in a state of distress, the industrial actions have exacerbated congestion and delays at Australian container ports.

Market participants from every part of the supply chain have voiced concerns to the ACCC about the impact that these industrial actions have had on their operations.

Long-term trends

Industrial relations issues hampered performance of Australian container ports even before the pandemic

As with the rest of the world, the COVID-19 pandemic has led to significant congestion and delays at Australian container ports. However, a recent study by the World Bank and IHS Markit showed that Australian container ports were relatively inefficient and well below international best practices even before the recent logistical issues caused by the pandemic. The World Bank and IHS Markit compared in-port time performance of 351 container ports in the world and found that 4 of the 5 Australian major container ports were in the bottom quartile of the ports in the study (table 1).²³

Table 1: Ranking of Australian container ports out of 351 global containers ports

	Administrative approach	Statistical approach
Brisbane	234	246
Melbourne	313	302
Fremantle	319	326
Sydney	327	337
Adelaide	333	339

Source: The World Bank and IHS Markit.

The ACCC also examined UNCTAD data on median in-port time that container ships spend in different countries. In 2019, the median in-port time for container ships visiting Australia was 1.2 days, which is 3 times longer than Japan, twice as long as China and 50% longer than Singapore and New Zealand.²⁴

The ACCC considers that escalating restrictive work practices and industrial actions have adversely affected the performance of the Australian stevedores over the past decade and may have also had an impact on performance of other port operators in the supply chain.

In the period 2012–19, Australian stevedores made substantial investments in infrastructure and more efficient equipment. Between 2012–13 and 2014–15, Hutchison invested around \$600 million to

22 M Garland, 'Retail's new fad? Charter ships to ensure sales, even if it's costly', *Supply Chain Dive*, 22 September 2021, accessed 5 October 2021.

23 The World Bank and IHS Markit, *The Container Port Performance Index 2020: A Comparable Assessment of Container Port Performance*, Washington, DC, 2021.

24 United Nations, *United Nations Conference on Trade and Development – Data Center*, 2021, accessed 15 September 2021.

start its stevedoring operations in Brisbane and Sydney. In the same period, Patrick invested almost \$700 million, including purchasing new cranes and semi-automating its terminal in Port Botany. DP World also invested \$300 million, including semi-automating its terminal in Brisbane. In 2017, VICT spent \$550 million to start its fully-automated operation in Melbourne.

Table 2 shows annual percentage changes in quayside productivity indicators (crane rate, labour rate and ship rate) across 2012–2019 and the preceding 2 7-year periods.

Table 2: Annual percentage change in quayside productivity indicators, Australia: 1998–99 to 2019–20

	Crane rate (% per annum)	Labour rate (% per annum)	Ship rate (% per annum)	Crane intensity (% per annum)	TEU (% per annum)
1998–99 to 2005–06	5.0	6.7	7.7	2.6	15.4
2005–06 to 2012–13	1.0	3.4	3.0	2.0	5.4
2012–13 to 2019–20	0.6	1.5	2.1	1.5	2.5

Source: ACCC calculation based on data from BITRE Waterline 68.

Table 2 shows that, despite the substantial capital spending by the stevedores, the rate of improvement across the quayside metrics in the period 2012–13 to 2019–20 is lower than the rate of improvement in these metrics in the preceding periods.

The MUA informed the ACCC that introduction of new automated technology by stevedores reduces container productivity in an overall sense, while reducing jobs and creating job insecurity. The MUA stated that, in some cases, stevedores’ experimentation with various technological applications in landside infrastructure and work processes has, in its view, been aimed at cost cutting and concentrating of managerial power. The MUA stated that this has led to work intensification, outsourcing of new functions and a lack of investment in training and upskilling of the workforce.

The ACCC has reviewed the most recent Enterprise Agreements (EA) reached between each of the stevedores and the MUA. A number of provisions limit stevedores’ ability to recruit qualified personnel, allocate employees across their operations, outsource tasks and upgrade technology.

Box 1 shows some of the most restrictive provisions in Hutchison’s current EA. This EA was signed by the parties after 971 days of negotiations following the expiry of the previous EA. These provisions limit Hutchison’s ability to automate, reduce labour costs and control its recruitment decisions.

Box 1: Restrictive provisions in Hutchison’s Enterprise Agreement

In July 2021, Hutchison signed an EA agreement containing the following provisions:²⁵

- 8.4 *No employee shall be made redundant due to the implementation of automation and/or technology or mode change.*
- 10.1 *Vacancies, including promotional and permanent level appointment opportunities as they arise, will be filled by trained and suitable people within the business, where available.*
- 10.4 *Appointment of positions covered by this agreement will be undertaken on the basis of:*
 - 10.4.1 *40% of appointments from family and friends of employees covered by this agreement*
 - 10.4.2 *30% appointments from the MUA*
 - 10.4.3 *30% appointments from Hutchison.*

²⁵ Fair Work Commission, (FWC), [Hutchison Ports Australia \(HPA\) and Maritime Union of Australia \(MUA\) Enterprise Agreement 2021](#), FWC website, 2021, accessed 21 September 2021.

The EAs of all other monitored stevedores also contain highly restrictive workplace provisions. Each time a stevedore's EA expires, the MUA and the stevedore engage in protracted EA negotiations, creating delays and congestion at Australian container ports.

For example, Patrick has informed the ACCC that during 2020–21, the MUA undertook 20 employee response actions at its container terminal at Port Botany. Patrick advised these actions, which were carried out initially in September 2020 and then again in May and June 2021, resulted in a total loss of more than 800 rostered work hours. Patrick also stated that the MUA imposed various additional bans during these periods, each running from a few hours to 28 days, including:

- unlimited ban on upgrades, that is, engaging employees in work at a higher grade than they were employed, preventing Patrick from fully resourcing its operations across this period
- unlimited ban on employee work extensions, preventing employees from working overtime shifts when required, reducing Patrick's ability to service vessels.

Market participants across the supply chain have expressed concerns to the ACCC that these industrial actions are also causing damage to many Australian businesses that are not parties to the industrial dispute. They advised industrial actions have disrupted their operations continuously over the past 3 years with a consequential impact on the entire supply chain.

In addition to these ongoing systemic issues, the industrial actions during the past 12 months have made the pandemic-induced logistical challenges even more acute. As an example, in 2020–21, shipping lines spent, on average, 21 idle hours at Port Botany in Sydney.²⁶ Some of the shipping lines have chosen to skip Sydney altogether rather than wait in queue. The fact that shipping lines cannot obtain adequate access to Australia's most populous city is making the situation even more challenging for many Australian businesses.

Industrial disputes have continued in recent months, affecting the operation of the stevedores and the rest of the supply chain. While in early October 2021, the MUA paused industrial action at Patrick's Melbourne terminal following a COVID-19 outbreak, the MUA announced further industrial actions in Melbourne just 3 weeks later.²⁷ It has been reported that industrial actions at Port of Fremantle forced the diversion of 7 vessels over 10 days²⁸, including 3 vessels delivering critical agricultural and mining resources to Western Australia.²⁹

The MUA has stated that all industrial actions undertaken by the stevedoring workforce have been approved by the Fair Work Commission. The MUA also stated that in order to ensure customers can access critical supplies such as medical equipment in a timely manner, it has regularly exempted the movement of containers holding those goods from industrial action.

Patrick has informed the ACCC that the MUA is using these disruptive industrial actions to demand, among other things, that Patrick include in its EA a 'friends and family' provision similar to clause 10.4 in Hutchison's EA (as set out in box 1). On 26 October 2021, Patrick Terminals, announced that it has applied to the Fair Work Commission to terminate its agreement with the MUA on the basis that it is no longer fit for purpose and restricting its ability to meet customer requirements.³⁰

As has become evident over the past 12 months, Australia is heavily dependent on maritime trade. A more productive waterfront, facilitated by more flexible labour arrangements, would benefit Australian businesses and consumers.

26 ACCC calculation based on data from BITRE Waterline 68.

27 I Ackerman, [MUA announces another round of strikes at Patrick's Melbourne terminal](#), *Daily Cargo News*, 26 October 2021, accessed 27 October 2021.

28 I Ackerman, ['Strikes at Fremantle continue as economic consequences mount'](#), *Daily Cargo News*, 14 October 2021, accessed 15 October 2021.

29 A Williams, ['Fremantle dispute prevents delivery of critical machinery to agricultural and mining sectors'](#), *Daily Cargo News*, 7 October 2021, accessed 14 October 2021.

30 Patrick Terminal, [Patrick Applies to Terminate Agreement with MUA](#), [media statement], Patrick Terminal website, 26 October 2021, accessed 27 October 2021.

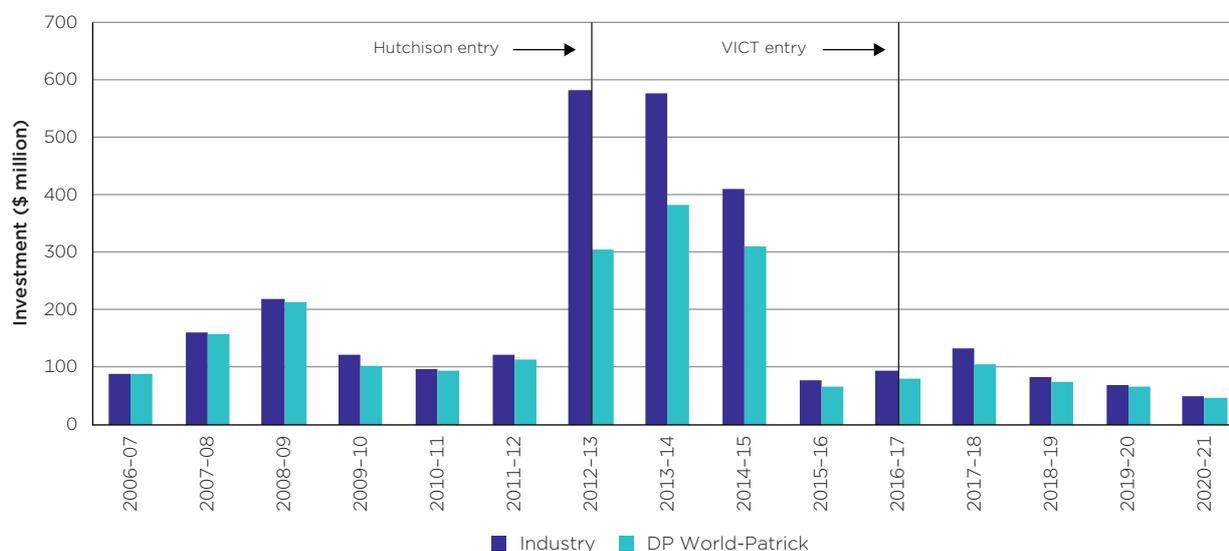
Enhanced competition between stevedores over the past decade has led to reduced profitability and increased investment in equipment and infrastructure

In the first 15 years of the ACCC's monitoring of the Australian container ports, Patrick and DP World operated as a duopoly across the majority of monitored ports. The ACCC regularly expressed concerns that the lack of competition between the 2 stevedores resulted in sustained high profit margins and lack of investment in infrastructure, particularly additional capacity.

These concerns have reduced on the east coast over the past 8 years following entry of Hutchison (Brisbane and Sydney) and VICT (Melbourne), with those entries enlivening competition between stevedores at the 3 largest container ports in Australia.

Figure 2 shows the aggregate investment made by the 2 incumbents (DP World and Patrick) and all 5 stevedores over the past 15 years. It is important to note that VICT made a \$550 million investment in its new terminal in Melbourne in 2016-17, but this is not depicted in figure 2.³¹

Figure 2: Aggregate investment (industry vs. incumbents): 2006-07 to 2020-21



Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

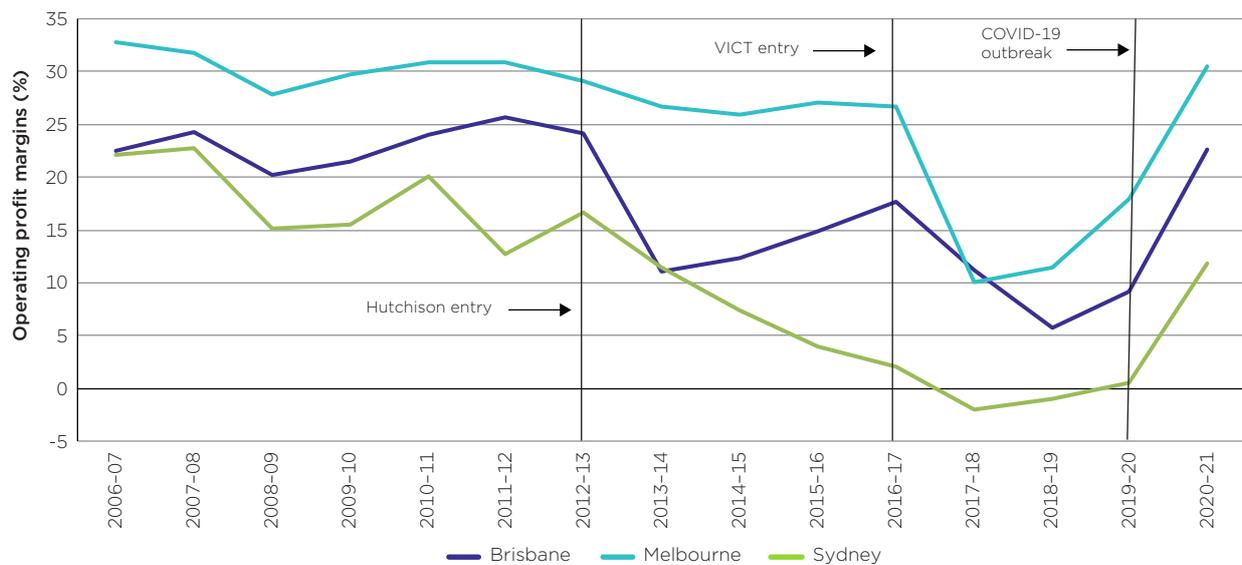
Note: Real values in 2020-21 dollars.

Figure 2 shows that Hutchison invested around \$600 million in the first 3 years to start its stevedoring operations in Sydney and Brisbane. In the same period, Patrick invested nearly \$700 million and DP World invested \$300 million, including in automation and expansion of capacity.

Figure 3 shows stevedores' aggregate operating profit margins at the 3 largest containers ports in Australia over the past 15 years. Three stevedores are operating at each of these ports. DP World and Patrick operate at all 3, Hutchison operates in Brisbane and Sydney, and VICT in Melbourne.

31 The ACCC exempted VICT from reporting its data in 2016-17.

Figure 3: Stevedores' aggregate operating profit (EBITA) margins across ports at Melbourne, Sydney and Brisbane: 2006-07 to 2020-21



Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

Aggregate operating profit margins at each of these ports fell significantly following entry of Hutchison and VICT. Greater competition between the stevedores, combined with the impact of other trends in the supply chain (discussed below), eroded the profit margins of the major incumbent stevedores. The ACCC considers that the overall level of profitability of container stevedores over the past 5 years does not indicate that stevedores were earning excessive returns.

Figure 3 shows that there was a substantial jump in stevedores' profitability over the past 12 months. The ACCC considers this is largely due the COVID-19 pandemic driving a significant, and unexpected, surge in throughput. If demand for containerised goods falls back to pre-pandemic levels once the Australian economy is re-opened and travel returns, stevedores' profitability is likely to drop down again.

In the past 5 years, the stevedores responded to changing market dynamics by increasing their landside charges, particularly terminal access charges. Market participants have raised concerns about the level of landside charges and how quickly they have increased. At current level of landside charges, stevedores do not appear to be earning excessive returns. The ACCC will continue to monitor landside charges levied by stevedores.

Major developments over the past decade have transformed the shipping industry

Since the beginning of the century, rapid expansion in trade, fuelled by China's economic growth, led to significant growth in container shipping. Shipping lines started to build much larger, longer and deeper ships to take advantage of economies of scale and to meet the growing demand for containerised cargo.³²

As the ships grew in size, they became more expensive to build and operate. In response, shipping companies formed alliances and started entering into various cooperation agreements to share the investment risk, reduce costs, optimise shipping capacity and facilitate access to greater number of markets for their members.³³

The larger ships considerably expanded shipping capacity, so when the 2007-08 global financial crisis depressed consumption demand, this created a significant surplus of global container shipping

³² Houston Kemp, *Containerised trade trends and implications for Australian ports*, Port of Newcastle, January 2019, accessed 20 September 2021, pp. 23-28.

³³ International Transport Forum (ITF), *The Impact of Alliances in Container Shipping*, ITF-OECD website, 2 November 2018, accessed 27 September 2021, p. 16.

capacity.³⁴ The excess capacity resulted in low container freight rates, which lasted for many years. At the same time, regulations of the International Maritime Organization to make container shipping more environmentally friendly put upward pressure on shipping costs.³⁵

These trends led to industry consolidation and growth of alliances, particularly over the past 5 years. By 2021, the top 10 major shipping lines, grouped in 3 major alliances (2M, Ocean Alliance and The Alliance) have acquired a market share of around 80% of the global container trade.³⁶

Over the past decade, Australian containerised trade has benefited from low container freight rates. However, many market participants have commented to the ACCC that the shipping trends are creating challenges for their business, which the market participants expect to increase over time.

The combination of larger ships, mergers and alliances led to shipping lines consolidating their services. A number of Australian exporters and importers noted there are now fewer shipping line services operating on major Australian trade routes than there were a decade ago. As a result, they have observed a reduction in the competitive tension on those routes. Some exporters have stated that they have lost direct access to some markets.

Market participants have also informed the ACCC that larger ships have adversely affected the productivity and efficiency of Australian ports and container terminals. Larger ships require large, deep ports and giant cranes, which limits where they can go. While the number of visits by larger ships is less frequent, they require much bigger container exchanges and place a heightened demand on port and terminal resources.

Ports and stevedores have been making investments to accommodate larger ships, but these investments are irregular because the visits by the larger ships are infrequent. As a result, larger ships sometimes contribute to congestion at Australian container terminals, as 2 berths may be taken up by one vessel. In addition, the capital costs incurred by ports and stevedores are passed on to Australian cargo owners.

Consolidation and alliances have also led to shipping lines having greater bargaining power in negotiations with stevedores, container parks and cargo owners.³⁷ Shipping lines have used this bargaining power to negotiate lower charges from both stevedores and empty container parks. However, the ACCC has not seen any evidence of shipping lines charging excessive freight rates prior to the COVID-19 pandemic. Some shipping lines informed the ACCC that for a number of years they were making losses on some Australian trade routes.

Industry analysts expect shipping consolidations to continue and note that mega ships comprise the bulk of vessels currently on order. This means the bargaining power of shipping lines is likely to grow further and may put them into a stronger position to control shipping capacity in the market.

There is a risk that shipping lines could use their increased bargaining power to keep freight rates higher for longer as the supply chain recovers from the COVID-19 pandemic. However, it is unclear how material this risk is as there are significant market factors that influence shipping lines' decisions in relation to capacity. The ACCC will continue to monitor these developments.

Following privatisation, ports have become more dynamic but the land rents at Port of Melbourne have grown rapidly

Since the ACCC commenced its monitoring activity in 1998, 4 of the 5 largest container ports in Australia have been privatised. Privatisation has seen some benefits, as ports appear to have become more dynamic in responding to the needs of their customers. For example, Port of Melbourne is planning to provide VICT's Webb Dock terminal with rail access and to modify the terminal to allow VICT to use its 2 berths more effectively.

34 UNCTAD, [Market Consolidation in container shipping: what next?](#), Policy Brief No. 69, UNCTAD website, September 2018, accessed 20 September 2021.

35 International Maritime Organization (IMO), [IMO 2020 – cutting sulphur dioxide emissions](#), IMO website, n.d., accessed 29 September 2021.

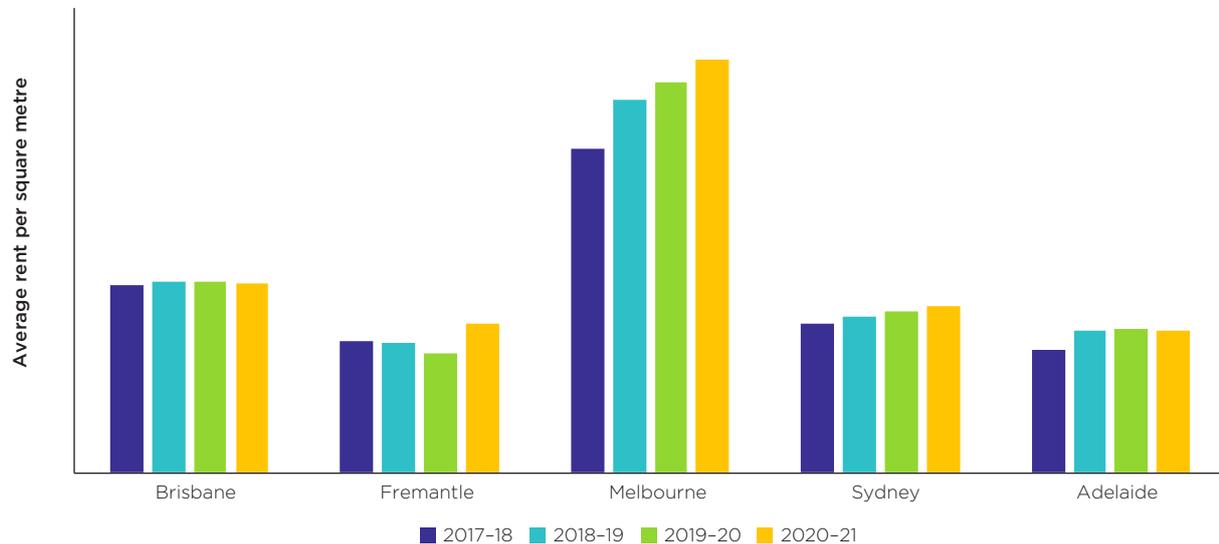
36 ITF, [The Impact of Alliances in Container Shipping](#), p. 7.

37 ITF, [The Impact of Alliances in Container Shipping](#).

However, container ports in Australia are regional monopolies and, in the absence of appropriate regulatory oversight, have the ability to extract monopoly rents from port users who are unable to choose to go to an alternative port. Some stevedores have informed the ACCC that privatisation of ports has led to substantial increases in their property costs.

Figure 4 shows the aggregate land rents per square metre across all the container ports.

Figure 4: Aggregate land rents per square metre: 2017-18 to 2020-21



Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

Note: The vertical axis of the chart is intentionally left blank to maintain confidentiality.

As shown, Port of Melbourne has by far the highest aggregate land rents per square metre of the 5 container ports – more than double that of Brisbane, which is the next highest.

The higher land rates in Melbourne are partly due to the fact that, upon its entry, VICT agreed to pay a substantial premium, compared to the other stevedores in Melbourne, because the location of its terminal gives it a competitive advantage over its rivals.³⁸

However, the higher rents are also due to the fact that the current level of economic regulation of Port of Melbourne is inadequate. In its 2020 public review of land rents, the Essential Services Commission of Victoria (ESC) found that the Port of Melbourne had exercised its market power in the process for setting and reviewing land rents.³⁹ Therefore, the ESC recommended economic regulation of Port of Melbourne in the form of an enhanced negotiate-mediate-arbitrate framework independently oversighted by the ESC.

Shortage of capacity at empty container parks is contributing to congestion in the supply chain

Australia imports more goods in containers than it exports and this imbalance is growing over time.⁴⁰ Australia has set up empty container parks at all major container ports to manage the flow of empty containers in and out of the ports. With containerised trade growing rapidly, the empty container parks are running out of capacity and creating congestion and delays across the supply chain.

There are difficulties in expanding capacity of empty container parks.⁴¹ Market participants prefer to have empty container parks close to a port to reduce transport costs and save time, but it is not easy to acquire large allotments of suitable land around a port.

³⁸ ACCC, [Container stevedoring monitoring report 2017-18](#), ACCC website, 30 October 2018, accessed 13 October 2021, p. 53.

³⁹ Essential Services Commission (ESC), [Port of Melbourne – Market Rent Inquiry 2020](#), ESC website, August 2020, pp. 41-43.

⁴⁰ Transport for NSW, [NSW Empty Container Supply Chain Study](#), Transport for NSW website, 5 May 2020, accessed 23 September 2021, p. 11.

⁴¹ Transport for NSW, [NSW Empty Container Supply Chain Study](#), p. 11.

Industry and state governments are taking steps to resolve this issue. Some ports are freeing up more space for empty container parks. Shipping lines are investing in development of collapsible containers. Victorian and NSW governments have conducted studies aimed at improving transparency and utilisation of empty container park operations.

Higher pass-through charges may create pressure on transport operators to become more efficient

Stevedores and empty container parks are earning less revenue from shipping lines because of a change in their bargaining dynamics. Over the past few years, stevedores and empty container parks have responded to this and other market dynamics by increasing their charges to transport operators. Transport operators have passed on these charge increases to cargo owners.

As pass through charges increase, cargo owners may start to actively shop around and explore alternatives to reduce their landside costs. This may lead to a margin squeeze in an already competitive sector and put greater pressure on transport operators to become more efficient and less costly. Some transport operators are already investing in high performance vehicles, which allow them to transport 2 or 3 containers at a time.

There is also potential to achieve greater efficiencies by better integrating rail into the supply chain. Rail is considered to be a more reliable and efficient way to transport large volume of cargo, compared to trucks.⁴² However, over the past decade, on average, only around 10% to 12% of the containers were transported by rail to the Australian container ports.⁴³ Ports and stevedores in Melbourne and Sydney are making substantial investments to improve access of rail to their respective ports and increase rail market share.

Conclusion

The container industry will eventually recover from the COVID-19 pandemic. Operation of the global supply chain will likely be restored, and global freight rates will subside.

However, the relatively poor performance of Australian container ports and ongoing disruptions across port operations are making Australia a less attractive destination for international shipping lines. It is critical for Australia to entice more shipping lines to provide services on Australian container trade routes, while also facilitating effective competition between them. This will influence the level of container freight rates that Australian cargo owners will face in the future.

Australia needs to act by:

- addressing industrial relations and restrictive work practices issues across the supply chain
- ensuring that privatised ports do not levy excessive rents and charges
- repealing Part X of the *Competition and Consumer Act 2010*
- investing in infrastructure to fix inefficiencies in the supply chain caused by larger ships, lack of rail access to Australian container ports and shortage of space in empty container parks.

Without this, Australia may end up being serviced by fewer shipping lines than would otherwise be the case. This would mean less competitive tension between shipping lines, and freight rates on Australian trade routes would likely be higher than they would otherwise be. As a result, Australian exporters would be less competitive in overseas markets, and Australian businesses and consumers would pay higher prices for imported goods. The cost of not addressing these issues is likely to be significant for many Australian businesses, consumers and the Australian economy as a whole.

The ACCC will continue to monitor stevedores' performance and charging practices. The ACCC will also monitor broader developments in the supply chain to inform governments' container freight policy and provide transparency to industry participants.

42 Port of Melbourne, [Our Plan for Rail 2020](#), Port of Melbourne website, 2020, accessed 28 September 2021, p. 17.

43 ACCC calculation based on data from BITRE Waterline 68.

Key stevedoring results 2020-21

Revenues, costs, profits and returns

Total revenue

\$1,665 m

▲14.8%

Total costs

\$1,356 m

▲3.3%

Profit margin^a

20.8%

▲10.9 pp

Investment
(additions)

\$50.6 m

▼28%

Tangible
asset base

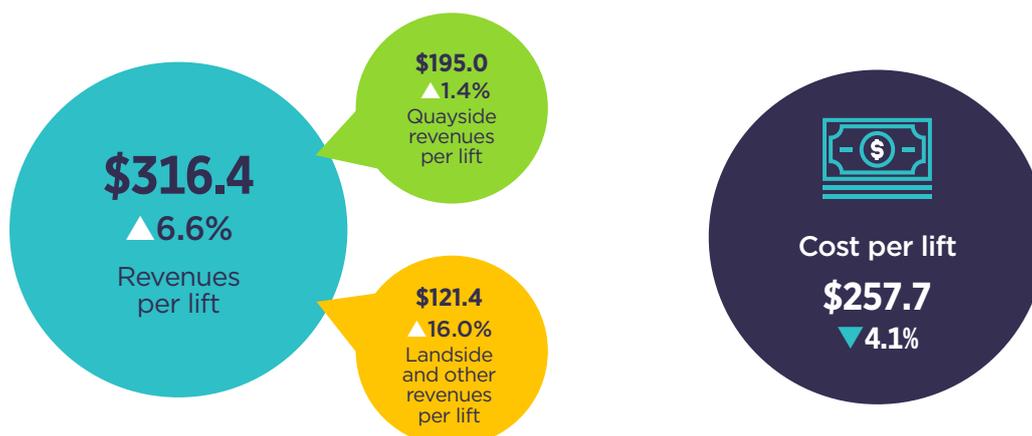
\$1,671 m

▼8.7%

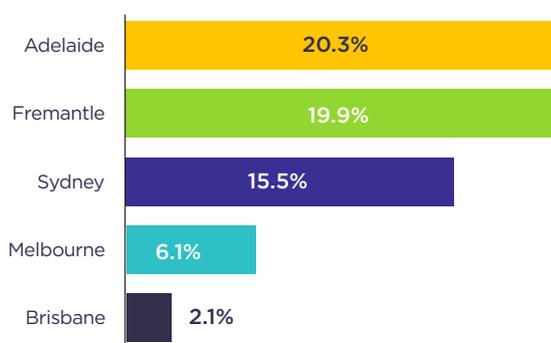
Return on average
tangible assets

20.0%

▲12.4 pp



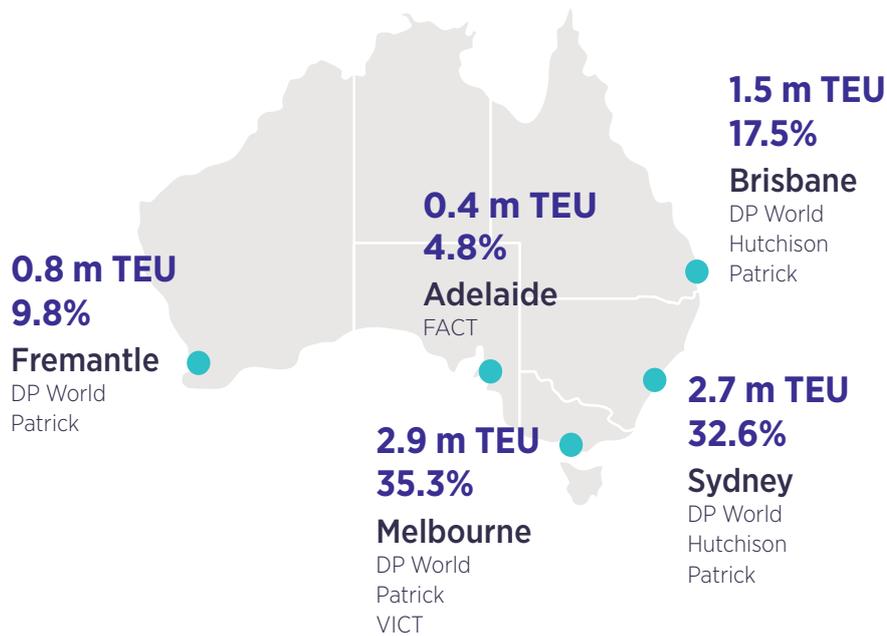
Freight on rail^b



^a Earnings before interest, tax and amortisation (EBITA) as a percentage of total revenue.

^b Percentage of containers on rail.

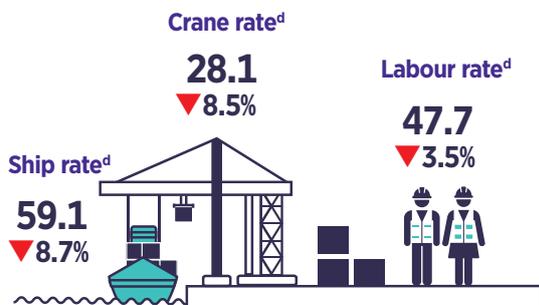
Total TEU (by port^c) and stevedore's locations



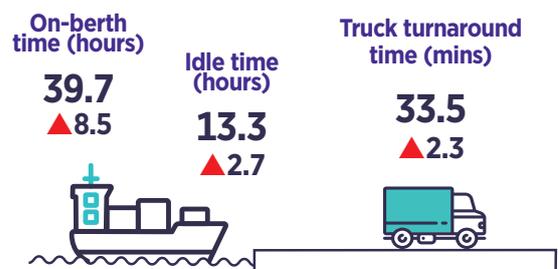
Lifts per stevedore^c



Container terminal productivity



Waiting and turnaround time



^c Includes international container terminal volumes only.
^d Containers per hour.

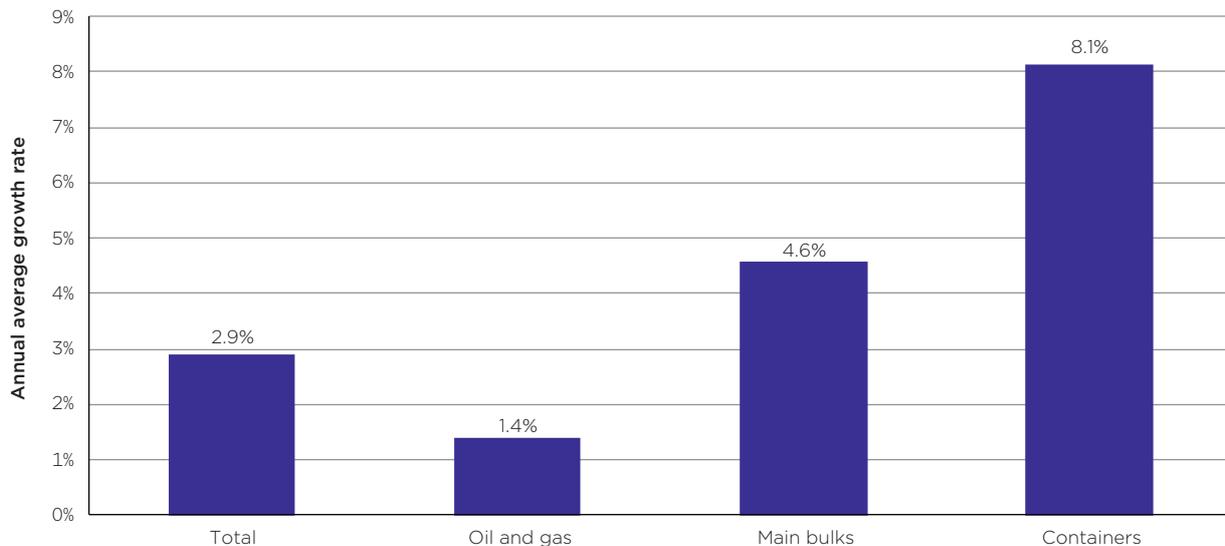
1. Introduction

1.1 The container freight supply chain in Australia

Development of containerisation has revolutionised the world maritime industry. The use of containers has dramatically lowered the cost of transporting goods across the globe. As global trade exploded over the past 70 years, containerised trade has become the dominant form of international shipping.

Figure 1.1 compares the average annual growth rate of container shipping volumes with other forms of shipping since 1980, and with seaborne trade overall.

Figure 1.1: Average annual growth rate of seaborne trade by shipping method, 1980–2018



Source: ACCC calculation of UNCTAD data (UNCTAD, Review of Maritime Transport 2018).

As shown, since 1980, containerised trade has grown more than any other form of trade.

The container freight supply chain (the supply chain) consists of a broad range of participants including shipping lines, ports, stevedores, road and rail operators, empty container parks (ECPs) and many others.

The Australian Government has directed the Australian Competition and Consumer Commission (ACCC) to monitor prices, costs and profits of stevedores at container ports in Adelaide, Brisbane, Fremantle, Melbourne and Sydney.⁴⁴ This is the ACCC's 23rd report.

This chapter introduces:

- the importance of the supply chain to Australia
- the key supply chain participants
- how the ACCC conducts its monitoring.

Australia's economy is heavily dependent on container trade

The Australian economy has benefited significantly from global trade. Australia's exports and imports are equivalent to 24% and 20% respectively of Australia's gross domestic product.⁴⁵ Australian exporters use the container freight supply chain to transport large quantities of agricultural products such

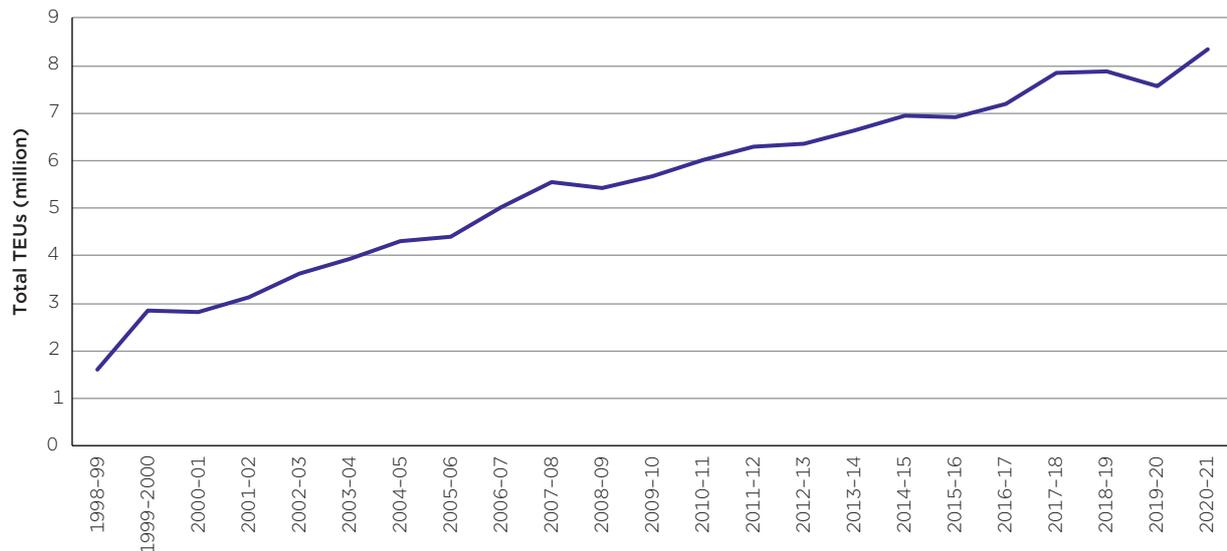
⁴⁴ The direction also requires the ACCC to monitor Burnie, but it currently does not have a container terminal.

⁴⁵ [World Bank national accounts data, and OECD National Accounts data files](#), accessed 6 October 2021.

as grain, meat and dairy products.⁴⁶ In addition, Australian retailers import considerable quantities of manufactured goods, which are used by consumers or as intermediate inputs in Australian production processes.

Over the past few decades, Australia has become heavily reliant on containerised trade. Since the ACCC began monitoring in 1998–99, the volume of containers passing through the international container ports that the ACCC monitors has increased by an average of 7.8% each year (figure 1.2).

Figure 1.2: Total annual throughput (TEU) at international container ports monitored by the ACCC: 1998–99 to 2020–21



Source: ACCC calculation of BITRE data.

Efficient operation of container freight supply chain is critical for Australia

Australia’s distance from other markets means that the efficiency of the supply chain has a large bearing on our competitiveness in overseas markets and the cost of imported goods.

Australian exporters selling into international markets need to overcome differentials in shipping costs to effectively compete with rivals that are located closer to customers. Improvements in productivity and efficiency at the Australian container ports, and the supply chain more generally, will lead to lower costs for Australian exporters. This will assist them to be more competitive in the global markets.

With the exception of petroleum products and vehicles, Australia’s imports are dominated by manufactured goods that are typically shipped in containers. Therefore, most of Australia’s imported goods are transported into Australia using the container freight supply chain.⁴⁷ This means that improving productivity and efficiency of the supply chain will lead to more timely and reliable delivery of many goods and lower prices for Australian households and businesses.

Substitutes for container freight shipping services are limited

Cargo owners only have 2 alternatives to transport their cargo overseas without using the container freight supply chain – air freight and bulk cargo. Some cargo owner can use these options for shipping certain types of goods under particular circumstances. However, as discussed below, these options are not viable alternatives for the majority of cargo owners.

⁴⁶ Department of Infrastructure, Transport, Regional Development and Communications (DITRDC), *Inquiry into National Freight and Supply Chain Priorities*, Supporting paper No. 2, DITRDC website, March 2018, accessed 13 October, p. 10.

⁴⁷ Bureau of Infrastructure, Transport and Research Economics (BITRE), *Ports: Job generation in the context of regional development*, Information sheet 56, BITRE website, 2014, p. 7; Houston Kemp, *Containerised trade trends and implications for Australian ports*, Port of Newcastle website, January 2019, pp. 12–14.

Air freight is unsuitable for shifting large volumes of cargo

Air freight is generally low-risk, flexible and ideal for shipping cargo long distances quickly. This makes it a good choice for transporting perishable or high-value cargo. However, it has several disadvantages, compared to containerised cargo.

Air freight is typically far more expensive than sea freight.⁴⁸ Aircraft also have very limited space compared with shipping vessels and are unable to transport high volumes of cargo.

Additionally, as a substantial amount of airfreight is flown in the belly hold of passenger planes, routes are subject to disruption based on consumer demand and other impacts on passenger numbers.

Bulk shipping is only viable in certain cases

Bulk cargo refers to cargo that is shipped without being packed into containers. This includes:

- Solid bulk: loose, unpackaged and solid goods of a homogeneous nature, such as cement, coal, iron ore and wheat.
- Break bulk: cargo that can be quantified as units in some way, such as pallets, barrels or crates. It is usually too large to fit inside a container.
- Liquid bulk: liquid goods that are shipped in purpose-made tankers, such as petroleum, liquid natural gas, liquid chemicals and cooking oils.

Shipping in bulk is typically more suited to large volumes of durable, homogeneous cargo where cargo owners benefit from economies of scale. Bulk shipping is unlikely to be economically viable for cargo owners seeking to transport smaller volumes. For exporters of some goods, such as those which are more fragile or which cannot easily be stacked, bulk shipping may not be possible.

For exporters of perishable agricultural products, there are currently refrigerated cargo ships ('reefers') that can be used for transporting goods such as meat, fish and dairy products. However, these are gradually being replaced by refrigerated containers, so there will likely be fewer of them available in the future.⁴⁹

Bulk shipping also lacks the flexibility of containerised shipping. It typically requires special facilities and additional dock workers to load and discharge, as well as specialised storage facilities. Consequently, not all origin and destination ports will have the infrastructure or resources to discharge bulk shipments.

1.2 Participants in the container freight supply chain

Figure 1.3 shows the contractual relationships between the parties and the flow of charges in the supply chain (both represented by arrows). The arrows point from the service provider to the acquirer. Blue arrows indicate that the acquirer of the service is likely to have a choice of multiple suppliers of the service. Red arrows indicate that the acquirer of the service does not have a choice of which supplier it can use. Specifically, shipping lines and stevedores must use the port chosen by the cargo owner, while transport operators must use the stevedore and ECP chosen by the shipping line.

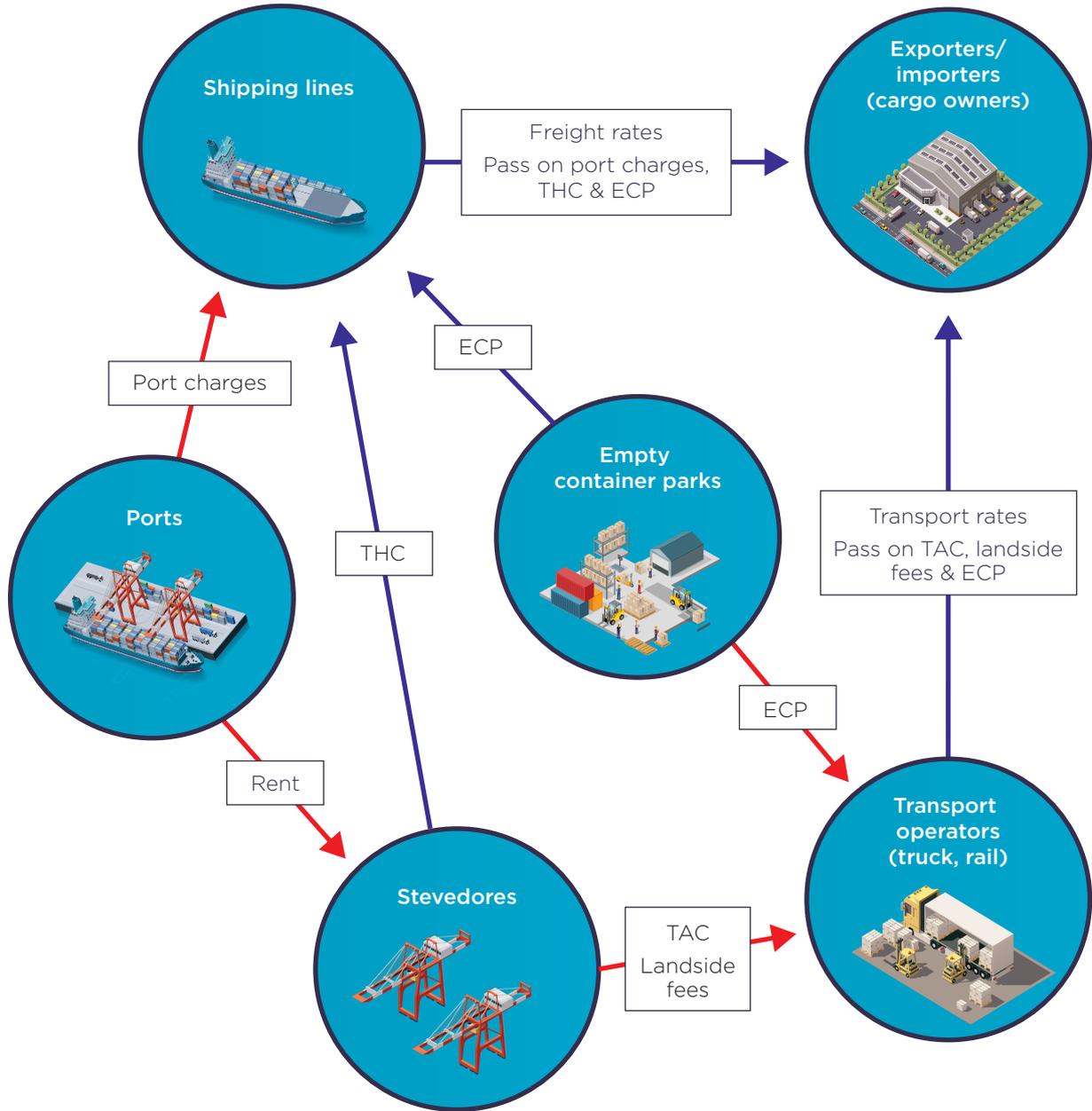
Figure 1.3 shows that the supply chain is an interconnected ecosystem of many service providers, all of which ultimately serve cargo owners.

The following sections explain the roles of the parties in the supply chain and how they interact with each other.

48 See e.g. International Forwarding Association (IFA), '[Pros and Cons of Air Freight](#)', IFA, 22 August 2019, accessed 5 October 2021; J Vineyard, '[4 Factors for Considering Air Freight vs. Ocean Freight](#)', *Universal Cargo*, 16 August 2011, accessed 6 October 2021.

49 Marvest, '[Reefer Vessel](#)', article, Marvest website, n.d., accessed 5 October 2021.

Figure 1.3: Contractual relationship and flow of charges between parties in the supply chain



- One party is charging another party for a service (no choice of supplier)
- One party is charging another party for a service (choice of multiple suppliers)

THC = Terminal handling charge and other quayside fees
 ECP = Empty container park fee
 TAC = Terminal access charge

Cargo owners

Cargo owners (importers and exporters) are the beneficial users of the supply chain. Cargo owners choose the port of origin and the destination port for transporting their goods, usually based on where the goods are made (or stored) and where the customers are located. Cargo owners then contract a shipping line to transport goods from the port of origin to the destination port. Shipping lines in turn contract stevedores at each of these ports to load and unload the containers on and off their vessel. Shipping lines also contract ECPs for storing empty containers after they are returned by the cargo owner. Cargo owners contract a transport operator (either rail or trucks) to transport the containers between the stevedore's terminal and either the cargo owner's warehouse or the customer's premises.

Cargo owners may also utilise the services of freight forwarders, who act as intermediaries to arrange the international transport of cargo on their behalf. Freight forwarders deal directly with shipping lines and hire transport operators for pickup and delivery of containers. Customs agents/brokers arrange clearance of cargo on behalf of importers.⁵⁰

A cargo owner's choice of shipping line is based on several factors. First, not all shipping lines provide services on each Australian trade route. Therefore, a cargo owner's choice is limited by availability of services on its desired trade route. Second, when choosing between shipping lines that offer suitable services, cargo owners take into account the 'bundle of prices'. This includes the freight rates charged by the shipping line for its services as well as all the fees and charges levied by stevedores and container parks chosen by the shipping line.

Cargo owners contract the transport operator that provides the most suitable and cost-efficient services. Many agricultural exporters are in regional areas far from ports and usually transport large volumes of produce. These exporters often prefer to use rail to transport their produce to the closest container port. Many retailers store their imported products at warehouses in major cities that are located much closer to container ports, so they often prefer to use trucks to transport their cargo.

Cargo owners do not have a direct contractual relationship with ports, stevedores or ECPs. Shipping lines and transport operators pay those service providers for their services and then pass on their fees and charges to cargo owners. Cargo owners ultimately pay for all the costs in the supply chain.

Stevedores

Container stevedores are firms that are primarily responsible for lifting containerised cargo on and off container ships at ports. They also provide other services such as storage, maintenance and repositioning of containers. They provide quayside services to shipping lines and landside services to transport operators.

Quayside services include the loading and discharging of container ships, primarily through the use of ship-to-shore cranes once a ship has berthed.

Landside services enable transport operators to pick up and drop off containers from the container terminal. Stevedores use equipment such as straddle carriers, rubber-tyred gantries, and automatic stacking cranes to facilitate the transfer of containers from the quay to the yard stack, and to land transport operators (and vice versa).

For a full container being imported, a stevedore unloads the container from a vessel, provides temporary storage for the container at its terminal and provides access to, and loading services for, a transport operator to pick up the container. For an empty or full container being exported, a stevedore provides access to the transport operator to drop off the container, unloads the container and provides temporary storage for it, before loading the container onto a vessel.

A stevedore provides the necessary equipment and labour to accomplish these functions. It leases land space and infrastructure from the relevant port authority, which in turn charges land rent to the stevedore. Land rent is the largest component of stevedores' lease costs.

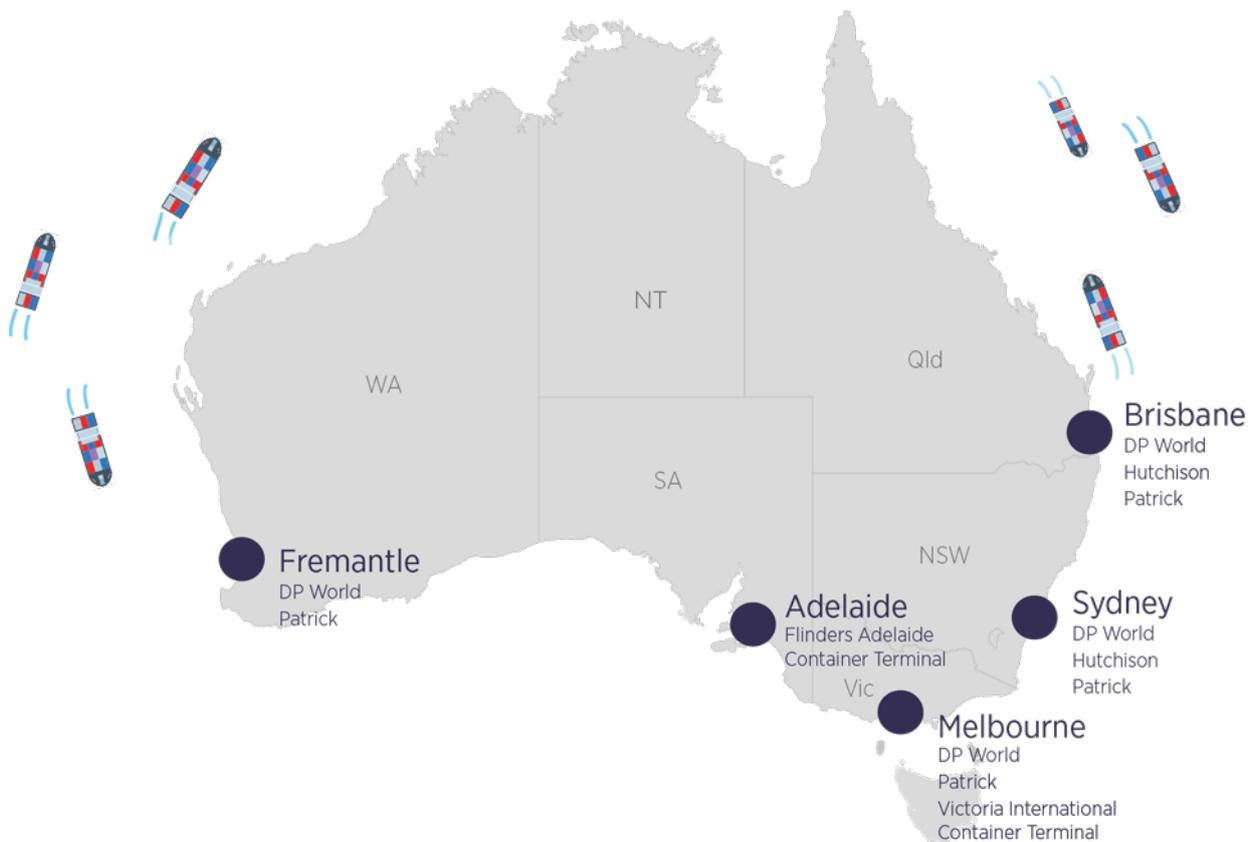
⁵⁰ Nine Squared, [Strategic Review of the Victorian Empty Container Supply Chain](#), Victorian Department of Transport website, September 2021, accessed 6 October, p. 13.

A stevedore competes for contracts to supply container handling services to shipping lines. The contracts require a stevedore to provide berthing facilities in accordance with a specified sailing schedule. The contracts also require the provision of sufficient cranes, labour and other equipment, and at times for a stevedore to agree to certain key productivity standards. Typically, the length of a stevedore's contract with shipping lines ranges from around 2 to 5 years.

On the landside, each stevedore is the sole provider of landside access to its respective terminal. It provides services such as receiving and delivering containers, yard services, storage, and other ancillary services to land transport operators. A stevedore uses platforms such as the Vehicle Booking System (VBS) to allocate time slots for trucks to drop off, or collect, their cargo at the terminal. Rail operators are offered access via rail windows.

Figure 1.2 shows the stevedores that are currently operating at the 5 container ports in Australia that are monitored by the ACCC.

Figure 1.2: Stevedores at Australian container ports



Shipping lines

Shipping lines contract with cargo owners to transport containerised cargo from the port of origin port to its destination port, providing and operating container ships for this purpose.

A standard shipping service will typically involve a vessel calling at a series of ports on a predetermined route. Cargo owners usually prefer direct shipping services, where their cargo remains on the same vessel from the port of origin until its destination. However, direct services do not exist between all ports, and where a direct service does not exist cargo will be unloaded at an intermediate port known as a trans-shipment hub.

Shipping lines usually base their networks around these hubs, connecting short-distance, intra-regional 'feeder' lines with long-distance deep-sea lines. For instance, where direct services are not available between 2 ports, one vessel will transport cargo to a trans-shipment hub. There, this cargo will await shipment to its final destination on another vessel (perhaps after being transported to another hub).

Congestion or delays at one port may affect the vessel's ability to reach subsequent ports on its schedule. This can have significant flow-on effects, not just for the shipping line but also elsewhere along the supply chain. Stevedores and transport operators may lose productivity while equipment and labour sit idle. They may have to pay overtime and employ additional resources to clear congestion due to off-window arrivals.

Shipping lines typically have a range of options to mitigate scheduling disruptions, such as slowing down in anticipation of delays, or speeding up to recover lost time. Shipping lines may also skip the port altogether, roll cargo to a later service or add additional capacity to clear congestion.

Shipping lines charge freight rates for their services to cargo owners (or the relevant freight forwarder) plus a range of surcharges. Freight rates are set according to supply and demand and are closely correlated with fleet utilisation.⁵¹

Shipping lines also levy or pass on a range of other fees and charges include terminal handling charges (THCs), port congestion charges, fuel surcharges, and detention and demurrage charges. Shipping lines usually recover wharfage costs and any customs or duties (charged by ports) from cargo owners as well.

Transport operators

Transport operators provide a service of transporting cargo owners' cargo to, and from, ports. The majority of containers in Australia are currently transported by trucks, with a much smaller share handled by rail. In some cases, both road and rail are used for carrying containerised goods. With 'intermodal' freight, for example, truck provide local pick-up and delivery to, and from, the rail terminal.

The shipping lines choose which stevedore to use, and the transport operator must then go to the chosen terminal to pick up, or drop off, containers. Stevedores have standard agreements with truck operators for access to their terminal. These agreements allow truck operators to access a stevedore's terminal on standard terms and conditions. Truck operators do not have the option of negotiating their own individual terms of access (including prices).

The same arrangements apply for truck operators accessing ECPs. Transport operators pass on the fees and charges levied by stevedores and ECPs to cargo owners.

Empty container parks

Shipping lines own the containers used to transport cargo. Shipping lines contract with ECPs to receive and store their empty containers after the containers are returned by transport operators. ECPs may also provide ancillary services such as container cleaning, repairs and repositioning. ECPs typically (but not always) have contracts with multiple shipping lines and allocate space for each shipping line to store their empty containers.

ECPs have booking systems and trucks must pay a fee (usually called a 'notification fee') to make a booking to collect or de-hire containers.⁵² ECPs can also issue redirections to cargo owners, freight forwarders and transport operators, requesting that empty containers be returned to an alternative location. For example, an ECP operator or shipping line may issue a redirection when there is insufficient capacity at a site, or unforeseen issues arise.

Ports

Australia's container shipping trade mainly moves through 5 international container ports, located in Adelaide, Brisbane, Fremantle, Sydney and Melbourne. Four of these ports are privately owned, with Fremantle port being government owned.

Ports manage a large area of land and accommodate tenants ranging from terminal operators to warehousing under lease agreements. They also manage and provide access to infrastructure (such as

51 DITRDC, [Inquiry into National Freight and Supply Chain Priorities](#), Supporting paper No. 2, p. 5.

52 'De-hire' refers to the process of returning an empty container to either an ECP or a terminal.

port channels and berths) which allow vessels to dock and discharge and load cargo. Additionally, port operators provide necessary day-to-day services to vessels to ensure they can navigate safely to, and from, berth.

Ports impose a range of charges on shipping lines that use their facilities and services. These vary by port, but typically include costs associated with the services they provide to shipping lines with respect to the vessel itself, such as:⁵³

- Port dues: these are charged to the vessel for each harbor entry, usually on a gross per tonnage basis, and go towards the costs of basic port infrastructure and equipment.
- Berth hire charges: the berth refers to the place in which a vessel is moored or secured, alongside a quay where a ship loads or discharges cargo. The charge is usually based on the duration of a vessel's stay and overall length.

Ports also usually charge cargo-based fees such as wharfage, based on the type and volume of cargo moving through the port.

1.3 The ACCC's container stevedoring monitoring program

The focus of ACCC's monitoring has evolved since the ACCC commenced its monitoring program in 1998. This section sets out the current focus on the ACCC's monitoring program and the steps the ACCC took in preparing this report.

The focus of the ACCC's monitoring

In 1998, there was a protracted labour dispute between Patrick Terminals and the Maritime Union of Australia (MUA). Following the introduction of a workplace reform package by the Australian Government, the ACCC was directed by the government to monitor the prices, costs and profits of stevedores and provide a report to the Minister within a specified period after every financial year.⁵⁴

Given the environment at the time the direction was made, the initial purpose of the monitoring regime was to assess the impact of the reforms and to monitor the potential for wage-driven cost increases.

Over time, the ACCC has shifted its focus to matters covered under Part VIIA of the *Competition and Consumer Act 2010* (CCA). Specifically, Part VIIA stipulates that the ACCC must have particular regard to the following matters:

- the need to maintain investment and employment, including the influence of profitability on investment and employment
- the need to discourage a person who is in a position to substantially influence a market for goods or services from taking advantage of that power in setting prices
- the need to discourage cost increases arising from increases in wages and changes in conditions of employment inconsistent with principles established by relevant industrial tribunals.

Pursuant to Part VIIA, the ACCC monitors a range of matters, including the degree of competition between the stevedores, whether the stevedores' returns are indicative of excessive pricing, the level of investment by stevedores and other port operators, and the degree of productivity and efficiency at Australian container ports.

53 See e.g. Port Authority of New South Wales, [Sydney Harbour Port Charges](#), Port Authority of New South Wales website, n.d., accessed 1 October 2021; Flinders Ports, [Port Charges](#), Flinders Ports website, n.d., accessed 1 October 2021; Fremantle Ports, [Ship and cargo charges from 1 October 2021](#), Fremantle Ports website, n.d., accessed 6 October 2021.

54 On 20 January 1999, the Federal Treasurer directed the ACCC under s. 27A of the *Prices Surveillance Act 1983* (PSA) to monitor prices, costs and profits of container terminal operator companies at the ports of Adelaide, Brisbane, Burnie, Fremantle, Melbourne and Sydney. The PSA has since been repealed and the price surveillance provisions are now contained in Part VIIA of the CCA. The direction under the former s. 27A of the PSA is now deemed a direction under s. 95ZE of the CCA.

The ACCC considers that to correctly interpret the data it collects and to understand the drivers behind the observed trends, it is essential to monitor developments across the entire supply chain. This is because the supply chain is an interconnected system of service providers, where developments in one part of the supply chain have flow on effects on operations of service providers in other parts of the supply chain.

The ACCC's monitoring serves several purposes, including:

- to inform governments' container freight policy and planning
- to provide transparency to industry participants about stevedores' operations to facilitate more informed decision making.

Relevant sections of Part VIIA are reproduced in Appendix B. The Ministerial direction setting out the ACCC's price monitoring framework is included in Appendix C.

Steps the ACCC took in preparing this report

The ACCC analysed data from a range of sources to examine issues affecting the overall supply chain

In preparing this year's monitoring report, the ACCC:

- obtained data from each of the 5 stevedores about their operations at the conclusion of the financial year (this data was collected on a voluntary basis)
- obtained data from the Bureau of Infrastructure, Transport and Research Economics (BITRE) in advance of its publication of Waterline 68 report
- obtained data from S&P Global Platts of container freight rates on key global trade routes
- has reviewed publicly available information about short-term and longer-term developments in the supply chain
- has conducted desktop research to review international data on port productivity.

The ACCC appreciates the cooperation of all the parties that provided information.

The ACCC consulted with market participants

The ACCC consulted with a wide range of parties across the supply chain, including stevedores, shipping lines, ports, cargo owners (both importers and exporters), freight forwarders, industry bodies and transport operators (both rail and truck).

In July 2021, as part of the consultation, the ACCC sent out surveys to market participants across the supply chain. This survey contained a range of questions, including about historical trends in the supply chain, key challenges experienced by market participants, costs of using the supply chain, the level of service provided by stevedores and the broader operation of the supply chain. The ACCC received responses from, or held subsequent meetings with, 44 parties.

This consultation formed a vital part of this year's report preparation and the ACCC thanks participants for their time and contributions.

1.4 Outline of the 2020-21 container stevedoring monitoring report

As in previous reports, the 2020-21 monitoring report covers the financial performance and productivity of stevedores at the 5 container ports monitored by the ACCC. To provide context and highlight the interconnected nature of the supply chain, this report also discusses developments across the entire supply chain.

Chapter 2 covers the current state of the supply chain. The ACCC examines the impacts of the COVID-19 pandemic on operation of the supply chain both internationally and domestically. The ACCC also discusses how disruptions have affected market participants.

Chapter 3 covers some of the long-term trends in the supply chain. The ACCC discusses how these trends have affected the supply chain participants as well as the industry more broadly.

Chapter 4 covers stevedores' financial performance. The ACCC discusses how stevedores' profitability has changed over the course of the ACCC's monitoring period and what the current profitability levels indicate about the present dynamic in the sector. The ACCC also discusses the impact of new entrants and port privatisation on stevedores' financial performance.

Chapter 5 covers stevedores' landside fees and charges. The ACCC examines the drivers behind increases in some landside charges, including terminal access charges. The ACCC also discusses measures to improve charging practices and transparency.

Chapter 6 covers productivity and efficiency at Australian container ports. The ACCC discusses indicators of productivity and factors affecting productivity, including the impact of industrial relations and restrictive work practices.

Chapter 7 covers current and upcoming investments by ports and stevedores to improve productivity and efficiency. The ACCC discusses how the supply chain can benefit from greater rail access to the ports through joint investment.

2. The current state of the container freight supply chain

Over the course of 2021, various market participants expressed concerns to the ACCC about the current state of the supply chain. In preparation for this report, the ACCC conducted surveys and held meetings with 44 parties, including market participants across the entire supply chain (as discussed in section 1.3).

This chapter is based on the information obtained through this consultation process and other information the ACCC has obtained through monitoring. It describes how recent disruptions due to the COVID-19 pandemic have affected the supply chain and the impacts this has had on various market participants.

2.1 The supply chain is not functioning effectively due to COVID-19 related disruptions

Prior to the pandemic, the supply chain was relatively stable. The ACCC understands from consultation with market participants that container movements and vessel scheduling prior to the pandemic were generally reliable, while freight rates were comparatively stable.

A notable feature of the Australian market, even before the pandemic, was the higher quantity of containerised goods being imported compared with exports. Vessels bringing imports into Australia would be faced with low utilisation rates on the return leg and would devote this spare capacity to repositioning empty containers to other markets, typically Asian hubs. Australian exporters benefitted from this arrangement, as shipping lines offered cheap rates to attract cargo to cover the cost of shipping empty containers back to Asia.⁵⁵

At the start of the pandemic in early 2020, there was an initial fall in demand for shipping services as global production and international trade declined. In the second quarter of 2020, global merchandise trade was down more than 20% relative to the same quarter of the previous year. This occurred largely because of lockdowns and closure of production facilities in China.⁵⁶

China has a pivotal role in global manufacturing and is a major importer of commodities and agricultural products. It also has 5 of the largest 6 container ports in the world based on throughput.⁵⁷ Backlogs of containers developed at ports in China, while travel restrictions within China led to a shortage of truck drivers to move containers. In response to the drop in demand, shipping lines adjusted capacity by substantially increasing the number of blank sailings⁵⁸, thus preventing freight rates from eroding.⁵⁹ Additionally, many major 'gateway' ports⁶⁰ in other parts of the world saw large declines in container throughput in the first half of 2020.⁶¹ In Australia, total TEU container throughput across the 5 international container ports fell by 9% in the first half of 2020.⁶²

55 Department of Infrastructure, Regional Development and Cities (DITRDC), [Inquiry into National Freight and Supply Chain Priorities](#), Supporting paper No. 2, DITRDC website, March 2018, accessed 1 October, p. 10.

56 K Cullinane and H Haralambides, '[Global trends in maritime and port economics: the COVID-19 pandemic and beyond](#)', *Maritime Economics and Logistics*, 2021, 23:369–380, p. 369.

57 The top 6 largest container ports in the world are Shanghai, Singapore, Ningbo-Zhoushan, Shenzhen, Guangzhou and Qingdao; see Statista, '[The largest container ports worldwide in 2020, based on throughput](#)', accessed 1 October 2021.

58 A blank sailing occurs where shipping lines cancel services, or where certain ports are omitted along a particular route.

59 T Notteboom, T Pallis and J Rodrigue, '[Disruptions and resilience in global container shipping and ports: the COVID-19 pandemic versus the 2008-2009 financial crisis](#)', *Maritime Economics and Logistics*, 2021, 23:179–210, p. 190.

60 Gateway ports are those which 'command the access of large manufacturing or market regions and are the spearhead of long-distance corridors': J Rodrigue, [The Geography of Transport Systems](#), Routledge, New York, 2020. Examples include Rotterdam, Shanghai, Los Angeles, Hamburg, Le Havre and Barcelona.

61 Cullinane and Haralambides, '[Global trends in maritime and port economics: the COVID-19 pandemic and beyond](#)', p. 373.

62 ACCC calculation based on BITRE data.

Consumption patterns have shifted

As lockdowns eased in China and production started to resume, border closures, lockdowns and travel restrictions were introduced in other parts of the world.

This was accompanied by a fall in global spending on 'experience' goods, such as passenger travel, holidays, hospitality services and entertainment activities. This fall in demand for services was partly offset by an increase in spending on goods. Lockdown measures, a shift to working from home, and government fiscal stimulus packages led to increase in online shopping.⁶³

There was a surge in demand for imports of manufactured consumer goods, which are typically shipped in containers.⁶⁴ These included electronic equipment such as computers, home office equipment, video games, mobile phones, exercise equipment, home-improvement materials, and medical and health equipment.⁶⁵ Businesses also moved to replace inventories which had been depleted during the lockdown in China in the first half of 2020.⁶⁶

Consequently, global trade volumes returned to their pre-pandemic levels by October 2020.⁶⁷ In Australia, this was reflected in the volume of full containers of imports moving through Australian container ports, which increased by 20% in the second half of 2020, and was 8% higher than the second half of 2019.⁶⁸ This sudden, and largely unexpected, shift in demand towards consumer goods resulted in a rapid turnaround in demand for container shipping services.⁶⁹

In normal circumstances, the supply chain would have likely had sufficient spare capacity in it to withstand this surge in demand. However, as discussed in the following sections, the supply chain has lost all spare capacity due to COVID-19 effects and has struggled to adapt to this rapid shift in consumption patterns.

Port capacity has declined

Many of the largest overseas ports were operating very efficiently prior to COVID-19, but their operations have become fragile as a result of COVID outbreaks and strict health measures put in place.

The average number of hours taken to unload large vessels of over 6,000 containers increased by 20% in the second half of 2020 compared with the previous years.⁷⁰ It also affected the typically efficient major gateway ports in Asia and Europe.⁷¹

Port and shipping services have continued to operate throughout 2020–21 as essential services. However, there have been additional constraints and uncertainty including:

- port and terminal closures following cases of COVID-19
- quarantine requirements and health directives leading to resourcing and staffing issues for market participants
- border closures, lockdowns and other government-imposed restrictions on movement.

Outbreaks of COVID-19 occurring either at ports or on vessels has caused further disruptions to shipping schedules, closures of terminals and reduced productivity. Market participants have told the

63 Cullinane and Haralambides, '[Global trends in maritime and port economics: the COVID-19 pandemic and beyond](#)', pp. 369–70; UNCTAD, '[Shipping during COVID-19: Why container freight rates have surged](#)', Policy Brief no. 84, UNCTAD website, April 2021, accessed 1 October 2021, p. 1.

64 UNCTAD, '[Shipping during COVID-19: Why container freight rates have surged](#)', p. 1; D Uren, '[Global Trade Has Rebounded but Stresses Remain](#)', ASPI Strategist, 21 July 2021, accessed 1 October 2021.

65 Cullinane and Haralambides, '[Global trends in maritime and port economics: the COVID-19 pandemic and beyond](#)', pp. 369–70; UNCTAD, '[Global Trade Update](#)', UNCTAD website, May 2021, accessed 1 October 2021, p. 3.

66 UNCTAD, '[Shipping during COVID-19: Why container freight rates have surged](#)', p. 1.

67 Uren, '[Global Trade Has Rebounded but Stresses Remain](#)'.

68 ACCC calculation based on BITRE data.

69 International Cargo Express (ICE), '[The Shipping Chaos Unveiled: What is Really Going On In Australia and Across the World?](#)', ICE, 10 March 2021, accessed 1 October 2021; UNCTAD, '[Shipping during COVID-19: Why container freight rates have surged](#)'.

70 Portcalls, '[Global Container Port Congestion Surges 20% in 2H of 2020](#)', Portcalls, 5 March 2021, accessed 1 October 2021.

71 Portcalls, '[Global Container Port Congestion Surges 20% in 2H of 2020](#)'.

ACCC that outbreaks and government quarantine measures have resulted in reduced staff numbers and affected productivity at terminals.

Market participants have informed the ACCC that the last-minute nature of these closures makes it difficult for supply chain participants to plan mitigating action. Survey respondents referred to the month-long closure in mid-2021 of China's Yantian port in Shenzhen (the 4th largest container port in the world by throughput). The closure of the Yantian terminal contributed to a massive backlog of containers for export and a diversion of vessels to alternative ports in the region. The result was a further deterioration in port congestion globally, and a sharp rise in freight rates across the board.⁷²

Australian container terminals have also been affected. A series of closures occurred in September 2021 following detection of COVID-19 cases at several terminals. On 15 September 2021, DP World closed its container terminal at Sydney's Port Botany after one worker tested positive for COVID-19. This led to the cancellation of all slots and time zones within an 11-hour period.⁷³ On 20 September 2021, Hutchison announced it was closing its Sydney terminal for a period of 9 hours after a positive case was detected.⁷⁴ VICT announced the closure of its terminal in Melbourne for several hours on 20 September, and again on 22 September for a period of approximately 4 days.⁷⁵

COVID restrictions are contributing to issues with vessel scheduling and crew movements

Shipping lines have continued to operate throughout the pandemic period but scheduling has been affected by various restrictions at ports. These have included mandatory quarantine periods for vessels entering ports and restrictions on crew disembarkation around the world.⁷⁶

The Australian Government put a range of restrictive border measures in place due to the pandemic, essentially closing the border to all non-Australian citizens and residents. Each State and Territory introduced their own local maritime restrictions.⁷⁷ Freight and stevedoring services were quickly deemed essential at the start of the pandemic, but some states did impose restrictions on ships docking at Australian ports.⁷⁸ These have included 'stay away' rules for vessels, where vessels are prevented from berthing if they have been at sea for fewer than 14 days, and various restrictions on disembarkation and crew movements. These have created additional uncertainty for shipping lines, as well as contributing to scheduling disruptions and staffing issues (for example, rotation of crew members).⁷⁹

Congestion at ports has knock-on effects on shipping schedules

Vessels call at a series of ports in different countries before they eventually return to the first port of call on a particular route. Consequently, congestion in overseas ports can have knock-on effects,

72 See e.g. M Wackett, '[Impact of Yantian closure and more rate hikes add to shipper misery](#)', *The Loadstar*, 4 June 2021, accessed 30 September 2021; W Water, '[Impact of Yantian disruption 'exceeds the Suez incident'](#)', *Lloyd's Loading List*, 11 June 2021, accessed 1 October 2021.

73 I Ackerman, '[DP World Botany Operations Resume after COVID Case](#)', *Daily Cargo News*, 16 September 2021, accessed 16 September 2021.

74 I Ackerman, '[Operations Cease at Hutchison's Sydney Terminal after COVID Case Detected - Update 2](#)', *Daily Cargo News*, 20 September 2021, accessed 21 September 2021.

75 I Ackerman, '[Melbourne's VICT Closes after COVID Case Detected](#)', *Daily Cargo News*, 20 September 2021, accessed 21 September 2021; I Ackerman, '[Second COVID Case Closes VICT Again](#)', *Daily Cargo News*, 23 September 2021, accessed 27 September 2021.

76 UNESCAP, '[COVID-19 and Its Impact on Shipping and Port Sector in Asia and the Pacific](#)', Technical Note, UNESCAP website, 30 September 2020, accessed 1 October 2021, p. 6.

77 A Farley, '[Australia Shipping and Trade Insights - What is Really Going on Down Under?](#)', *Global Trade*, 22 March 2021, accessed 1 October 2021.

78 For example, Queensland and Western Australia: see e.g. B Clark, '[Countries and States may shut borders, but freight and logistics cannot be interrupted](#)', *Rigby Clarke Lawyers*, 26 March 2020, accessed 29 September 2021; Shipping Australia Limited, '[Covid-19 - Shipping Update: Requirements, restrictions, rules and policies affecting the maritime industry at Australian ports](#)', *Shipping Australia Limited*, 23 August 2021, accessed 29 September 2021.

79 Shipping Australia Limited, '[Submission No. 56 to the Productivity Commission \(Attachment\)](#)', *Inquiry into Vulnerable Supply Chains*, Productivity Commission website, 5 August 2020, accessed 1 October 2021.

putting ships off-schedule at other ports along the route and resulting in further congestion.⁸⁰ Survey responses mentioned congestion in overseas ports having a flow-on effect across the broader network, contributing to equipment and capacity shortages. Vessels may end up omitting ports on their route to get back on schedule. For example, FACT informed the ACCC that congestion in overseas terminals and delayed vessels had resulted in over 20% of ships bypassing Port Adelaide.

Shipping lines told the ACCC that increased turnaround times at ports resulted in further schedule disruptions through delays. Average idle hours increased in aggregate across all 5 Australian container ports, from 9.1 hours in 2018–19 prior to the pandemic, to 13.3 hours in 2020–21. The increase in idle time at Port Botany was especially pronounced, going from 11.9 hours to 21.2 hours over the same period.⁸¹ Congestion at Port Botany has deteriorated to such an extent that shipping lines are often skipping the port entirely.⁸²

Vessel delays are reducing shipping line capacity

The ACCC understands that vessel delays are a major factor contributing to current shipping capacity shortages.⁸³ For example, if a shipping line offers a service which previously had taken 6 weeks to ship a set number of containers, but now takes 7 weeks, this results in an overall loss of capacity on the part of the shipping line.

Prior to the pandemic, shipping lines could add extra vessels in response to congestion at ports. However, the surging demand for shipping services coupled with a shortage of free capacity means this is not an option. Instead, shipping lines have adopted a strategy of delaying advertised sailings ('sliding').⁸⁴ Even though shipping lines have attempted to provide as much capacity as possible, there has been a rise in rolled cargo⁸⁵, with one shipping line's rollover ratio increasing to 35% in October 2020.⁸⁶

Due to this, a greater proportion of space on vessels is allocated to volume that is already contracted. As booked cargo is rolled over to a later service, this leaves less space available for uncontracted cargo, contributing to the squeeze of shipping line capacity.

Scheduling disruptions have affected the efficiency of terminal operations

Stevedores have informed the ACCC that scheduling reliability has deteriorated, negatively affecting terminal operations. One stevedore quantified the extent of these disruptions, stating that only 30% of vessels were arriving on their designated berth windows. It noted that this had been the lowest rate on record. Globally, schedule reliability has been between 35 and 40% in 2021. In August 2021, it dropped to 33.6%, the lowest in 10 years.⁸⁷

Another stevedore stated that during the 12 months to June 2021, only 10% of the vessels calling into its terminal had arrived within the scheduled window. The effects of off-window arrivals include vessel bunching, which places strain on stevedores' equipment and labour resources, and can lead to further congestion. Off-window arrivals also have a knock-on effect, delaying import volumes from reaching beneficiary cargo owners.

80 Shipping Australia Limited, '[Dreadful performance of Australia's container ports is revealed](#)', *Shipping Australia*, 4 June 2021, accessed 1 October 2021.

81 ACCC calculation of BITRE data.

82 J Ellicott, '[Rough in world sea freight lanes, but ship owners reject blame](#)', *The Land*, 17 September 2021, accessed 1 October 2021.

83 P Wallace, '[Net Capacity Reduction on Transpac and Asia-Pacific Container Routes](#)', *Daily Cargo News*, 4 August 2021, accessed 1 October 2021.

84 M Wackett, '[Carriers claim 'sliding' services will help them recover shattered schedules](#)', *The Loadstar*, 1 February 2021, accessed 5 October 2021.

85 'Rolled cargo' refers to cargo which is moved to a later service.

86 Farley, '[Australia Shipping and Trade Insights - What Is Really Going on Down Under?](#)'.

87 Sea Intelligence, '[Schedule reliability drops to all-time low 33.6% in August 2021](#)', *Sea Intelligence*, 27 September 2021, accessed 29 September 2021.

The total number of container moves taking place within a berthing window is one of the main determinants of turnaround times at ports.⁸⁸ Stevedores have attempted to address turnaround times and deal with increased congestion by imposing caps on the number of container exchanges (the total number of containers that can be unloaded and loaded) taking place within each berthing window. However, as imports have increased and need to be unloaded, this limits the number of moves available to load exports or empty containers onto vessels. Capped vessel exchanges have thus impacted the supply chain by contributing to underutilisation of vessels and inability of shipping lines to address the surge in demand.

Loss of airfreight options has led to further capacity reductions

Approximately 80% of Australia's international air cargo volume is usually carried in the belly of passenger aircraft.⁸⁹ Travel restrictions due to the pandemic have resulted in a major reduction in passenger flights which would otherwise move this cargo. Air cargo capacity has been estimated to have fallen by 91% since the start of the pandemic, driving up the cost of airfreight.⁹⁰

The initial impact of the fall in airfreight capacity was a shift to increased sea transportation. Airfreight volumes are relatively small compared to sea freight volumes⁹¹ but this shift has contributed to constrained container shipping capacity.

The ACCC notes there are measures to continue providing airfreight to cargo owners, such as an increase in dedicated freight flights in and out of Australia. Flights bringing freight in and out of Sydney Airport have more than tripled since mid-2019, rising from 5,120 movements in the 12 months to 2019 to 18,301 movements in the 12 months to June 2021.⁹² Airlines have increasingly deployed passenger aircraft for freight purposes and some freight forwarders have also initiated chartered services utilising what would otherwise be idle passenger aircraft.⁹³

The Australian Government (Austrade/IFAM) implemented an \$800 million grant program to provide temporary subsidised capacity for exports of horticulture, seafood, lamb, beef, pork and dairy sectors to support maintaining overseas markets through until September 2021.⁹⁴

2.2 Australian cargo owners are incurring significantly higher costs and experiencing difficulties securing shipping capacity

As discussed in chapter 1, cargo owners are the end users of the supply chain.

In the years prior to COVID-19, Australian cargo owners had experienced more favourable conditions. This is despite Australia being on a smaller north-south trade route with little growth compared to some developing countries. This has changed due to the convergence of major disruptions over the previous 12 months. Cargo owners have experienced greater difficulty in obtaining capacity on remaining shipping services. In addition to the higher costs associated with obtaining reduced capacity,

88 K Hart, 'An Analysis on Cargo Handling Performance and Its Effect on Turnaround Time of Liner Ships (A Case of Tema Port)', *Ideation Resources*, August 2019; K B Loke, M R Othman, A H Saharuddin, M N Fadzil, 'Analysis of Variables of Vessel Calls in a Container Terminal', *Open Journal of Marine Science*, 2014, 4:279-285.

89 Freight and Trade Alliance (FTA) and Australian Peak Shippers Association (APSA), [Submission No. 18 to the Productivity Commission](#), *Inquiry into Vulnerable Supply Chains*, Productivity Commission website, 30 April 2021, accessed 1 October 2021, p. 19.

90 S Wheelan, 'Australia subsidises forwarders to pool shipments to get cargo in the air', *The Loadstar*, 30 April 2020, accessed 1 October 2021; ICE, 'The Shipping Chaos Unveiled: What is Really Going On In Australia and Across the World?'

91 Maritime trade accounts for approximately 98% of all Australian trade by weight; see e.g. Bureau of Infrastructure, Transport and Regional Economics (BITRE), [Research report 138: Containerised and non-containerised trade through Australian ports to 2032-33](#), BITRE website, 2014, accessed 1 October 2021, p. 9.

92 J Wiggins, 'E-commerce freight boom here to stay, Sydney Airport says', *Australian Financial Review*, 23 August 2021, accessed 1 October 2021.

93 FTA and APSA, [Submission No. 18 to the Productivity Commission](#), *Inquiry into Vulnerable Supply Chains*, p. 19.

94 International Forwarders and Custom Brokers Association of Australia (IFCBAA), [Submission No. 41 to the Productivity Commission](#), *Inquiry into Vulnerable Supply Chains*, Productivity Commission website, 30 April 2021, accessed 1 October 2021, p. 6.

disruptions have resulted in greater uncertainty, resulting in further costs due to penalties, mitigating action and lost opportunities.

Shipping lines are allocating capacity to higher value routes and volumes

The fall in shipping line capacity has contributed to a surge in freight rates, particularly on high value trade routes (for example, Asia to North America). Consequently, shipping capacity has been preferentially allocated to these more lucrative international routes. A number of market participants told the ACCC that the number of services to Australia had declined overall, even as demand had increased.

At the same time, shipping lines are increasingly reluctant to carry export laden cargo that is low margin, which requires investment in equipment (such as food-grade containers), or which is moving to a port where there is lower demand for empty containers.⁹⁵ All this had further limited shipping capacity available to Australian cargo owners.

Small and medium-sized cargo owners have informed the ACCC that they have been impacted to a greater extent by reductions in shipping capacity. They have stated that high volume priority customers have been better able to secure shipping capacity. Companies moving major volumes of containers can negotiate block space and rates agreements directly with the shipping lines. Similarly, major global forwarders can negotiate global agreements with guaranteed container volumes and contracted rates. However, smaller cargo owners and freight forwarders moving smaller volumes lack the leverage to negotiate discount rates with shipping lines.

Exporters are competing with empty containers for shipping capacity

One of the key problems that has arisen is that empty containers are in the 'wrong' parts of the world. Containers have accumulated in certain parts of the world where imports of containerised goods are high. By contrast, there is currently a shortage of empty containers in regions of the world which serve as hubs for exporting manufactured consumer goods. As a result, exporters in those regions are waiting several weeks and paying high prices to obtain empty containers.⁹⁶

Prior to COVID-19, shipping lines would typically bring in unladen vessels ('sweeper vessels') to evacuate empty containers, clearing local congestion and returning equipment to centres of demand back in Asia. However, because of higher shipping demand globally and a lack of available berthing windows, fewer services are available for shipping lines to charter sweeper vessels to evacuate empty containers.⁹⁷

In Australia, before the pandemic, services bringing in containerised imports would typically have ample space on the return leg to evacuate empty containers as well as accommodate Australian exports. However, as imports of containerised goods have increased during the pandemic, these now take up a larger share of the total available container moves at terminals during a berthing window. This leaves a smaller share of the remaining move capacity to be shared between empty containers and exports.

The ACCC also understands that shipping lines are currently allocating capacity to repositioning empty containers from Australia back to centres of demand (particularly China), for use on more lucrative trade routes. Exporters in China are paying large premiums for empty containers as demand is so high.⁹⁸ This further reduces the space available to Australian exports and, therefore, exporters are effectively competing with empty containers to secure shipping slots.⁹⁹

95 FTA and APSA, [Submission No. 18 to the Productivity Commission, Inquiry into Vulnerable Supply Chains](#), p. 7.

96 N Rivero, ['A shipping container shortage is snarling global trade'](#), *Quartz*, 30 June 2021, accessed 1 October 2021; Cullinane and Haralambides, ['Global trends in maritime and port economics: the COVID-19 pandemic and beyond'](#), pp. 374-5.

97 Associated Customs & Forwarding (ACF), ['International Trade Routes and Port Practices Fall into Disarray'](#), *ACF*, 7 December 2020, accessed 1 October 2021.

98 Grain Brokers Australia, ['Global container crisis disrupting food supply chain'](#), *The Land*, 9 February 2021, accessed 29 September 2021.

99 J Ellicott, ['Choked and gouged: story of NSW containerised grain exports'](#), *The Land*, 6 September 2021, accessed 29 September 2021.

Shipping rates have surged as cargo owners compete for capacity

The consequence of these constraints on capacity is that shipping rates have increased significantly for both imports and exports. Figure 2.1 shows the data that the ACCC has obtained from S&P Global Platts for container freight rates on key global trade routes.

Figure 2.1: S&P Global Platts Container Index (US\$/FEU): August 2017 to September 2021¹⁰⁰



Source: S&P Global Platts.

Note: The Platts Container Index is a weighted average of Platts' key container assessments including North Asia-to-North America and North Asia-to-North Continent routes. FEU (forty-foot equivalent unit) is a measure of volume in units of 40-foot long containers.

As shown, container freight rates on the key global trade routes have increased from about US\$1,000 in May 2020 to around US\$7,500 in September 2021.

Shipping line industry bodies have noted that rates have increased substantially due to market mechanisms reacting to changes in supply and demand. They have also emphasised that shipping lines are acting independently and not attempting to restrict supply or otherwise gouge other market participants.¹⁰¹ Shipping lines cited that ship-chartering costs have increased by 773% since late May 2020 and marine fuel costs have near tripled from since early 2020.¹⁰²

Freight rates have surged across all shipping lines and cargo owners have few options. Importers and exporters are both currently paying a premium to shipping lines to ensure their goods are delivered within a certain timeframe, with some attempting to outbid each other to secure capacity. Exporters in particular have to book at higher rates to secure capacity in order to service customers within their contracted time and may end up making a loss on the transaction overall.

Cargo owners have informed the ACCC that there are currently limited opportunities to save money by switching to another shipping line. All shipping lines have minimal spare capacity and freight rates have risen across the board. Exporters have also told us that their ability to switch between competing services is limited by the need to make last-minute decisions in light of disruptions. Further, the point of origin or final destination of goods may limit the choice of shipping lines for cargo owners, as not all shipping lines service every port. This has been further exacerbated by the reduced number of services available and moves by shipping lines to rationalise their networks.

¹⁰⁰ The Platts Container Index methodology can be found in the [Platts Global Freight Specifications Guide \[PDF 263KB\]](#).

¹⁰¹ J Ellicott, 'Rough in world sea freight lanes, but ship owners reject blame', *The Land*, 17 September 2021, accessed 1 October 2021.

¹⁰² I Ackerman, 'A "Rapidly Disintegrating Shipping Market"?'', *Daily Cargo News*, 2 September 2021, accessed 5 October 2021.

Exporters experience delays and difficulty meeting contractual obligations

Australian exporters can be waiting many weeks or months to obtain an export booking.¹⁰³ Exporters stated that schedules may change on a daily basis which had impacted on their ability to plan what products to load for which vessel.

Even where they can secure shipping space, the ongoing rerouting of vessels, port omissions or cancellation by shipping lines cause significant delays to existing booked shipments. There have also been reported instances of lower paying cargo (such as exported grain) being removed from vessels at transshipment ports, in favour of higher paying priority cargo.¹⁰⁴

Exporters have informed the ACCC that vessel scheduling disruptions and restrictions on shipping capacity had impacted on their ability to make timely deliveries. This put them at increasing risk of failing to meet existing contractual delivery obligations, resulting in them being subject to contractual penalties from missing delivery windows.¹⁰⁵ Australian Peak Shippers Association recently reported that 3 of its members had collectively paid in excess of US\$117,000 in contract breaches over a period of 3 months.¹⁰⁶

Where vessels are cancelled at short notice, exporters may also have to roll-over cargo to a later vessel, incurring further costs from both shipping lines (from having to make last-minute bookings and secure free capacity) as well as disrupting landside freight logistics.

Exporters have difficulty obtaining food quality shipping containers

Exporters of agricultural food products typically require containers of a specific type (such as food-grade or refrigerated containers) for their goods and are not able to use general-purpose containers (designed to carry durable consumer goods). Therefore, while there has been a surplus of general-purpose containers across Australian ports, many exporters have experienced difficulties accessing containers of the required quality in a timely manner.

As an example of this, over the past 12 months, there has been a shortage of empty food-grade containers in Port Adelaide (a net exporting port). There appear to be several reasons for this:

- due to congestion and delays in overseas ports, over 20% of shipping line services are bypassing Adelaide
- the surge in imports appears to have resulted in reduced space being allocated to empty food-grade containers on vessels entering Australia
- some shipping lines may be reluctant to send empty containers to Adelaide, because they can get higher freight rates by exporting goods from China instead.

The difficulty obtaining food grade containers has impacted on some exporters' businesses. Some exporters have had to delay or cancel their bookings, causing considerable inconvenience and expense. Some exporters have had to scale back their export programs, while some lower value agricultural products (for example, grain and hay) have been squeezed out altogether. Further, delays due to the difficulties in obtaining food-grade quality containers, coupled with longer periods during which containers sit at port, have impacted on the freshness and perishability of some foods.

Higher costs and uncertainty have affected the competitiveness of Australian exports

Exporters have attempted to mitigate the impact of higher costs and greater uncertainty, however, this is extremely challenging. Many exporters are not able to pass on higher prices to customers for goods which are exported into competitive international markets. These exporters have instead paid lower

103 FTA and APSA, [Submission No. 18 to the Productivity Commission](#), *Inquiry into Vulnerable Supply Chains*, p. 8.

104 J Ellicott, '[Choked and gouged: story of NSW containerised grain exports](#)', *The Land*, 6 September 2021, accessed 29 September 2021.

105 FTA and APSA, [Submission No. 18 to the Productivity Commission](#), *Inquiry into Vulnerable Supply Chains*, p. 8.

106 Ellicott, '[Choked and gouged: story of NSW containerised grain exports](#)'.

prices to primary producers, or attempted to absorb higher costs in the short term to retain customers or maintain competitiveness with global exporters. However, not all businesses will have the resources to continue absorbing higher costs over a prolonged period of time in order to remain viable.

The ACCC is aware that some exporters may be able to respond to increased costs by shipping lower-value commodities as bulk cargo rather than using containers. The ability to do this will depend on the commodity in question, and not all exporters have this option.

Overall, increased uncertainty coupled with rising freight rates makes Australian products less competitive. This is especially true of agricultural products such as grain, where producers face a competitive international market serviced by multiple countries. It also leads to a reluctance by shipping lines to service Australia, further impacting on exporters.

Importers are increasingly holding higher stock levels and attempting to source locally

The increase in disruptions and lack of reliable shipping services has led importers to re-consider 'just-in-time' business models with an increase in onshore warehousing and distribution.¹⁰⁷ Importers have informed the ACCC they need to hold higher levels of inventory or 'safety stock', in response to the uncertainty caused by scheduling disruptions. This has led to higher storage costs and a diversion of capital from other projects.

The surge in demand driven by changes in consumer spending on products has also driven up rates for importers due to COVID-19. Disruptions (coupled with increased shipping rates) had led some importers to drop more marginal product lines.

Some market participants also told the ACCC that recent disruptions in international supply chains have led to a shift in favour of local manufacturing. Importers commented on having looked at ways of sourcing more products locally as a way of dealing with uncertainty in international shipping, although with varying levels of success.

Importers face additional land freight costs due to port omissions

Where vessels omit certain ports due to disruptions, containers may instead be delivered to an alternative destination port. Where this had occurred, importers mentioned having to transport their container cargo overland from a container port elsewhere in Australia, resulting in additional costs and delays.

Cargo owners are impacted by empty container park congestion

As noted above, there has been an increased imbalance in imports over exports and shipping lines have been unable to evacuate empty containers. This has contributed to an excess of empty containers at some Australian terminals. East coast container ports were particularly affected by constraints on evacuating empty containers, leading to significant congestion at empty container parks in these regions.

Importers have experienced difficulties de-hiring empty containers after unloading the contents due to congestion at these empty container parks. The lack of space at these parks means that empty containers must be redirected elsewhere, at additional cost to the importer.¹⁰⁸

The long-term trends in empty container park storage are discussed further below.

107 FTA and APSA, [Submission No. 18 to the Productivity Commission, Inquiry into Vulnerable Supply Chains](#), p. 8.

108 ICE, ['The Shipping Chaos Unveiled: What is Really Going On In Australia and Across the World?'](#).

2.3 COVID-19 induced disruptions have also affected service providers in the supply chain

While these disruptions have affected all market participants to at least some extent, the effects have been experienced differently at each point in the supply chain.

Some ports have commented that increasing number of blank sailings as a result of the disruptions caused by the COVID-19 pandemic and industrial actions have resulted in falling revenue.

The following sections discuss the information provided by transport operators, shipping lines and stevedores about the impact of COVID-19 induced disruptions on their operations.

Delays have reduced the efficiency of transport operators

Transport operators face delays loading and unloading containers at terminals and delivering empty containers to empty container parks. This has led to an increase in idle time of transport operators and an overall reduction in operational efficiency. Transport operators have informed the ACCC that delays have led to them missing booking slots on subsequent deliveries, leading landside operators to charge penalty fees.

Transport operators also told the ACCC about difficulties obtaining bookings at required times, and working outside standard hours to make booking slots. This was leading to higher staffing costs.

Disruptions have increased operational and opportunity costs for shipping lines

The disruptions of the past 12 months have constrained shipping lines from making full use of their available capacity. The surge in imports over exports, capped vessel exchanges and increased container volumes more generally has created congestion on both the water side and landside. This congestion has resulted in reduced productivity and longer turnaround times at ports, further limiting the number of viable services which shipping lines can run and leading to sliding.

Some shipping lines have informed the ACCC that they are having to factor in larger 'buffers' into their operations to deal with disruptions and end up sailing with underutilised capacity. The net effect of these developments is that capacity is further limited, driving up shipping rates.

Shipping lines also mentioned the costs associated with empty container park congestion as something which had impacted on their operations, particularly the high costs associated with booking slots at empty container parks.

COVID-19 impacted on stevedores' operating costs and productivity

Stevedores' operations have been impacted by blank sailings and vessels arriving off window because of congestion. Labour has idled due to delayed or cancelled ships and overtime increased to work delayed ships and make up for lost time.

Stevedores also noted that the risks associated with the pandemic had driven up their operating costs and impacted productivity. One stevedore noted they had implemented various initiatives to comply with health directives from governments and supply chain partners. These all impacted on productivity and resulted in common activities taking longer to complete. Stevedores also faced increased labour allocation requirements and administrative costs.

Stevedore financial performance and productivity are discussed in chapters 4 and 6.

3. Long-term trends in the container freight supply chain

The dynamics in the supply chain have changed over the past decade. During the ACCC's consultation, market participants and industry analysts have identified the following longer-term trends that were affecting the supply chain even before the onset of the COVID-19 pandemic:

- industrial relations
- the trend towards larger vessel sizes requiring timely investment
- regulations requiring ships to use more environmentally friendly fuel
- increase in bargaining power of shipping lines
- port privatisation
- congestion caused by imbalance of empty containers
- vertical integration between different levels of the supply chain potentially impacting on competition.

This chapter discusses these issues based on information obtained from market participants through consultation and ACCC's broader monitoring activities. These issues are complex and the approaches to resolving them will differ and may take some time. The ACCC will continue to monitor these trends as they develop.

3.1 Industrial relations

There is a long history of labour disputes associated with Enterprise Bargaining Agreements between the maritime labour force and major container stevedores at Australian ports.

Over the past decade, as stevedores sought to automate their operations, restrictive work practices and protracted industrial actions have escalated. As discussed further in chapter 6, many current stevedores' Enterprise Agreements contain restrictive provisions which reduce flexibility of labour supply and allocation, retard automation and other technological advances, reduce timeliness and reliability, constrain workplace performance, and increase labour costs for a given level of activity.

Market participants have also informed the ACCC that in the past 3 years, industrial action has disrupted port operations continuously, causing significant delays, increased costs and loss of business. For example, a shipping line informed the ACCC that the delays at Port Botany in September 2020 cost it around \$25,000 a day per ship. In addition, an exporter stated that it had to deliver its cargo to another port for a period of 3 weeks due to industrial actions. This cost the exporter \$200,000 and resulted in delays, which caused the exporter to miss shipping windows and risk exceeding contracted timeframes.

Restrictive work practices and industrial actions lead to loss of productivity and efficiency at Australian container ports. This makes Australia a less attractive destination for global shipping companies and results in higher costs for Australian cargo owners.

3.2 Large ships

The sizes of container ships have been increasing since 2015. Prior to 2015, there was little change in the number of ships with capacity over 12,000 TEU, however, since then the number of vessels exceeding 12,000 TEU has significantly increased globally.¹⁰⁹ In 2020 and 2021, 10% of new vessel builds on order globally were in the 12,000–15,000 TEU range, while 15% were over 15,000 TEU.¹¹⁰

In Australia, approximately half of the container ships visiting Australia averaged a capacity of around 5,000 to 8,000 TEU or larger in 2017.¹¹¹ In July 2020, a 10,662 TEU vessel was the largest to call at the Port of Melbourne.¹¹²

There are various factors behind this trend towards the use of larger ships. Larger ships can provide economies of scale in shipping (transport costs per unit). While ships become more costly and use more fuel as they get bigger, the increase in cost is less than the increase in cargo carrying capacity.¹¹³ One estimation was that, per TEU, the largest container ships at approximately 20,000 TEU fully loaded are able to achieve costs that are less than half of that incurred by a 2,000 TEU container ship.¹¹⁴ There are other benefits such as energy and fuel efficiency, resulting in lower costs and reduced emissions (to meet emissions restrictions).

Larger ships can have a negative impact on productivity of the supply chain unless appropriate investment is made by other segments in the supply chain, particularly port operators. The efficiencies to be gained from the use of larger ships can be constrained by existing port infrastructure and equipment. To receive the larger ships, ports and terminal operators need to have sufficiently sized infrastructure such as cranes, berths, quays, large enough channels, technology and sufficient labour.¹¹⁵ There may be a need to increase channel depth at a port, invest in berth improvements and equipment. It also may require landside investments in rail and road networks to accommodate greater volumes of cargo.

The largest container ships that the Port of Melbourne, Port Botany and the Port of Brisbane can accommodate are in the range of 8,000 TEU to 10,000 TEU, fully loaded.¹¹⁶ There has been some recent investment made by ports and stevedores in Australia to accommodate larger vessels. Stevedores have told the ACCC that they been investing in additional and upgraded equipment to have sufficient capability to load and unload these larger ships. For example, in 2019 Flinders Ports commenced a channel widening program to allow it to accommodate larger Post-Panamax sized container ships¹¹⁷, and in 2020 Patrick invested in larger cranes to service larger vessels (Liebherr cranes at Brisbane and Port Botany, and ZMPC Post-Panamax cranes at Fremantle and Melbourne).¹¹⁸

While investment is being made in Australia to accommodate the larger ships, it has generally been lagging behind the rapid increase in the number of larger ships visiting Australia. In part, this is because larger ships visit Australia infrequently, compared to larger overseas ports, so this can make it harder to make the business case for committing to investment until the frequency of visits increases.

As a result, it appears that advances in port infrastructure have not aligned with the use of larger ships to optimise productivity. Market participants have said that currently Australian terminals are not suitable for use with larger vessels and this is resulting in operational inefficiencies. Larger ships result in fewer ships entering ports, but more congestion as 2 berths may be taken up by one vessel at a time.

109 Facilitation of Transport and Trade in Latin America and the Caribbean, [Ongoing challenges to ports: the increasing size of container ships](#), FAL Bulletin, 1 December 2020, accessed 20 September 2021.

110 Facilitation of Transport and Trade in Latin America and the Caribbean, [Ongoing challenges to ports: the increasing size of container ships](#).

111 Houston Kemp, [Containerised trade trends and implications for Australian ports](#), Port of Newcastle, January 2019, accessed 20 September 2021.

112 Port Strategy, [‘Melbourne Sees largest container ship’](#), *Port Strategy*, 2 July 2020, accessed 20 September 2021.

113 Houston Kemp, [Containerised trade trends and implications for Australian ports](#), p. 23.

114 Houston Kemp, [Containerised trade trends and implications for Australian ports](#), p. 24.

115 Houston Kemp, [Containerised trade trends and implications for Australian ports](#), pp. 26–29.

116 Houston Kemp, [Containerised trade trends and implications for Australian ports](#), p. 28.

117 Port Technology International Team, [‘Adelaide Expansion Project Wins Government Approval’](#), PT website, 14 March 2019, accessed 20 September 2021.

118 D Sexton, [‘Patrick pushes 2020 waterfront investment’](#), *Daily Cargo News*, 17 January 2020, accessed 20 September 2021.

For example, Port of Melbourne's Webb Dock East Berth 4 and 5, used by VICT, was designed as a 2-berth terminal but the current design only allows one vessel over 337m length overall to berth at a time. The arrival of larger ships effectively turns VICT into a single berth terminal. Shipping lines told the ACCC that in normal times this can be planned around, but this had exacerbated congestion and disruptions over the past 18 months. Port of Melbourne has noted that vessels frequently queue at VICT and these delays can lead to significant costs (charter costs up to USD 42,000 per day for a 8,500 TEU vessel excluding fuel) passed through to consumers via freight rates or congestion surcharges.¹¹⁹

In response to these issues, Port of Melbourne is investing in improving both Webb Dock East and Swanston Dock West. Port of Melbourne plans to extend Webb Dock East Berth 4/5 by 71 metres and increase VICT's terminal area by approximately 2% to enable safe operation of cranes and service vehicle access behind the extended berth. This project is estimated to be delivered in around 2022-23.¹²⁰ Port of Melbourne is also investing in a Port Rail Transformation Project and dredging to maintain channel depths.

Ports and stevedores will need to continue to make capital investments to accommodate larger ships. However, the difference in pace or extent of investment between ports or terminals may mean that only a few terminals will be able to service larger ships. In some cases this may constrain competition. For example, VICT is the only terminal in Melbourne that is able to service larger vessels, as ships over a certain size cannot reach Swanston Dock due to the Westgate Bridge restrictions. The Westgate Bridge and Yarra River channel vessel size constraints are approximately a 10,000 to 10,500 TEU up-river limit. This has effectively made VICT a monopoly in Melbourne for servicing larger vessels.

The long-term trend of larger ship sizes will likely be resolved through investments by ports, stevedores and other service providers. However, some market participants have indicated that further port investment results in flow-on costs and cost recovery measures charged to stevedores. Port of Melbourne has stated that it is proposing to recover the investment in Webb Dock East from Prescribed Services Tariffs from port users and stevedores, noting that the Swanson Dock stevedores have previously opposed direct contributions for investments at Swanson Dock.¹²¹

In addition to higher costs imposed by larger ship visits, many of these investment costs by ports and stevedores to service larger ships, will ultimately be passed along the supply chain and will flow onto cargo owners.

3.3 Environmental regulations

There is a long-term trend in increased investments in sustainability to reduce the environmental footprint of container freight. Market participants have told the ACCC that low sulphur fuels have added costs for shipping lines and subsequently to cargo owners. There has also been a move for ports to reduce emissions and increase sustainability.

The International Maritime Organization (IMO) introduced regulations for the Prevention of Air Pollution from Ships in 2005.¹²² In January 2020, the IMO introduced a new limit on sulphur content in fuels. Ships are required to use fuel oil containing a maximum of 0.5% m/m sulphur, instead of the previous level of 3.5%. Ships can use alternative fuels such as liquefied natural gas (LNG) or compliant marine diesel oil that have a sulphur content of 0.5% m/m or less. An Exhaust Gas Cleaning System or 'scrubber' is the only alternative measure currently approved for use to reduce sulphur oxide emissions.¹²³

Shipping lines have noted a challenge is the lack of availability of alternative fuel sources. Moving to alternative fuel sources may lead to initial higher costs. Industry observers have commented that

119 Port of Melbourne Operations, [2021 Industry update \[Industry presentation\]](#), Port of Melbourne website, April 2021, accessed 20 September 2021.

120 Port of Melbourne Operations, [2021 Industry update](#).

121 Port of Melbourne Operations, [2021 Industry update](#).

122 International Maritime Organization (IMO), [IMO 2020 – cutting sulphur dioxide emissions](#), IMO website, n.d., accessed 29 September 2021.

123 Australian Maritime Safety Authority (AMSA), [Compliance with low sulphur 2020](#), AMSA website, n.d., accessed 29 September 2021.

cleaner fuels could add substantial costs from USD \$400 to \$600 per tonne for fuel oil.¹²⁴ The cost of more expensive fuels will be reflected in higher freight rates.¹²⁵ Shipping lines will also seek to recover investment in scrubbers and newer vessels.

In addition, the current lack of choice of cleaner fuels has created some uncertainty for shipping lines that are seeking to purchase new ships. Shipping lines may see a risk in picking the wrong technology when ordering new ships, because this could result in them having to retire those ships prematurely in the future. If shipping lines respond to this risk by delaying some orders of new ships, this could delay additional shipping capacity coming onto the market.

3.4 Growing bargaining power of shipping lines

Most market participants the ACCC contacted noted the increased consolidation and bargaining power of shipping lines as a key issue.

Increased consolidation and coordination between shipping lines

Following the 2008 global financial crisis, shipping lines experienced a period of depressed demand for shipping services and reduced market returns. This resulted in excess shipping capacity, further exacerbated by previous orders of additional large container ships.¹²⁶ Market participants have told the ACCC that freight rates were at historic lows during this period.

This was followed by a wave of shipping line consolidation by way of mergers and acquisitions. These aimed to reduce costs, better manage capacity and improve efficiency. At the same time, some vessels reached the end of their viable lifespan and were retired, leading to a reduction in supply.

In 2016, there was a further increase in consolidation between shipping lines following depressed market conditions and poor financial returns.¹²⁷ The 2016 bankruptcy of the container line Hanjin (Republic of Korea) also contributed to the trend towards consolidation. The main consolidations relevant to trade with Australia occurred in 2016 to 2018.¹²⁸

Following several years of consolidations, the global shipping industry stabilised somewhat in 2017–18, with a relative slowdown in merger activity, and a partial recovery in freight rates.¹²⁹

In the period 2005–2016, the top 10 shipping companies controlled only 60% of the total fleet capacity.¹³⁰ Presently, the top 10 shipping companies, grouped in 3 alliances, control more than 90% of the transoceanic container traffic.¹³¹

Coordination agreements between shipping lines can optimise economies of scale and offer a more comprehensive global shipping network.¹³² As larger ships were developed, shipping lines formed agreements (such as alliances) to fund the more expensive ships. Shipping lines through alliances share the investment risk, reduce costs, optimise shipping capacity and facilitate access to greater number of markets for their members.

124 F Harvey, '[Shipping fuel regulation to cut sulphur levels comes into force](#)', *The Guardian*, 1 January 2020, accessed 29 September 2021.

125 A Gelder, '[Uncertainty shrouds impact of IMO 2020](#)', *Wood Mackenzie*, 26 February 2019, accessed 5 October 2021.

126 UNCTAD, '[Market Consolidation in container shipping: what next?](#)', Policy Brief No. 69, UNCTAD website, September 2018, accessed 20 September 2021.

127 UNCTAD, '[Market Consolidation in container shipping: what next?](#)'.

128 CMA-CGM acquisition of Neptune Orient/American President Line in 2016–17 and Sofrana Line in 2017–18; A.P. Moller-Maersk acquisition of Hamburg Sud in 2016–17; merger of container shipping divisions of NYK Line, M.O.L., and K-Line in 2016–17 to form Ocean Network Express; and COSCO acquisition of Ocean Orient Container Lines (OOCL) in 2017–18.

129 ACCC, '[Container Stevedoring Monitoring Report 2017–18](#)', ACCC website, 18 October 2018.

130 Cullinane and Haralambides, '[Global trends in maritime and port economics: the COVID-19 pandemic and beyond](#)', p. 373.

131 Cullinane and Haralambides, '[Global trends in maritime and port economics: the COVID-19 pandemic and beyond](#)', p. 373.

132 International Transport Forum (ITF), '[The Impact of Alliances in Container Shipping](#)', ITF-OECD website, 2 November 2018, accessed 27 September 2021, pp. 12–13.

There are many types of agreements between shipping lines such as alliances, slot charter agreements, consortia, vessel sharing agreements and conferences. Some shipping lines may use these types of agreements simultaneously, for example there may be vessel sharing agreements within alliances.

Global alliances are the most common form of cooperation agreements between shipping lines. Alliances can include matters such as overall capacity, utilisation of ships, sailing schedules and itineraries, vessel sharing and use of terminals. It does not cover joint sales, marketing, joint ownership of assets, revenues or profits.¹³³ A carrier will generally get compensated relative to what the carrier contributed to the alliance.¹³⁴

In 2011, there were 3 alliances (CKHY, Grand Alliance and New World Alliance) but their combined market share was only 29%.¹³⁵ Since 2017, the leading 8 container lines formed 3 global alliances:

- the OCEAN Alliance between CMA CGM, Cosco Group, OOCL and Evergreen Marine
- the 2M Alliance between Maersk and Mediterranean Shipping
- The Alliance between Hapag Lloyd, K Line, Mitsui O.S.K. Line, Nippon Yusen Kaisha and Yang Ming. Hyundai Merchant Marine joined in 2020.

These alliances, which have received worldwide regulatory approval, represent around 80% of overall container trade and operate around 95% of the total ship capacity on the East-West routes.¹³⁶

In Australia, many of these agreements between shipping lines are subject to Part X of the *Competition and Consumer Act (Cth)* (the CCA).

Box 3.1: Regulation of coordination between shipping lines

Part X of the CCA contains various exemptions for ocean carriers providing international liner cargo shipping services to and from Australia (Liners).

Part X allows Liners with registered agreements to:

- agree on prices
- pool or apportion earnings, losses or traffic
- regulate capacity
- coordinate schedules.

In the absence of Part X, these types of agreements would otherwise breach cartel provisions or anticompetitive provisions of the CCA.

Part X was introduced by the Australian Government in 1989 to facilitate a more competitive and efficient shipping industry servicing Australia. It was intended to benefit cargo owners by delivering frequent and reliable liner cargo shipping services to Australia.¹³⁷

133 ITF, [The Impact of Alliances in Container Shipping](#), p. 10.

134 ITF, [The Impact of Alliances in Container Shipping](#), p. 16.

135 ITF, [The Impact of Alliances in Container Shipping](#), p. 16.

136 ITF, [The Impact of Alliances in Container Shipping](#), p. 7.

137 ACCC, [Proposed Class Exemption for Ocean Liner Shipping](#), Discussion Paper, ACCC website, 3 December 2019, accessed 6 October 2021, p. 1.

Since then, there have been several reviews of Part X that have recommended it be repealed or reformed, with concerns that it is not considering net public benefits.¹³⁸ In 2015 the Competition Policy Review (chaired by Professor Ian Harper) recommended Part X should be repealed. It recommended that a block exemption granted by the ACCC should be available for liner shipping agreements that meet a minimum standard of pro-competitive features.¹³⁹ The ACCC notes that any reform of Part X is a policy matter for government.

Following the Harper Review recommendations, the ACCC is proposing to develop a class exemption. This class exemption would provide legal protection for certain types of coordination among Liners and their customers without them having to apply to the ACCC. In December 2019, the ACCC released a discussion paper seeking stakeholder views on a possible class exemption applicable to shipping lines.¹⁴⁰ Overall, stakeholders are supportive of a liner class exemption limited to operational coordination that should not include prices.¹⁴¹ The ACCC is giving this issue further consideration, noting that any potential legislation is subject to acceptance by government.¹⁴²

Increased bargaining power of shipping lines has impacted on the supply chain

The consolidation of shipping companies and formation of alliances has increased shipping lines' bargaining power relative to cargo owners and other service providers in the supply chain (particularly stevedores and empty container parks (ECPs)). This is because there are now fewer shipping lines and the shipping line alliance collectively has greater negotiating power.

This sometimes allows all shipping lines within the alliance to obtain the same lower price from the service providers. For example, the G6 Alliance applied joint procurement with one tariff negotiated for all alliance partners for the joint services, with each alliance partner negotiating their own tariffs for the services that they operated outside the alliance.¹⁴³

Market participants have told the ACCC that the increased bargaining power of shipping lines has impacted on negotiations with stevedores and ECPs.

In the past, there was a larger number of shipping lines that operated independently. Stevedores and ECPs were in a better position to negotiate contracts and were able to recover most of their business costs from the shipping lines. While stevedores and ECPs provide services to both shipping lines and transport operators, this allowed them to charge much lower charges to transport operators.

The top tier of shipping line alliances represents the greater proportion of a stevedore's customers and of a port's total container trade. This provides the shipping line alliance with more bargaining power in negotiating new stevedoring contracts.¹⁴⁴ In comparison to major shipping lines and alliances, smaller shipping lines transporting smaller volumes have a disadvantage when negotiating prices with stevedores.

138 Productivity Commission, *International Liner Cargo Shipping (2005) Inquiry Report*, Productivity Commission website, 5 October 2005, accessed 14 October 2021; I Harper, *Competition Policy Review [Final Report]*, Treasury, March 2015, accessed 6 October 2021. The Senate Rural and Regional Affairs and Transport References Committee also published a report examining priorities for Australian shipping in 2020 – Part X formed an element of the committee's inquiry (Senate Rural and Regional Affairs and Transport References Committee, *Policy, regulatory, taxation, administrative and funding priorities for Australian shipping*, Parliament of Australia website, December 2020, accessed 6 October 2021). The Senate Rural and Regional Affairs and Transport References Committee recommended Part X be reformed to ensure that it supports operators' continued access to frequent and reliable liner cargo shipping services at competitive rates and to ensure that liner service providers do not engage in anti-competitive behaviour.

139 Harper, *Competition Policy Review*, p. 40.

140 ACCC, *Proposed Class Exemption for Ocean Liner Shipping*. The ACCC has the power to make 'class exemptions', for eligible businesses to engage in conduct of a kind that might otherwise breach the competition provisions in Part IV of the CCA where it is satisfied that the conduct:

- would not have the effect or likely effect of substantially lessening competition, and and/or
- would result or be likely to result in overall public benefits.

141 In response to the discussion paper, 8 stakeholders made [submissions](#).

142 ACCC, *Ocean liner shipping class exemption*, ACCC website, accessed 6 October 2021.

143 ITF, *The Impact of Alliances in Container Shipping*, p. 17.

144 ITF, *The Impact of Alliances in Container Shipping*.

Major shipping lines have used their increased bargaining power to negotiate lower stevedore quayside charges and lower ECP fees. This has led to stevedores and ECPs moving to recover a greater share of their costs from transport operators (refer to chapter 5 for further discussion of stevedores' landside charges).

Cargo owners have stated that they have observed a decline in the level of competition between shipping lines over the past few years, even before the COVID-19 pandemic. Cargo owners also expressed concerns that shipping lines may be in position to charge higher freight rates due to greater bargaining power.

However, there does not appear to be evidence of shipping lines charging excessive freight rates before the pandemic. The global shipping supply-demand balance has a strong influence on freight rates.¹⁴⁵ In the several years prior to the COVID-19 pandemic, freight rates were relatively low. This is attributed to overcapacity in the liner sector and competition levels on certain trade routes. To some extent alliances used the building up of capacity to act as a strategic deterrence to new entrants, resulting in further overcapacity.¹⁴⁶

Freight rates increased in 2020. However, this appears to be initially due to the introduction of IMO 2020 (restrictions on the sulphur content for marine fuel), which increased fuel costs or required vessel modifications, and subsequently due to COVID-19 disruptions discussed in chapter 2.

The major shipping alliances can influence global shipping capacity to affect freight rates to some extent. Industry observers have found that at the start of the pandemic shipping alliances were able to quickly reduce overcapacity to prevent a sharp drop in global freight rates.¹⁴⁷ Shortly after that response, consumer demand surged and there was insufficient capacity in the market.

Cargo owners have also commented that shipping lines have the power to control the amount of shipping capacity available, resulting in increased costs for cargo owners. In peak shipping periods of the year when capacity is constrained, cargo owners may bid against each other to secure shipping capacity. Larger customers may be able to enter long-term contracts with shipping lines to access lower prices in return for a commitment to provide a minimum amount of cargo for a negotiated period of time. The ACCC understands however that the bargaining power of large alliances can make it difficult for even these larger customers to negotiate favourable rates.

The number of mergers and acquisitions slowed in 2020 due to the COVID-19 pandemic.¹⁴⁸ However, the market expects consolidations and agreements between shipping lines to pick up again from next year.¹⁴⁹ In December 2020, a new alliance was signed between 5 South Korean liner operators to operate services to Southeast Asia.¹⁵⁰

The 3 main alliances are likely to have influence over capacity and there is a risk that shipping lines could use this to manipulate container freight rates. For example, shipping lines may slow down the roll out of new ship orders and seek to manage capacity more actively.

However, it is unclear at this stage how material this risk is. There are significant market factors that influence shipping lines' decisions in relation to capacity. For example, if demand is difficult to predict, shipping lines may choose to accommodate possible unpredictable fluctuations in demand by operating too much capacity or operating 'just in time' capacity in line with the market's average demand.¹⁵¹

145 Drewry, [Container ship fleet forecast and maritime economic assessment \[PDF 1787KB\]](#), Infrastructure Victoria website, 1 March 2017, accessed 28 September 2021.

146 ITF, [The Impact of Alliances in Container Shipping](#).

147 S&P Global Platts, [Shipping alliances help container industry boost freight rates in coronavirus pandemic](#), SP Global website, 16 September 2020, accessed 30 September 2021.

148 International Cargo Express, [Shipping line mergers revealed: how they affect importers and exporters?](#), *ICE*, 22 January 2021, accessed 28 September 2021.

149 S Chambers, [Shipowner consolidation 2021: Pools in the limelight](#), *Splash* 247, 13 January 2021, accessed 5 October 2021.

150 Container News, [South Korea's K-Alliance to launch in 2021](#), *Container News*, 24 December 2020, accessed 28 September 2021.

151 L Jensen, [Restricting container capacity management comes with perils](#), *Journal of Commerce*, 14 September 2021, accessed 5 October 2021.

3.5 Privatisation of ports

Since the introduction of the ACCC's monitoring regime, there has been an increase in the number of ports that have been privatised in Australia. This includes the 3 largest container ports in Australia (Port of Brisbane in 2011, Port Botany in 2013, and Port of Melbourne in 2016) and 2 key bulk ports (Port of Newcastle and Port Kembla in 2013). Port Adelaide container port was also privatised in 2001.

The operation of privatised ports, including the level of economic regulation that would apply after privatisation, is generally negotiated between the new port manager and state governments at the time of privatisation. The ACCC considers that the privatised container ports in Australia were privatised without effective regulation being put in place. Several of the privatised container ports are subject to monitoring regimes:

- The Port of Melbourne is subject to limited price monitoring by the Essential Services Commission of Victoria. The monitoring applies to certain prescribed services specified under the Port Management Act 1995 (Vic).¹⁵²
- The Port of Adelaide, operated by Flinders Ports Pty Ltd, is subject to pricing and access regulation by the Essential Services Commission of South Australia (ESCOSA). ESCOSA is authorised to monitor prices and make price determinations relating to essential maritime services.¹⁵³
- In NSW, a price monitoring regime has been established. It includes a requirement by the lessee to publish port service charges and give notice of any proposed change to charges. The regime applies to Port Botany and Port Kembla.¹⁵⁴
- In Queensland, there is currently no specific prices oversight regime applying to the Port of Brisbane.¹⁵⁵

Container ports in Australia are regional monopolies and, in the absence of appropriate regulatory oversight, can extract monopoly rents from port users who are unable to choose to go to an alternative port.

There can be benefits to privatisation such as greater cost efficiencies and the private port owner has a commercial interest in the commercial success of all its tenants. These efficiencies and benefits are likely, at least in part, to be passed through to the tenants, including the container terminals.

Market participants have informed the ACCC that land rents at some privatised ports have increased significantly since privatisation. For example, stevedores have publicly stated that the imposition of terminal access charges in 2017 was partly due to significant increases in port rents.¹⁵⁶ Stevedores and other port operators pass on the higher land rents to their customers, the shipping lines and transport operators, which in turn pass on those costs to cargo owners.

Refer to chapter 4 for further discussion of the ACCC's analysis of the benefits and costs of privatised container ports in Australia.

3.6 Growing imbalance of empty containers

Australian trade has historically had a level of imbalance in empty containers as there are more imports of containerised goods than exports. Australia's exports are predominantly commodities exported in bulk or in food grade containers, rather than consumer goods. The population growth in Australian capital cities has driven growth in imports at a much faster rate than exports.

152 Essential Services Commission, '[Our role in administering the Port of Melbourne regulatory regime](#)', n.d., ESC website, accessed 12 October 2021.

153 Essential Services Commission of South Australia, '[Ports Overview](#)', ESCOSA website, n.d., accessed 5 October 2021.

154 Part 6 of the *Ports and Maritime Administration Act 1995* (NSW) No 13.

155 However, the Queensland Competition Authority has potential power to monitor prices and report to the Queensland government (under section 10 of the *Queensland Competition Authority Act 1997* (Qld)).

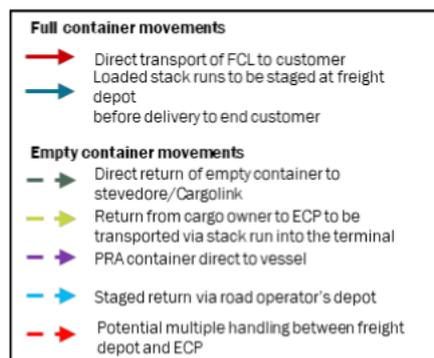
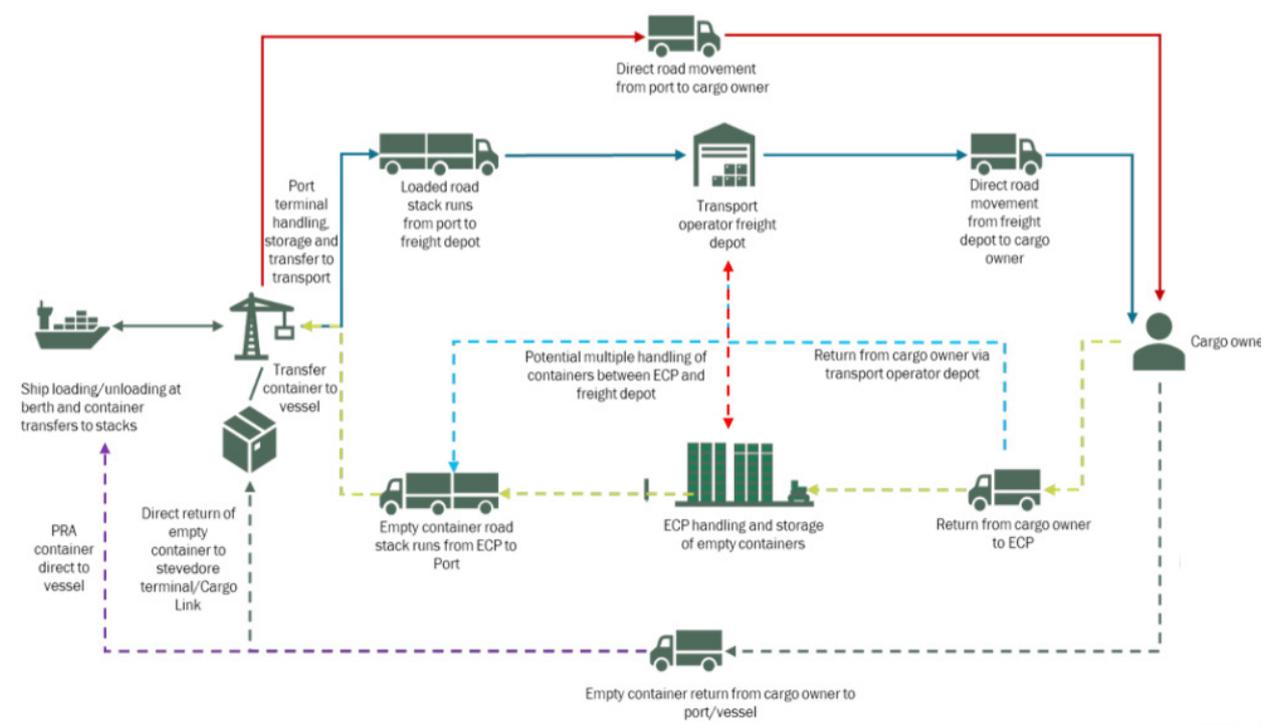
156 R McKay, '[DP World to impose major port access charges](#)', *Australasian Transport News*, 6 March 2017, accessed 28 September 2021.

Growing imbalance of empty containers has increased demand for empty container parks

Australia has a higher imbalance between imports and exports compared to many overseas markets which results in a higher requirement to store empty containers.¹⁵⁷ In Australia, dedicated empty container parks (ECPs) play a greater role compared to many international ports, which rely more heavily on container stevedores' terminals for storage of empty containers for return to overseas markets.

Figure 3.1 shows the movement of containers by road once unloaded from a ship, and the role of ECPs.

Figure 3.1: Movement of empty containers by road



Source: Strategic review of the Victorian Empty Container Supply Chain, September 2021.

157 Transport for NSW, [NSW Empty Container Supply Chain Study](#), Transport for NSW website, 5 May 2020, accessed 23 September 2021, p. 11.

From the stevedore terminal, full containers can either be:

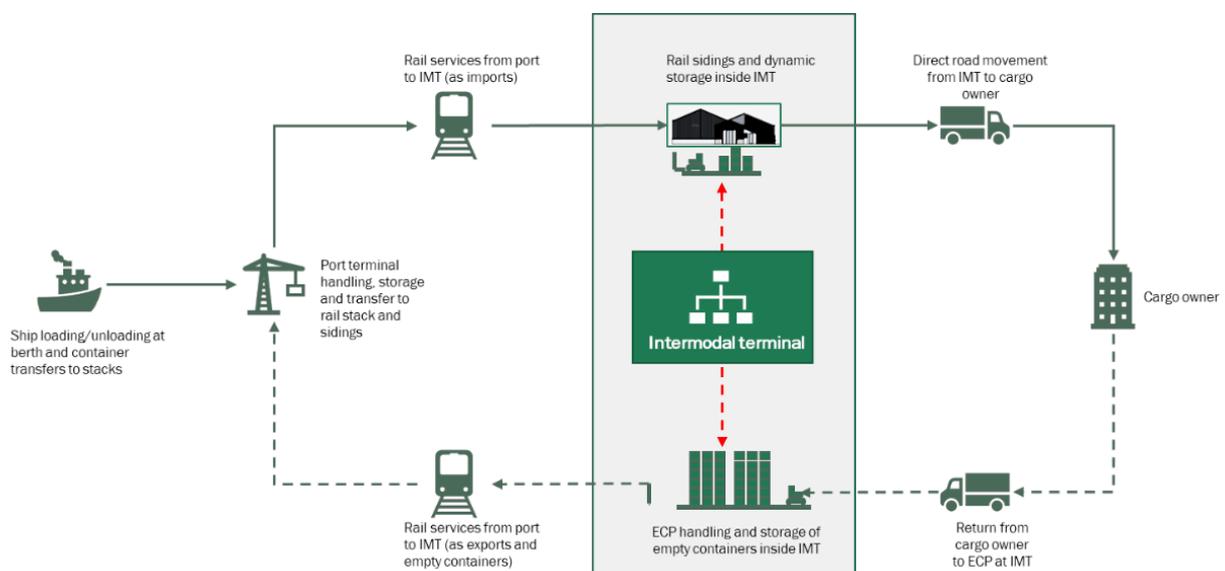
- directly transported to the cargo owners' premise, or
- transported to the road transport operator's depot to be stored before being transported to the cargo owner (staging).

Once containers are unloaded at the cargo owner's premises, the empty container must be returned (or 'de-hired'). There are 2 'de-hire' pathways:

- transport to an ECP and store before transporting to the stevedore terminal, or
- directly return empty containers to a holding area in the stevedore's terminal.

Where there are rail services from port, such as at Port Botany, the main difference from road is the rail connection to an intermodal terminal. The intermodal terminals generally collocated with warehousing, freight forwarding, import and export (IMEX) and ECP facilities.¹⁵⁸ This is shown in figure 3.2.

Figure 3.2: Movement of empty containers by rail



Source: NSW Empty Container Supply Chain study, May 2020

Shipping lines will direct an importer to the location where the empty container must be de-hired. The importer will have to arrange this through their transport operator within a set time frame (typically 7 days) from when the full container was discharged by the stevedore. If importers fail to 'de-hire' containers at the specified location and within the set time allotted, they may be liable to detention fees from shipping lines.

NSW's Empty Container Study last year found that importers often agree to standard de-hire periods because of various factors, including a limited ability to negotiate with shipping lines. However, large freight customers have greater bargaining power and can often negotiate more favourable de-hire terms.¹⁵⁹ Competition between transport operators allows importers to place responsibility for timely return of empty containers onto transport operators.¹⁶⁰

The process of container triangulation is an alternate pathway that allows re-use of surplus empty container for export purposes. Shipping lines direct emptied import containers to local exporters to be filled and loaded onto a vessel. This reduces transport costs for cargo owners and reduces empty container storage requirements. However, this process requires the cargo owners or third-party

158 Transport for NSW, [NSW Empty Container Supply Chain Study](#).

159 Nine Squared, [Strategic Review of the Victorian Empty Container Supply Chain](#), Victorian Department of Transport website, September 2021, p. 18.

160 Transport for NSW, [NSW Empty Container Supply Chain Study](#), p. 26.

logistics operators to ensure empty containers are inspected, repaired and cleaned so that they are fit for purpose for export cargo.¹⁶¹

For shipping lines, directly returning empty containers to container terminals is generally more cost efficient than at an ECP. Shipping lines can save costs by reducing container handling and reducing coordination of stevedores, truck operators and ECPs. By storing more empty containers at stevedore facilities, shipping lines are also able to have unplanned evacuations of empty containers using surplus capacities on their ships.

In previous years, some stevedores told the ACCC that the direct return of empty containers to the terminals by shipping lines becomes less cost effective for the stevedores as container volumes increase.¹⁶² This is because there is limited space at the terminals, so increase in the number of containers being stored at the terminal increases congestion.

Market participants have told the ACCC that the growing imbalance of empty containers has meant that there is insufficient capacity at terminals for direct de-hire and more containers need to be stored at ECPs.

Direct returns to terminals can result in other additional costs incurred by transport operators. Slots at stevedore terminals are in much higher demand compared to slots at ECPs and available slots may not always be operationally suitable to transport operators. If there is a significant gap in time between when the transport operator collects the empty container from the cargo owner and the de-hire slot at the terminal, the transport operator may have to store or 'stage' the container at their depot until the de-hire slot at the stevedore becomes available. According to transport operators, staging results in them incurring significant administrative and handling costs. To avoid these costs, transport operators prefer to drop off containers at ECPs, which further increases demand for ECPs.

Shortage of capacity at empty container parks is contributing to congestion

ECPs are used by shipping lines (who own the containers) to ensure the efficient storage, maintenance, cleaning and as required, the repair of empty containers. ECPs typically have contracts with multiple shipping lines and allocate space for each shipping line for the storage of empty containers. Shipping lines pay the ECP operators for lifts in and out of the parks, storage, cleaning and maintenance/repair of the containers if applicable.¹⁶³

The major ECP operators in Australia are Qube Logistics, Patrick Terminals, and ACFS Port Logistics. Melbourne has 15 ECPs, with a greater amount of storage capacity located outside of the port precinct compared to other ports.¹⁶⁴ Sydney has 13 ECPs with most capacity within the immediate vicinity of Port Botany. Brisbane has 3 ECPs located at the port providing 80% of Brisbane ECP capacity, and Fremantle has 85% of its ECP capacity located at the port.¹⁶⁵ In Melbourne, 4 of the largest shipping lines (Maersk/HamburgSud, COSCO, CMA CGM ANL and MSC) own ECPs or exclusively use specific ECPs to store their containers.¹⁶⁶

In May 2020, NSW's Empty Container Supply Chain study found that there was insufficient ECP capacity in Sydney to manage the cycles in demand. ECP storage capacity in Sydney has been largely fixed since 2015 at around 58,000–60,000 TEUs.¹⁶⁷ A shipping line stated to the ACCC that extra capacity being added to Sydney is not enough to service the growing market.

The Victorian Empty Container Supply Chain Strategic Review Report found that capacity limitations strongly influence issues currently being experienced in the supply chain. In contrast to NSW, market participants in Victoria did not see the need for additional ECP capacity to cater for fluctuations in

161 Nine Squared, [Strategic Review of the Victorian Empty Container Supply Chain](#), p. 17.

162 ACCC, [Container Stevedoring Monitoring Report 2018-19](#), ACCC website, 6 November 2019, p. 38.

163 Port of Melbourne, [Port of Melbourne 2020 Container Logistics Chain Study](#), Port of Melbourne website, July 2021, accessed 20 September 2021, p. 48.

164 Nine Squared, [Strategic Review of the Victorian Empty Container Supply Chain](#), pp. 47-48.

165 Transport for NSW, [NSW Empty Container Supply Chain Study](#), p. 37.

166 Nine Squared, [Strategic Review of the Victorian Empty Container Supply Chain](#), p. 12.

167 Transport for NSW, [NSW Empty Container Supply Chain Study](#), p. 12.

demand.¹⁶⁸ Those participants suggested that recent congestion was driven by short-term factors (COVID-19, industrial action) and impacts on the ability of shipping lines to evacuate empty containers.

However, longer-term commercial factors and operational practices have exacerbated the impacts of the more recent issues. These longer-term issues include the trend in larger vessel sizes (as discussed above) which increases the number of containers being moved into terminals and creates additional challenges in managing empty containers. Other issues include mismatch of operating hours across the supply chain, redirections, and insufficient information provided by ECPs to transport operators. The report considered the impact of issues in Victoria does not appear as significant as in Sydney, however, these issues are increasing supply chain costs and will continue to pose challenges into the foreseeable future.

The longer-term issues related to empty container storage capacity are creating congestion and delays across the supply chain, leading to higher costs. Transport operators have stated in the media that many major ECPs have reached operational capacity.¹⁶⁹ Transport operators have said that occupied container parks cause delays in import container de-hires, difficulties in accessing export containers, truck queuing and added landside logistics costs. A redirection of containers for de-hire from one ECP facility to another facility results in a time delay of at least 24 hours or longer for transport operators to manage and can end up breaching the detention time imposed by the shipping line.¹⁷⁰

It appears that additional ECP capacity and reconsideration of empty container management will be required to handle the increased volumes of containers. However, there are difficulties in expanding ECP capacity. ECPs are preferred near the port to reduce transport costs and save time. It can also allow 'just in-time' delivery of empty containers to the port if shipping lines determine spare capacity on a departing vessel. It can be difficult to acquire available and large allotments of land suitable for ECPs at, or near, the port.

According to NSW Ports' study, even though the volume of empty containers is forecast to grow, in the long-term it is not sustainable to develop additional empty container storage capacity located at the limited area of land space at port.¹⁷¹ Another issue for new ECPs may be the business model. Industry has noted that empty container storage has traditionally been a low margin component of supply chain operations and challenging to operate as a standalone business.¹⁷²

168 Nine Squared, [Strategic Review of the Victorian Empty Container Supply Chain](#), p. 27.

169 Australasian Transport News, '[Melbourne Container Congestion Ramping Up: CTAA](#)', *Australasian Transport News*, 18 January 2021, accessed 28 September 2021.

170 Australasian Transport News, '[Melbourne Container Congestion Ramping Up: CTAA](#)'.

171 Transport for NSW, [NSW Empty Container Supply Chain Study](#).

172 Transport for NSW, [NSW Empty Container Supply Chain Study](#).

Industry and State governments are taking steps to address congestion

Industry and State governments are working on measures to address empty container congestion.

Shipping lines consider the movement of empty containers as a longer-term challenge for their business and are working to develop solutions. Shipping lines may seek to improve scheduling to collect empty containers or allocate 'sweeper vessels' that only collect empty containers. The cost of chartering extra ships to clear the backlog of empty containers has become significantly more expensive than a year ago, and industry observers consider the situation could last for up to 3 years.¹⁷³ Industry has noted that diverting a vessel to evacuate empty containers can forgo a significant freight revenue for the journey in addition to additional time waiting to berth if the port is congested.¹⁷⁴

Shipping lines are also investing in development of collapsible containers, which may allow containers to be collapsed down to a quarter of its original size. This would enable parties to collapse and combine 4 empty units to form a single container, drastically improving the efficiency of shipping and storing empty containers.¹⁷⁵

The NSW Empty Container study recommended voluntary industry actions such as extended de-hire periods by shipping lines and extended ECP operating hours. The study also recommended ECPs performance measures and increased transparency by ECPs on capacity, demand, dwell time throughput and utilisation.

Freight Victoria also commenced an Empty Container Park study earlier this year to examine similar issues in Victoria.

The Port of Melbourne recently signed a short-term agreement with logistics company Qube to free up ECP space within the Swanson Dock precinct. Allocation of the 60,000-square-metre site, operational immediately under Qube's management, adds capacity for up to 9,000 20-foot equivalent units (TEU).¹⁷⁶

Port Botany introduced an Empty Container Incentive Scheme from 1 July 2021. The scheme aims to encourage the shipping industry to achieve a balance of imports and exports to avoid the build-up of empty containers in greater Sydney. NSW Ports noted that the root cause of empty container congestion in NSW is the imbalance in the ratio of the number of (full and empty) containers loaded (for export) relative to the number of containers discharged (for import). This is known as the Load/Discharge ratio (L/D ratio).¹⁷⁷ NSW Ports will charge a higher empty container wharfage charges for sub-optimal L/D ratios and wharfage rebates if L/D ratios are one for one or better (that is, equal or greater exports relative to imports).

173 J Greber, H van Leeuwen, E Connors and M Smith, '[Why Australia is running low on timber, cars and pianos](#)', *AFR*, 21 May 2021, accessed 5 October 2021.

174 Daily Cargo News, '[Shipping companies lead the fight against empty container build-up](#)', *Daily Cargo News*, accessed 30 September 2021.

175 Australian Trade and Investment Commission (Austrade), '[World-first collapsible shipping container goes global](#)', Austrade, n.d., accessed 5 October 2021.

176 Australasian Transport News, '[Qube and Melbourne Port seal container park agreement](#)', *Australasian Transport News*, 9 February 2021, accessed 30 September 2021.

177 NSW Ports, '[Empty Container Incentive Scheme \(ECIS\) Factsheet](#)', NSW Ports website, 21 May 2021, accessed 30 September 2021.

3.7 Vertical integration across the supply chain

Market participants have informed the ACCC that over the past few years there has been increasing vertical integration across the container supply chain.

Some logistics operators have acquired interests in stevedores and ECPs. For example, in 2016, Qube Holdings acquired a 50% interest in Patrick Terminals and, in 2018, it acquired Maritime Container Services Pty Ltd (empty container park) at Port Botany. Some transport operators expressed concerns that this could result in Qube Holdings receiving preferential treatment from its related companies.

In addition, some global container shipping lines have been moving into landside logistics.¹⁷⁸ For example, in Australia, in 2019, MSC acquired Integrated Container Logistics, which is a provider of specialised container transport, warehousing, distribution and storage solutions at Fremantle Port.¹⁷⁹ In the same year, A.P. Moller-Maersk, an integrated shipping and container logistics company, signed a 10 year lease on a warehouse and container park at Salta Properties' Altona intermodal port.¹⁸⁰ Shipping lines have said that acquisitions of logistics businesses can allow them to achieve efficiencies in their operations and reduce operational complexities.

Freight forwarders have informed the ACCC that some vertically integrated shipping lines are only offering shipping capacity to cargo owners if they also take up their logistics services. Freight forwarders are concerned that this may squeeze independent small and medium freight forwarders for landside logistics, warehousing and customs clearance services out of the market.

The ACCC does not regard vertical integration of itself as a competition concern. It can lead to greater efficiencies and lower costs for customers due to synergies in related services. However, where there is an absence of sufficient competition in the upstream or downstream market, vertical integration can provide the incentive and ability for a firm to establish and maintain a dominant position. A vertically integrated firm could then use this dominant position to discriminate against upstream or downstream competitors, or favour its own related entities, to the detriment of end users. The ACCC can enforce the general competition provisions of the CCA where evidence is available indicating that potentially illegal anti-competitive behaviour, including abuse of market power, may have occurred.

178 Fitch Ratings, '[Container Shipping Shifts to Vertical Integration](#)', Fitch Ratings website, 19 June 2019, accessed 30 September 2021.

179 S Thompson, A Macdonald and T Boyd, '[Shipping bigwig sets foot on land with WA logistics acquisition](#)', *AFR*, 27 October 2019, accessed 28 September 2021.

180 S Johanson, '[Salta boosts container handling at Altona site](#)', *The Sydney Morning Herald*, 21 August 2019, accessed 5 October 2021.

4. Financial performance of stevedores

The ACCC commenced monitoring the Australian container stevedoring industry in 1998–99. During the first 15 years of monitoring, the stevedoring industry was largely comprised of a duopoly between Patrick and DP World.¹⁸¹ Throughout that period, the ACCC regularly raised concerns about the lack of competition between the 2 stevedores and the impact this had on the supply chain. The ACCC was most concerned about:

- sustained high profit margins earned by the 2 stevedores
- lack of investment in infrastructure, particularly capacity, by the 2 stevedores
- lack of incentives for stevedores to efficiently respond to the requirements of their customers.

The ACCC also expressed some concerns about lack of timely investment being made by government owned ports.

Over the past 10 years, there has been several concurrent market developments across the entire supply chain:

- increased competition between stevedores following entry by Hutchison (Brisbane in May 2013 and Sydney in November 2013) and VICT (Melbourne in April 2017)
- consolidation of shipping lines and increase in size of ships (discussed in chapter 3)
- privatisation of the largest container ports in Australia (discussed in chapter 3).

This chapter will examine how these market developments have impacted on:

- stevedores' profitability
- the level of investment by stevedores
- stevedores' costs.

The financial information in this chapter, and the broader report, only relates to stevedoring operations. The financial figures throughout the report are presented in real terms with values in 2020–21 dollars.¹⁸²

4.1 Stevedores' profitability has fallen over the past 10 years and varies significantly across ports and across stevedores

The ACCC monitors stevedores' financial performance to assess whether their returns are reflective of the cost of capital, accounting for the long-term nature of their investments and the industry risk. If their returns are excessive, this would indicate that stevedores are exercising market power to charge excessive prices and/or providing lower quality service. This would cause harm to Australian consumers and, given the role of the supply chain, the Australian economy more broadly.

This section discusses how stevedores' profitability has changed over the course of the ACCC's monitoring period and what the current level of stevedores' profitability indicates about the current dynamic in the sector.

181 DP World was previously known as P&O Ports. In 2006, DP World acquired the port terminal business of P&O's global operations. P&O became DP World in 2010. For details, see [DP World's history](#).

182 Deflator series derived from the ABS CPI (cat. no. 6401.0, tables 1 and 2, Index Numbers; All Groups CPI; Australia). Base year for the ACCC deflator series is 2020–21.

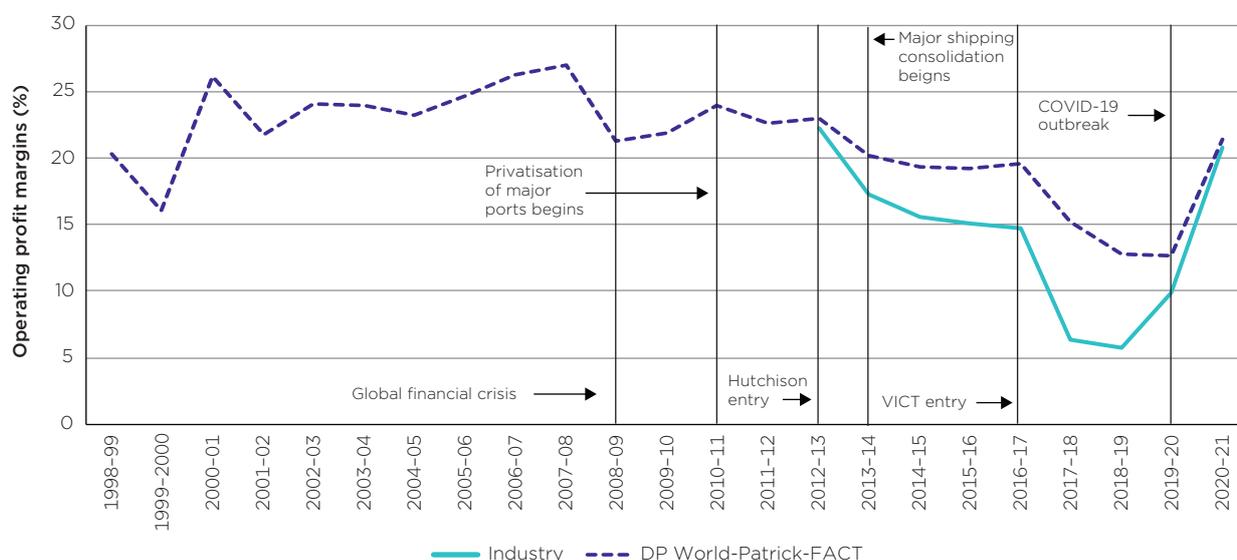
Stevedores' profitability has fallen over the past 10 years due to increased competition and other market developments

The ACCC has been using several measures to monitor stevedores' profitability – operating profit margin and return on average tangible assets. Both metrics show a similar trend over time, so for the purpose of this report, the ACCC will focus on changes in operating profit margin.

The ACCC calculates operating profit margin by taking a ratio of earnings before interest, tax, and amortisation (EBITA) relative to total revenue. This isolates the effects of variation in operational size and scale among stevedores and allows a broader assessment of the industry's operating profitability.¹⁸³

Figure 4.1 illustrates how aggregate operating profit margin of all 5 stevedores and aggregate operating profit margin of the 3 incumbents (DP World, Patrick and FACT) has changed during the ACCC's monitoring period.¹⁸⁴

Figure 4.1: Aggregate operating profit (EBITA) margins (industry vs. 3 incumbents): 1998-99 to 2020-21



Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

Figure 4.1 shows that the industry operating profit margin was relatively steady from 2000-01 to 2012-13, ranging between 22% and 25% in most of the years. In its monitoring reports during this period, the ACCC raised concerns about stevedores' sustained high profitability.

The ACCC is aware that stevedoring is a capital intensive, high risk business, characterised by large fixed costs and economies of scale. However, the ACCC considered that the stevedores' level of profit before 2012-13 was likely to be excessive, even in comparison to similar businesses. For example, in 2012-13 monitoring report, the ACCC found the stevedoring industry rates of return were significantly above the average of industrial-related companies listed on the Australian Stock Exchange.¹⁸⁵

Figure 4.1 shows that in the period between 2012-13 and 2019-20, the aggregate operating profit of incumbent stevedores fell significantly, dropping to 12.7% by 2019-20. Both Hutchison and VICT incurred substantial losses during their initial start-up period. Because of this, the aggregate operating profit of all 5 stevedores fell even more, reaching 5.8% in 2018-19.

Figure 4.1 shows that there was a substantial jump in stevedores' profitability in 2020-21. The ACCC considers that this is largely due the COVID-19 pandemic driving a significant, and unexpected, surge

¹⁸³ Return on average tangible assets is another profitability measure that indicates stevedores' operating profits relative to the value of their deployed tangible assets. For details, please refer to Appendix figure A1.

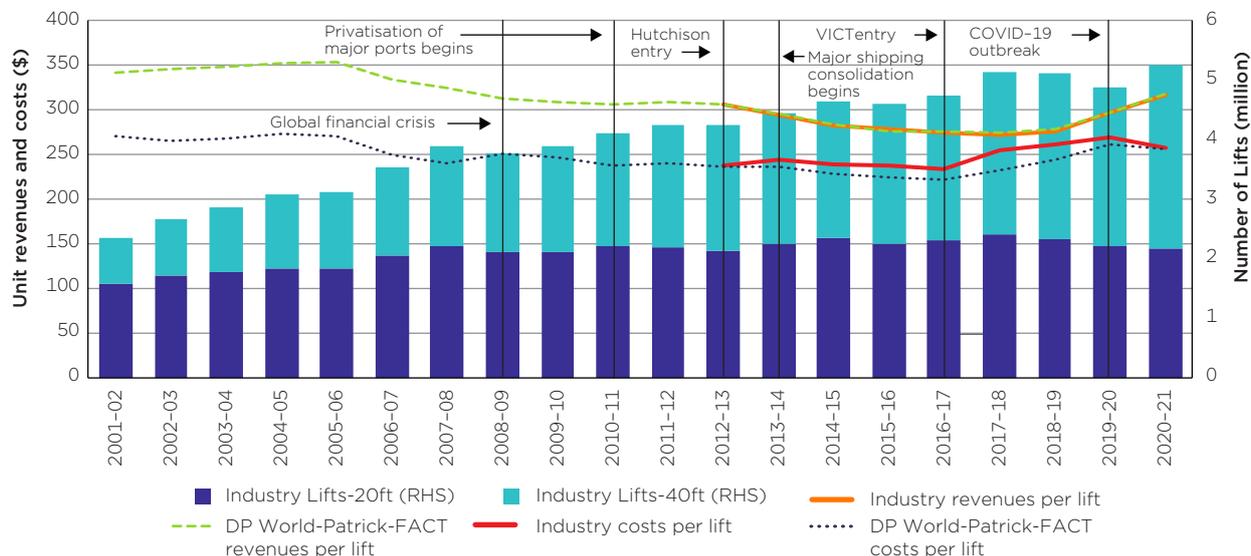
¹⁸⁴ The ACCC exempted VICT from providing data for the 2016-17 as it commenced operation in the last quarter of the financial year, in April 2017. VICT commenced reporting its data in full for the 2017-18 monitoring program.

¹⁸⁵ ACCC, [Container stevedoring monitoring report no.15](#), ACCC website, October 2013, accessed 13 October 2021, p. 56.

in throughput. The number of container lifts increased by 7.8% in 2020–21, after dropping by 4.4% in the previous year. The ACCC will continue to monitor this.

The ACCC has examined how stevedores’ revenues and costs have changed over time, to understand the drivers behind the observed trends in stevedores’ profitability. Figure 4.2 shows how revenues per lift¹⁸⁶, costs per lift and the total number of lifts have changed over the past 20 years.¹⁸⁷

Figure 4.2: Unit revenues, unit costs and number of lifts: 2001-02 to 2020-21



Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

Note: Real values in 2020–21 dollars.

Figure 4.2 shows that, in the period between 2001–02 and 2012–13, the gap between the revenues per lift and costs per lift of the incumbents was relatively stable. As a result, the operating profit margin was also relatively constant in that period, as observed earlier. However, the gap between the revenues per lift and costs per lift narrowed in the period between 2012–13 and 2019–20, both for the incumbents and the industry as a whole.

Several concurrent drivers impacted on revenues and costs of the stevedores. The most significant factor was the increase in competition between stevedores following entry of Hutchison and VICT. The incumbent stevedores responded to new entry in a number of different ways, and this impacted on their revenues and costs.

First, new entry increased competition between stevedores for shipping line services. Prior to 2012–13, the ACCC commented in its reports that it was rare to see shipping lines switching stevedores in Australia, reflecting the lack of competition at the time. However, this has changed after 2012–13. Several stevedores have reported that they won or lost around 20 shipping contracts over the last 5 years.

As the ACCC previously reported, the increased competition resulted in incumbents offering discounted quayside charges to shipping lines to maintain their volumes.¹⁸⁸ At the same time, consolidation in the shipping industry increased the bargaining power of the shipping lines (as discussed in chapter 3), which also adversely affected stevedores’ bargaining position and further intensified competition for shipping line services. This resulted in significant fall in stevedores’ quayside charges and, therefore, quayside revenue per lift (as shown in figure 5.2 in chapter 5).

Prior to 2017, stevedores recovered most of their revenue through quayside charges. The fall in quayside charges in the period between 2012–13 and 2017–18 therefore resulted in a decline in their overall revenue per lift (as seen in figure 4.2). Stevedores responded to rapidly falling quayside charges

186 Revenue per lift is a proxy for the overall price charged by the stevedores.

187 The ACCC does not have data on container lifts prior to 2001–02. Refer to A2 to A5 in Appendix A for more details.

188 ACCC, [Container stevedoring monitoring report 2016–17](#), ACCC website, October 2017, accessed 13 October 2021, p. 8.

by increasing landside charges, particularly terminal access charges (TAC). This led to the rebound in revenue per lift from 2018–19.

Second, increased competition between stevedores also led to incumbents losing market share to new entrants. Given that a large proportion of stevedores’ costs is unrelated to throughput, the fall in revenue of incumbents due to lost market share was greater than the offsetting fall in costs of providing stevedore services.

Third, the incumbents made substantial investments in equipment and expansion of capacity following new entry (discussed in more detail in section 4.2 below). This also contributed to the increase in their costs.

In the same period, several other developments in other parts of the supply chain contributed to an increase in equipment and property-related costs of the stevedores. As discussed in section 4.3 below, stevedores’ land rents have grown rapidly following privatisation of the largest container ports in Australia.

Further, as discussed in chapter 3, there has been a significant increase in the size of ships. To service larger ships visiting Australia, stevedores upgraded their equipment, sometimes earlier than expected. For example, some stevedores retired older cranes before the end of their useful life and acquired new cranes that are capable of servicing larger ships.

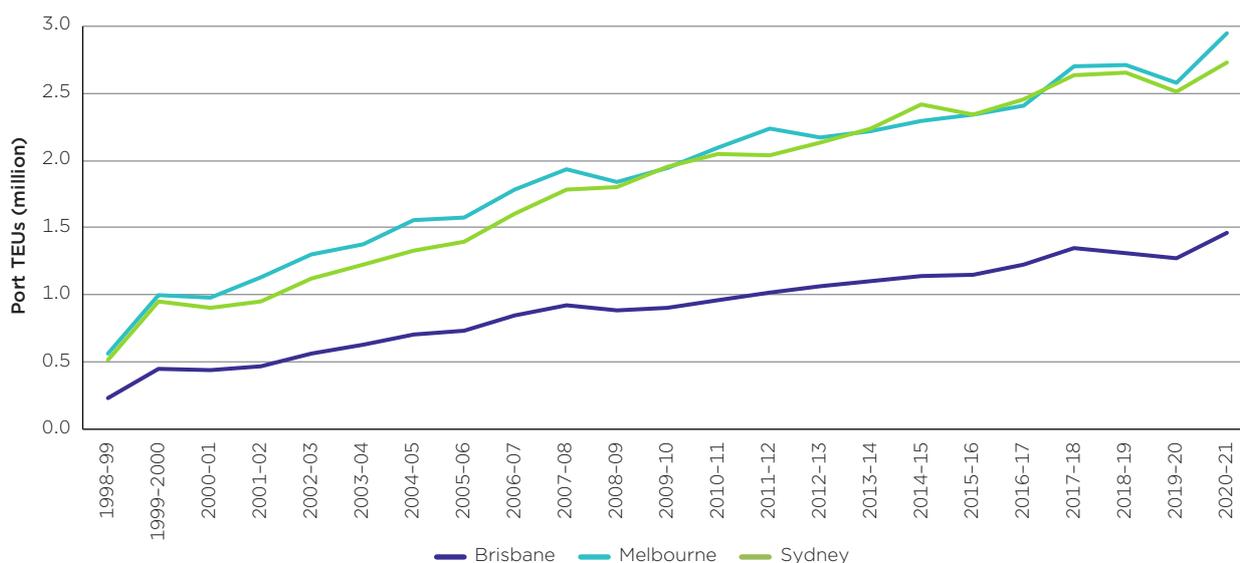
This section shows that the incumbent stevedores’ profitability declined in the 7 years prior to the COVID-19 pandemic due to increased competition and other industry developments.

To understand the current market dynamics and whether new entry has been a success, the ACCC has examined stevedores’ performance in the 3 ports in which there was entry by Hutchison (Brisbane and Port Botany) and VICT (Melbourne). This is discussed in the section below.

Stevedores’ recent profitability is not indicative of excessive returns and varies significantly across ports as well as stevedores

The largest container ports in Australia are in Melbourne, Sydney and Brisbane. Figure 4.3 shows the throughput (in TEU) at these 3 ports during the ACCC’s monitoring period.

Figure 4.3: Throughput (TEU) at Melbourne, Sydney and Brisbane: 1998–99 to 2020–21

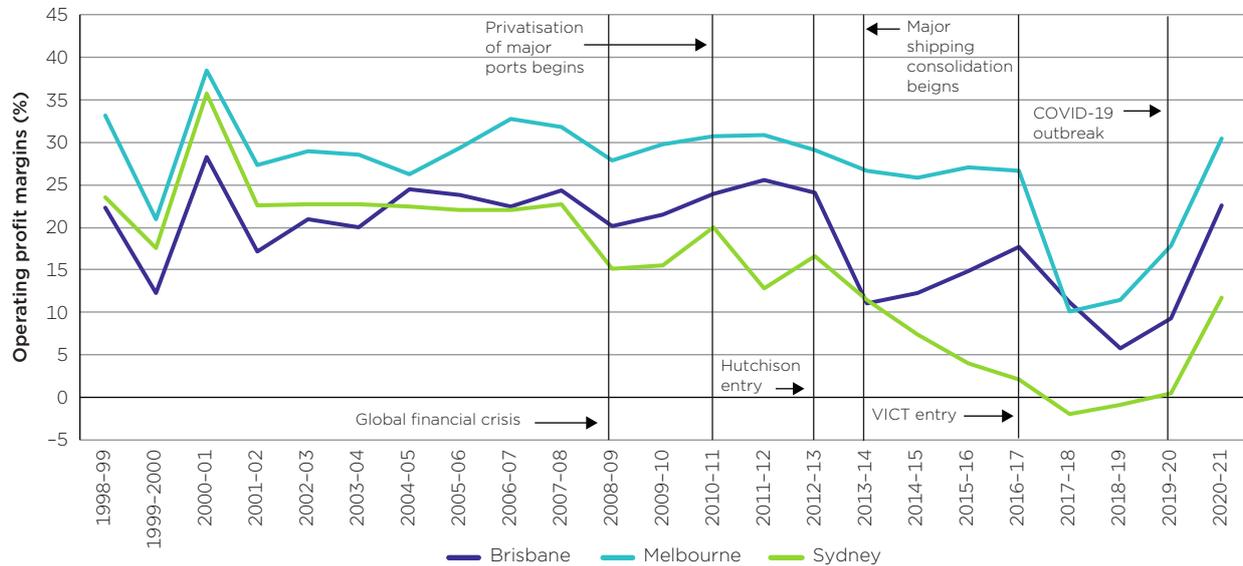


Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

Figure 4.3 shows that Melbourne and Sydney have handled similar volumes over the past 20 years, but Brisbane has generally handled about half the volume of the other 2 ports.

Prior to entry of Hutchison and VICT, stevedoring operations at each of these ports were provided by DP World and Patrick. Following entry of Hutchison and VICT, there are now 3 stevedores operating at each of these ports. Figure 4.4 shows stevedores' aggregate operating profit margins across these ports over the ACCC's monitoring period.

Figure 4.4: Stevedores' aggregate operating profit (EBITA) margins across ports at Melbourne, Sydney and Brisbane: 1998-99 to 2020-21



Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

Figure 4.4 shows that prior to entry of Hutchison and VICT, aggregate operating profit margins at each of these ports were relatively constant, with Melbourne being the most profitable port and Sydney typically the least profitable port of the 3 (due to higher labour, equipment and property costs across most of the period).

Figure 4.4 shows that entry of Hutchison and VICT had a material impact on the aggregate operating profit margins at each of the ports. Aggregate operating profit fell in Brisbane from 24.1% in 2012-13 to a low of 5.8% in 2018-19, in Sydney from 16.6% in 2012-13 to a low of -2.0% in 2017-18 and in Melbourne from 26.6% in 2016-17 to a low of 10.0% in 2017-18.

In part, the decreases in the aggregate figures in the chart reflect that the 2 new entrants incurred substantial losses during their initial start-up period, as was mentioned earlier. However, examination of the individual operating profit margins of DP World and Patrick shows that new entry has had a material impact on their individual operating profit margins at each port, for reasons discussed in the previous section. This is particularly apparent in Sydney, where, in aggregate, the 3 stevedores incurred operating losses in 2017-18 and 2018-19.

The data shows that stevedoring operations are not equally profitable across all container ports in Australia. DP World and Patrick operate at 4 of the 5 monitored ports (excluding Adelaide) and their individual financial performance varies substantially across those ports. There is also material difference in performance between the 5 stevedores in Australia. This is illustrated in box 4.1, which shows large disparity between the level of success of new entrants Hutchison and VICT to date.

In aggregate, despite the recent increase, the level of profitability of stevedores over the past 5 years does not appear to be indicative of stevedores earning excessive returns.

Box 4.1: Case study – has entry of Hutchison and VICT been a success?

Both Hutchison and VICT are subsidiaries of major international port operations and have utilised significant financial backing from their parent organisations. However, they have had a very different level of success following their entry into Australia.

Hutchison is yet to become sustainable

Hutchison began operating as the third stevedore at the Port of Brisbane in May 2013 and at Port Botany in November 2013. In response to Hutchison's entry, DP World and Patrick expanded their capacity at those ports and started to compete more aggressively for the services of shipping lines, as was mentioned earlier.

Hutchison was able to grow its market share to around 13% in both Sydney and Brisbane in the first few years but has only marginally improved its market share in the last 4 years. As a result, Hutchison is still struggling to achieve its break-even point after 8 years of operating in Australia. Hutchison has informed the ACCC that it has written off around \$400 million from its assets and, had it not done that, it would have been unlikely to make a positive return on its assets for the duration of its leases in Sydney and Brisbane (which end around 2040 and 2050 respectively).

Hutchison has commented that increasing bargaining power of shipping lines and industrial relations have made it more challenging for the company to improve its financial performance. Hutchison's quayside revenue per lift has fallen substantially over the past 8 years due to consolidations and alliances in the shipping sector (discussed in chapter 3).

Further, Hutchison stated that labour costs in Australia are extremely high compared to other parts of the world in which it operates and restrictive provisions in its EA are making it more difficult for Hutchison to reduce its operating costs. Box 6.1 in chapter 6 illustrates some of the most restrictive clauses in Hutchison's latest EA.

VICT rapidly gains market share in Melbourne due to competitive advantage

VICT began operating as a third stevedore in Melbourne in April 2017. It already started to make a positive return on its tangible assets, gaining nearly a third of Melbourne's market share by 2020–21.

VICT has entered in Melbourne as a fully automated operation, with fewer employees than at other container terminals. This means that its productivity is higher and it has lower labour costs compared to its competitors. However, it has higher equipment and property costs.

A key reason for its rapid success is the location of its terminal, which gives it a material competitive advantage over the 2 incumbents. VICT's Webb Dock terminal is located on the bayside of West Gate Bridge, so ships can access the terminal without having to pass under the West Gate Bridge. By contrast, to reach DP World's and Patrick's Swanston Dock, ships have to go up the Yarra River and under the West Gate Bridge.

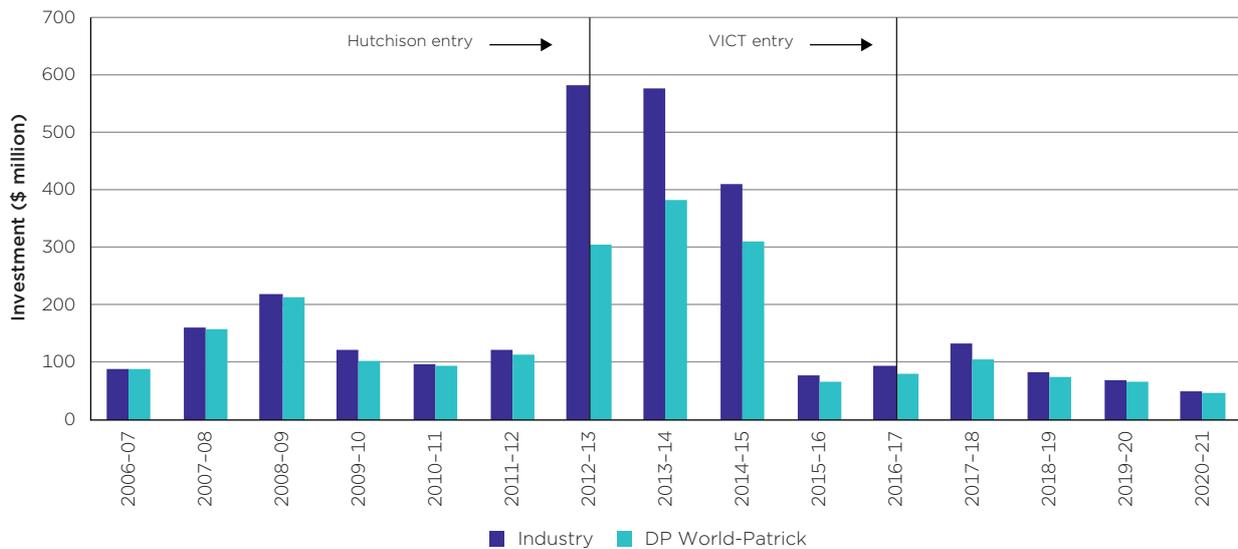
This gives VICT 2 advantages. First, ships can save time by using the VICT terminals, because they don't have to travel up and down the Yarra River. Second, as was mentioned in chapter 3, ships over a certain size cannot reach Swanston Dock due to the Westgate Bridge restrictions. This effectively makes VICT a monopoly in Melbourne for servicing vessels over a certain size.

4.2 Greater competition between stevedores has led to increased investment in equipment and infrastructure

Prior to 2012–13, the ACCC expressed concerns in its monitoring reports that stevedores did not adequately invest, particularly in expanding capacity of their terminals, due to a lack of competition between them. As discussed in previous sections, the state of competition between stevedores has improved following the entry of Hutchison and VICT.

Figure 4.5 shows the aggregate investment made by the 2 incumbents (DP World and Patrick) and all 5 stevedores over the past 15 years.

Figure 4.5: Aggregate investment (industry vs. 2 incumbents): 2006-07 to 2020-21



Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

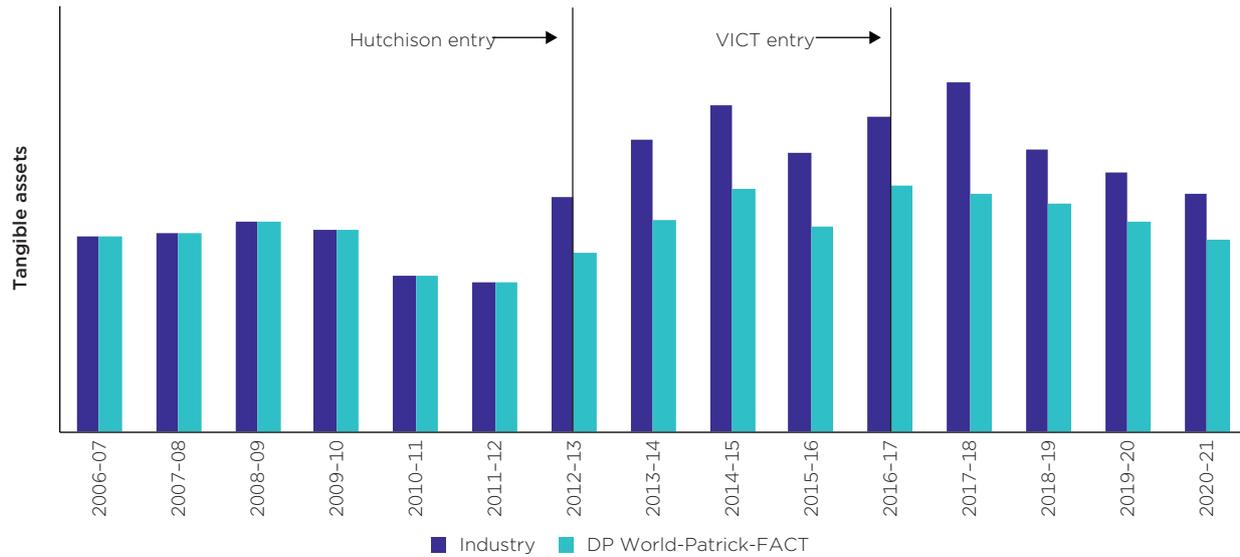
Note: Real values in 2020-21 dollars.

Capital investments in the industry tend to be ‘lumpy’. Figure 4.5 shows that there were several periods of notable investment growth, particularly in the period 2007–08 to 2008–09, and in the period 2012–13 to 2014–15. It is important to note that VICT made a \$550 million investment in its new terminal in Melbourne in 2016–17, but this is not depicted in figure 4.5.¹⁸⁹

To understand the nature of investments made in each period, it is helpful to examine how the investments affected the stevedores’ tangible asset base. Figure 4.6 shows how the aggregate tangible asset base of the incumbents and all 5 stevedores changed over the past 15 years.

¹⁸⁹ The ACCC exempted VICT from reporting its data in 2016–17.

Figure 4.6: Aggregate tangible asset base (industry vs. 3 incumbents): 2006-07 to 2020-21



Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

Note: The vertical axis of the chart is intentionally left blank to maintain confidentiality. Asset values were adjusted for write-down in the value of Hutchison’s assets in 2015-16, 2018-19 and 2020-21.

Figures 4.5 and 4.6 show that, while there was a spike in investment in the period 2007-08 to 2008-09, this did not result in the growth of the aggregate tangible asset base. This indicates that the bulk of the investment made in that period was to upgrade or replace existing equipment.

Figure 4.5 shows that there was a large spike in investment in the period 2012-13 to 2014-15. Hutchison invested about \$600 million to start its stevedoring operations in Sydney and Brisbane, Patrick invested around \$700 million, and DP World invested \$300 million.

Figure 4.6 shows that investments by incumbents led to a large expansion to their aggregate tangible asset base. This shows that DP World and Patrick increased capacity of their terminals in Brisbane and Sydney and invested in technological upgrades following entry of Hutchison. DP World informed the ACCC that, at the time, it invested heavily toward semi-automation at its Brisbane terminal, while Patrick informed the ACCC that it also invested in semi-automation at its Port Botany terminal.

Figures 4.5 and 4.6 also show that the incumbent stevedores made further investments that expanded their asset base following entry of VICT. DP World and Patrick informed the ACCC at the time that they invested heavily in infrastructure to handle larger ships and improve landside operations at their Melbourne terminals.

The entry of Hutchison and VICT has had a notable impact on the level of investment by stevedores in Melbourne, Sydney and Brisbane. There has not been the same level of investment at the other 2 monitored container ports in Australia, although at least in part this is due to their smaller throughput.

4.3 Following privatisation, the ports have become more dynamic but the land rents at Port of Melbourne have grown rapidly

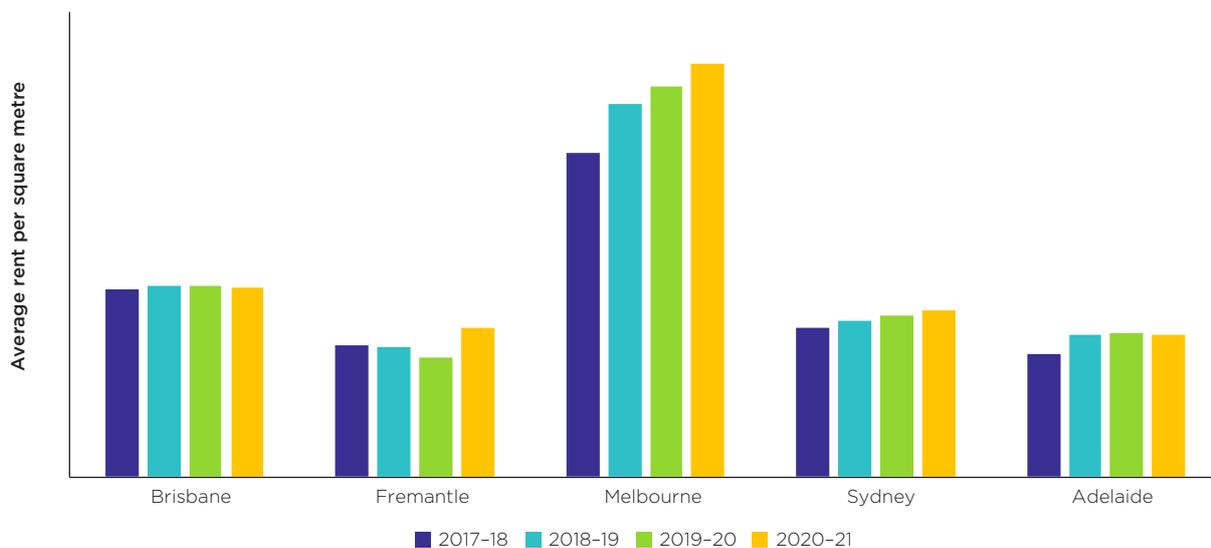
Ports are the landlords of the container stevedores. As discussed in chapter 3, over the past decade, the 3 largest container ports in Australia – Melbourne, Sydney and Brisbane – have been privatised by state governments through long-term leases. As expected, private owners of ports have behaved in a more commercial manner than the previous government owners. This appears to have brought both benefits and costs to tenants and other port users.

A private owner has an incentive to pursue greater cost efficiencies and dynamism in relation to enhancing the value of the port. In particular, privatisation appears to have had a positive impact on the timeliness of port investments and the ports appear to be more actively responding to the needs of their customers. Private owners will also place a greater emphasis on cost recovery and will have an incentive to exercise monopoly power. Both these tendencies can lead to increases in rents to tenants, including container terminals, especially soon after privatisation.

Some of the stevedores have informed the ACCC that privatisation of ports has led to substantial increases in their property costs. The ACCC does not have data on land rents paid by stevedores prior to 2017-18, as the specific rent data was not collected prior to this date. Therefore, the ACCC is not in position to comment on how the land rents changed immediately following the privatisation of each container port.

However, the ACCC can compare the aggregate land rents per square metre across all the container ports and how they have changed since 2017-18. This is shown in figure 4.7.

Figure 4.7: Aggregate land rents per square metre: 2017-18 to 2020-21



Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

Note: The vertical axis of the chart is intentionally left blank to maintain confidentiality.

Figure 4.7 shows that the Port of Melbourne has by far the highest aggregate land rents per square metre of the 5 container ports – more than double that of Brisbane, which is the next highest.

As the ACCC previously reported, VICT in Melbourne is paying the highest land rates of all container stevedores in Australia. As mentioned in box 4.1, the location of VICT's terminal gives it a competitive advantage over the other 2 terminals in Melbourne. As a result, VICT is paying a substantial premium compared to the rents paid by other stevedores in Melbourne.¹⁹⁰

Table 4.1 shows how much the aggregate land rents per square metre have changed at each port over the past 4 years.

Table 4.1: Percentage change in aggregate land rent per square metre: 2017-18 to 2020-21

	Brisbane	Fremantle	Melbourne	Sydney	Adelaide
4-year change	0.8%	13.5%	27.6%	11.8%	15.5%

Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

Table 4.1 shows that, since VICT's entry in 2017, the aggregate land rent per square metre in Melbourne has increased by 27.6%, which is a substantially more than at any other container port in Australia.

As set out in chapter 3, the Port of Melbourne is currently subject to limited price monitoring by the Essential Services Commission of Victoria (ESC). The ESC conducts a public review of land rents every 5 years. In October 2020, the ESC released its first inquiry report which found that the Port of Melbourne's rents have grown strongly since privatisation of the port. The ESC commented that there was general acceptance in the industry that rents prior to privatisation were too low and would therefore need to increase over time.

However, the ESC also stated that the Port of Melbourne has not sufficiently considered the different characteristics of land at the port, which would be necessary to arrive at efficient rent levels. The ESC ultimately concluded that the Port of Melbourne had exercised its market power in the process for setting and reviewing land rents.¹⁹¹ Consequently, the ESC recommended economic regulation of Port of Melbourne in the form of an enhanced negotiate-mediate-arbitrate framework with independent oversight by ESC.

190 A Patrick, '[Down \\$300m, Filipino port operator calls time on MUA](#)', *The Australian Financial Review*, 1 March 2021, accessed 19 October 2021.

191 Essential Services Commission, '[Port of Melbourne - Market Rent Inquiry 2020](#)', ESC website, August 2020, pp. 41-43.

5. Stevedore fees and charges

Stevedores levy quayside charges to shipping lines for lifting containers on and off the vessels. Stevedores also levy landside charges to transport operators for loading and unloading containers onto trucks or rail as well as for other ancillary terminal services.

During the consultation in preparation for this report, market participants expressed concerns about the landside charges levied by stevedores. Some of the concerns stemmed from the lack of transparency provided by stevedores as to why certain fees or charges are levied or why they are increasing. Lack of transparency makes it more difficult for market participants to make informed decisions about their operations.

Some market participants also expressed concerns that landside charges are too high or have increased significantly over a short period of time.

The ACCC considers that in a well-functioning market, those parties that receive a service would pay prices that reflect at least the efficient costs of providing that service plus a return on investment commensurate with the regulatory and commercial risks involved. If the price charged by service provider does not reflect the underlying costs of providing the service, then there is a risk that price signals become distorted, which could lead to inefficient level of investment and misallocation of resources.

This chapter will examine the fees and charges levied by stevedores, focusing on:

- terminal access charges, including the drivers behind their increases
- other the landside fees, including reasons given by stevedores for imposition of some of those fees
- changes that are needed to stevedores' charging practices and current government initiatives to improve the practices
- the level of transparency provided by shipping lines in passing on stevedores' quayside charges to cargo owners.

5.1 Terminal access charges

Stevedores levy terminal access charge (TAC) on trucks and trains for dropping off or picking up a laden container at the stevedore's terminal. During the consultation, many cargo owners and transport operators have raised concerns about these charges. A large number commented that TACs have increased significantly over the past few years without there being any noticeable improvements in landside productivity. Some expressed a view that stevedores are taking advantage of their market power because transport operators cannot choose a different stevedore.

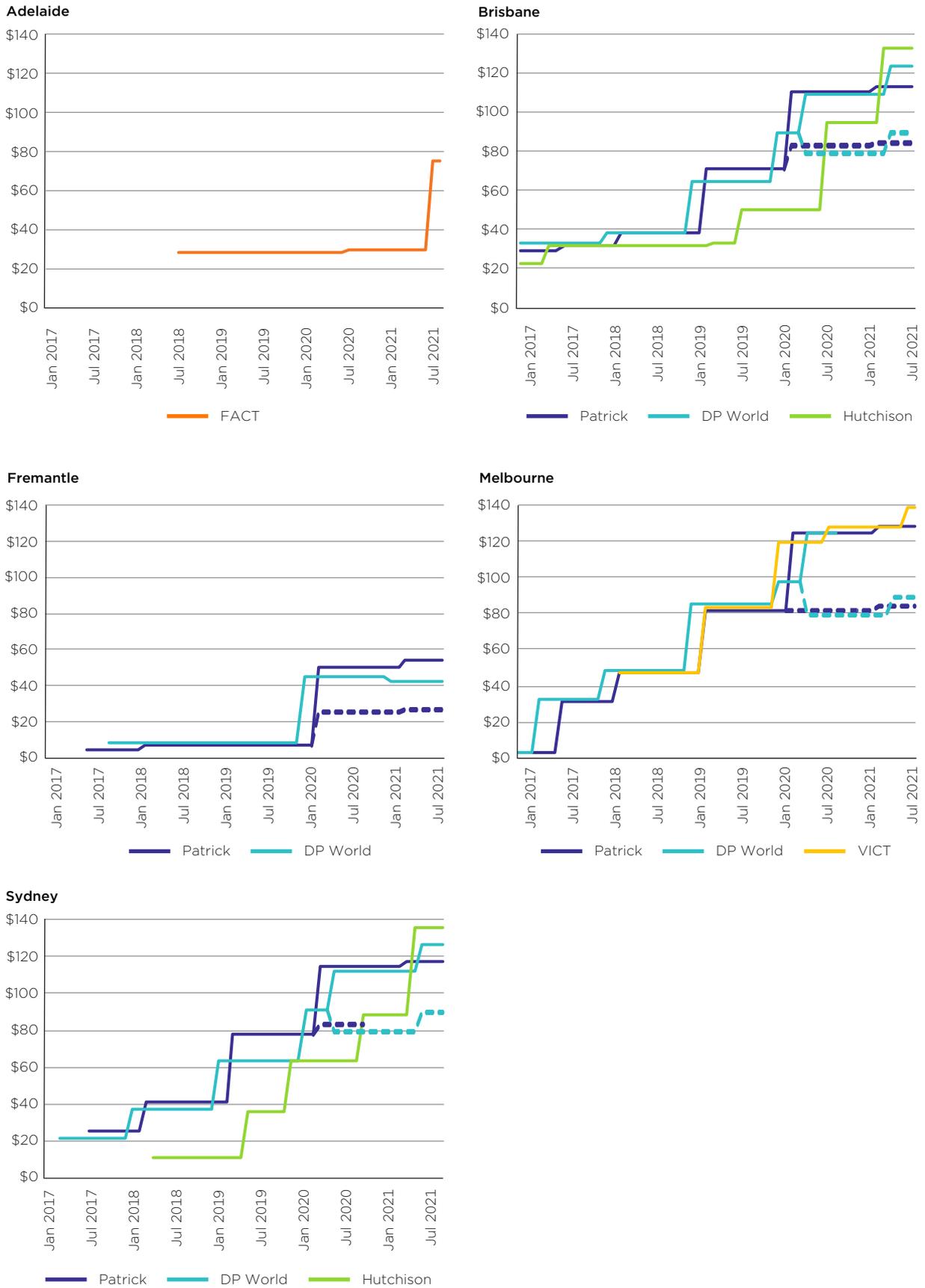
This section will examine:

- how TACs have changed between over time
- the drivers behind increases in TACs
- whether the level of TACs is reasonable, and
- the impact of TACs on transport operators and cargo owners.

While terminal access charges have increased significantly since 2017, there appears to have been some competition until recently

TACs, formerly known as infrastructure charges, were introduced by stevedores around a decade ago. Initially they were levied as part of broader landside fees and charges. In 2017, most stevedores started charging TAC separately. In January 2020, DP World and Patrick introduced separate TAC charges for exports and imports, which they explained was to reduce the impact of TACs on exporters. Figure 5.1 shows the changes in TACs since 2017.

Figure 5.1: Terminal access charges levied by stevedores since January 2017



Source: ACCC analysis of publicly available stevedore pricing information.

Note: Solid lines indicate 'import' or both 'import & export' charges, while dotted lines indicate 'export' charges only.

Figure 5.1 shows that TACs have increased significantly since 2017, particularly at the larger ports in Melbourne, Sydney and Brisbane. In the period 2017–20, DP World led major increases in TACs, with Patrick and VICT quickly following. Since January 2020, there no longer appears to be a single price leader, with VICT leading some of the increases in Melbourne and Patrick leading some of the increases in Sydney and Brisbane.

As mentioned earlier, several market participants expressed concerns to the ACCC that these significant TAC increases are driven by the fact that transport operators cannot choose the stevedores, which means stevedores can charge them as much as they want. This statement appears to assume that if transport operators could negotiate TACs with stevedores, the stevedores would compete with each other by offering lower TACs. However, there is a large number of transport operators competing with each other, so individually they would lack the countervailing power to negotiate fees and charges with stevedores.

Further, figure 5.1 appears to show that there had been some competitive market forces in play in Sydney and Brisbane until recently. As discussed in chapter 4, Hutchison has struggled to win market share in Sydney and Brisbane since its entry. In a well-functioning market, one would expect Hutchison to seek to grow its market share by offering lower prices and/or higher quality of service.

As shown, while Hutchison has largely followed the increases by other stevedores, it has done so with a delay and has generally kept its TACs below the level of Patrick and DP World. The most plausible explanation for this pricing strategy appears to be that Hutchison was seeking to gain more market share in Sydney and Brisbane.

While transport operators cannot choose which stevedore they go to, cargo owners can indirectly influence the choice of the stevedore through their negotiations with shipping lines. During the consultation, some exporters explained to the ACCC that when they compare offers they receive from shipping lines, they take into account a ‘bundle of prices’. This bundle of prices includes the container freight rates offered by the shipping lines plus the quayside and landside fees and charges levied by the stevedore chosen by the shipping line.

By setting lower TACs, Hutchison increased the likelihood that the price bundle offered by the shipping line that uses Hutchison would be lower than the price bundles offered by shipping lines that use other stevedores. This would put that shipping line and Hutchison in a stronger position to win the business of the exporter.

Such pricing strategy by a stevedore seeking to grow its market share would be most effective when cargo owners have multiple shipping lines to choose from and there is intense competition between those shipping lines for services of cargo owners. As described in chapter 2, the COVID-19 pandemic has changed the supply-demand dynamics in the shipping sector and cargo owners are currently not in position to pick and choose which shipping lines they use. This likely explains why Hutchison has recently chosen to change its pricing strategy and increase its TACs above those offered by other stevedores.

Figure 5.1 shows that VICT did not adopt the same pricing strategy following its entry in Melbourne. However, as explained in chapter 4, VICT has a fully automated operation and a locational advantage over its competitors in Melbourne. This has put VICT in a stronger position to win market share based on the non-price elements of its service offering.

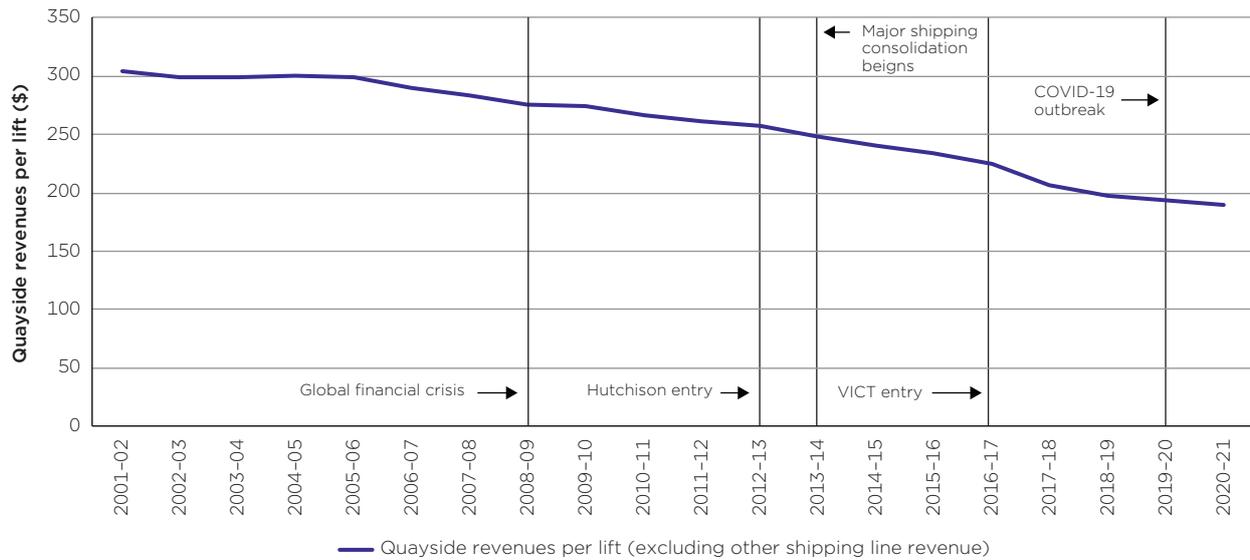
The following section discusses what the ACCC considers to be the main drivers behind TAC increases.

Key drivers of increases in TACs

The ACCC considers that market forces contributed to significant increases in TACs since 2017. The drivers behind those market forces are discussed in full in chapter 4.

Briefly put, greater competition between stevedores following entry of Hutchison and VICT, led to a significant fall in stevedores’ quayside charges. This is illustrated in figure 5.2, which shows the trend in quayside revenue per lift (a proxy for quayside charges) since 2001–02.

Figure 5.2: Aggregated quayside revenue per lift for Patrick, DP World and FACT: 2001-02 to 2020-21



Source: ACCC analysis of information received from stevedores as part of the monitoring regime.
 Note: Real values in 2020-21 dollars.

Figure 5.2 shows that quayside revenue per lift for incumbent stevedores has fallen by 27.6% over the past 10 years.

While stevedores’ quayside charges and revenue have fallen, stevedores’ overall costs have increased due to:

- increases in land rents charged by port operators (as discussed in section 4.3)
- capital investments made by stevedores:
 - in automated container handling technology (as discussed in section 4.2)
 - to accommodate larger ships (refer to section 3.2)
- limitations on the ability of stevedores to reduce labour costs as a result of industrial relations (as discussed in section 6.2).

Stevedores have responded to the cumulative effect of all these drivers on their business by increasing the TACs and other landside fees over the past few years.

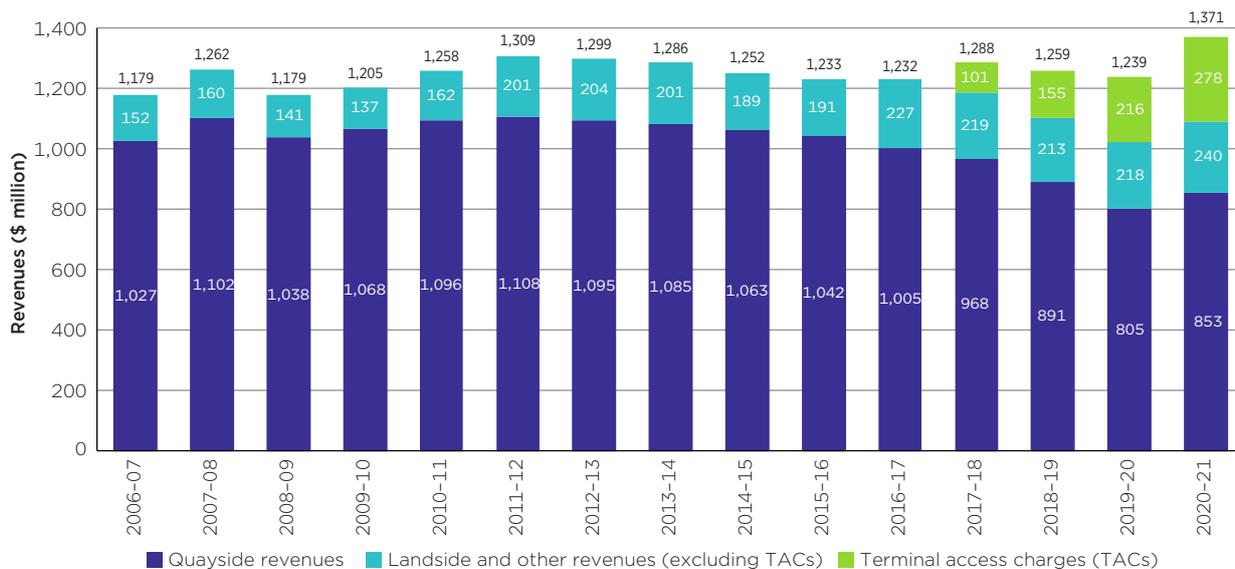
At current TAC levels stevedores are not making excessive returns

A number of market participants have expressed a view that imposing TACs on transport operators is unreasonable because the shipping lines should pay for all the costs incurred by the stevedores in providing their services.

However, the ACCC considers that given stevedores provide landside services to transport operators, it is efficient for the stevedores to levy fees and charges on transport operators for those services providing that they are not excessive.

Figure 5.3 shows the distribution of the incumbent stevedores’ revenue between quayside and landside over the past 15 years.

Figure 5.3: Aggregate revenue for Patrick, DP World and FACT: 2006-07 to 2020-21



Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

Note: Real values in 2020-21 dollars.

Figure 5.3 shows that, in aggregate, the proportion of total revenue that incumbent stevedores’ have recovered from landside fees and charges has increased from around 13% in 2010-11 to around 38% in 2020-21. TACs comprise around 20% of total revenue in 2020-21. While stevedores now recover a greater proportion of their total revenue from landside operations than they did a decade ago, the bulk of their revenue still comes from the shipping lines.

One stevedore has informed the ACCC that it incurs around 75-80% of its costs on the landside, which means that its current landside fees and charges do not fully recover the costs that the stevedore incurs in providing landside services. The ACCC does not have sufficient data to verify the accuracy of this claim, as it does not have the information on how the stevedore allocates its common costs. The ACCC needs this information to determine what proportion of a stevedore’s costs are incurred on quayside compared to landside.

However, the ACCC can make several general observations, based on aggregate financial data and information available to it about stevedores’ investments over the past 20 years. First, it appears that stevedores have spent a substantial proportion of their capital in recent years on landside infrastructure projects (such as the ones discussed in chapter 7).

Second, as discussed in chapter 4, the level of profitability of stevedores over the past 5 years does not appear to be indicative of stevedores earning excessive returns. This implies that at current level of TACs, and other landside charges, stevedores are not earning excessive returns.

Third, cargo owners are the beneficial users of stevedores’ services. Therefore, to understand the impact that changes in TACs may have had on cargo owners, it is necessary to examine the changes in the cargo owners’ total stevedoring bill (per container). The ACCC uses total revenue per lift as a proxy for the total bill that cargo owners would expect to pay (per container) for services provided by stevedores. Table 5.1 shows aggregate revenue per lift of the 3 incumbents (Patrick, DP World and FACT) since 2011-12.

Table 5.1: Total revenue per lift for Patrick, DP World and FACT: 2011-12 to 2020-21

2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
\$308.77	\$305.81	\$294.94	\$283.37	\$276.36	\$275.48	\$274.23	\$278.90	\$297.41	\$318.20

Source: Information received from stevedores as part of the monitoring regime.

Note: Real values in 2020-21 dollars.

Table 5.1 shows that while the aggregate revenue per lift of the 3 incumbents increased during the period between 2017-18 and 2019-21, for majority of that period it was lower than the aggregate revenue per lift in 2011-12 and 2012-13. This means that, despite significant increases in TACs, stevedores charged less overall to lift containers in recent years than they charged in the past. This is because, as shown in figure 5.2, stevedores have been charging shipping lines less for provision of quayside services.

However, cargo owners do not have direct contractual relationship with stevedores. Therefore, shipping lines and transport operators pay the charges levied by the stevedores and then pass them on to cargo owners. Cargo owners' actual bills depend on the amounts that shipping lines and transport operators pass-through. Therefore, cargo owners' actual total bills (per container) for stevedoring services may have been higher in recent years, particularly if shipping lines did not pass-through in full the reductions in stevedores' quayside charges. This is discussed further in section 5.4.

The ACCC will continue to monitor TACs and other stevedore fees and charges.

5.2 Other landside fees

In addition to paying TACs, transport operators have to pay a range of other landside fees, some of which are levied on each container and some are only levied in prescribed circumstances (for example, when transport operators pick up or drop off containers outside of prescribed procedures).

The stevedores publish a public tariff schedule of their landside fees and charges on their websites and update this schedule when they increase their fees or charges. While stevedores provide transparency of what the fees and charges are, they do not appear to provide sufficient information to explain why the fees or charges are increasing or why new fees have been introduced.

Over the past few years, some landside fees have increased substantially and some new landside fees have been introduced. This section sets out the information that the ACCC has obtained from stevedores about these fees.

The fees listed in tables 5.2 to 5.5 below are in nominal terms and are exclusive of GST.

No Show Fee

Each stevedore charges a 'no show fee' when a truck operator fails to collect an import container or to drop off an export container on time. The stevedores have broadly explained that they introduced this fee because when a container is prepared for collection but the truck does not arrive to collect it on time, this creates inefficiencies for their operation.

Table 5.2 shows how much each stevedore increased this fee since they introduced it.

Table 5.2: Details of no-show fees charged by stevedores

Terminal	When introduced	Fee at introduction	Current fee	Average annual growth rate (%)	How the fee is charged
DP World – Brisbane, Melbourne Fremantle	On or before July 2013	\$110.00	\$217.00	8.9	Per slot
DP World – Port Botany ^(a)	On or before July 2013	\$110.00	\$217.00	8.9	Per slot
Patrick – Brisbane, Melbourne Fremantle	August 2016 ^(b)	\$114.93	\$215.00	13.3	Per container
Patrick – Port Botany ^(a)	March 2020	\$145.00	\$215.00	48.3	Per container
VICT – Melbourne	2016	\$130.00	\$175.50	6.2	Per booking
Hutchison – Brisbane	July 2014	\$105.00	\$130.00	3.1	Per booking
FACT – Adelaide	July 2012	\$100.00	\$100.00	0	Per container

(a) Transport operators in NSW are exempt from paying this fee under certain circumstances (refer to Part 6 of the mandatory standards for Port Botany Landside Operations under the Ports and Maritime Administration Regulation 2021).

(b) This fee was in place when Brookfield and Qube acquired Patrick.

Source: Information received from stevedores as part of the monitoring regime.

Table 5.2 shows that most stevedores have increased no show fees substantially over the past few years. Stevedores have explained that they have done so to further discourage truck operators from failing to show up to collect their container on time.

The ACCC acknowledges that there appears to be a need for stevedores to maintain orderly arrival and departure of trucks to minimise landside delays and congestion, particularly given the growth in container trade and the increasing number of trucks visiting stevedores' terminals. While the no show fee appears to be quite large, truck operators can avoid it by arriving on time and working with the stevedores to improve the standards and the efficiency of landside operation.

Vehicle Booking System Fee

When a truck operator picks up or drops off a container at a stevedore's terminal, the truck operator must make a booking for a time slot to pick up or drop off the container. The booking is made through the stevedore's Vehicle Booking System (VBS). Each stevedore charges a fee to truck operators to use its VBS system.

Table 5.3 shows the fees charged by each stevedore at the relevant terminals at introduction and at present.

Table 5.3: Details of VBS fees charged by stevedores

Terminal	When introduced	Fee at introduction	Current fee	Average annual growth rate (%)	How the fee is charged
DP World - all terminals	July 2013	\$5.00	\$28.45	24.3	Per booking
Patrick - Brisbane, Melbourne	August 2016(a)	\$5.46	\$29.50	40.1	Per container
Patrick - Fremantle	August 2016(a)	\$6.18	\$29.50	36.7	Per container
Patrick - Port Botany	August 2016(a)	\$11.02	\$29.50	21.8	Per container
VICT - Melbourne	2016	\$10.00	\$18.25	12.8	Per slot
Hutchison - Brisbane	July 2014	\$6.00	\$19.50	18.3	Per container
Hutchison - Port Botany	July 2014	\$10.00	\$19.00	9.6	Per container
FACT -Adelaide	July 2012	\$4.85	\$22.50	18.6	Per container

(a) This fee was in place when Brookfield and Qube acquired Patrick.

Source: Information received from stevedores as part of the monitoring regime.

Table 5.3 shows that stevedores have substantially increased VBS fees across all monitored ports over the past few years. Several cargo owners and transport operators have raised concerns with the ACCC about these increases.

The stevedores have explained that the fee is levied to recover the costs to the stevedores of providing the booking service. However, they have not provided clear reasons to the ACCC for substantially increasing these fees. Instead, they have cited a range of reasons, including the need to recover general cost increases and investments in IT infrastructure.

Long Vehicle Fee

Patrick and FACT charge a long vehicle fee when a transport operator picks up or drops off a container using a truck that is longer than a certain length.

These stevedores have stated that the number of long vehicles accessing their terminals has increased over time. Long vehicles comprise approximately a tenth of the vehicles that access Patrick and approximately one third of the vehicles that access FACT. The stevedores have explained that long vehicles have a negative impact on their terminal resources and productivity, so they have introduced the fee to compensate for this.

The ACCC notes that Patrick has only introduced the fee at 2 of its 4 terminals, while DP World and Hutchison have not introduced the fee at their terminals in Brisbane and Port Botany. This suggests that the extent to which long vehicles affect the efficient operation of container terminals may depend, at least in part, on landside configuration of the terminal.

Table 5.4 shows the details of the long vehicle fees charged by the 2 stevedores.

Table 5.4: Details of long vehicle fees charged by stevedores

Terminal	When introduced	Fee at introduction	Current fee	How the fee is charged
Patrick - Brisbane, Port Botany	March 2021	\$50.00	\$50.00	Per vehicle
FACT - Adelaide ^(a)	2020	\$6.50	\$6.50	Per container

(a) This fee only applies to vehicles that cannot reverse in the terminal.

Source: Information received from stevedores as part of the monitoring regime.

Cargo owners, transport operators and freight forwarders have stated that long vehicles are more efficient for transport operators and raised concerns that the fee effectively penalises those transport operators that are seeking to increase productivity and reduce their costs. They have also observed that long vehicles reduce carbon emissions and road congestion.

While the ACCC understands transport operators' perspective, the ACCC considers that the long vehicle fees are reasonable as long as they reflect the additional costs associated with serving the long vehicles.

Overweight fee

Patrick and DP World levy a fee when a container's actual weight differs from the weight listed in the documentation. The stevedores have stated that this fee has been introduced to improve safety, as ensuring that containers have their correct weights assists cargo owners to comply with the International Convention for the Safety of Life at Sea regulations and stevedores to comply with Chain of Responsibility laws and regulations.

Table 5.5 shows the details of the fees charged by the 2 stevedores.

Table 5.5: Overweight fees charged by stevedores

Terminal	When introduced	Fee at introduction	Current fee	How the fee is charged
DP World - Brisbane	July 2017	\$111.13	\$180.00	Per export container
DP World - Melbourne	July 2019	\$111.13	\$180.00	Per export container
Patrick - Brisbane	January 2021	\$230.00	\$230.00	Per import container

Source: Information received from stevedores as part of the monitoring regime.

The table shows that DP World's overweight fee is currently \$180 and Patrick's is \$230. Some market participants have raised concerns that these fees appear large.

DP World has explained that the reason for the fee is to recover the high cost of stevedoring services resulting from the changing dynamics in the stevedoring market. DP World has not explained to the ACCC why it has chosen the overweight fee, which is rarely levied, to recover the general costs of its stevedoring services. Likewise, Patrick has not provided a clear explanation to substantiate the amount of the overweight fee that it levies.

In contrast, VICT offers its customers the option of weighing the container at its facility for a fee of \$50. VICT has explained that when it detects a discrepancy, it makes the required correction without charging its customers for it.

It appears that Patrick and DP World have chosen the approach of penalising cargo owners for specifying an incorrect weight in their documents. While the weight amendment fee seems large, it appears that cargo owners can avoid it by ensuring that the weight of their containers matches the weight specified in the documents. DP World stated that it has levied the overweight fee only 7 times in Brisbane since it introduced the fee in 2017.

5.3 Some improvements to stevedores' charging practices are needed and a number of initiatives are underway

Transport operators have informed the ACCC that large increases in TACs and other landside charges have had an impact on their business.

Most transport operators have passed on increases in TACs and landside fees to cargo owners. However, some transport operators were not able to do so, due to fixed contracts with their customers that did not allow for the prices under those contracts to be varied. Those transport operators expressed concerns that TAC and other landside fee increases were unpredictable, so they had to absorb some increases due to their inability to accurately forecast them.

Many transport operators also informed the ACCC that increases in TACs and other landside fees have created cash flow issues for their business as there is often a gap between when they must pay stevedores and when they receive payment from their customers. In addition, smaller transport operators stated that their administrative costs have increased due to additional effort required to collect payments from their customers.

The ACCC considers that some improvements to stevedoring charging practices are needed to minimise unintended impacts of increases in TACs and other landside fees on transport operators. In particular, stevedores should make their increases of TACs and landside charges more predictable to their customers and give their customers sufficient notice of these increases.

A number of initiatives across Australia are already underway to address these issues. In Victoria, in May 2020, the State government introduced the Victorian Voluntary Pricing Protocol. The protocol came into effect on 1 July 2020 and applies to any proposed increases in fees or charges by container terminal operators in Melbourne. The protocol, includes the following provisions:¹⁹²

- stevedores will only amend terminal access charges once per annum
- stevedores must issue a notice of intention to the Secretary, Department of Transport, and industry, 60 days prior to the proposed date of the increase of an existing charge or introduction of a new charge
- the notice of intention to change prices or introduce a new charge to the Department of Transport must be accompanied by detailed reasons for the increase or introduction of a new charge, including all relevant supporting information or data
- the notice of intention to change prices or introduce a new charge to Industry will be published on the operator's website and must outline relevant detail of the rationale for the price increase or introduction of a new charge
- stevedores will receive feedback from Department of Transport, and industry, on the proposed increase or introduction of a new charge, with the feedback being published on the Departments' website
- stevedores must issue a final notice of changed prices 30 days prior to the date of the proposed increase, with the final notice incorporating a statement summarising issues raised by affected stakeholders and the response of the terminal operator.

Further, the National Transport Commission has released draft voluntary guideline for imposition of stevedores' landside fees and charges across Australia. The guideline recommends that any stevedore which proposes to increase landside fees or charges should notify the industry of the proposed increase at least 60 days before the actual increase. The guideline also recommends that the confirmation of an increase in landside fee or charge should happen no less than 30 days before the fee or charge is implemented.

¹⁹² Victorian Department of Transport, [Voluntary Pricing Protocol for stevedore landside charges](#), Victorian Department of Transport website, n.d., accessed 6 October 2021.

The principles in the guideline are similar to NSW's Port Botany Landside Operations Mandatory standards. These standards state that 60 days prior written notice must be given before any increase in landside charges is to take effect.¹⁹³

In Western Australia, as part of its recently concluded lease negotiations, Fremantle Ports have reached an agreement with its tenant stevedores (Patrick and DP World) on the structure of the TACs that the stevedores will charge. As part of this agreement, Fremantle Ports has agreed to provide certainty of property costs across the period.¹⁹⁴

The ACCC considers that these are positive initiatives that will improve transparency and predictability of increases in stevedores' landside charges.

5.4 Shipping lines are not providing sufficient transparency of pass-through charges

When cargo owners engage shipping lines to carry their cargo, they pay for the blue water freight charges levied by the shipping lines for their services as well as for the pass-through charges levied by other service providers, including stevedores, ports and empty container parks. Cargo owners typically do not know how much shipping lines pay to other service providers, as the charges negotiated by shipping lines with other services providers are not publicly available.

As part of its consultation, the ACCC asked some cargo owners whether the shipping lines had passed through savings in quayside charges they pay to stevedores. A number of cargo owners were unsure as their bill did not separately itemise these charges, while others commented that they haven't observed any material decreases in those charges over the past few years.

This may mean that while cargo owners' costs have increased on the transport operators' side due to increases in TACs and empty container park fees. As a result, they may not have received the offsetting benefits from lower charges paid by shipping lines to stevedores and empty container parks.

As noted in section 3.4, over the past 10 years, shipping lines have gained increased negotiation power with stevedores as a result of consolidation of international shipping lines, coupled with increased competition between stevedores in Australia. Shipping lines have bargained down the charges they pay to stevedores for quayside services and the charges they pay to empty container parks for their services. Shipping lines may not be passing on the cost savings to cargo owners.

At least some shipping lines do not separately itemise any of the pass-through charges in their bills to cargo owners. This means that cargo owners lack visibility on the extent to which shipping lines are passing on any savings in pass-through charges. In contrast, cargo owners can observe any changes in pass-through charges they pay to transport operators, as stevedores and empty container parks make those publicly available.

The ACCC considers that, if shipping lines itemised their bills to separately show all pass-through charges, then cargo owners would better understand the drivers behind changes to their costs.

193 Section 19(b), [Port Botany Landside Operations Mandatory standards](#), Transport for NSW website, n.d., accessed 12 October 2021.

194 Fremantle Ports, '[Fremantle Ports signs container terminal leases with Patrick and DP World](#)', Fremantle Ports website, 25 March 2021, accessed 6 October 2021.

6. Productivity and efficiency at Australian container ports

The efficient movement of container freight is essential to the competitiveness of the Australian economy. Low levels of productivity impacts on the cost of moving freight for cargo owners, which may result in higher end cost of goods to producers and consumers.

Historically, Australian container ports have been regarded as having relatively poorer productivity compared to overseas ports, with various quayside productivity measures well below international standards.¹⁹⁵ In 1998, the Productivity Commission's productivity benchmarking study of the waterfront found labour and capital productivity were lower than overseas terminals.¹⁹⁶ This study also found ship loading and unloading were slower and services were less reliable when compared with other countries.

Industrial deadlock between the maritime union and stevedores in 1998 led to the Australian Government introducing significant workplace reforms based on specified performance objectives.¹⁹⁷ These objectives included ending certain staffing and restrictive work practices, raising the crane rate, improving reliability, and reducing industrial disputes. The objectives also included reducing the amount of workplace injuries, assisting to reduce costs in the supply chain, making effective use of technology, and promoting training programs.

The Australian Government then directed the ACCC to monitor the container stevedoring industry to ensure the progress towards these objectives.

This chapter will explore:

- how productivity and efficiency at Australian ports has changed since the ACCC commenced monitoring
- the key factors, in particular restrictive work practices and industrial actions, that are impeding further improvements in productivity and efficiency.

6.1 Despite some productivity gains, Australian ports are still not internationally competitive

There are several different metrics used to measure quayside and landside productivity and efficiency at container terminals. In the 2020–21 report, the ACCC has chosen to focus on measures of quayside productivity to explore how productivity and efficiency at Australian ports has changed over time and how the Australian ports compare to international counterparts.

In addition to the 3 key BITRE indicators that measure quayside productivity on a 'net' basis, the ACCC examines some 'gross' time measures used for benchmarking ports internationally. These gross time measures do not make adjustment for downtime for labour and equipment, or part thereof, and thus capture the impact of restrictive work practices in port operation among other factors that are relevant to the cross-country comparison.¹⁹⁸ Furthermore, it is the gross time that matters to the shipping lines and the supply chain, and ultimately to the end consumers.

The ACCC has also prepared a number of charts, based on data obtained from Bureau of Infrastructure and Transport Research Economics' (BITRE), which show landside measures of productivity and efficiency. These are available at figure A9 and A10 in the Appendix.

195 Productivity Commission, [International Benchmarking of Container Stevedoring](#), Productivity Commission website, 11 July 2003, accessed 12 October 2021.

196 Productivity Commission, [International Benchmarking of the Australian waterfront](#), Productivity Commission website, 28 April 1998, accessed 12 October 2021.

197 Productivity Commission, [Work arrangements in container stevedoring](#), Productivity Commission website, 28 April 1998, accessed 12 October 2021.

198 While delays caused by adverse weather do not necessarily reflect inefficiency of stevedoring or port services, this factor does affect the international competitiveness of a container port.

After initial improvement through advancements in technology, quayside productivity and efficiency have stagnated in the past 10 years

The ACCC asked the stevedores to describe how their quayside productivity has improved over time. Stevedores responded that they have achieved significant improvement in quayside productivity, for operations of their size, including:

- increases in berth availability due to increased capacity, additional cranes and equipment, investment in IT infrastructure and extension of operating hours
- improved timeliness and reliability of quayside services due to upgrade or new investment in equipment and infrastructure
- reductions in the number of injuries because of investment in automation and staff training.

As in previous years, the ACCC has obtained quayside data from BITRE's publication of *Waterline*.¹⁹⁹ The ACCC has typically used a number of BITRE's indicators to assess changes in productivity and efficiency of the stevedores' operations, including:

- data on the volume of containers handled by the stevedores at the monitored ports, also referred to as throughput
- indicators assessing how productively and efficiently the stevedores handled the freight handling task, including net crane rate, elapsed labour rate and net ship rate.

The ACCC has chosen to report on net crane rate, elapsed labour rate and net ship rate because they are accepted by industry participants and are internationally recognised benchmarks. These measures are defined as follows:

- Crane rate is an indicator of capital productivity and reflects the number of containers handled per crane hour while quay cranes are in operation.²⁰⁰
- Elapsed labour rate is an indicator of labour productivity and measures the number of containers handled for the period of time that labour is working on the ship.²⁰¹
- Ship rate is an indicator that reflects the overall productivity of terminal operations by measuring the number of containers transferred to, or from, ships using the combined input of labour and cranes.²⁰²

Each of these 3 metrics is measured on a basis of time, net of labour and equipment downtime (that is, not including operational and non-operational delays caused by holidays, industrial stoppages, adverse weather, maintenance and repairs, and etc.) where applicable.

Figure 6.1 shows how these indicators have changed, in aggregate, across all monitored ports and stevedores in Australia over the ACCC's monitoring period.

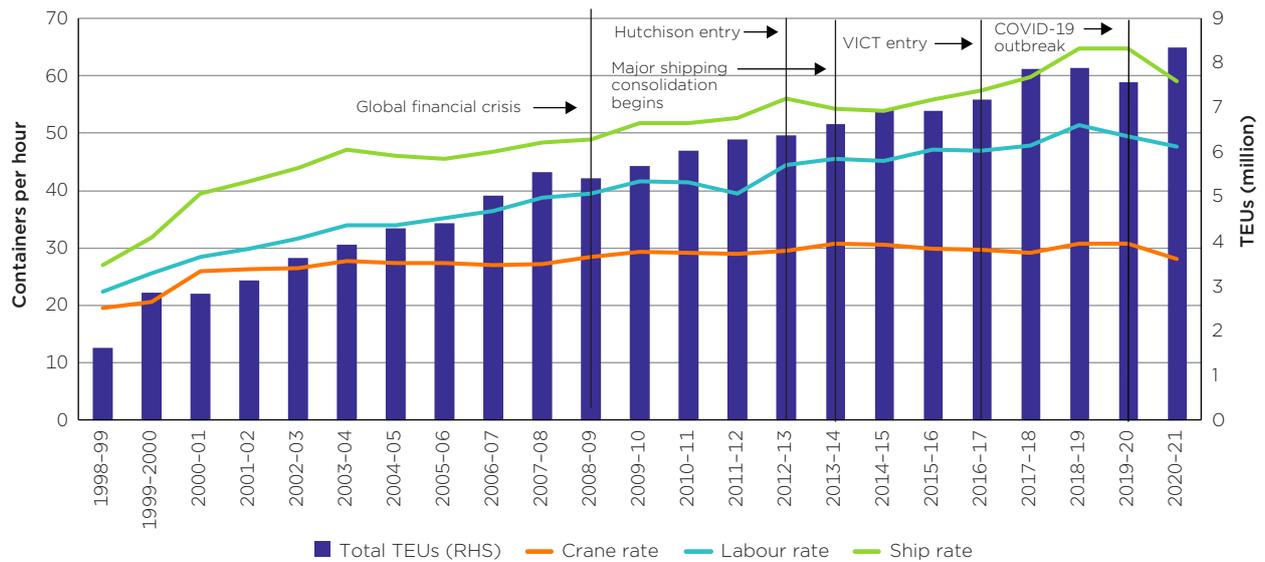
199 BITRE's [Waterline](#) publication reports on trends in quayside productivity in stevedoring operations in the monitored container ports: Adelaide, Brisbane, Fremantle, Melbourne, and Sydney. BITRE has an established methodology in calculating container stevedoring productivity measures.

200 The net crane rate is measured by dividing the total number of containers handled by the elapsed crane time. The elapsed crane time is the crane time allocated by the stevedores. It is computed as the total allocated crane hours less operational and non-operational delays. See: BITRE, [Waterline 66](#), 2021.

201 Elapsed labour rate measures the number of containers handled for the period of time between labour first boarding a container ship to labour last leaving the ship, less any time when labour was not working due to delays. It is computed as the number of containers handled divided by the elapsed labour time. See: BITRE, [Waterline 66](#), 2021.

202 Ship rate is an indicator which reflects the overall productivity of terminal operations while the ship is being worked by measuring the average number of containers transferred to and from ships by cranes and labour in an hour. See: BITRE, [Waterline 66](#), 2021.

Figure 6.1: Quayside productivity indicators, Australia: 1998-99 to 2020-21



Source: ACCC calculation based on data from BITRE Waterline 68.

Figure 6.1 shows that Australia’s performance across all indicators has improved over time. Compared to the steady growth in the elapsed labour rate and ship rate, improvements in crane rates have stagnated after the initial rise following the waterfront reform.²⁰³

The widening gap between the ship rate and the crane rate is fully attributable to the increase in the measured crane intensity.²⁰⁴ Over time Australian stevedores are using more cranes to service ships across all monitored container ports to handle the increasing number of containers with higher share of 40-foot containers. For each crane in operation, the hourly number of containers being loaded or unloaded has not improved significantly since 2000-01 (refer to figure A7 in Appendix A for more details).

This shows that the key drivers for quayside productivity were stevedores increasing investment in technology and automation. Automated machines increase reliability and efficiency of operations and reduce human error. By having access to additional and more powerful and automated equipment, the stevedores manage to handle the fast-increasing volume with limited improvement in equipment operating hours.

The rate of improvement has not been constant over the monitoring period. Table 6.1 shows how the indicators presented in figure 6.1 have changed in 3 7-year periods since 1998-99. The ACCC has not included 2020-21 in the table, because the COVID-19 pandemic has caused congestion issues discussed in chapter 2.

203 Note that the elapsed labour rate measuring labour productivity and the crane rate measuring capital productivity are respectively influenced by way of both capital and labour initiatives. For example, an increase in labour productivity or capital productivity can be attributable to improvements in labour deployment, and/or technological advances such as automation, and thus it is not straight-forward to decompose into the contributing factors. The rising elapsed labour rate relative to the relatively constant crane rate, as depicted in figure 6.1, indicates this improved labour productivity is primarily due to the labour having access to a greater quantity of equipment (e.g., number of cranes allocated to the job).

204 Mathematically, net ship rate is the product of net crane rate and capital intensity, where the latter is measured as the total number of allocated crane hours, divided by the elapsed time. See: BITRE, Waterline 50, 2011.

Table 6.1: Percentage change in quayside productivity indicators, Australia: 1998–99 to 2019–20

	Crane rate (%)		Labour rate (%)		Ship rate (%)		Crane intensity ²⁰⁵ (%)		TEU ²⁰⁶ (%)	
	Total	Per annum	Total	Per annum	Total	Per annum	Total	Per annum	Total	Per annum
1998–99 to 2005–06	40.3	5.0	57.2	6.7	68.3	7.7	20.0	2.6	172.7	15.4
2005–06 to 2012–13	7.4	1.0	26.2	3.4	23.0	3.0	14.6	2.0	44.6	5.4
2012–13 to 2019–20	4.3	0.6	11.0	1.5	15.6	2.1	10.8	1.5	18.8	2.5

Source: ACCC calculation based on data from BITRE Waterline 68.

Table 6.1 shows that there was material improvement across all measures in the first 7 years of ACCC’s monitoring, largely driven by the reform in the industry. However, the rate of improvement dropped off significantly in the period 2005–06 to 2012–13, particularly in crane rate. The rate of improvement has dropped off further since 2012–13, despite substantial investment made by all stevedores during this period following entry of Hutchison and VICT (as discussed in section 4.2 of chapter 4).

While the ‘net’ metrics above are informative, they do not tell the whole story, because they are relatively narrow measures. Therefore, it is also useful to examine ‘gross’ metrics, which are used by international benchmarking studies and market participants (for example, shipping lines) to evaluate a port’s performance. These metrics take into consideration all the events that impact a vessel while alongside the quay (that is, without adjustment for downtime for labour and equipment or part thereof).

The ACCC has obtained data from BITRE on some of these gross metrics, which are reproduced below.

Table 6.2 shows the average on-berth hours for ships visiting each of the 5 Australian container ports. On-berth hours is an indicator of the time a ship spends in berth (that is, the elapsed time between the time a ship arrives at berth and the time of its departure from berth).²⁰⁷

Table 6.2: Average on-berth hours: 2011–12 to 2020–21

	Brisbane	Melbourne	Fremantle	Adelaide	Sydney	Australia
2011–12	23.9	30.2	36.6	26.2	36.5	31.0
2012–13	23.7	29.6	30.0	23.8	32.9	28.7
2013–14	22.0	27.9	29.6	25.8	30.2	27.1
2014–15	23.3	29.2	25.3	22.4	36.4	28.6
2015–16	22.3	28.7	23.8	20.6	35.0	27.4
2016–17	22.4	28.7	24.1	22.0	34.2	27.4
2017–18	24.6	30.8	26.5	23.1	37.0	29.7
2018–19	23.6	30.6	27.6	20.9	34.4	28.5
2019–20	23.8	33.8	31.4	25.8	37.3	31.2
2020–21	29.2	40.3	41.1	29.7	51.7	39.7

Source: ACCC calculation based on data from BITRE Waterline 68.

205 Mathematically, the growth rate in crane intensity is the growth rate in the ship rate net of the crane rate. That is, $(1 + 20\%) = (1 + 68.3\%) / (1 + 40.3\%)$.

206 Stevedores only began reporting the number of lifts to the ACCC in 2001–02, hence data between 1998–99 and 2001–02 is not available. To show the extent of throughout growth the number of TEU has been provided in table 6.1 instead.

207 On-berth hours also includes all times spent by a ship at berth such as time for loading/unloading containers, for maintenance and supply operations, or waiting for labour or suitable weather.

Table 6.2 shows between 2011-12 and 2018-19 (prior to the commencement of the COVID-19 pandemic), there was noticeable improvement in average on-berth times at Port of Fremantle and Port of Adelaide. However, there was little improvement across all other ports.

Table 6.2 also shows a noticeable difference in the performance between ports, with Port Botany having the highest on-berth hours in Australia, on average, while Port Adelaide generally having the lowest. The longer time spent on container-handling operation at the terminal in Sydney and Melbourne may be attributable to the larger number of containers loaded and unloaded per visit. In terms of ship composition, both Sydney and Melbourne tend to serve a higher proportion of large ships than the other 3 ports. Some components of the operation, such as mooring and lashing completion generally take longer on larger ships.

Table 6.3 below shows the average idle hours for ships visiting each of the 5 Australian container ports. Average idle hours are calculated as the difference between the average on-berth hours and the net ship hours.²⁰⁸

Table 6.3: Average idle hours: 2011-12 to 2020-21

	Brisbane	Melbourne	Fremantle	Adelaide	Sydney	Australia
2011-12	8.4	8.9	15.3	8.4	12.3	10.4
2012-13	7.7	7.2	10.7	6.9	11.2	8.8
2013-14	6.5	6.4	7.3	7.3	6.9	6.8
2014-15	6.2	6.7	6.6	6.8	9.8	7.3
2015-16	6.3	6.3	5.8	6.9	9.1	7.0
2016-17	7.1	6.1	6.4	8.5	9.6	7.5
2017-18	8.4	7.6	6.9	9.3	12.5	9.2
2018-19	9.1	7.8	7.0	8.0	11.9	9.1
2019-20	9.1	11.0	8.6	9.9	12.8	10.6
2020-21	10.6	10.3	9.8	9.9	21.2	13.3

Source: ACCC calculation based on data from BITRE Waterline 68.

Table 6.3 shows that the average idle hours generally declined across all ports in the period between 2011-12 and 2015-16. However, the average number of idle hours ships have spent at berth has increased in the past 5 years. By 2018-19, just before the onset of COVID-19 pandemic, ships were spending, on average, 9 idle hours at Australian ports. In the course of the ACCC's consultation, shipping lines have stated that they generally regard idle time at ports as pure waste, and this affects the efficiency of their operations.

According to the World Bank and IHS Markit study, for every unplanned additional hour in port or at anchorage, the ships will need to increase speed to maintain the schedule, resulting in increased fuel consumption, increased costs, and increased emissions. In extreme cases, ships that fall many hours behind their pro forma schedule will start to arrive at ports outside of their agreed windows, causing berth availability challenges for ports and terminals, particularly those with high berth utilisation rates. This in turn can cause delays to shipments and disruption to supply chains.²⁰⁹

Shipping lines commented that, based on this and other gross-based quayside metrics, the Australian ports are among the worst performing ports in the world. The following section examines how Australian container ports compare with their overseas counterparts.

208 Average idle time (hours) measures the time that a ship spends in berth, net of the average time taken by the cranes to complete the loading and unloading operations.

209 The World Bank and IHS Markit, *The Container Port Performance Index 2020: A Comparable Assessment of Container Port Performance*, Washington, DC, 2021, p. 44.

International studies show that Australian ports are among the worst-performing ports in the world

International comparisons of container port performance can be challenging due to the varying methodologies employed by various port authorities, statistical agencies, and other bodies. The ACCC has reviewed a recent study by the World Bank and IHS Markit and data published by the United Nations Conference on Trade and Development (UNCTAD).

In 2021, the World Bank and IHS Markit released a study on international benchmarking of container ports. The study uses 2 alternative approaches to assess comparative performance of container ports, namely the ‘administrative approach’ and the ‘statistical approach’.²¹⁰ This is to ensure that rankings closely reflect actual port performance while being statistically robust.

The study compared performance of ports based on measure of in-port time, which is primarily comprised of 2 components:

- the time between when a ship reaches a port and when all lines fast²¹¹
- the on-berth time.²¹²

The study compared a total of 351 containers ports using 6-month data for the first half of 2020. Table 6.4 shows the rankings of the 5 Australian container ports (however the study did not publish the underlying data on in-port time).

Table 6.4: Ranking of Australian container ports out of 351 global containers ports

	Administrative approach	Statistical approach
Brisbane	234	246
Melbourne	313	302
Fremantle	319	326
Sydney	327	337
Adelaide	333	339

Source: The World Bank and IHS Markit.²¹³

The World Bank and IHS Markit found that, based on the metrics it used, the Port of Yokohama in Japan was the world’s best performing container port in 2020, taking 1.1 minutes on average to load or unload a container.²¹⁴ In contrast, the study suggested that container ports in Australia were relatively inefficient and well below international best practices.²¹⁵ Australian major container ports, except for Brisbane, were found to be in the bottom quartile of the worst-performing container ports in the study. Brisbane was found to be in the bottom 50% of the ports in the study.

The World Bank and IHS Markit considered that the poor performance at some container ports and terminals had caused transshipment delays, supply-chain disruption, additional costs, and reduced

210 The World Bank and IHS Markit, *The Container Port Performance Index 2020: A Comparable Assessment of Container Port Performance*, Washington, DC, 2021. The administrative approach is a pragmatic methodology reflecting expert knowledge and judgment, and the statistical approach refers to a statistical methodology using factor analysis. Neither methodology is better than the other; rather, the 2 different approaches complement each other.

211 All fast means the point when the ship is fully secured at berth, and all mooring lines are fast.

212 The World Bank and IHS Markit study estimates that, on average, container-handling operations account for 74.6% of total port time (i.e., gross operating time available to stevedores), with another 16.9% for other berth time. Ships may spend additional time in a port after the departure from a berth. They might dwell within a port’s limits for bunkering, repairs, or simply waiting in safe areas if unable to berth on earliest arrival at the next port. These are not considered as port inefficiencies and are thus excluded.

213 The World Bank and IHS Markit, *The Container Port Performance Index 2020: A Comparable Assessment of Container Port Performance*, Washington, DC, 2021.

214 The World Bank, *Asian Ports Dominate Global Container Performance Index*, World Bank website, 5 May 2021, accessed 15 September 2021.

215 The World Bank and IHS Markit, *The Container Port Performance Index 2020: A Comparable Assessment of Container Port Performance*, Washington, DC, 2021.

competitiveness. The World Bank and IHS Markit concluded that, over the longer term, such bottlenecks in the supply chain can negatively affect imports and exports, slow down economic growth, and result in lower employment.

The ACCC also examined the data released by UNCTAD on median in-port time for container ships by country. Table 6.5 below compares Australia’s performance against New Zealand and Australia’s top trading partners in Asia: China, Japan and Singapore.

Table 6.5: Median in-port time for container ships (in days)²¹⁶

	2018	2019	2020	Annual change (%) 2019	Annual change (%) 2020
Australia	1.2	1.2	1.4	-1.8	20.0
China	0.6	0.6	0.6	-3.1	3.3
Japan	0.4	0.4	0.3	-0.8	-2.8
New Zealand	0.7	0.8	0.9	3.3	10.7
Singapore	0.8	0.8	0.8	0.2	3.8

Source: United Nations Conference on Trade and Development.²¹⁷

Table 6.5 shows that median in-port time for container ships visiting Australia was 1.4 days in 2020.²¹⁸ This is more than 4 times as long as Japan, more than double compared to China and 67% greater than time that ships spent in Singapore or New Zealand.

The median in-port time is relatively constant between 2018 and 2019 for all the 5 countries. However, the median in-port time has generally increased in 2020, attributable to port congestion and delays caused by COVID-19 pandemic. Notably, the impact varies across the countries. Australia was the most affected, with an increase of median in-port time by 5.5 hours (20%). It is likely that this was due to major industrial action at Australian ports exacerbating the impact of the COVID-19 pandemic (as discussed in section 6.2 below).

Both the World Bank study and the UNCTAD data show that Australian container ports are lagging their international counterparts. Australia has several characteristics, including isolated location and smaller market size, which put Australian container ports at a comparative disadvantage compared to the best-performing Asian container ports. With this in mind, it is necessary to compare the performance of Australian container ports with ports in countries that have similar characteristics.

New Zealand is a good example, being geographically close and with its largest ports being of similar size to some of the Australian container ports. As shown in table 6.5 above, Australia is lagging New Zealand in terms of median in-port time performance. For completeness, the ACCC also obtained data from New Zealand Freight Information Gathering System to compare the 3 largest New Zealand container ports (Tauranga, Auckland, and Lyttelton) against the 5 Australian container ports based on metrics discussed earlier.

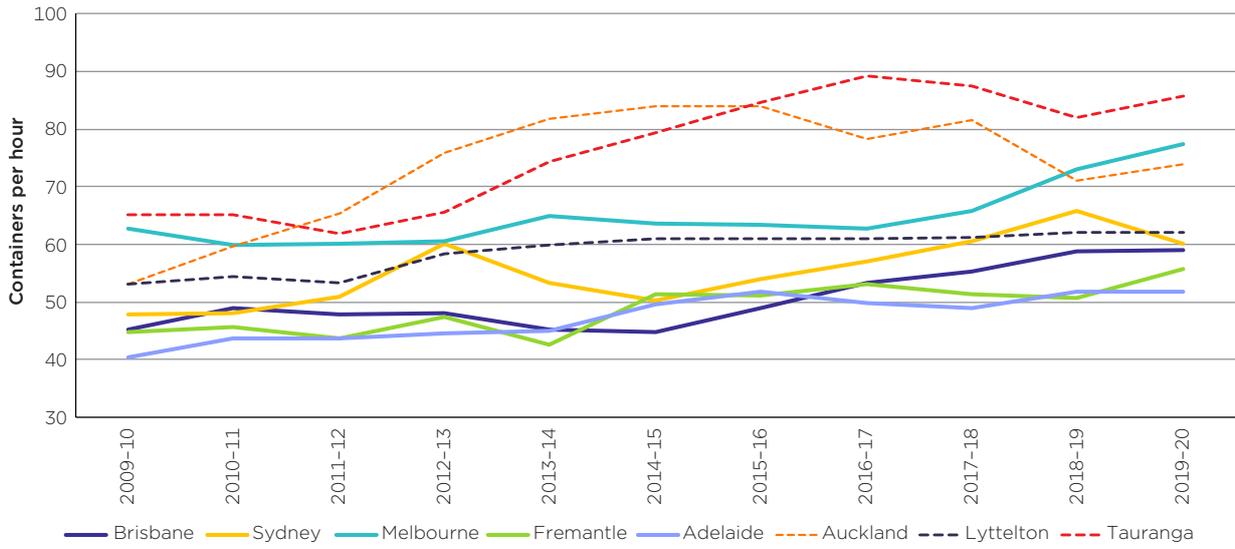
Figures 6.2, 6.3 and 6.4 show how the 3 largest New Zealand ports compare to the 5 largest Australian container ports based on net ship rate, net crane rate and net labour rate.

216 This is the median time vessels spent within port limits (in days). According to UNCTADstat, the average time vessels spend in port is longer for practically all countries, due to statistical outliers on the right tail, i.e. ships that spend weeks or months in a port, for example, for repairs. The global average time ships spent in port in 2020 was 42.3 hours *versus* 24.0 hours median time.

217 United Nations, *United Nations Conference on Trade and Development – Data Center*, 2021, accessed 15 September 2021.

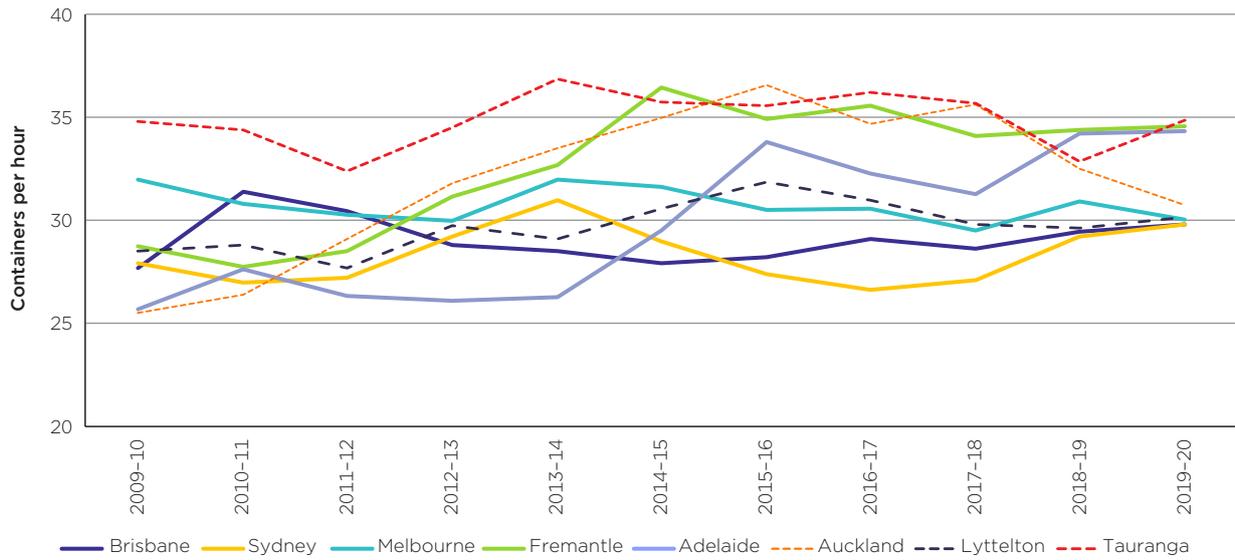
218 Refer to figure A11 in Appendix A for the median in-port time for the 5 monitored container ports in Australia.

Figure 6.2: Net ship rate: Australian ports and New Zealand ports: 2009-10 to 2019-20



Source: ACCC calculation based on data from BITRE Waterline 68 and New Zealand Freight Information Gathering System.²¹⁹

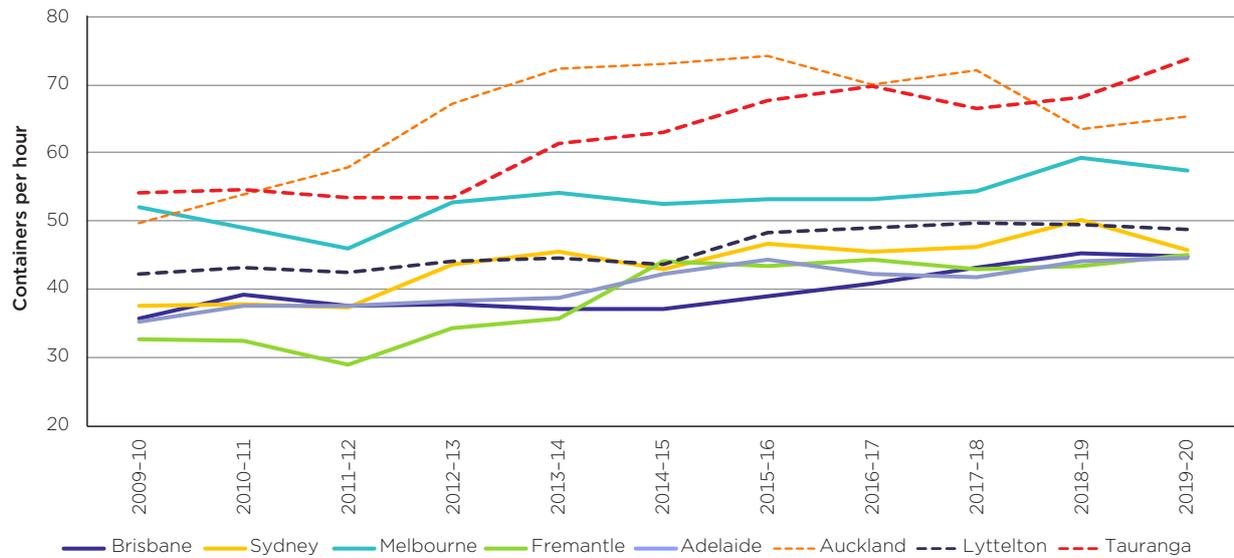
Figure 6.3: Net crane rate: Australian ports and New Zealand ports: 2009-10 to 2019-20



Source: ACCC calculation based on data from BITRE Waterline 68 and New Zealand Freight Information Gathering System.

219 New Zealand Ministry of Transport, *Freight and Logistics*, NZ Ministry of Transport website, 2021, accessed 21 September 2021. The New Zealand Ministry of Transport and BITRE employ similar methodologies in calculating quayside productivity.

Figure 6.4: Net labour rate: Australian ports and New Zealand ports: 2009-10 to 2019-20



Source: ACCC calculation based on data from BITRE Waterline 68 and New Zealand Freight Information Gathering System.

The 3 figures above show that New Zealand ports have generally performed better than Australian ports over the past decade. Across all 3 quayside productivity measures, Australia's best-performing port, Port of Melbourne, has consistently under-performed against the top performer in New Zealand, Tauranga.²²⁰

Overall, although there has been productivity improvement at Australian ports, the various benchmarks show that productivity improvement has stagnated in the past decade and Australian ports are lagging behind its international counterparts. The next section explores the key factors that are contributing to this.

6.2 Restrictive work practices and industrial actions are hampering productivity improvements and damaging operation of the entire supply chain

The drivers of performance at Australian container ports are many and varied. Differences between performance at Australian container ports and those in other countries need to be viewed in the light of the inherent operating environment differences across countries. In particular, there are a number of characteristics that put Australian container ports at a comparative disadvantage relative to its overseas counterparts, including:

- the long distance of Australian ports from originating and destination ports
- the low frequency of ships visiting Australian ports due to relatively small throughput compared with the major ports in East Asia, Europe and North America²²¹
- the differential impact across ports of the increasing capacity of ships being used in container trade
- the issues surrounding the management of empty containers due to imbalance of imports over exports.

Generally, larger ports with more frequent ship calls, bigger ships and larger call size have better connectivity with the global market and better productivity performance such as reduced in-port

²²⁰ As discussed above, the crane rate is inversely related to number of cranes to service a ship. Noting that both Fremantle and Adelaide's crane intensity (on average) is approximately 1.5 while the New Zealand's port of Tauranga has a crane intensity of 2.5, this will result in Fremantle and Adelaide having comparable crane rates to Tauranga.

²²¹ In 2019, Melbourne was ranked 59th port in the world in terms of throughput while Sydney was ranked 72nd in the world. Lloyd's List, [One Hundred Ports 2019](#), Lloyd's List website, 2020, accessed 21 September 2021.

time.²²² However, as was shown in the previous section, New Zealand's largest port, Tauranga, has managed to consistently out-perform the Australian container ports, despite being of similar size (by TEU throughput) and geographical location to Brisbane. This indicates that there are factors specific to Australia that inhibit the ability of Australian ports to maximise their productivity and efficiency.

The ACCC considers that industrial relations have played a pivotal role in inhibiting productivity and efficiency gains at Australian ports, exacerbating delays and increasing costs to Australian importers and exporters.

The following sections discuss the impact that industrial relations have had on stevedores, through restrictive work practices and industrial action. While the focus in this report is on stevedores, it is important to point out that similar industrial relation issues affect other market participants in the supply chain, including empty container parks and port operators.

Restrictive work practices are preventing stevedores maximising labour efficiency and effectively utilising technological enhancements

As discussed in section 6.1, while Australian stevedores have made substantial productivity-enhancing capital investments over the decade, they have been unable to significantly improve the productivity and efficiency of their operations.

The MUA believes that this is due to the way stevedores have implemented automation. The MUA informed the ACCC that introduction of new automated technology by stevedores reduces container productivity in an overall sense, while reducing jobs and creating job insecurity. The MUA considers that, in some cases, stevedores' experimentation with various technological applications in landside infrastructure and work processes had the aim of cutting costs and concentrating managerial power. The MUA stated that this has led to work intensification, outsourcing of new functions and a lack of investment in training and upskilling of the workforce.

A flexible, suitably trained workforce on the docks that accommodates the vagaries of international shipping, so containers can be unloaded and loaded as soon as a ship arrives, is critical to efficiency. The ACCC has reviewed the most recent Enterprise Agreements (EA) reached between each of the stevedores and the MUA. The stevedores' EAs contain numerous provisions that restrict supply and deployment of labour, including:

- **Recruitment decisions:** Some stevedores must initially offer any promotional opportunities internally and are only allowed to make offers to external candidates in the absence of an adequate internal candidate. Some stevedores are required to consult with the Maritime Union of Australia (MUA) or apply criteria agreed with the MUA when conducting recruitment. These provisions can foster skill mismatches and reduce the ability of management to hire the most qualified person for the job.
- **The order of engagement:** Most EAs contain provisions (also known as the 'order of pick') that specify the order in which different types of employees are engaged for a shift. The order of engagement constrains management's ability to make the most effective use of the workforce, thereby reducing productivity and, in turn, timeliness and reliability.
- **Employee allocation:** A number of EAs have highly restrictive employee allocation clauses with respect to employee shift start, notification and cancellation times. Stevedores lack labour flexibility to enable optimisation and minimisation of 'idle' person-hours or 'waste', which means stevedores have to carry excess labour when volumes are low. This type of restriction can be expensive, disruptive and counterproductive.
- **Outsourcing of labour:** Some EAs have highly restrictive clauses on outsourcing labour, particularly with respect to performing some preventative and corrective maintenance tasks on terminal container handling equipment and infrastructure. Good management practice would normally involve a case-by-case assessment of the viability of contracting out, by comparing the benefits and costs of alternative providers. The restriction to contracting out decreases pressure on permanent employees to be competitive with contractors, thereby reducing workplace performance.

222 UNCTAD, [Review of Maritime Transport 2020](#), UNCTAD website, 2020, accessed 12 October 2021, p. 97.

Overall, these provisions constrain workplace performance, reduce and distort incentives to improve productivity, reduce timeliness and reliability, and increase labour costs for a given level of activity. This has contributed to the sub-optimal performance of the nation's major ports and added to the pandemic-induced supply constraints.

There are also provisions in the stevedores' EAs which create onerous processes in relation to adoption of new technologies. For example, the FACT EA does not preclude technology adoption and automation of production processes. However, the conditions in 'Introduction of Change' and 'Automation' clauses could be viewed as administratively onerous, particularly with respect to employee consultation, involvement, and impact mitigation.²²³

Other provisions make it more difficult for stevedores to fully utilise their equipment. For example, while Patrick has 8 ship-to-shore cranes installed at Port Botany, labour constraints limit it to staffing only 5 to 6 of these at a time. This limits the extent to which it can deploy its cranes when multiple vessels are at berth.

Patrick is similarly constrained from flexibly rostering staff across different shifts. It is uneconomical to employ sufficient permanent staff to operate all cranes at all times, but Patrick is unable to employ further staff on a flexible basis to allow it to operate additional cranes to meet peak load as, and when, required. Even though Patrick has made considerable investment in enhancing crane capabilities, restrictive labour constraints limit Patrick's ability to effectively utilise its cranes to meet peak demand.

Box 6.1 illustrates how restrictive some of the EA provisions have become.

Box 6.1: Case study – restrictive provisions in Hutchison's Enterprise Agreement

In July 2021, after 3 years of negotiations, Hutchison signed an EA agreement containing the following provisions.²²⁴

- 8.4 No employee shall be made redundant due to the implementation of automation and/or technology or mode change.*
- 10.1 Vacancies, including promotional and permanent level appointment opportunities as they arise, will be filled by trained and suitable people within the business, where available.*
- 10.4 Appointment of positions covered by this agreement will be undertaken on the basis of:*
 - 10.4.1 40% of appointments from family and friends of employees covered by this agreement*
 - 10.4.2 30% appointments from the MUA*
 - 10.4.3 30% appointments from Hutchison.*

These provisions limit Hutchison's ability to automate, reduce costs and control its recruitment decisions. By definition, automation is a creation and application of technologies to produce goods or services with minimal human intervention. Yet, provision 8.4 prohibits Hutchison from automating in a way that would reduce the level of its employees.

Provision 10.4 gives significant control to the MUA and Hutchison's employees in employee appointments, severely limiting Hutchison's ability to recruit the most suitable and qualified people for its company.

223 Fair Work Commission, (FWC), [Flinders Adelaide Container Terminal Stevedoring Enterprise Agreement 2021-2025](#), FWC website, 2021, accessed 30 September 2021.

224 FWC, [Hutchison Ports Australia \(HPA\) and Maritime Union of Australia \(MUA\) Enterprise Agreement 2021](#), FWC website, 2021, accessed 21 September 2021.

On 26 October 2021, Patrick Terminals, announced that it has applied to the Fair Work Commission to terminate its agreement with the MUA on the basis that it is no longer fit for purpose and restricting its ability to meet customer requirements.²²⁵

Increasingly, restrictive work practices related to both supply and deployment of labour, have limited stevedores' ability to utilise their technological enhancements effectively. This is a critical factor in the 'plateauing' of general productivity gains in stevedoring services and port operation in recent years, which negatively impacts the productivity of container vessels and their crew, and in turn, increases the blue-water freight costs of importing and exporting goods. All these additional costs will ultimately be borne by Australian consumers.

Industrial actions are causing ongoing disruptions to the supply chain

The stevedores' EAs contain some of the most restrictive work practices in Australia. Each time a stevedore's EA expires, the MUA and the stevedore engage in protracted EA negotiations.

Table 6.6 shows the number of days that each stevedore negotiated their most recent EA.

Table 6.6: Details of EA negotiations between the MUA and Australian stevedores

	Date previous EA expired	Date signed by stevedore/ MUA (whichever is later)	Number of days in dispute	Terminal locations affected
Hutchison	25 November 2018	23 July 2021 ²²⁶	971	Brisbane, Sydney
DP World	28 February 2019	25 February 2021 ²²⁷	728	Brisbane, Sydney, Fremantle, Melbourne
VICT	31 October 2020	2 July 2021 ²²⁸	254	Melbourne
Patrick	30 June 2020 ²²⁹	EBA not reached	488*	Brisbane, Sydney, Fremantle, Melbourne
FACT	30 June 2021	20 August 2021 ²³⁰	78	Adelaide

Source: From EAs published on the Fair Work Commission's website.

Note: *More days if agreement not reached by 31 October 2021.

Table 6.6 shows that the MUA negotiated with Hutchison and DP World 971 and 728 days respectively. Negotiations with Patrick have lasted for nearly 500 days and continue. It appears that during each of those negotiations, the MUA used industrial actions to demand that stevedores accept restrictive provisions. The EA conditions that Hutchison accepted in its current EA, as illustrated in box 6.1, appear to be outside the realm of what would be considered reasonable terms and conditions in any industry.

Critically, in addition to adversely impacting on stevedores' revenues and costs, the industrial actions are causing damage to many Australian businesses that are not parties to the industrial dispute. Market participants informed the ACCC that supply chain disruptions have increased significantly over the past few years and that industrial action was one of the major causes of these disruptions. Market participants have stated that these disruptions have caused considerable delays, higher costs, and loss of business.

Box 6.2 illustrates this, using Patrick's industrial dispute at Port Botany as an example.

225 Patrick Terminal, [Patrick Applies to Terminate Agreement with MUA](#), [media statement], Patrick Terminal website, 26 October 2021, accessed 27 October 2021.

226 FWC, [Hutchison Ports Australia \(HPA\) and Maritime Union of Australia \(MUA\) Enterprise Agreement 2021](#).

227 25 February 2021 was the date (whichever is later) that MUA / DP World signed the agreement for Melbourne. Agreements signed by the MUA or DP World for various terminal occurred on different dates. For Brisbane the date the agreement was signed was 26 November 2020, for Sydney it was signed on 1 December 2020 and for Fremantle it was signed on 22 January 2021. FWC, [DP World](#), 2021, accessed 21 September 2021.

228 FWC, [Victoria International Container Terminal Operations Agreement 2021](#), FWC website, 2021, accessed 21 September 2021.

229 FWC, [Patrick's Terminals Enterprise Agreement 2016](#), FWC website, 2021, accessed 30 September 2021.

230 FWC, [Flinders Adelaide Container Terminal Stevedoring Enterprise Agreement 2021-2025](#).

Box 6.2: Case study – Industrial disputes at Patrick’s Port Botany terminal

Patrick’s EA expired on 30 June 2020. During negotiations for new EA, Patrick offered to roll over the expired EA, with a 2.5% pay rise. As reported at the time, negotiations collapsed when the MUA sought new restrictions on outsourcing and automation.²³¹

Over the next 12 months, the MUA undertook 20 employee response actions at Patrick’s terminal at Port Botany. These actions, which were carried out initially in September 2020 and then again in May and June 2021, were in pursuit of various claims, including wages, rosters, manning levels, and other conditions.

Patrick informed the ACCC that these actions resulted in a total loss of more than 800 rostered work hours as a result of stoppages, with each stoppage ranging from one hour to 24 hours. Patrick also informed the ACCC that the MUA imposed various additional bans during these periods, each running from a few hours to 28 days, including:

- unlimited ban on upgrades, that is, engaging employees in work at a higher grade than they were employed, preventing Patrick from fully resourcing its operations across this period
- unlimited ban on serving subcontracted vessels, preventing Patrick from accepting or performing subcontracted work from other stevedores
- unlimited ban on employee work extensions, preventing employees from working overtime shifts when required, reducing Patrick’s ability to service vessels
- unlimited ban on employees working when not allocated, significantly reducing labour availability and flexibility
- unlimited ban on employees working when on the standby list, impacting on Patrick’s ability to fully resource shifts.

The MUA’s actions against Patrick in September 2020, combined with concurrent actions against Hutchison, resulted in significant delays at Port Botany. On 17 September 2020, there was a cargo backlog of up to 11 days directly because of the overtime and work bans at Patrick and Hutchison.²³² On 29 September 2020, Patrick publicly released figures which showed that Port Botany would be more than 3 weeks, and more than 56,000 lifts, behind schedule by 2 October.²³³ Containers that should have been handled at Port Botany during September were delayed until October and November 2020 instead.

These extended delays impacted on capacity, productivity, reliability and cost of the entire supply chain, such that:²³⁴

- shipping lines introduced shipping surcharges of US\$285–\$350 per TEU
- vessels either omitted or suspended bookings to Port Botany, whilst some shipping lines cancelled vessels or suspending bookings to Australia
- some importers transported their container cargo from Melbourne to Sydney, at substantial cost, while others waited extra 3–4 weeks to receive their cargo by sea from Melbourne
- empty container parks in Sydney became full, creating landside congestion, as ships were not evacuating, or not able to evacuate empty containers
- vessel servicing time deteriorated by up to 80%, with containers spending extra time waiting on the terminal.

231 Australian Financial Review, '[Wharries' strike sabotages jobs and supply lines](#)', *AFR*, 17 September 2020, accessed 21 September 2021.

232 *ibid.*

233 Patrick Terminal, '[Delays worsening at Patrick terminals nationwide as MUA action continues](#)' [media statement], Patrick Terminal website, 29 September 2020, accessed 21 September 2021.

234 NSW Ports, '[NSW Ports CEO Update](#)', NSW Ports website, 10 October 2020, accessed 21 September 2021.

Similar disruptions occurred following industrial action in May and June 2021. In addition, it was reported that Patrick closed at least a quarter of their rail freight windows in response to the disruptions, reducing capacity from 4,300 lifts per week to 3,200 lifts per week.²³⁵ This resulted in rail freight being unloaded at intermodal depots and then trucked back to Port Botany, generating additional freight handling charges for Australian farmers and exporters.

Patrick Terminals is the only stevedore without an EA when this report is published. On 27 September 2021, Patrick announced that the MUA informed that it would undertake a new series of rolling strikes in the lead up to Christmas and at a time of high agricultural export demand.²³⁶ This included 40 industrial actions at Patrick's Melbourne terminal, where workers would strike every Monday, Wednesday and Friday in October 2021, as well as industrial actions at Port Botany and Port of Fremantle.

On 6 October 2021, the MUA announced that it would pause the industrial actions following COVID-19 outbreak at Patrick's Melbourne terminal.²³⁷ However, 3 weeks later, the MUA announced further industrial actions in Melbourne.²³⁸ The MUA has also continued industrial actions at Patrick's terminals in Port Botany and Port of Fremantle. It has been reported that industrial actions at Port of Fremantle forced the diversion of 7 vessels in 10 days²³⁹, including 3 vessels delivering critical agricultural and mining resources to Western Australia.²⁴⁰

The MUA has stated that all industrial actions undertaken by the stevedoring workforce have been approved by the Fair Work Commission. The MUA also stated that in order to ensure customers can access critical supplies such as medical equipment in a timely manner, it has regularly exempted the movement of containers holding those goods from industrial action.

Patrick has informed the ACCC that the MUA is using these disruptive industrial actions to demand, among other things, that Patrick include in its EA a 'friends and family' provision similar to clause 10.4 in Hutchison's EA (as set out in box 6.1).

235 I Ackerman, '[Industrial action reduces Patrick rail capacity at Sydney by 25%](#)', *Daily Cargo News*, 28 June 2021, accessed 28 September 2021.

236 D Marin-Guzman, '[Port strikes threaten to cripple Christmas](#)', *AFR*, 27 September 2021, accessed 29 September 2021.

237 I Ackerman, '[MUA lifts industrial action at Melbourne](#)', *Daily Cargo News*, 6 October 2021, accessed 6 October 2021.

238 I Ackerman, '[MUA announces another road of strikes at Patrick's Melbourne terminal](#)', *Daily Cargo News*, 26 October 2021, accessed 27 October 2021.

239 I Ackerman, '[Strikes at Fremantle continue as economic consequences mount](#)', *Daily Cargo News*, 14 October 2021, accessed 15 October 2021.

240 A Williams, '[Fremantle dispute prevents delivery of critical machinery to agricultural and mining sectors](#)', *Daily Cargo News*, 7 October 2021.

7. Investments at Australian container ports

As discussed in chapter 6, Australian container port monitored by the ACCC are currently not performing as well as many overseas counterparts. While industrial relations issues are a major contributor to that poor performance, service providers across the supply chain need to continue to invest in technology and infrastructure to achieve further improvements in productivity and efficiency.

The chapter examines the current and planned investments of ports and stevedores.

7.1 Investments being made by ports and stevedores to improve productivity and efficiency

As the container terminal industry continues to be affected by market volatility driven in part by COVID-19, the investment program across the 5 monitored stevedores varied significantly. Table 7.1 lists the key investments that stevedores either commenced or completed in 2020-21.

Table 7.1: Selected key investment commenced and/or completed in 2020-21

Stevedore	Infrastructure	Location	Status
DP World	New rubber tyred gantries and internal transfer vehicles	Sydney	In progress
	High mast lighting upgrade	Sydney	In progress
	New straddle carriers	Melbourne	In progress
	New shuttle carriers	Brisbane	In progress
	Automated stacking cranes maintenance works	Brisbane	In progress
	IT infrastructure upgrade	Fremantle	In progress
	New quay crane and heavy forklifts	Fremantle	In progress
	Truck marshalling area	Fremantle	In progress
	Terminal pavement upgrades	All terminals	In progress
	New terminal vehicles	All terminals	Completed
	Quay crane works and upgrades	All terminals	Completed
	Upgrades in security infrastructure	All terminals	Completed
	Terminal pavement works	All terminals	Completed
FACT	Straddle carrier replacement	Adelaide	In progress
Patrick	12 new straddles	Brisbane, Sydney	Operational
	Terminal operating system upgrade	All terminals	Operational
	Port Botany rail project (with NSW Ports)	Sydney	Operational
	Redevelopment of Fremantle terminal	Fremantle	In progress
	2 Liebherr cranes	Brisbane, Sydney	In progress
	ESD rail project (with Port of Melbourne)	Melbourne	In progress
VICT	6 automated container carriers	Melbourne	In progress

Source: Information received from stevedores as part of the monitoring regime

Patrick has informed the ACCC that its investments, as set out in the table, total around \$227 million. The table does not include Hutchison, because due to the pandemic it has delayed its capital expenditure to 2021-22.

The stevedores have also indicated their future investments plans to the ACCC:

- Hutchison has indicated that its future investments will be for additional container storage in both Sydney and Brisbane.
- VICT has indicated that its further investment plans include civil works project, as well as purchases of new quay cranes, automated stacking cranes and automated container carriers.
- DP World has indicated that in the future, it will invest in additional yard equipment and infrastructure that ensures projected trade demands are met and service levels are maintained on both quayside and landside operations. Key planned investments in the near term include new shuttle carriers and pavement upgrades in Brisbane, new rubber tyred gantries and terminal vehicles in Sydney, replacement straddles and major pavement works in Melbourne and in Fremantle, a new quay crane, truck marshalling area, additional yard equipment, and upgrade to the rail interface and IT systems.
- FACT has indicated that it will continue replacing its straddles into 2021-22 to provide additional capacity. FACT also has plans to purchase additional quay cranes as required by throughput and contractual service delivery obligations.
- Patrick plans to invest in excess of \$50 million in Fremantle by enhancing truck and rail interfaces, enhancing crane capability and systems improvement. To increase capacity, Patrick will also undertake various civil, pavement and reefer work in the next 3 years across its 3 terminals on the east coast. To cater for volume growth, Patrick plans to replace existing, and purchase additional, straddles for its 3 east coast terminals. Patrick will also invest in Port's rail project at Port Botany and Port of Melbourne (these are discussed further below).

While most of stevedores' investments discussed above are specific to their operation, there are some investment projects that require cooperation across the supply chain. The following section discusses joint investments being made by ports and stevedores in improving rail access to the ports.

7.2 The supply chain can benefit from greater rail access to the ports from joint investments

As discussed in chapter 4, the throughput at the Australian ports has grown significantly over the past 2 decades. As shown in figure 6.1, TEU has grown at an average rate of over 5% per annum in the past 20 years. If throughput continues to rise at such rate, then by 2030-31, it will grow to around 13 million TEU.

Currently, most freight is carried by trucks. Over the past decade, on average, only around 10% to 12% of the containers entering or leaving the Australian container ports were transported by rail.²⁴¹ If the split between market share of rail and trucks continues into 2030, this may double the number of trucks required. This could lead to more congestion on metropolitan roads.

There is potential to better integrate rail into the supply chain, to increase its market share to a more sustainable mode split. Increase in rail utilisation can increase capacity and efficiencies. Transport by rail compared to road is considered more reliable and efficient for large volumes of cargo.²⁴² Increases in rail capacity would particularly benefit farmers and other regional exporters who currently rely more on rail.

In 2020-21, rail's market share of freight containers varied between the 5 monitored ports. Table 7.2 below shows the movement in freight on rail between 2013-14 and 2020-21 (refer to figure A8 in Appendix A for more details).

241 ACCC calculation based on data from BITRE Waterline 68.

242 Port of Melbourne, [Our Plan for Rail 2020](#), Port of Melbourne website, 2020, accessed 28 September 2021, p. 17.

Table 7.2: Freight on rail (%), Australia between 2013-14 and 2020-21²⁴³

	2013-14 (%)	2020-21 (%)	Percentage point change over the period
Adelaide	4.1	20.3	16.2
Brisbane	5.6	2.1	-3.5
Fremantle	16.8	19.9	3.1
Melbourne	13.9	6.1	-7.8
Sydney	12.0	15.5	3.5
National	11.6	10.5	-1.1

Source: ACCC calculation based on data from BITRE Waterline 68.

As shown in table 7.2, rail has gained material market share in Adelaide, but not much elsewhere. This is not surprising given many South Australian food growers use rail to transport their produce, such as wines and grains, from regional areas to Port Adelaide.²⁴⁴ It was recently reported that South Australian exports achieved new record volumes, driven by the growth in wheat and barley and the minerals sector.²⁴⁵ In contrast, over the same period, the use of rail in Melbourne has decreased. This drop coincided with the entry of VICT at Webb Dock in Melbourne, which currently does not have direct access to rail.

Brisbane has the lowest rail utilisation of the 5 monitored container ports. This is due to factors such as lack of investment in infrastructure and freight trains sharing the passenger rail network. The latter leads to operational limitations and inefficiencies, delays and longer transit times. A study in 2019 found increasing the rail freight utilisation at Port of Brisbane to 30% rail share will increase reliability and reduce transport costs by \$130 per TEU on average.²⁴⁶

Rail access to ports by rail is achieved in 2 ways:

- through on-dock rail terminals constructed at the port, or
- intermodal terminals constructed elsewhere, which require containers to be transported from the intermodal terminal to the port.

On-dock rail terminals are considered the most efficient, as this eliminates needing to transfer containers by truck.²⁴⁷

The lack of direct on-dock rail access at the port increases the cost of using rail and can limit the use of rail for containerised product to, and from, the port. For example, at the Port of Melbourne, the West Swanson Rail Terminal is currently the only on-dock rail terminal at the Port to move containers. All other terminals use trucks to move containers to, and from, the 2 Swanson Dock container terminals.²⁴⁸ This transfer via road between the rail terminal near the Port and the stevedoring terminal can cost up to \$100 for each container.²⁴⁹ A large proportion of this cost can be removed if a direct on-dock rail is integrated into the stevedoring terminal.

Ports and stevedores in Melbourne and Sydney are making investments to improve access of rail to their respective ports.

²⁴³ Freight on rail is the measure of the percentage of containers on rail.

²⁴⁴ Bureau of Infrastructure, Transport and Regional Economics (BITRE), [Research Report 139: - Why short-haul intermodal rail services succeed](#), BITRE website, 2016, accessed 4 October 2021, p. 139.

²⁴⁵ Premier of South Australia, [A new record for South Australian exports \[media release\]](#), Premier of SA website, 2021, accessed 4 October 2021.

²⁴⁶ Deloitte Access Economics, [Establishing the need for the last mile: Making the case for a dedicated freight rail link from Acacia Ridge to the Port of Brisbane](#), Port of Brisbane website, 2019, accessed 21 September 2021.

²⁴⁷ Port of Melbourne, [Our Plan for Rail 2020](#), p. 10.

²⁴⁸ *ibid.*

²⁴⁹ Victorian Department of Transport, [Delivering the Goods: Victorian Freight Plan](#), Victorian Department of Transport website, 2018, accessed 28 September 2021, p. 42.

Port of Melbourne and Patrick have agreed to construct a new rail terminal at Patrick's Logistics Park to enable more freight to be delivered by rail. The Port of Melbourne is currently investing \$125 million towards on-dock rail to increase efficiency by enhancing terminal capacity and improving rail terminal operations. This includes building infrastructure such as a new rail terminal interface with the container terminal at Swanson Dock East. This will lower the cost of transferring containers between rail and ships. By allowing longer trains, it will also provide greater operational flexibility in accessing the port.

Port of Melbourne will commence construction of the on-dock rail at Swanson Dock in 2021-22 and plans to complete it by mid-2023.²⁵⁰ Although Webb Dock is not currently serviced by rail, Port of Melbourne plans to develop the Webb Dock Freight Link in the next 5 years.²⁵¹ Port of Melbourne is also investing in the Port Rail Shuttle Network aimed at improving rail connection between the port and other major freight hubs, reducing the cost to use rail freight.²⁵²

In November 2019, NSW Ports announced plans to significantly improve rail infrastructure capacity at Port Botany. The first stage involves \$120 million from NSW Ports to deliver on-dock rail infrastructure and \$70 million from Patrick Terminals to deliver automated rail operating equipment. At completion in 2023, Patrick's rail capacity terminal will increase to 0.5 million TEUs and Port Botany's overall rail capacity increase to 1.5 million TEUs. Some of the proposed key benefits of this increased capacity include improved rail efficiency, reducing costs for importers and exporters as the result of faster train turnaround, an increase in rail service and rail windows for cargo owners and reduction of truck travel in Sydney.²⁵³

250 Port of Melbourne, [Port rail transformation project](#), Port of Melbourne website, 2021, accessed 21 September 2021.

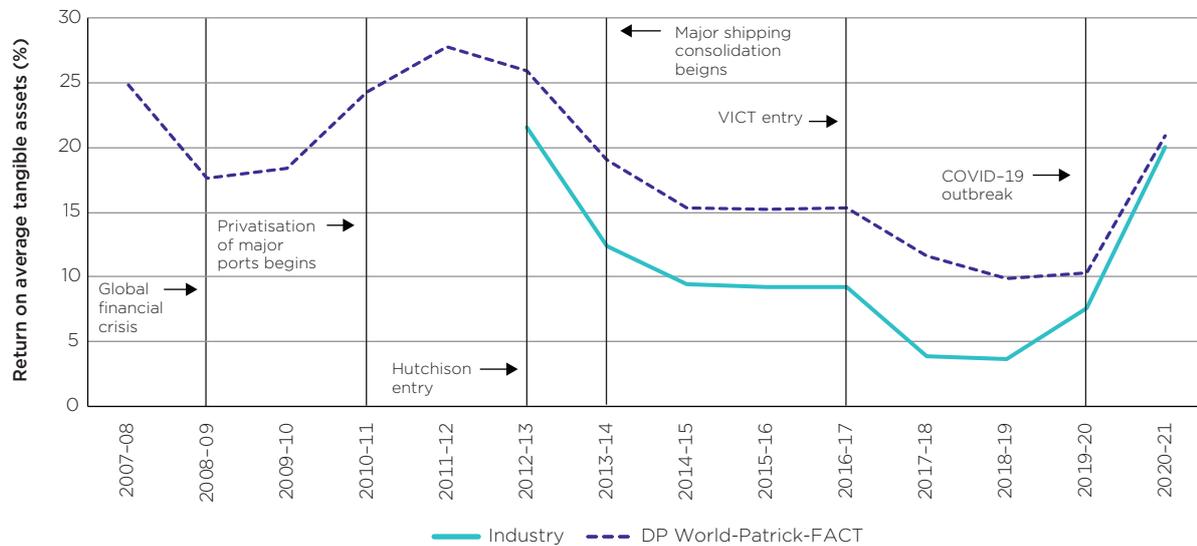
251 Port of Melbourne, [Our Plan for Rail 2020](#).

252 Victorian Department of Transport, [Port rail shuttle network](#), Victorian Department of Transport website, 2021, accessed 28 September 2021.

253 NSW Ports, [Major initiatives: Growth in rail](#), NSW Ports website, 2021, accessed 21 September 2021.

Appendix A: Additional graphs

Figure A1: Return on average tangible assets: 2007-08 to 2020-21²⁵⁴



Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

Notes: Industry comprises 5 monitored stevedores: DP World, Patrick, FACT, Hutchison and VICT. DP World-Patrick-FACT represents 3 established incumbents: DP World, Patrick, and FACT. Data availability dictates the chart. In calculating return on average tangible assets, neither EBITA nor asset values are indexed. Asset values recognise a write-down in the value of Hutchison's assets in 2015-16, 2018-19, and 2020-21.

Figure A2: Total revenues in real terms: 2001-02 to 2020-21

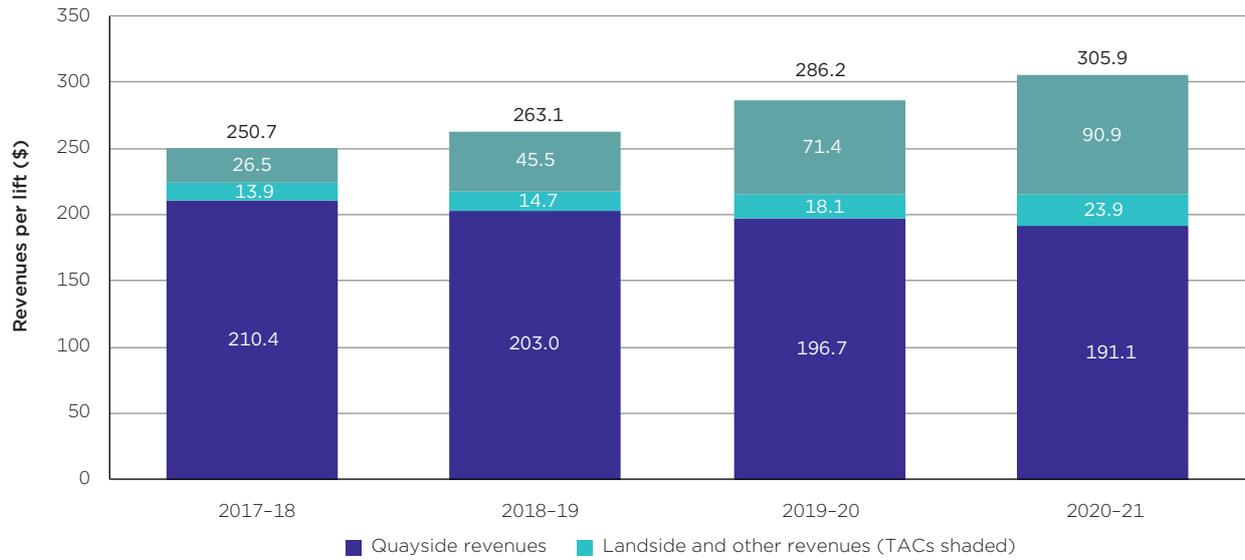


Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

Note: TACs have been collected by container stevedores at some ports since 2011-12 and aggregated under landside and other revenues until 2016-17. Real values in 2020-21 dollars.

254 Return on average tangible assets is a profitability measure that indicates stevedores' operating profits relative to the value of their deployed tangible assets. This ratio provides a measure of the efficiency with which stevedores use their tangible assets to produce operating profit.

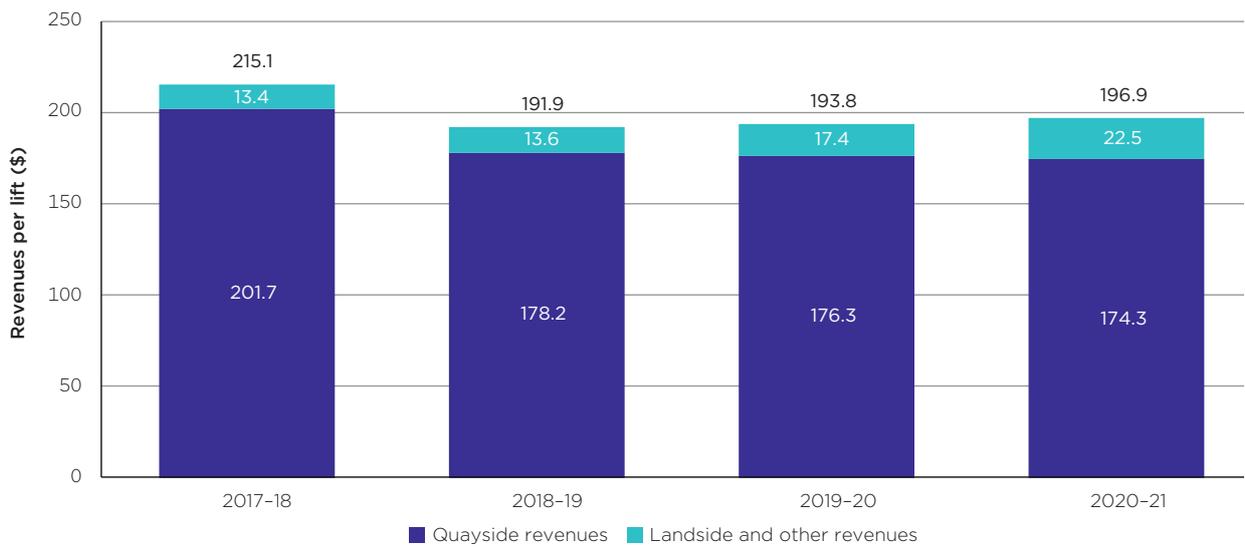
Figure A3: Revenues per lift in real terms—full containers: 2017-18 to 2020-21



Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

Note: Real values in 2020-21 dollars.

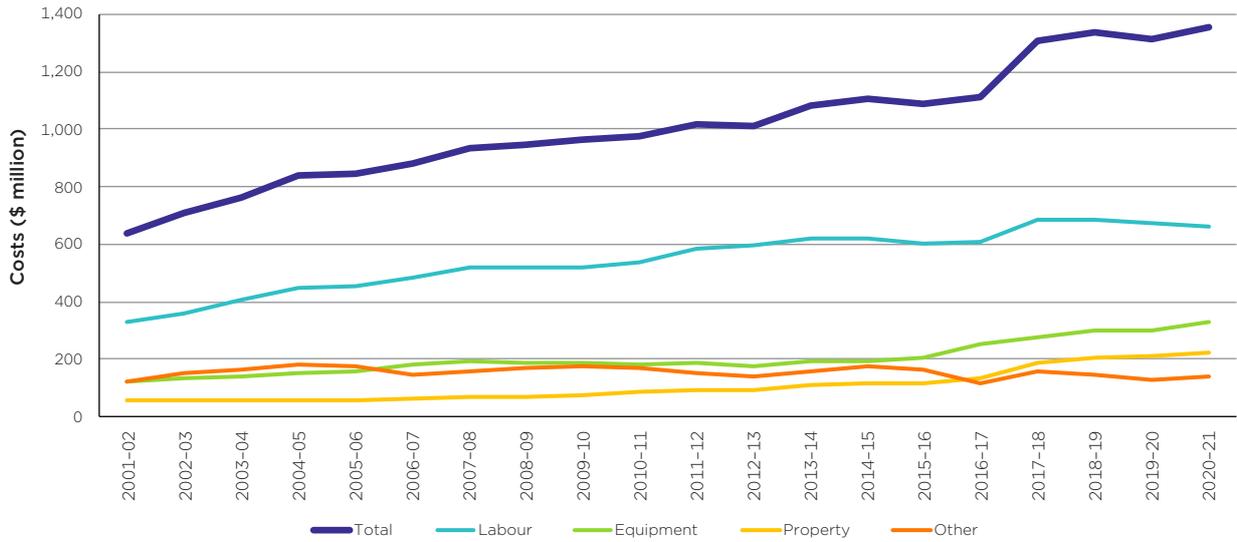
Figure A4: Revenues per lift in real terms—empty containers: 2017-18 to 2020-21



Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

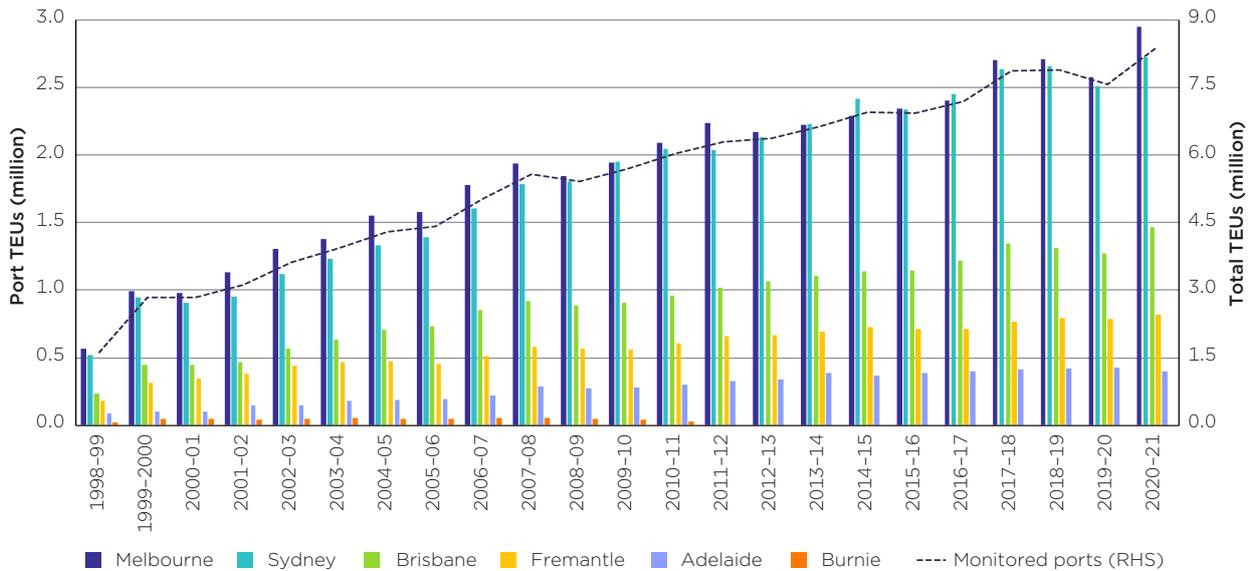
Note: Real values in 2020-21 dollars.

Figure A5: Costs in real terms: 2001-02 to 2020-21



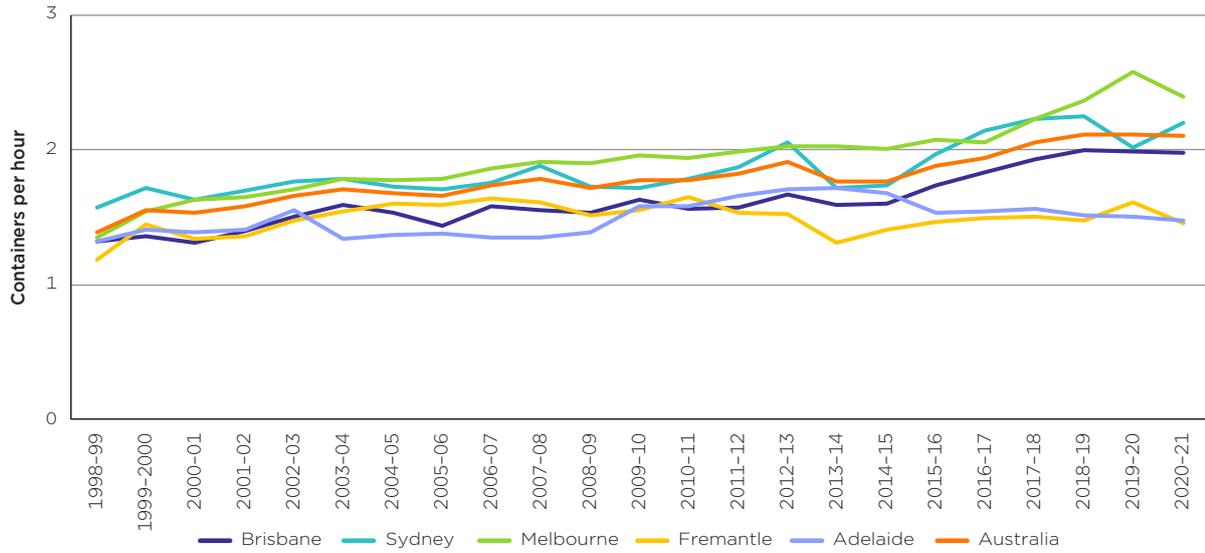
Source: ACCC analysis of information received from stevedores as part of the monitoring regime.
 Note: Real values in 2020-21 dollars.

Figure A6: Container stevedoring throughput trends at monitored ports: 1998-99 to 2020-21



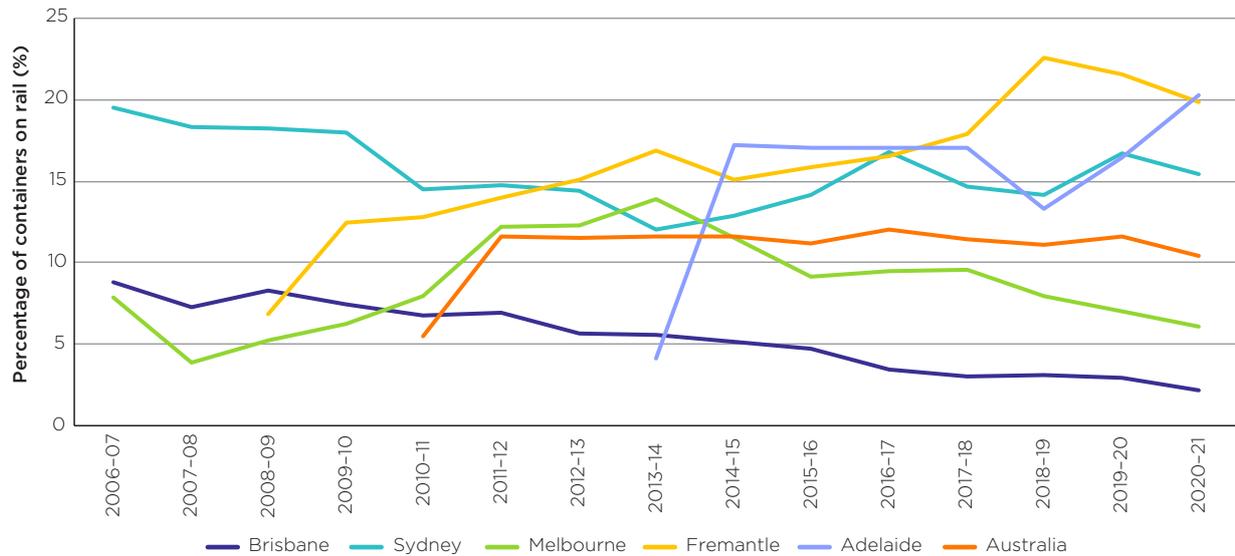
Source: ACCC analysis of information received from stevedores as part of the monitoring regime.

Figure A7: Crane intensity at each container port: 1998-99 to 2020-21²⁵⁵



Source: ACCC calculation based on data from BITRE Waterline 68.

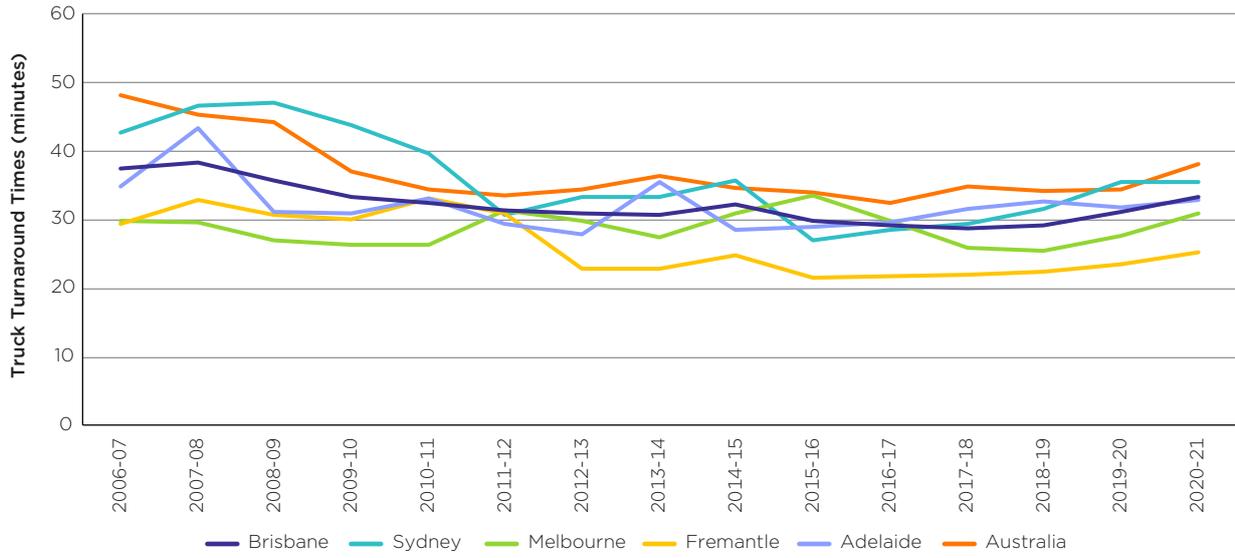
Figure A8: Freight on rail: 2006-07 to 2020-21



Source: ACCC calculation based on data from BITRE Waterline 68.

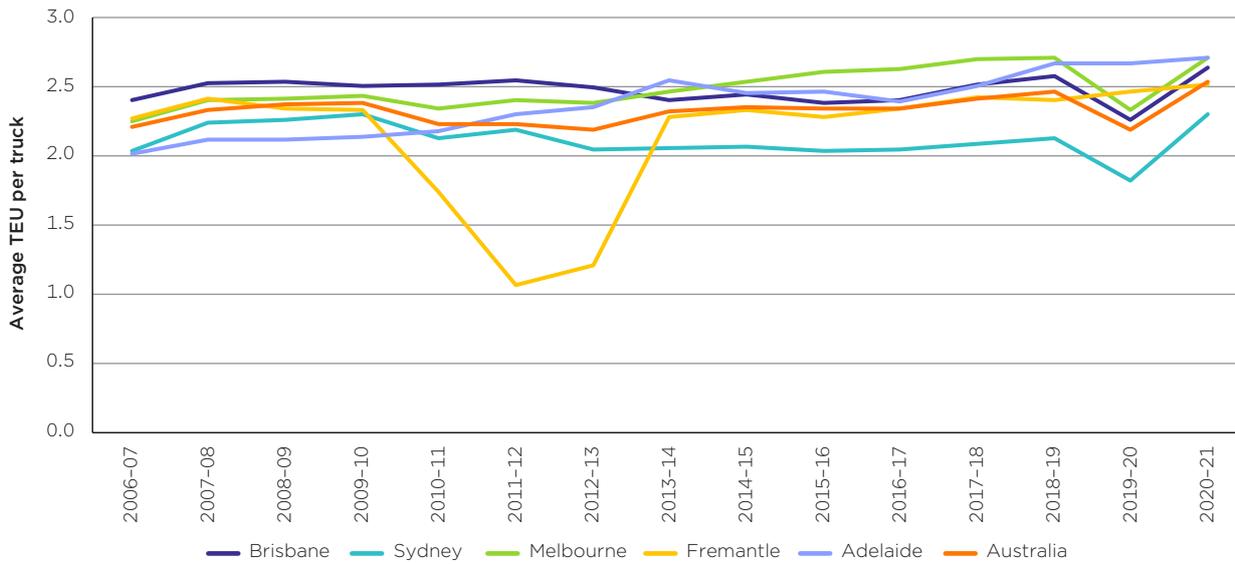
255 Crane intensity is the total number allocated crane hours, divided by the elapsed time. See: BITRE, *Waterline* 50, 2011.

Figure A9: Truck turnaround times: 2006-07 to 2020-21



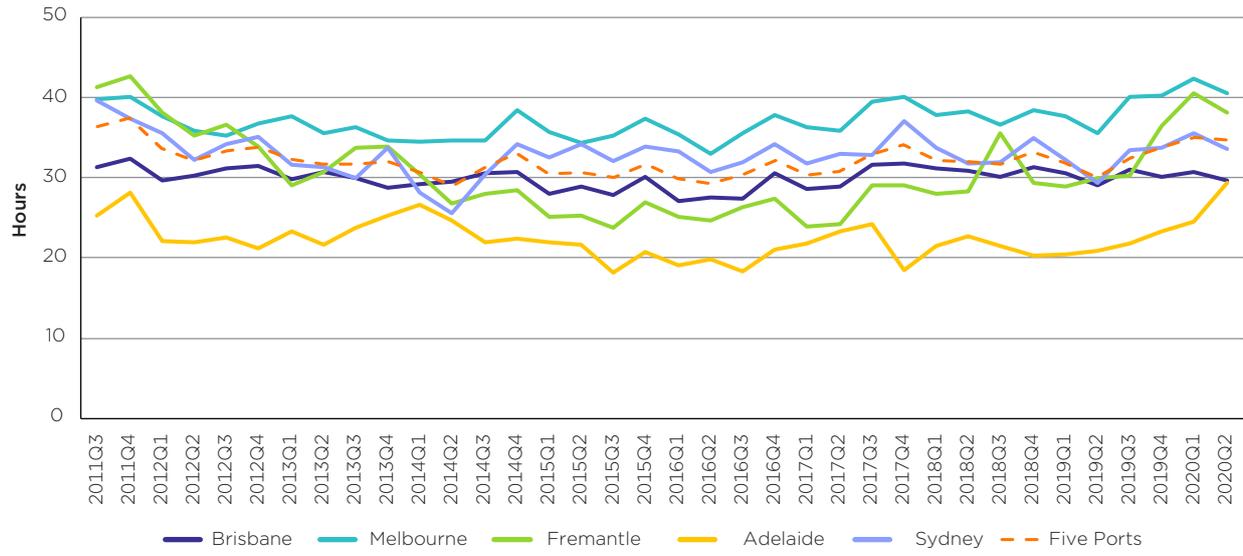
Source: ACCC calculation based on data from BITRE Waterline 68.

Figure A10: TEU per truck: 2006-07 to 2020-21



Source: ACCC calculation based on data from BITRE Waterline 68.

Figure A11: Median In-port time (hour), 5 ports and Australia: 2011-12 to 2019-20



Source: ACCC calculation based on data from BITRE Waterline 68.

Appendix B: Part VIIA, Competition and Consumer Act 2010

s. 95ZE

Directions to monitor prices, costs and profits of an industry

- (1) The Minister may give the Commission a written direction:
- (a) to monitor prices, costs and profits relating to the supply of goods and services by persons in a specified industry; and
 - (b) to give the Minister a report on the monitoring at a specified time or at specified intervals within a specified period.

Commercial confidentiality

- (2) The Commission must, in preparing such a report, have regard to the need for commercial confidentiality.

Public inspection

- (3) The Commission must also make copies of the report available for public inspection as soon as practicable after it gives the Minister the report.

s. 95ZG

Exceptions to price monitoring

- (1) The Minister must not direct the Commission under this Division to monitor prices, costs and profits relating to a supply of goods or services of a particular description that is an exempt supply in relation to goods or services of that description.
- (2) The Minister must not direct the Commission under this Division to monitor prices, costs and profits of a State or Territory authority that supplies goods or services unless the State or Territory concerned has agreed to the direction being given.

s. 95G(7)

The Commission's functions under this Part

General

- (7) In exercising its powers and performing its functions under this Part, the Commission must, subject to any directions given under section 95ZH, have particular regard to the following:
- (a) the need to maintain investment and employment, including the influence of profitability on investment and employment;
 - (b) the need to discourage a person who is in a position to substantially influence a market for goods or services from taking advantage of that power in setting prices;
 - (c) the need to discourage cost increases arising from increases in wages and changes in conditions of employment inconsistent with principles established by relevant industrial tribunals.

Appendix C: Ministerial direction

COMMONWEALTH OF AUSTRALIA

Prices Surveillance Act 1983

DIRECTION NO 17

- (1) I, Peter Costello, Treasurer, pursuant to section 27A of the Prices Surveillance Act 1983, hereby direct the Australian Competition and Consumer Commission to undertake monitoring of prices, costs and profits relating to the supply of services by a container terminal operator company in ports at the following locations:
 - (a) Adelaide;
 - (b) Brisbane;
 - (c) Burnie;
 - (d) Fremantle
 - (e) Melbourne; and
 - (f) Sydney.
- (2) In this direction, 'container terminal operator company' means a provider of container stevedoring services in ports at the locations listed in paragraph (1).
- (3) The ACCC is to report to me on its monitoring activities referred to in paragraph (1) within 4 months after the end of each financial year.



PETER COSTELLO

January 1999

Federal Register of Legislative Instruments F2008B00402



AUSTRALIAN COMPETITION
& CONSUMER COMMISSION

