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Glossary

ABS  Australian Bureau of Statistics
ACCC  Australian Competition and Consumer Commission
ASC  automated stacking crane
Asciano  Asciano Limited
ASX  Australian Securities Exchange
BITRE  Bureau of Infrastructure, Transport and Regional Economics
CCA  Competition and Consumer Act 2010
COAG  Council of Australian Governments
CPI  Consumer Price Index
DP World  DP World Australia Ltd, jointly owned by DP World (25 per cent) and Citi Infrastructure Investors (75 per cent)
EBITA  earnings before interest, tax and amortisation
Elapsed crane time  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. Elapsed crane time is an input to calculating the ‘net crane rate’.
Elapsed labour rate  The elapsed labour rate is 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 labour time is the elapsed time between labour first boarding the ship and labour last leaving the ship, less any time when the labour has not worked, including non-operational delays. Elapsed labour time is an input to calculating the ‘elapsed labour rate’.
ESC  Essential Services Commission of Victoria
FACT  Flinders Adelaide Container Terminal Pty Ltd, the sole container stevedore at Port Adelaide
GDP  gross domestic product
Hutchison  Hutchison Ports Australia, a member of Hutchison Port Holdings Group
Net crane rate  The net crane rate is an indicator of capital productivity and reflects the intensity to which quay cranes are worked. It is measured by dividing total number of containers or TEUs handled by the elapsed crane time.
Patrick  Patrick Terminals and Logistics, a former division of Asciano Ltd, owned by a consortium including Qube and Brookfield Infrastructure
PBLIS  Port Botany Landside Improvement Strategy
Real terms  A value expressed in the money of a particular base time period (e.g. 2012–13 dollars). Values in real terms remove the impact of inflation and provide for better comparison of values over time.
| **Ship rate** | The ship rate is an indicator of labour and capital productivity while the ship is being worked. It is calculated by multiplying the net crane rate by crane intensity. Crane intensity is defined as the total number of allocated crane hours divided by the elapsed time from labour first boarding the ship to labour last leaving the ship. |
| **Tangible assets** | The physical infrastructure used by the stevedores to provide container stevedoring services. |
| **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 two TEUs. |
| **VBS** | 1-Stop Connections Pty Ltd Vehicle Booking System used by Patrick and DP World |
| **VICT** | Victorian International Container Terminal Ltd which is owned by International Container Terminal Services Inc. |
Infographic

Container stevedoring monitoring report 2015–16

Australian Container Stevedoring Terminals

Container volumes
National container volumes (TEU)
7.2 million (↑1.4% since 2014–15)

Productivity

National crane rate
29.7 containers/hour
(▼2.9% since 2014–15)

Labour productivity
47.0 containers/hour
(▲3.8% since 2014–15)

Truck turnaround times
34 minutes
(▼15 minutes since 2014–15)

Prices

Containers
$111.06 per TEU
(▼0.6% since 2014–15)

Charts

Productivity—containers per hour

Prices ($) per TEU

(2011-12 to 2015-16)
Executive Summary

Container stevedoring services and the broader freight supply chain play an important role that impacts on both the cost of goods imported to Australia and the international competitiveness of Australian exporters.

Australia’s container stevedoring industry is experiencing a period of increased competition and investment in infrastructure. The incumbent operators Patrick and DP World have faced new competition from Hutchison Ports Australia (Hutchison) in Brisbane since 2012-13 and Sydney since 2013-14. This competitive dynamic has seen extensive investment in the industry as Hutchison established its new container terminals and the incumbents have looked to increase the degree to which their facilities are automated. Competition will also be enhanced at the Port of Melbourne when Victoria International Container Terminal (VICT) launches Australia’s first fully automated terminal in late 2016.

The benefits of this increased competition are likely to have flowed directly to the shipping lines and indirectly to importers and exporters.

In 2015-16, average prices fell, unit costs increased in response to investment in infrastructure, and productivity remained close to record levels.

Average prices fell in an increasingly competitive stevedoring industry

Importers and exporters are likely to have benefited as unit revenue (a proxy for average stevedoring prices) fell in real terms in 2015-16. Unit stevedoring revenue per TEU for 20-foot and 40-foot containers both fell by around 1 per cent in real terms and are now at their lowest levels since the ACCC commenced its monitoring program.

Unit revenues have been falling for many years in line with unit costs, driven by greater economies of scale and increasing automation. However, the fall in unit revenues in 2015-16 occurred despite a sizeable increase in unit costs. This is indicative of price competition as incumbent stevedores try to retain shipping line customers from the new entrants.

Importers and exporters are presently benefiting from historic low shipping freight rates on trade lanes to and from Australia. While this is no doubt assisted by falling stevedoring prices, it primarily reflects a downturn in a shipping industry that is suffering from an oversupply of capacity.

Industry profitability has been affected by substantial asset expansion

A key factor driving industry performance in recent years has been the large investment by Hutchison to establish container terminals in Sydney and Brisbane. This is providing a greater choice of stevedores for shipping lines and putting the industry in a better position to handle growing freight volumes in the future. However, it is also resulting in higher industry unit costs in the short term as a higher number of container terminals are used to service a similar number of containers. Unit costs increased by 4.9 per cent in real terms in 2015-16, the largest since the ACCC commenced its monitoring of the industry.

This situation has led to the industry reporting a reduction in the rate of return on average tangible assets from 10.4 per cent in 2014-15 to 8.0 per cent in 2015-16. This is the lowest return on assets since monitoring commenced.

While returns on assets have declined in recent years due to a growing asset base, the drop in return on assets in 2015-16 was driven primarily by falling margins.

It is expected that the expansion of the asset base associated with VICT’s commencement in Melbourne in 2016-17 will see the industry rate of return on assets fall further.
There continue to be challenges for new entrants into the industry

While there are signs of improvements in the industry resulting from increased competition, challenges exist for new operators seeking to establish themselves. To the extent that new operators cannot make meaningful inroads into the market over time, the extent of competition may be more limited.

Hutchison has been operational since 2013 but is yet to win many contracts from its key competitors DP World and Patrick. It is also possible that VICT may face some of these issues when it commences operations at the Port of Melbourne. In this context, it is already facing some difficulties in being able to exploit its potential advantage in catering to larger ships.

That said, as a result of substantial investments by new entrants there is now infrastructure in place to support a third stevedore in each of the three largest container ports in Australia which will provide additional choice (and capacity) to shipping lines now and in the future.

Productivity remains strong

Productivity on the wharves remained largely unchanged in 2015-16 at close to record levels.

Labour productivity is measured by the elapsed labour rate. This increased from 45.3 to 47.0 containers per hour and is now at record levels. The most significant increase during the year was in Sydney (8.1 per cent), while the measure also increased in Brisbane, Adelaide and Melbourne.

Capital productivity is measured by the net crane rate. This decreased from 30.6 in 2014-15 to 29.7 containers per hour in 2015-16. At the container port level, capital productivity improved significantly in Adelaide (14.6 per cent) but declined or did not change materially in the other ports.

A key landside productivity indicator, average truck turnaround time, also improved in 2015-16, by 1.5 minutes to 34 minutes. Average truck turnaround times improved most significantly in Sydney but worsened in Melbourne and Adelaide.

Privatisations

The Victorian government finalised the privatisation of the Port of Melbourne in September 2016, while the Western Australian government is also proposing the privatisation of the Port of Fremantle.

Privatising monopoly infrastructure assets can promote efficient outcomes in the interests of users and the wider community. However it is important for governments to ensure there are appropriate structural reforms and/or sufficient regulatory oversight put in place at the time of privatisation so as to realise the potential economic efficiencies. Some stakeholders were concerned that the high price paid by the new lease holder for the Port of Melbourne means that port fees will increase significantly in the future.

Use of rail in Australian container ports

The volume of container freight to pass through Australian ports is forecast to more than double by 2032-33.

To successfully transport an increasing volume of containers without more road congestion, governments and private stakeholders have looked to increase the use of rail links. Many state governments have expressed a goal of using more rail freight and some have set
targets for the proportion of containers to be transported by rail. Alternative forms of support for rail freight have been in the form of investment in freight connections or the development of intermodal terminals and other rail infrastructure.

However, investment in freight rail is relatively costly and to date there has only been a limited transition from road freight to rail. This suggests that ambitious government targets for rail transport may not be met in the short term.

**Road funding and pricing reforms**

Federal, state and local governments are considering potential reforms that would result in more market orientated service provision of heavy vehicle related road infrastructure services. Known as Heavy Vehicle Road Reform, these reforms would support greater productivity in container supply chains, and ensure targeted investment occurred in freight routes to meet expected growth in user demand (including container volumes).

A practical starting point for reform is to establish a system that ensures that the revenue collected from road users is directed to the entities that build and maintain the roads, on the basis of more directly targeting user service outcomes. This would provide for a more direct revenue source. Fully user-funded and hypothecated roads would also mean that governments would not need to choose between roads and other services in each budget allocation.
1. Introduction

Most consumer goods imported into Australia are transported by sea and handled by a container stevedore. Increased efficiency in stevedoring should, in a competitive market, be passed directly on to users of stevedoring services (shipping lines), and indirectly to consumers in the form of lower prices.

Ports and related land-side logistics chains are also critical to the domestic and international competitiveness of Australian businesses, which rely on them to deliver business inputs and to take exports to the global market. As a nation dependent on maritime trade, Australia’s ports are an important gateway for goods. Consequently, ports and associated infrastructure are of great economic and social importance to Australia.

This is the ACCC’s 18th container stevedoring monitoring report. The ACCC is required to monitor prices, costs and profits of the container stevedores at the ports in Adelaide, Brisbane, Burnie, Fremantle, Melbourne and Sydney. As part of this role, the ACCC releases an annual container stevedoring monitoring report. These reports provide information to governments and the community about the operating performance of the container stevedores, as well as the level of competition, investment and productivity in the industry.

The ACCC also uses these reports to provide commentary on relevant developments or matters relating to the broader container freight supply chain.

1.1. The ACCC’s container stevedoring monitoring program

The ACCC’s monitoring program began following the Australian government’s decision in 1998 to support reform of the Australian waterfront. The ACCC is required to monitor the prices, costs and profits of the stevedores and provide a report to the minister every financial year.

In performing its monitoring function under Part VIIA of the *Competition and Consumer Act 2010* (CCA), 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.

Relevant sections of Part VIIA are reproduced in Appendix D and the ministerial direction setting out the ACCC’s monitoring function is at Appendix E.

1.2. Container stevedoring and the container supply chain

In Australia, container stevedoring services are provided by specialist companies that own container handling equipment such as cranes and straddles. They lease port terminals, which include berthing and yard space, from port operators.

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1 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.

2 The PSA has since been repealed, with the prices surveillance provisions 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 container supply chain moves containerised freight from its point of origin to its end destination. Many parties play a role in the container supply chain. These include stevedoring businesses and dock workers, shipping lines, importers/exporters (shippers) (who may choose to engage freight forwarders/shipping agents), road transport operators, rail operators, logistics service providers, intermodal terminal operators, port operators, empty container park operators and governments.

The main aspects of the container supply chain are illustrated in Diagram 1.1 below. The solid lines indicate where there are typically commercial relationships between key parties, while the dotted lines signify the movements of full containers.

**Diagram 1.1 – Container supply chain**

At a high level, the container supply chain involves a shipper selecting a shipping line to transport goods to/from the origin to the destination port(s). Shipping lines will in turn choose a stevedore to load/unload containers at the port. The transport operator is selected by the shipper and is responsible for picking up/dropping off containers from the port (via rail or road).

Intermodal terminals are also sometimes used to change between modes of container transport, e.g. to move containers from rail transport to road transport or from regional trains to port shuttle trains.

### 1.3. Container stevedoring in Australia

There are currently four container terminal operators covered by the ACCC’s monitoring program. These are Patrick Terminals & Logistics (Patrick), DP World Australia (DP World), Hutchison Ports Australia (Hutchison) and Flinders Adelaide Container Terminal (FACT).

Patrick and DP World operate container terminals at the Port of Brisbane, Port Botany (Sydney), Port of Melbourne and Port of Fremantle.

FACT is the sole container stevedore at the Port of Adelaide.

New operator Victoria International Container Terminal (VICT) is scheduled to commence operation in Melbourne by the end of 2016.

1.4. The purpose of the ACCC’s container stevedoring monitoring program

The objective of monitoring is to improve firm or market conduct, for example, through moral suasion or the threat of a stronger regulatory measure being applied. Monitoring may also be introduced to improve consumer understanding or decisions by providing information about pricing practices where there are general concerns about the effectiveness of competition and price levels and movements. Monitoring also has the potential to improve public awareness without requiring a large allocation of resources.

The ACCC’s monitoring program with respect to container stevedoring provides information to the government and wider community about the development of Australia’s container stevedoring industry. In particular, the monitoring program looks at the operating performance of, and investment in, container stevedoring terminals, and degree of competition at the monitored ports. The monitoring program also highlights issues affecting the broader supply chain, including road and rail connections to container terminals.

While price monitoring is used in some industries to provide additional transparency, without the credible threat of regulatory intervention and/or independent binding arbitration, monitoring alone is unlikely to be an effective deterrent against monopoly pricing in the absence of competition.

1.5. The structure of this report

The remainder of this report is structured as follows:

- Chapter 2 provides an overview of the Australian stevedoring industry and policy issues that relate to container ports and the container supply chain
- Chapter 3 provides information on the productivity performance of the stevedoring industry
- Chapter 4 provides the financial monitoring results
- Appendix A presents company-specific data from the four stevedoring businesses involved in the monitoring program
- Appendix B provides information on the characteristics of the stevedoring industry
- Appendix C provides further information about the ACCC’s monitoring methodology
- Appendix D reproduces relevant sections of Part VIIA of the CCA
- Appendix E provides the ministerial direction for the ACCC’s container stevedoring monitoring role.
- Additional information on trends in industry revenue cost and margins and on specific cost categories for each of the stevedores can be found in separate spreadsheets on the ACCC’s website https://www.accc.gov.au/regulated-infrastructure/waterfront-shipping/monitoring-reporting-for-container-stevedoring
2. The stevedoring industry and broader policy issues

2.1. Introduction

This chapter looks at the industry structure and competitive dynamics of the Australian stevedoring industry, as well as industry performance over the last decade. The chapter also discusses policy issues that relate to container ports and the container supply chain.

Australia’s container stevedoring industry is experiencing a period of increased competition and investment in infrastructure. The incumbent operators Patrick and DP World have faced new competition from Hutchison Ports Australia (Hutchison) in Brisbane since 2012-13 and Sydney since 2013-14. This competitive dynamic has seen extensive investment in the industry as Hutchison established its new container terminals and the incumbents have looked to increase the degree to which their facilities are automated. These investments are expected to drive performance improvements in future years for shipping lines and other users of stevedoring services such as transport companies. Competition will also be enhanced at the Port of Melbourne when Victoria International Container Terminal (VICT) launches Australia’s first fully automated terminal in late 2016.

However, there are a number of challenges for new entrants to establish themselves in the market. If new operators cannot make meaningful inroads into the market over time, competition may be more limited.

Importers and exporters are likely to have benefited as unit revenue (a proxy for average stevedoring prices) fell in real terms in 2015-16. Unit stevedoring revenue per TEU for 20-foot and 40-foot containers both fell by around 1 per cent in real terms and are now at their lowest levels since the ACCC commenced its monitoring program. Importers and exporters are likely to have also benefited from a challenging 2015-16 for the shipping industry, which has translated into historic low shipping freight rates on trade lanes to and from Australia.

The Victorian government finalised the privatisation of the Port of Melbourne in September 2016, while the Western Australian government is also proposing the privatisation of the Port of Fremantle. Privatising monopoly infrastructure assets can promote efficient outcomes in the interests of users and the wider community. However it is important for governments to ensure there are appropriate structural reforms and/or sufficient regulatory oversight put in place at the time of privatisation to realise potential economic efficiencies.

There is also a continued need to improve road and rail transport connections to container terminals. This includes increasing the use of rail to meet future expected container volumes and improving the efficiency with which roads are delivered and used. A more efficient coastal shipping industry for freight could also help to relieve pressure on Australia’s road and rail networks.

The ACCC’s observations are presented below. Sections 2.2 to 2.6 cover the key aspects of the industry, such as:

- industry structure
- competitive dynamics
- productivity and competition
- investments by the stevedores, and
- the recent downturn in the global shipping industry.
Sections 2.7 to 2.10 discuss the key policy issues that relate to container ports and the container supply chain, including:

- port privatisations
- improving rail connections to container ports
- coastal shipping, and
- road funding and pricing reforms.

### 2.2. Industry structure

Stevedoring services are provided by businesses using specially designed cranes and straddles. These businesses typically lease berthing and terminal space from port operators, under long term arrangements of between 20 to 40 years.

Stevedores Patrick and DP World have long operated at the Port of Melbourne, Port of Brisbane, Port Botany (Sydney) and the Port of Fremantle.

The market entry by Hutchison has meant there are now three stevedores in Brisbane (since 2012-13) and Sydney (since 2013–14). A third stevedore, VICT, is expected to commence operations at the Port of Melbourne in late 2016.

The sole stevedore at the Port of Adelaide is Flinders Adelaide Container Terminal (FACT), a subsidiary of Flinders Ports.

The other port in which the ACCC was directed to monitor stevedoring prices, costs and profits was the Port of Burnie in Tasmania, where Patrick previously operated a terminal. However, this facility was decommissioned in May 2011. On 4 November 2015, DP World announced that it had entered into an exclusive agreement with the Tasmanian Ports Corporation, Tasports, to provide an international container terminal at the Port of Burnie. However, DP World has subsequently stated that it was reconsidering its plans.

Incumbent stevedore Patrick was previously owned by freight logistics company Asciano Limited. Asciano was acquired by a consortium comprising Qube Holdings Ltd (Qube), Brookfield Infrastructure Partners LP (Brookfield) and a group of global investment funds in August 2016. The acquisition is discussed in Text box 2.1 below.

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3 Hutchison Ports Australia Limited, a part of the CK Hutchison Holdings Limited group, operates Brisbane Container Terminals Pty Ltd and Sydney International Container Terminals Pty Ltd.

4 Previously, DP World Adelaide supplied stevedoring services, under a joint venture arrangement between DP World and Flinders Ports. However, in July 2012, Flinders Ports announced that it had acquired DP World’s 60 per cent share of the business and became sole owner. Three years prior, Flinders Ports had acquired a 40 per cent stake in the business.


6 DP World has stated that it is reconsidering its plans in light of the Senate’s rejection of amendments contained in the **Shipping Legislation Amendment Bill 2015**. Amendments included in the Bill would have allowed foreign vessels working between Australian ports for more than six months per year to pay foreign wages to their crew. See Gramenz E, **Senate rejection of shipping bill puts $20m Tasmanian port development in doubt**, ABC News, 26 November 2015 <http://www.abc.net.au/news/2015-11-26/rejection-of-shipping-bill-puts-port-development-in-doubt/6977868>. 
Text box 2.1 Acquisition of Asciano by Brookfield and Qube

On 19 August 2016, the acquisition of Asciano—freight logistics company and the owner of the incumbent stevedore Patrick—was finalised by a consortium comprising Qube, Brookfield and a group of global investment funds.

Qube is Australia’s largest integrated provider of import and export logistics services with national operations that provide a broad range of services. Brookfield is an owner and operator of utilities, transport, energy and communications infrastructure assets in North and South America, Australia, and Europe.

As part of the transaction:

• Qube takes a 50 per cent ownership of Asciano’s Patrick ports business with Brookfield (33.5 percent) also having a significant interest
• Asciano’s Bulk and Automotive Port Services business becomes majorly owned by Brookfield (67 per cent) along with a number of smaller investors and
• Asciano’s rail business, Pacific National, is owned by a group of global investment funds.

Qube considered that its ownership of Patrick contained significant synergies with its existing logistics business and would enable it to further a strategy of developing solutions to address inefficiencies in import and export supply chains. In particular, Qube considered that the transaction would enable it to undertake the necessary investment to ensure the delivery of efficient rail operations and support a more reliable overall logistics supply chain from port to importer and from exporter to port. It considered that this will result in lower costs and improved customer service.

The acquisition came shortly after the ACCC’s announcement on 21 July 2016 that it would not oppose the acquisition under section 50 of the Competition and Consumer Act 2010. The ACCC concluded that there was not likely to be a substantial lessening of competition in any market as result of the acquisition.

The ACCC’s consideration of the proposed acquisition focused on the import-export supply chain for containerised freight through the ports of Botany, Brisbane, Fremantle and Melbourne. Specifically, it closely considered the vertical integration of Asciano’s Patrick container terminals with Qube’s road and rail container transport services and empty container parks.

The ACCC also considered whether the vertical integration of the Patrick container terminal at Port Botany with Qube’s rail operations would result in discrimination against Qube’s competitors. A key issue was whether this would reduce competition in the market for regional rail container export services to Port Botany, with particular regard to Qube’s interest in the Moorebank intermodal terminal.

More information on the ACCC’s decision is contained in the Public Competition Assessment, which can be accessed on the ACCC website at: http://registers.accc.gov.au/content/index.phtml/itemId/501191.

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9 Ibid.
2.3. Competitive dynamics

This section discusses the competitive dynamics in the Australian stevedoring industry. In particular, it outlines the changes to the market dynamics as a result of the entry of Hutchison in Sydney and Brisbane, and VICT in Melbourne, and the challenges faced by new entrants.

2.3.1. Market entry

Throughout the 18-year history of the ACCC’s monitoring program, two firms—currently known as Patrick and DP World—have dominated the supply of container stevedoring services and offered a national service to users.

Prior to the recent entry of new stevedores there were some concerns about the level of competition in the industry. Increased competition in the industry has driven investment in capacity expansion and improved productivity and efficiency in stevedoring. The entry of Hutchison in Brisbane and Sydney and the imminent entry of VICT in Melbourne means that a third stevedore will be in operation in each of the East Coast container ports.

The benefits of this increased competition are likely to flow directly to the shipping lines and indirectly to importers and exporters. These benefits include greater choice and bargaining power allowing shipping lines to negotiate for reduced charges and/or better service. The benefits could also include the provision of more suitable berthing windows (which may allow cost savings for shipping lines if they can increase the overall efficiency of their service schedule, by, for example, reducing fuel use).

In particular, in 2015-16 there has been a significant investment by VICT to establish Australia’s first fully automated container terminal at the Port of Melbourne. Further information surrounding this investment is detailed in Section 2.5.

2.3.2. Sustainability of competition

While there are signs of improvements in the industry resulting from increased competition, challenges exist for new operators seeking to establish themselves. To the extent that new operators cannot make meaningful inroads into the market over time, the extent of competition may be more limited. There are a number of challenges for new entrants to establish themselves in the market. These include:

- the need to obtain sufficient economies of scale in order to get unit costs down, with the expectation that the new entrant will run at a loss as it establishes itself
- new contracts with shipping lines only becoming available every three to five years when the existing contract with the existing stevedore expires
- the likely response from incumbent stevedores through the use of rate reductions in order to secure long term contracts and
- a preference of some lines for a national stevedoring service.

Hutchison, which is owned by CK Hutchison Holdings Limited, one of the world’s largest global port operators, has been operational since 2013 but is yet to win many contracts from its key competitors DP World and Patrick. Indeed it reported a 42.5 per cent fall in volume.

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10 This issue has been discussed in previous ACCC container stevedoring monitoring reports: see for example ACCC container stevedoring monitoring report no. 13, October 2011.
handled in 2015-16 from an already low base.\textsuperscript{11} Hutchison’s Acting CEO Mark Jack stated that ‘[t]he third operator policy is not viable in the immediate future but hopefully we can work with all stakeholders to ensure the viability of the container terminal industry on the east coast over the longer term’.\textsuperscript{12}

Many of the difficulties Hutchison has encountered to date are the types of issues that are likely to face any new entrant to the industry. It is possible that VICT may face some of these issues when it commences operations at the Port of Melbourne at the end of 2016. On one hand, VICT would appear to have a number of advantages over the incumbent stevedores at the port. The primary advantage is an ability to service larger container ships with a capacity of up to 8,000 TEU due to its location at Webb Dock. The two existing container terminals at Swanson Dock cannot accommodate these vessels owing to their length and issues concerning air draught under the West Gate Bridge.\textsuperscript{13} Although none of these larger vessels currently call at Australian ports, a 2015 survey of shipping lines by Shipping Australia suggested there is likely to be significant numbers of these vessels visiting Australia in the next five years if it is feasible for such vessels to dock in the major container ports.\textsuperscript{14}

A secondary advantage that VICT may have is that it will be operating a fully automated terminal. This may enable VICT to avoid some of the labour disputes that have historically characterised the industry, making the stevedore more attractive to shipping lines.

However, VICT is still facing a number of challenges. Most significantly, VICT is reportedly paying a considerably higher rent than the incumbent stevedores. VICT’s rent was determined by its bid in a competitive tender. In late 2014, the Port of Melbourne sought to increase the rent it charges DP World by around 750 per cent, which would have brought DP World’s rent roughly in line with VICT’s.\textsuperscript{15} However, the port later agreed to a much lower rent, with Patrick reportedly expected to receive a similar deal to that of DP World.\textsuperscript{16} Such a disparity in rent may make it difficult for VICT to compete on price for shipping line customers.

VICT may also be hampered in its ability to service larger ships. The ACCC understands that the Port of Melbourne has not yet approved larger ships entering the port. While this approval may be granted, it has also been reported that VICT is being restricted to prevent it gaining a competitive advantage over Patrick and DP World at Swanson Dock.\textsuperscript{17} VICT’s location at Webb Dock offers the possibility of berthing of two larger vessels at VICT’s terminal at the same time. However, this would require the removal of a concrete obstruction from a decommissioned berth. At present, VICT has not been able to reach an agreement with the Port of Melbourne for the removal of this concrete obstruction and the extension of

\textsuperscript{11} However, Hutchison (together with DP World) secured a major contract in September 2016, with the A3 consortium, an alliance between three of Asia’s biggest shipping lines. See Smith, M, *DP World battle-ready for Patrick after A3 win*, Australian Financial Review, 21 September 2016.


\textsuperscript{16} Ibid.

its berth frontage.\textsuperscript{18} According to VICT, this would increase the capacity of the entire Port of Melbourne by up to 25 per cent.\textsuperscript{19}

Other challenges for VICT relate to landside linkages. VICT at present does not have access to a rail connection at its location at Webb Dock,\textsuperscript{20} in contrast to the incumbent stevedores at Swanson Dock. Additionally, the proposed Western Distributor road project will enable DP World and Patrick to be served by 110 tonne ‘Super Double B’ trucks, but not VICT at Webb Dock.\textsuperscript{21}

For the above reasons, it is likely that it will take new entrants in the Australian stevedoring industry some time to establish themselves in the market and generate viable market shares. That said, as a result of substantial investments by new entrants there is now infrastructure in place to support a third stevedore in each of the three largest container ports in Australia which will provide additional choice (and capacity) to shipping lines now and in the future.

2.4. ACCC observations on stevedoring productivity and price competition

This section summarises the historical performance of the container stevedoring industry, and recent evidence of price competition between stevedores.

2.4.1. Historical performance of the container stevedoring industry

The ACCC began monitoring the container stevedoring industry in 1998-99. The performance of the container stevedoring industry has improved markedly since that time, in terms of stevedoring prices and productivity.

The ACCC’s monitoring program was introduced at the time of the Australian government’s reform package for the Australian waterfront, which set benchmarks agreed to by the stevedores to improve productivity and reduce costs across the waterfront supply chain.

At this time, there were two dominant container stevedores operating at the four largest ports (Brisbane, Sydney, Melbourne and Fremantle): Patrick and P&O Ports (now DP World Australia). Market shares held by these two companies have varied over time but each stevedore’s market share has generally remained between 45 and 55 per cent at each port.

The history of the monitoring program shows that reform has been effective in increasing waterfront productivity and encouraging investment in a more efficient stevedoring service.

The ACCC monitoring program has found that since 1998–99:

- Significantly higher volumes of containers are now processed by container stevedores. Since 1998-99, the number of TEUs processed has more than doubled, from 2.9 million to 7.2 million TEUs in 2015–16.


\textsuperscript{20} The PoMC’s Port Development Plan 2006-2035 identified an intention to establish a rail service at Webb Dock: see http://www.portofmelbourne.com/publications/port-development-plan. However, the ACCC understands there are no present plans for a rail connection at Webb Dock.

• Improved productivity by the stevedores—the average net crane rate (a commonly used measure of capital productivity) for the five major ports has improved from 19.6 containers per hour to 29.7 in 2015–16. The average elapsed labour rate (a commonly used measure of labour productivity) has also increased, from 22.4 containers per hour to 47.0 in 2015–16.

• Lower real unit costs and average prices—costs per TEU have also decreased in real terms by 42.2 per cent since 1998–99.

• Unit revenues (a proxy for average prices for users of stevedoring terminal services) are also 43.0 per cent lower since 1998–99.

• Increased investment in stevedoring assets including additional capacity—the value of assets employed in container stevedoring has increased substantially since 1998–99.

• Industry profitability has risen and then fallen—after rising significantly over the monitoring period and peaking in 2011–12 at 29.2 per cent, profitability levels (as measured by earnings before interest, tax, depreciation and amortisation divided by average tangible assets) have decreased every year since. In 2015–16 this profitability measure for the stevedoring industry was at 8.0 per cent, which was the lowest rate of return reported since monitoring commenced.

2.4.2. Recent evidence of price competition

Unit revenues have been falling for a number of years in the container stevedoring industry reflecting in part significantly improved productivity levels by the incumbent stevedores.22 However, with the entry of new container stevedores and the increase in capacity, there is some indication that stevedores are also using price to try to maintain market share and win new business from shipping lines.

There is continued evidence of increased price competition in the industry. Unit revenues have declined by around one-fifth in real terms over the previous decade, and declined slightly (0.6 per cent) in 2015-16 even with a significant (4.9 per cent) increase in real unit costs.

The higher level of pricing pressure is also reflected in reductions in 2015-16 in unit stevedoring revenues for 20-foot and 40-foot containers. Over the previous decade, real unit stevedoring revenue for 20-foot and 40-foot containers has decreased by over 17 per cent to $139.87 and $70.62 per TEU respectively.

2.5. Investment by the stevedores

Industry assets have increased substantially in recent years as a result of investment by new entrants to develop terminals in Melbourne, Sydney and Brisbane, while the incumbent stevedores have been investing in automation, cranes and other equipment. These investments are expected to drive performance improvements in future years for shipping lines and other users of stevedoring services such as transport companies.

The major stevedoring investment that occurred in 2015-16 has been associated with the establishment of VICT’s fully automated Webb Dock container terminal at the Port of Melbourne.

22 Another key reason for falling unit revenues has been the increasing use of 40-foot containers, instead of 20-foot containers. This is because stevedores typically charge per container, regardless of its size.
Phase 1 of the terminal is expected to be ready for operation by 31 December 2016. At this point it would have one berth of 330 metres fitted with three Neo-Panamax robotic ship-to-shore (STS) cranes, with fully automated operations from the gate to the quayside to be able to handle an estimated capacity of 350,000 TEUs per annum. Servicing the terminal will be a 10 hectare empty container park with a working capacity of around 200,000 TEUs per annum.\textsuperscript{23}

Phase 2 will deliver an additional two Neo-Panamax robotic STS cranes and additional container storage increasing the capacity of the terminal to 1 million TEU by December 2017.\textsuperscript{24}

When fully developed, the terminal will have six Neo-Panamax robotic STS cranes and will be able to handle up to 1.4 million standard containers annually. The empty container park’s capacity will rise to 280,000 standard containers.\textsuperscript{25}

There has also been significant investment by Hutchison over recent years to establish new container terminals in Brisbane and Sydney. Additionally, the incumbent stevedores have made investments in recent years, most significantly in automated terminal handling equipment. This has included Patrick’s semi-automation of its Port Botany terminal completed in 2014-15 and the semi-automation of DP World’s Brisbane terminal completed in 2013-14.

However in 2015-16 there was significantly less investment by the four currently operating stevedores covered by the monitoring program compared to the previous few years.

The ACCC has been provided with information by the currently operating stevedores on key investments undertaken during 2015-16 and planned for in the future. This information is outlined in Text box 2.3.

\textbf{Text box 2.3: Key investments undertaken and planned by the stevedores}\textsuperscript{26}

The stevedores provided the following information about their key investments to the ACCC.

\textbf{DP World}

DP World reported that its Melbourne terminal underwent an expansion project increasing the capacity of the terminal by 100,000 TEU per annum to 1.4 million TEU. The expansion will improve terminal performance and provides increased ability to handle peak volumes.

DP World’s Sydney terminal extended its empty container handling capability with the completion of civil works at its Lot 13 site. The new area spans 17,100 sqm and provides an additional 371 twenty foot ground slots.

Ten new straddle carriers have been ordered for DP World’s terminal in Melbourne. These new straddle carriers will replace ten of the oldest carriers in the terminal, which is expected to reduce equipment running costs, improve straddle fleet performance and improve operational reliability.

Two new automated stacking cranes (ASCs) have been ordered and delivered to the semi-automated terminal in Brisbane. The new cranes will increase the size of the fleet of ASCs to

\textsuperscript{24} Ibid.
\textsuperscript{25} Ibid.
\textsuperscript{26} VICT will commence providing information to the ACCC for monitoring purposes in 2016-17.
The addition of Module One in Brisbane is expected to deliver improved quay crane productivity and vessel schedule integrity. Module One will also increase the number of waterside exchange lanes from 28 to 32, allowing additional freight to be transferred between ASCs and straddle carriers at any time. The two new ASCs are expected to be handed over for use in December 2016.

Four new super post Panamax quay cranes are being ordered, one each for DP World’s Brisbane and Sydney terminals and two for DP World’s Melbourne terminal. The new cranes will improve terminal productivity, crane fleet reliability and give DP World the ability to handle the largest vessels currently servicing Australia. The cranes are expected to be ordered in 2016 with delivery and commissioning expected in mid-2017.

FACT

FACT reported the following investments for 2015–16 for its terminal in Adelaide:

- replacement of a damaged rail spur at the rail intermodal
- upgrade of terminal operating system including a new asset management system
- replacement of terminal operational vehicles and additional plant and equipment
- commissioned crane / straddle carrier training simulator
- replacement of wireless network system and
- upgrade of crane rails and anchor points.

It also reported the following planned investments for 2016–17 and beyond:

- expansion and relocation of existing terminal depot operation
- replacement of terminal operational vehicles and additional plant and equipment
- additional hardstand
- acquisition of five twin lift spreaders to increase operational flexibility of straddle carrier fleet
- development of new straddle access platform and
- a rail intermodal upgrade

With the capital investment made and improvements implemented since 2012, FACT considers the terminal has considerable capacity to accommodate future volume growth.

Hutchison

Hutchison reported that there has been minimal expenditure in 2015-16 for both quayside and landside areas.

Hutchison reported that further investment plans in Sydney will depend on market demand. Port Botany will, for the present, focus on building up its productivity and service offering. In Brisbane, the commissioning and redeployment of a quay crane will occupy the second half of 2016, and there are plans for the continued development of Berth 12.

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27 A module is an area within the container terminal that ASCs operate from.
Patrick reported that four new cranes ordered in 2013–14 were delivered and were commissioned in 2015-16. A new crane has also been ordered for Melbourne. Patrick has continued investment in truck entry systems across its terminals to streamline entry conditions and reduce truck turn-around times.

2.6. Downturn in global shipping

In addition to competition between stevedores, importers and exporters have generally benefited from a challenging 2015-16 for the global shipping industry. Shipping Australia has claimed that freight rates on trade lanes to and from Australia have been at an all-time low, with freight rates for capesize vessels (the largest dry cargo vessels) down to half of their breakeven cost.\(^{28}\) The downturn has largely stemmed from persistent overcapacity in the shipping industry, resulting in weak freight rates which struggle to meet costs. During ACCC industry consultations, a range of port operators and shipping lines noted the ongoing oversupply of shipping services and subsequent consolidation efforts to arrest further financial decline.

Shipping Australia has described the period as the worst state for shipping this century,\(^ {29}\) as global economic conditions reduce demand for manufactured goods intensifying the impact of industry overcapacity. According to Shipping Australia, the efforts to create bigger, more fuel efficient ships have resulted in a supply glut as container volumes have not increased as significantly as it was anticipated.\(^ {30}\)

The downturn has been characterised by one chief executive as being ‘worse than in 2008’.\(^ {31}\) The severity of the industry downturn has prompted the European Central Bank to launch a review of banks’ lending to the shipping industry.\(^ {32}\)

Most recently Hanjin—which is the seventh-biggest shipping company in the world—went into receivership in September 2016 after its creditors rejected a debt restructuring plan.\(^ {33}\) The collapse caused major disruption along the supply chain with dozens of ships and an estimated US$14 billion worth of cargo stranded at sea.\(^ {34}\)

Shipping lines are utilising a range of options to respond to the downturn. For example, bondholders in Hyundai Merchant Marine Co Ltd (HMM) approved a debt-for-equity swap plan in late May 2016, facilitating a restructuring plan designed to stabilise the shipping line.\(^ {35}\)

Mergers have also been a significant response to the industry downturn with potential repercussions for the Australian shipping industry:


\(^{30}\) Ibid.


\(^{34}\) Three Hanjin ships are sold as its terminal edges to a ‘standstill’, Fortune, 14 September 2016, http://fortune.com/2016/09/14/hanjin-shipping-collapse-ships-sold/.

CMA CGM (France) acquired over 78 per cent of Neptune Oriental Lines (Singapore) (NOL) in June 2016.\(^{36}\) NOL’s container shipping business, APL, provides container shipping services globally, with APL Oceania having operated in Australia since 1998.\(^{37}\) CMA CGM is the world’s largest private-held container shipping group, now operates 536 vessels at over 400 ports around the world, including eight ports in Australia.\(^{38}\)

China Ocean Shipping (Group) Company (i.e. Cosco Group) and China Shipping Group Company merged in late 2015.\(^{39}\) The merged business (now the China Cosco Shipping Corporation) is now the fourth-largest shipping line in the world controlling a market share of 7.8 per cent.\(^{40}\) Chairman Xu Lirong noted the industry was in the midst of its worst downturn since 2008, with such mergers the key to facing the decline in business.\(^{41}\)

In July 2016, Hapag-Lloyd and United Arab Shipping Company (UASC) signed a merger agreement.\(^{42}\) Both Hapag-Lloyd\(^{43}\) and UASC\(^{44}\) operate Australian services. The shipping lines are the world’s sixth and 10\(^{th}\) biggest container operators respectively\(^{45}\) and the new merged entity will create the fifth-largest container shipping line.\(^{46}\)

### 2.7. Privatisation of ports

Port operators have an important role in the supply chain. They are the landlords of container stevedores and also impose charges on shipping lines.

There has been a trend towards the privatisation of ports in Australia through the sale of long term leases by state governments. The first was in 2001 when the Port of Adelaide was acquired along with six other South Australian ports by Flinders Ports.

The trend has increased in recent years with:

- a 99 year lease over the Port of Brisbane acquired by Q Port Holdings in 2010
- a 99 year lease over Port Botany and Port Kembla acquired by NSW Ports in 2013
- a 98 year lease over the Port of Newcastle acquired by The Infrastructure Fund and China Merchants Group in 2014, and

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• a 99 year lease over the Port of Darwin acquired by Landbridge in 2015.

This trend continued with the Victorian government privatising the Port of Melbourne in September 2016. The Western Australian government also announced that it would privatisate the Port of Fremantle, but this would still require specific legislation to be approved by the Western Australian (WA) parliament. These processes are discussed further below. If the Port of Fremantle process goes ahead as intended, all five mainland container ports would be privatised.

The ACCC considers that privatising monopoly infrastructure assets can promote efficient outcomes in the interests of users and the wider community. However it is important for governments to ensure there are appropriate structural reforms and/or sufficient regulatory oversight put in place at the time of privatisation so as to realise the potential economic efficiencies. A key aspect of any regulatory oversight would be restrictions on the ability of the monopoly owner from charging excessive prices.

The Productivity Commission has also recently stated that:

‘Privatisation of major ports has the potential to increase economic efficiency, provided appropriate processes are followed to ensure that the public interest is protected through structural separation, regulation or sale conditions. Increasing the sale price of ports by conferring monopoly rights on buyers is not in the public interest’. 47

If privatisation occurs without taking these factors into account, governments may unwittingly place a tax on future generations of Australians and hinder Australia’s competitiveness.

Ports are typically considered to be monopolies as presently they do not face competition (refer text box 2.4 below).

Text box 2.4: To what extent do container ports compete with each other?

Inter-port competition tends to be very limited in Australia due to the large distances between major container ports. The cost of land transport means that there is essentially no competition between container ports for goods that originate or are destined for one of the main capital cities. The shipper of these goods has no choice but to use the local port.

There is potential for some limited competition between ports where the source or destination of the goods is in a regional area between two ports (or where the ports are in the vicinity of the same city). This is most relevant for agricultural products for export.

One example is the Riverina and the southern New South Wales region for exported primary produce, where some exporters have a choice between the Port of Melbourne and Port Botany. The ACCC understands that ports will sometimes offer small incentives for key producers in these contestable areas to switch their port of choice, but that exporters’ (and other port users’) decisions on which port to use are influenced by a number of factors, most of which are not factors within the control of the ports.

The lack of competition between ports also impacts somewhat on the degree of competition between stevedores. Despite there being different numbers and combinations of stevedores at different ports, it may not be feasible for a shipping line to threaten to move its service to a different port in order to improve its bargaining position.

A shipping line’s ability to switch to a stevedore in a different port will also be influenced by any additional costs of steaming between ports as well as the land transport costs of moving the cargo to its ultimate destination.

The ACCC’s observations relating to the privatisation of the Port of Melbourne and the proposed Port of Fremantle privatisation process are outlined below.

**Port of Melbourne**

On 19 September 2016, the Victorian government announced it had agreed to a 50 year lease of the Port of Melbourne for $9.7 billion to the Lonsdale consortium. The Lonsdale consortium includes the Queensland Investment Corporation, the Future Fund, and Global Infrastructure Partners.\(^{48}\)

It has been reported that the price paid by Lonsdale Consortium represents 25-times the ‘normalised’ earnings for the Port of Melbourne.\(^{49}\) This is similar to the multiples paid for Port Botany and Port Kembla in 2013 and for the Port of Newcastle in 2014. Shipping Australia and shipping line ANL both expressed concern that the high purchase price may indicate that the new leaseholders will need to significantly increase fees in future.\(^{50}\)

Currently, the Port of Melbourne is subject to limited price monitoring by the Essential Services Commission (ESC). The monitoring applies to certain prescribed services specified under the *Port Management Act 1995* (Vic).

The Victorian government will establish a Pricing Order that gives effect to a more comprehensive regulatory regime that will apply to port pricing for the duration of the long term lease of the port. This Pricing Order is expected to apply to certain services provided by the port (including wharfage fees and channel fees) other than the leasing of land to users (rent and licence fees). Prices for ‘prescribed services’ will be subject to a CPI-based price cap for the first 15 years of the lease.

In relation to land rents, which are not subject to the Pricing Order, the ESC will conduct a five-yearly review into whether there has been misuse of any market power by the leaseholder in the setting of rents at the port. The port operator will also be required to offer new and renewing tenants a market standard rent review mechanism with dispute resolution by an independent property market expert.

The ACCC had a number of discussions with the Victorian government in 2015 regarding the proposed regulatory regime for the privatisation of the Port of Melbourne. Although the ACCC continues to have some concerns about the proposed regulatory regime to apply post-privatisation these arrangements are more rigorous than measures in place at other major Australian container ports.

One of the issues raised in discussions with the Victorian government by the ACCC is the issue of the existence and length of schemes to compensate the leaseholder if a second port is developed. Such schemes can hinder the prospects of future competition and can entrench substantial market power held by the lessee. In the ACCC’s view, competition (or the credible threat thereof) provides a strong incentive for investment. That said, the ACCC considers the 15 year compensation regime to be a significant improvement on the initial proposal, which was not time-limited.

The ACCC also has some concerns about what will happen to port prices after the 15 year price cap period has ended. Additionally the ACCC does not consider it appropriate that land rents are proposed to remain outside the CPI price cap.

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Port of Fremantle

The Port of Fremantle is presently managed by the Fremantle Port Authority, and comprises the Inner Harbour at Fremantle and the Outer Harbour at Kwinana.

The Inner Harbour is the port's container port and also provides facilities for livestock exports, motor vehicle imports, other general cargo trades, cruise ships and visiting naval vessels.

A key aspect of the proposed Fremantle port privatisation process has related to a right of first refusal mechanism where the lessee could have the first right to develop future port capacity at the Outer Harbour precinct to the south of Fremantle at Kwinana. It is one of Australia's major bulk cargo ports handling grain, petroleum, liquid petroleum gas, alumina, mineral sands, fertilisers, coal, sulphur, iron ore and other bulk commodities. It is also earmarked by the WA government as the next potential site for development of a container port.

An example of a similar right of first refusal mechanism—entered into over a decade ago—relates to Sydney Airport. This anti-competitive arrangement has curtailed the potential for Sydney to be serviced by two competing airports, to the detriment of passengers and business.

The ACCC is engaging with the WA government about the ACCC's concerns about the privatisation process. The WA Treasurer Dr Michael Nahan has said the port sale would not proceed without ACCC endorsement and that a range of safeguards will be put in place to protect port users on the key issues of access and pricing.51

2.8. Improving rail transport connections to container terminals

The volume of container freight to pass through Australian ports has been forecast by the Bureau of Infrastructure, Transport and Regional Economics (BITRE) to more than double from 7.2 million to 19.4 million TEUs by 2032-33.52

To successfully transport an increasing volume of containers without more road congestion, governments and private stakeholders have looked to increase the use of rail links. Many state governments have expressed a goal of using more rail freight and some have set targets for the proportion of containers to be transported by rail. Alternative forms of support for rail freight have been in the form of investment in freight connections or the development of intermodal terminals and other rail infrastructure.

However, investment in freight rail is relatively costly and to date there has only been a limited transition from road freight to rail. Indeed, the proportion of containers transported to and from a port by rail has actually been declining slightly since 2012-13, by around 1 per cent.53 This suggests that ambitious government targets for rail transport may not be met in the short term.

The sections below look at how rail is currently used at Australian ports and then considers a number of freight rail projects recommended by Infrastructure Australia.

52 BITRE, ‘Containerised and non-containerised trade through Australian ports to 2032–33’ (Report, December 2014), pp. 70-71.
53 BITRE, Waterline, forthcoming publication no 59.
2.8.1. Use of rail in Australian container ports

The section provides information on the current use of rail in each container port and some of the issues that impact on the viability of new rail investments. Further information on the landside operations of the stevedores can be found in Section 3.3.

Sydney

In 2015-16, rail accounted for around 13 per cent of container transport at Port Botany.\(^{54}\) The dedicated 80 km Metropolitan Freight Network serves both freight customers and the port, and there are currently four significant intermodal terminals within 50 kilometres of Port Botany. These intermodal terminals have been likened to ‘inland ports’, which enable freight to travel by rail instead of truck. They typically include a rail yard, trucking terminal, warehouses and facilities to move shipping containers between trains and trucks.

The NSW government has set a target to double the proportion of container freight movements by rail through NSW ports by 2020.\(^ {55}\) It designed this target to maximise the operational capacity of Port Botany in future years and to ease road congestion.

With a goal of increasing freight throughput at Port Botany, the Australian government is supporting the development of a large intermodal terminal in Sydney’s south-west. The Moorebank Intermodal Terminal, which is being developed by Qube, will provide capacity for 250,000 containers a year by early 2018 and eventually more than a million each year.\(^ {56}\) It is claimed that freight trucks will travel 60,000 fewer kilometres on Sydney’s roads each day as a result of this mode shift to rail.\(^ {57}\)

In August 2016, Aurizon also announced that it had commenced its Sydney Port Shuttle service between Port Botany and its new Enfield Intermodal facility in Sydney’s west. Six services are scheduled per week, and Aurizon plans to increase the number of services over the medium term to accommodate growing customer demand.\(^ {58}\)

Ernst & Young, in a report commissioned by the Department of Infrastructure and Regional Development, has stated that there is considerable under-utilisation of the rail network in Sydney, due to weak demand for rail caused by unreliable and uncompetitive conditions. It suggested that improvements in efficiency were more important than additional investment in infrastructure.\(^ {59}\) Similarly, Shipping Australia found that the low contribution of rail share was largely attributable to the mismatch between rail paths and stevedores’ time windows.\(^ {60}\)

These findings were supported by a 2015 study funded by National ICT Australia.\(^ {61}\) The study also found that rail was under-utilised. Indeed, it noted that the peak rail capacity of Port Botany was over six times higher than current volumes, and that operational changes

\(^{54}\) Ibid.


\(^{57}\) Ibid.


\(^{60}\) Shipping Australia Limited, Metropolitan intermodal terminal study 2011, p. 28.

as opposed to infrastructure investment would increase Port Botany’s ability to handle increased container volumes. It concluded that building new infrastructure would have only marginal gains without the streamlining of existing rail lines.

Melbourne

In 2015-16 rail was responsible for around 11 per cent of container movements at the Port of Melbourne. Container access to the Port of Melbourne is via railway goods sidings that serve both Swanson Dock East and West (from which Patrick and DP World operate) which then join the Dynon rail freight terminal. These rail services then link to regional and interstate rail systems. However, unlike in Sydney, no metropolitan freight is moved by rail. There is no rail link to Webb Dock and the new third stevedore VICT. It has been suggested that this lack of rail access to Webb Dock will create greater congestion on the West Gate Bridge.

Ernst & Young has also noted a number of barriers to increasing rail’s share of container transport in Melbourne. The metropolitan rail corridors are mainly used by passenger trains and unlike Sydney there are no freight-only rail lines in Melbourne. Upgrading the passenger rail network to handle more freight would require significant investments, such as signalling.

Furthermore, unlike Sydney, Melbourne’s freight market is sent in three directions—north, east and west. This makes it harder to obtain the necessary economies of scale to develop dedicated freight rail. Freight in Melbourne also has better road transport links, with congestion less of a problem than in Sydney. This has implications for the potential competitiveness of future rail investment.

DP World is seeking permission to close the portion of Coode Road that currently separates its Melbourne container terminal from its adjoining West Swanson intermodal terminal site. The closure of Coode Road would allow for a link to be constructed between the terminals allowing the uninhibited transportation of containers between the sites. According to DP World the closure of Coode Road will help extend rail opportunities and capacity at its terminal. DP World’s COO, Max Kruse, recently commented that ‘we’re looking at how do we provide easier access for our modes, be it rail or road, and Coode Road [closure] is critical to allow us to make that happen because it will allow us to expand our rail capability and capacity’.

In a related development and following the successful trial of a metropolitan rail shuttle service, DP World and SCT Logistics in July 2016 commenced a weekly port shuttle service between Altona and DP World’s West Swanson terminal. The service brings up to 81 TEU direct from SCT’s Altona depot to the dock at DP World’s terminal.

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62 BITRE, Waterline, forthcoming publication no 59.
64 Ernst & Young, ‘Australian Government Department of Infrastructure and Regional Development: A study of the potential for dedicated freight infrastructure in Australia’ (Report, October 2014) p. 50.
65 Ibid.
67 Ibid.

Container stevedoring monitoring report 2015-16
DP World and Austrak have also announced plans to develop an intermodal freight hub at Somerton, located 23 km north of the Port of Melbourne and with direct road access to the Hume Highway. Once completed, the new facility will connect Somerton to regional and interstate rail networks via the Port of Melbourne. According to DP World the new facility will have capacity to handle 200,000 TEU per annum.  

_Brisbane_  

In 2015-16 rail carried around seven per cent of the container trade at the Port of Brisbane. However, this may need to increase given BITRE’s 2014 forecast that container volumes at the port would more than triple by 2032-33. There are two dedicated freight lines from the port: one connects the port to the Cleveland suburban line and the other to an intermodal terminal in Acacia Ridge. A 2013 study by the Port of Brisbane noted that the condition of rail infrastructure and lack of rail connectivity to the port was one of the most significant impediments to the port’s logistics chain.  

The Port of Brisbane observed that rail share has declined from 15 per cent to five per cent in the past ten years. A recent Parliamentary Committee report attributed this fall to a number of factors, such as advancements in high productivity road vehicles, and increased reliability, flexibility and responsiveness in road freight.  

A couple of projects relating to the use of rail at the Port of Brisbane are discussed in the next section on the Australian Infrastructure Plan.  

_Perth_  

At the Port of Fremantle, rail accounted for around 21 per cent of container movements in 2015-16, which is a higher proportion of container movements than the other monitored ports. However, there is pressure on this number to increase with container volumes forecast to more than triple by 2032-33.  

The WA government introduced a freight rail subsidy in 2007 that is currently in place until 2016-17. The cost of this subsidy is estimated at $2.5 million for 2016-17, and it allows rail to compete with road over shorter distances.  

_Adeelaide_  

Around 17 per cent of the containers at the Port of Adelaide were transported by rail in 2015-16. Ernst & Young has found that Adelaide’s road and rail infrastructure is adequate
for dealing with the predicted growth in container volumes at the port in the future.\textsuperscript{80} Ernst & Young’s report noted that congestion around the port is not an issue, because:

- the level of containerised freight is small
- the roads leading into and out of the port are dual carriageways and
- the existing rail system is underutilised and has capacity for more freight.

The volume of container freight to pass through Australian ports has been forecast to more than double by 2032-33. Improving rail transport connections to container terminals will assist in transporting an increasing volume of containers without increasing road congestion.

\subsection*{2.8.2. Rail projects identified in the Australian Infrastructure Plan}

The Australian Infrastructure Plan, released by Infrastructure Australia in February 2016, recommended the creation of a National Freight and Supply Chain Strategy.\textsuperscript{81} The purpose of the strategy would be to map significant supply chains, evaluate the adequacy of the current institutional framework, and recommend reforms and investments.

The Plan also identified a number of rail projects to ‘address a nationally significant need’ for Australia’s infrastructure. This included the proposed $10 billion Inland Rail project and a number of other rail projects for development across the country.

The Australian government has said that it will respond to the Plan in due course.

\textit{Inland Rail}

At present, whilst rail moves around 60 per cent of containerised freight in the East-West corridor, only around 30 per cent of containerised freight between Melbourne and Brisbane is moved via rail.\textsuperscript{82} In order to address this disparity, the Australian government released a delivery plan in September 2015 that outlined a 10-year construction timeframe for completing a direct freight rail link between Melbourne and Brisbane. The project will not only promote the movement of containerised household products between the two cities, but also the delivery of agricultural products to either port. The project may also have the capacity to increase competition between ports by decreasing the cost of interstate freight.

\textit{Port Botany rail freight duplication}

This is an initiative nominated by the NSW government which proposes to increase the Port Botany freight line’s capacity, given additional demand and growth at the port could potentially create a freight bottleneck. The proposal aims to duplicate 2.8km of the rail line, and is in the process of business case development.

\textit{Chullora Junction upgrade in the Metropolitan Freight Rail Network}

At present, the Chullora Junction presents a constraint for Sydney’s Metropolitan Freight Rail Network and risks becoming a bottleneck given forecast growth in freight movements and population growth. Such a bottleneck would damage productivity and risk increasing freight delays. Infrastructure Australia has emphasised that Sydney’s rail network must provide an


\footnotesize{\textsuperscript{82} Australasian Railway Association, \textit{Australian Railway Industry}, <https://www.ara.net.au/sites/default/files/Australian%20Rail%20Industry%202014%20web.pdf>.}
‘efficient and cost competitive alternative to road distribution’ in order to reduce reliance on Sydney’s road network. One such suggested improvement is the duplication of the Chullora North/Chullora West connection, as well as a holding road between Chullora Junction and Flemington Junction.

**Dedicated freight rail connection to the Port of Brisbane**

The Infrastructure Plan notes freight volumes at the Port of Brisbane are forecast to grow by 4.8 percent per annum to 2045, potentially creating significant congestion on both road and rail in the absence of construction of a dedicated freight rail corridor. Infrastructure Australia said that a dedicated freight rail connection to the Port of Brisbane would accommodate the potential increase in freight volume, as well as encourage a modal shift from road to rail.

**Preservation of a corridor for the Western Sydney Freight Line and Intermodal Terminal access**

Infrastructure Australia has also suggested that a dedicated rail freight line between Western Sydney and the Sydney Metropolitan Freight Network should be part of a broader strategy to facilitate a shift from road to rail for containerised freight movement in Sydney. Such a project could reduce growth in truck movements, and reduce freight delays on the main Western line, which currently prioritises passenger trains.

### 2.9. Coastal shipping

A more efficient coastal shipping industry for freight could also help to relieve pressure on Australia’s road and rail networks.

While international shipping is fundamental to Australia’s import/export supply chains, coastal shipping plays a far less significant role in the domestic supply chain. Only a very small proportion of containers are transported domestically by ship. The vast majority are transported by road, and to a lesser extent rail. Coastal shipping can be an alternative to road and rail, but may not always be available or competitive for Australian domestic routes.

Changes to Australian coastal shipping regulations in recent years have impeded foreign shipping lines from competing with Australian vessels for domestic trade. These changes included a licensing system that grants Australian registered vessels unlimited access to coastal trade for the term of the licence, and imposing further restrictions on the ability of foreign vessels to compete for domestic sea trade.\(^{83}\) Additionally, the *Fair Work Act 2009* (Cth) applies Australian labour standards to foreign-registered vessels operating in the Australian coastal trade.

The higher costs and administrative requirements have deterred the vast majority of international lines from carrying domestic cargo, despite the obvious efficiencies for vessels already calling at a number of Australian ports. The ACCC notes the Productivity Commission’s recent draft recommendation for a reduction in barriers to entry for foreign vessels, in order to improve competition in coastal shipping services.\(^{84}\)

The ACCC considers that such changes would help reduce freight costs for Australian businesses and ultimately prices for consumers. It would also help to reduce the number of trucks on increasingly congested roads at a time when the nation’s freight task is expected to grow significantly.

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\(^{83}\) ACCC, ‘ACCC submission to the Government’s Options Paper: Approaches to Regulating Coastal Shipping in Australia’ (Submission, May 2014), p. 4.

\(^{84}\) Productivity Commission, ‘Regulation of Australian Agriculture’ (Draft Report, July 2016), draft recommendation 8.2.
2.10. Road funding and pricing reforms

Federal, state and local governments are considering potential reforms that would result in more market orientated service provision of heavy vehicle related road infrastructure services. Known as Heavy Vehicle Road Reform, these reforms would support greater productivity in container supply chains, and ensure targeted investment occurred in freight routes to meet expected growth in user demand (including container volumes).

Despite their key role, roads have not been subject to the level of microeconomic reform that has occurred in other industries since the National Competition Policy Review in 1993.

Currently the bulk of funds raised from road user charges do not directly flow to the entities responsible for investing in roads. Rather, the funding for these entities’ investment in roads comes from a variety of sources including local rates, state general revenues and Commonwealth general revenue. This is likely to result in sub-optimal decisions to invest in and maintain certain roads or groups of roads and does not provide clear signals between the demand for road services and the provision of services to meet that demand.

In its submission to the 2015 Competition Policy (Harper) Review, the ACCC said that current road charging mechanisms and structural arrangements are failing to promote efficient decisions by road users and funding bodies.\(^{85}\)

The Australian government supported the recommendation of the Harper competition review on road reform. The review recommended for government to introduce cost-reflective road pricing with the aid of new technologies, with pricing subject to independent oversight and revenues used for road construction, maintenance and safety.

In December 2015, the Council of Australian Governments (COAG) also made a decision to:

- accelerate heavy vehicle road reform
- implement independent price setting for heavy vehicle charges by 2017-18 and
- investigate the high level costs and benefits of direct user charging for all vehicles.

In February 2016, Infrastructure Australia recommended for the Australian government to initiate a public inquiry into the existing funding framework for roads and development of a road user charging reform pathway.\(^{86}\)

A practical starting point for reform is to establish a system that ensures that the revenue collected from road users is directed to the entities that build and maintain the roads on the basis of more directly targeting user service outcomes. This would provide for a direct revenue source. Fully user-funded and hypothecated roads would also mean that governments would not need to choose between roads and other services in each budget allocation.

A second focus of reform should be transition to a forward-looking approach to revenue requirements for roads. To date, total revenue requirements for Australia’s roads have been largely based on historical information and the availability of funding through budget processes. Shifting the focus from a historical cost approach to a forward-looking approach


would promote better long term planning for road provision, significantly improving the lifecycle costs of building and maintaining road infrastructure.

Once the first two stages of reform are in place, the focus could then turn to the role of price signals. This could involve adjusting existing pricing systems so as to more directly link the price paid by users to their individual use of roads.

Such a system would bring roads in line with other infrastructure sectors (such as energy and telecommunications) where long term plans and demand forecasts are used to determine economic costs and annual revenue requirements, and the funds collected from access charges flow directly to infrastructure providers.

Such reforms could also enable road transport operators to negotiate with roads bodies in order to secure access to more roads for heavy vehicles, especially high productivity heavy vehicles. This access could be underpinned by direct user charges linked back to the costs of providing that access.
3. Monitoring results: Productivity and throughput

3.1. Introduction

This chapter examines the productivity of the stevedoring industry in servicing ships (quayside) and trucks (landside).

Information is also presented in this chapter on the volume of containers processed through the terminals, as well as the size of the landside freight task. The size of the landside freight task includes the number of containers transported by road versus rail, as well as the number of trucks accessing the terminals.

The 2015-16 year saw a small increase in container throughput and increases in two of the major quayside productivity indicators: the ship rate and the elapsed labour rate. However, the crane rate, which is the proxy for quayside capital productivity, declined slightly compared to 2014-15. A key landside productivity indicator, truck turnaround times, also improved in 2015-16.

The figures in this chapter are based on information collected by BITRE for its Waterline publication series.

3.2. Supply of stevedoring services

3.2.1. Container volumes and shares by port

Figure 3.1 shows the share of national container volumes exchanged at each of the monitored ports in 2015-16. Melbourne continues to account for the highest share of containers with 36.6 per cent of the total. The three East coast ports were responsible for 84.7 per cent.

Figure 3.1: Container throughput shares by port, 2015–16

Source: BITRE, Waterline, forthcoming publication no 59.
Note: Data in Waterline includes international and domestic cargo.
Container ports in Australia have relatively small volumes of throughput by international standards. Total throughput across the monitored container ports was 7.2 million TEUs, up 1.4 per cent from the previous year. Melbourne processed a record 2.6 million TEUs in 2015-16. This was followed by Sydney (2.3 million), Brisbane (1.1 million), Fremantle (715,100) and Adelaide (389,680). By comparison, the world’s largest container port at Shanghai handled 35 million TEUs in 2014.87

Figure 3.2 shows the throughput trends over time. Volumes continued to increase at all ports in 2015-16, with the exception of Fremantle where volumes fell by 3.8 per cent mainly due to a downturn in the WA economy. The largest percentage increase in throughput was in Adelaide (6.5 per cent). Volumes increased at a lower rate in Melbourne (2.3 per cent), Sydney (1.5 per cent) and Brisbane (0.7 per cent).

**Figure 3.2: Container throughput trends at each container port, 2006–07 to 2015–16**

Source: BITRE, Waterline, forthcoming publication no 59; TasPorts (Port of Burnie).

Note: Data in Waterline includes international and domestic cargo.

Total throughput volumes across the monitored ports have increased nearly every year since 2006-07. The exception was a slight decline in throughput in 2008-09 which was mostly due to the global financial crisis. The compound annual growth rate in throughput across the ports was 3 per cent over the last decade.

### 3.2.2. Quayside productivity trends

Changes in productivity are an important indicator of industry performance, as well as the quality of service provided to customers. For stevedoring, productivity indicators partly reflect the quality of management and investment decisions made by the stevedores to offer a more efficient service. They also reflect the productivity of labour in working equipment and servicing ships.

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BITRE reports on changes in capital and labour productivity in stevedoring operations in the five mainland ports. The three key indicators of quayside productivity are: net crane rate, elapsed labour rate, and ship rate. These are defined below:

- **Net crane rate**—this is a broad indicator of capital productivity and reflects the intensity with which quay cranes are worked and measures the number of containers exchanged per crane hour while that quay crane is operating.\(^{88}\)
- **Elapsed labour rate**—this is a broad indicator of labour productivity and measures the number of containers exchanged for the period of time that labour is aboard the ship.\(^{89}\)
- **Ship rate**—this reflects the productivity of labour and capital while the ship is being worked by measuring the average number of containers exchanged in an hour.\(^{90}\)

These indicators measure the productivity of capital and labour that are allocated to working ships. They therefore do not measure the levels of spare capacity—the amount of labour and capital that is available but not actively working a ship.

Figure 3.3 shows that all three measures have been trending upwards over the last decade.

**Figure 3.3: Productivity indicators, quarterly five-port average, June 2006 to June 2016**

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88 The net crane rate is measured by dividing total number of containers handled by the elapsed crane time. The elapsed crane time is the crane time allocated by the stevedores to work on a container ship, assuming the container ship is ready for loading or unloading. It is computed as the total allocated crane hours less operational and non-operational delays. See BITRE, *Waterline*, issue no. 57, p. 21 for further information.

89 The elapsed labour rate is computed as the number of containers handled divided by the elapsed labour time. The elapsed labour time is the elapsed time between labour first boarding the ship and labour last leaving the ship, less any time when the labour has not worked for whatever reasons including non-operational delays. See BITRE, *Waterline*, issue no. 57, p. 22 for further information.

90 The ship rate is calculated by multiplying the net crane rate by crane intensity. Crane intensity is defined as the total number of allocated crane hours divided by the elapsed time from labour first boarding the ship to labour last leaving the ship. See BITRE *Waterline* publications.
Movements in the key productivity indicators show that:

- The five-port average annualised **net crane rate** decreased from 30.6 containers per hour in 2014–15 to 29.7 in 2015–16.
- The five-port average **elapsed labour rate** increased in 2015–16 from 45.3 to 47.0 containers per hour.
- The five-port average **ship rate** also increased from 53.9 to 55.5 containers per hour in 2015-16.

The ACCC has observed substantial progress in stevedoring productivity since the commencement of the monitoring program. It is worth noting that the quayside productivity indicator—the net crane rate—in 2001 already met the Australian government’s benchmark of 25 lifts per hour. Since then the quayside net crane rate has been consistently higher than the above benchmark. Australian stevedoring productivity levels have continued to improve in recent years in terms of both labour productivity and capital productivity.

The ACCC has observed substantial progress in stevedoring productivity since the commencement of the monitoring program. It is worth noting that the quayside productivity indicator—the net crane rate—in 2001 already met the Australian government’s benchmark of 25 lifts per hour. Since then the quayside net crane rate has been consistently higher than the above benchmark. Australian stevedoring productivity levels have continued to improve in recent years in terms of both labour productivity and capital productivity.

Figure 3.4 below shows trends in the net crane rate for each of the monitored container ports. It shows that individual ports’ productivity performances have varied considerably over time, but that productivity has generally been increasing over the period.

**Figure 3.4: Net crane rates at each container port, 2006–07 to 2015–16**

Source: BITRE, *Waterline*, forthcoming publication no 59. Annual average data has been calculated by the ACCC based on quarterly data available in *Waterline*.

In 2015-16, capital productivity improved significantly in Adelaide, with the net crane increasing by 14.6 per cent. However, it declined in three of the other ports (Fremantle, Melbourne and Sydney), and did not change materially in Brisbane.
The port with the most consistent increases in capital productivity over time has been Fremantle, which has had the highest level of capital productivity since 2012-13. Capital productivity in Brisbane increased significantly until 2010-11, but has declined since then. Capital productivity in Melbourne and Sydney has also declined in both of the last two years. The increase in the level of capital productivity in Adelaide has been the most significant of the monitored ports over the last two years.

The level of labour productivity is approximated by the elapsed labour rate. The changes in the elapsed labour rate at each of the monitored ports (expressed as containers per hour in year average terms) are illustrated in Figure 3.5 below.

**Figure 3.5: Elapsed labour rate at each container port, 2006-07 to 2015-16**

![Graph showing elapsed labour rate at each container port from 2006-07 to 2015-16](image)

Source: BITRE, *Waterline*, forthcoming publication no 59, Averages for ports of Brisbane, Sydney, Melbourne, Adelaide and Fremantle, converted to annual average by the ACCC. The elapsed labour rates for Adelaide and Fremantle were first provided in BITRE *Waterline* no 57.

Figure 3.5 illustrates that in 2015-16 the elapsed labour rate increased in each of the ports except Fremantle, where the measure declined slightly. The most significant increase during the year was in Sydney (8.1 per cent), while the measure also increased in Brisbane, Adelaide and Melbourne.

The elapsed labour rate has increased in each of the monitored ports over the last decade. The elapsed labour rate over the period has been substantially higher in Melbourne compared to each of the other ports. The elapsed labour rate in Brisbane has been increasing significantly over the period, but the measure remained substantially lower than for each of the other ports in the last two years.
3.3. Landside stevedoring services

3.3.1. Size of the landside freight task

BITRE publishes a range of landside performance indicators. These relate to the number of containers transported by truck or rail, general performance, and the time of the week in which trucks moved the freight.

The size of the landside task follows container throughput patterns. This is expected as the amount of transport activity at a container terminal is ultimately a function of the number of containers being exchanged. The size of the landside task is greatest in Melbourne and Sydney, Australia’s two largest container ports.

Figure 3.6 shows the number of trucks at each container terminal. The number of trucks has been highest in Melbourne in recent years, although in 2015-16 the number of trucks in Sydney was similar to Melbourne. The number of trucks in Melbourne has been declining over the period, while the number of trucks in Sydney has been increasing. The increase in the number of trucks at the container terminals in Sydney corresponded with a decline in the proportion of the total number of containers which is carried via rail, which is discussed below.

Figure 3.6: Number of trucks at each container terminal, March 2013 to June 2016

![Image of Figure 3.6 showing the number of trucks at each container terminal, March 2013 to June 2016.](source: BITRE, Waterline, forthcoming publication no 59)

Figure 3.7 below shows the proportion of the total number of containers which is carried via rail to and from each of the major container ports. The port with the highest proportion of total containers transported by rail in 2015-16 was Fremantle (21 per cent), where the use of rail has been increasing in recent years. The port with the lowest proportion of total containers being transported by rail was Brisbane (7 per cent).
While the proportion of containers transported by rail across the five major container ports is currently low (around 13 per cent in 2015-16), rail freight use is becoming an increasing focus for managing future container flows in and around Australia’s major ports. A number of initiatives underway or recently completed are expected to facilitate the transfer of some containers from road to rail in the longer term (refer to Section 2.8).

The proportion of the total number of containers that is transported to and from a port by rail has declined slightly since 2012-13, by around 1 per cent. However, the proportion of containers transported by rail varied between ports in recent years. The usage of rail in Adelaide has been increasing significantly to nearly 19 per cent at the end of 2015-16, up from a negligible amount in 2012-13. While there has been increased focus on transferring container volumes from road to rail in Sydney, the proportion of containers transported by rail in Sydney has declined significantly, from around 20 per cent in 2012-13 to around 13 per cent at the end of 2015-16.

3.3.2. Productivity in landside stevedoring services

Truck turnaround times

Truck turnaround times are an indicator of landside productivity and show how fast a stevedore processes trucks within a terminal. Figure 3.8 shows average truck turnaround times for each of the major container ports and the five-port average.
Figure 3.8: Annual average truck turnaround times, container ports and five-port average, 2006–07 to 2015–16

In 2015-16 the average truck turnaround time on a five-port average basis decreased by 1.5 minutes to 34.0 minutes. Average truck turnaround times improved in Sydney (39.4 to 32.3 minutes), Fremantle (30.7 to 28.4 minutes) and Brisbane (38.1 to 37.9 minutes). However, truck turnaround times deteriorated in Melbourne (33.5 to 36.6 minutes) and Adelaide (28.5 to 29.0 minutes).

Over the ten year period to 2015-16, truck turnaround times have improved across the five ports (based on a five-port average) by around 3.5 minutes. However, this measure has not changed significantly since 2009-10.

Figure 3.8 also shows there were significant differences in truck turnaround times in each of the ports during the ten year period to 2015-16. Melbourne has had the fastest truck turnaround times between 2007-08 and 2010-11 (between 26.4 and 29.7 minutes), but since that time the fastest truck turnaround times have been in Adelaide (28.5 to 35.5 minutes) and Fremantle (25.7 to 34.2 minutes). Truck turnaround times have been longest in Sydney (between 32.3 and 47 minutes) and Brisbane (36.4 and 48.1 minutes). However, Sydney’s performance has increased significantly since regulations were introduced in 2010 under the Port Botany Landside Improvement Strategy (PBLIS).
Demand for access to container terminals

It is becoming increasingly important for stevedores and transport companies to operate outside of standard business hours. This is in order to manage landside congestion at the ports and to avoid delays associated with using the roads and rail networks at peak periods. Figure 3.9 shows when trucks accessed the terminals across the five container ports between 2007–08 and 2015–16.

Figure 3.9: Times in which trucks accessed container terminals, five-port average, 2007–08 to 2015–16

Source: BITRE, Waterline, forthcoming publication no 59

Note: The Monday to Friday time windows are defined as follows: Day—0600 to 1800, Evening—1800 to 2400, Night—2400 to 0600.

Figure 3.9 shows that despite most container terminals offering 24 hour/7 day operations, daytime weekday access is the mostly intensely used. In 2015–16, 50 per cent of VBS/TAS usage occurred during Monday to Friday between 6am and 6pm. This is likely to have implications for those ports which are located in highly urbanised areas and where existing road networks cater for both passenger and freight demands.

Evening and night-time slots Monday to Friday are the next most popular times for container movements by truck. A reason for the low non-peak use may be a mismatch between the hours of operation of stevedores and businesses in the upstream supply chain (such as empty container parks, depots, and warehouses). There may also be additional costs to upstream businesses for operating out of hours.

While there has been an increase in the access of terminals on weeknights and weekends, most of the increases took place prior to 2012-13.
4. Monitoring results: Revenues, costs and profitability

4.1. Introduction

This section looks at revenues, costs, margins and returns for the stevedoring industry as a whole. This information was supplied by the four stevedoring companies in operation during 2015-16—Patrick, DP World, FACT and Hutchison.91

The 2015-16 results show the continuing impact of a third stevedore’s entry in Sydney and Brisbane on industry revenues, costs and returns. The period saw a substantial fall in real unit margins across the industry, driven primarily by an increase in unit stevedoring costs. Real unit revenues (a proxy for price) also fell slightly.

These whole-of-industry results are consistent with extensive investment by a new competitor, as Hutchison has been doing over the previous three years. The downturn in the global shipping industry may have also had an impact. The new competition is driving the incumbent stevedores at Sydney and Brisbane to reduce their prices in order to retain customers. At the same time, investment in new equipment has meant that the industry as a whole is incurring more cost per container (such as higher depreciation expenses). While this will better position the industry to handle growing freight volumes in the future, it is resulting in higher unit costs in the short term. This situation has led to the industry reporting its lowest return on assets since monitoring commenced. While returns on assets have declined in recent years due to a growing asset base, the drop in return on assets in 2015-16 was driven primarily by falling margins.

Investments in equipment in recent years have also contributed to labour becoming a less significant cost component than in previous years.

Data in this section is presented in total or unit form. Data in unit form is the total figure divided by the volume of containers as measured by TEUs.

4.2. Revenues

4.2.1. Total revenue

Stevedoring revenue declined by 2.0 per cent in real terms in 2015–16. This was the first fall in stevedoring revenue since the global financial crisis of the late 2000s, as shown in Figure 4.1. Previously, stevedoring revenue had been growing in line with container volumes.

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91 VICT was not included in the 2015-16 data because it did not commence operations during this period. It is expected to be included in the data in the next report.
While revenue from non-stevedoring activities\textsuperscript{92} constitutes a small portion of total revenue, this revenue source has increasingly become an important part of the stevedores' business. Non-stevedoring revenue now accounts for 16.1 per cent of total revenues, compared to 12.9 per cent in 2006–07. These revenues increased by 6.6 per cent in 2015-16. More information on non-stevedoring revenues is presented in Section 4.2.3.

### 4.2.2. Unit revenue

Unit revenue acts as a proxy for prices charged by stevedores, which are privately negotiated with shipping lines. Figure 4.2 shows the changes in total revenue on a per TEU basis in real terms from 2006-07 to 2015-16. On average in 2015-16, stevedores collected $93.16 per TEU in stevedoring revenue, $17.90 per TEU in other revenue and $111.06 per TEU in total revenue.

\textsuperscript{92} This includes break-bulk, berth hire, container storage and reposition, penalties, and services provided to the Australian Customs and Border Protection Service as part of the container examination facilities program.
Figure 4.2: Unit revenues, 2006–07 to 2015–16

Unit total revenue decreased by 0.6 per cent in real terms in 2015-16 to $111.06 per TEU. This reflected a 1.9 per cent fall in stevedoring revenue to $93.16 per TEU and a 6.7 per cent increase in non-stevedoring revenue to $17.90 per TEU.

Figure 4.2 also shows that both unit stevedoring revenue and unit total revenue have fallen about one-fifth in real terms since 2006-07. Unit revenue from non-stevedoring activities has fluctuated between around $14 and $18 per TEU during the period.

One reason for falling unit revenues has been the increasing use of 40-foot containers, instead of 20-foot containers. This is because stevedores typically charge per container, regardless of its size. To isolate these effects caused by changes in product mix, the ACCC also compares unit revenues from 20 and 40-foot containers (Figure 4.3).
The number of TEUs in 40-foot containers was 56.5 per cent greater in 2015–16 than in 2006–07. In contrast, the number of 20-foot containers has increased by only 10.5 per cent over the same period.

Since 2006-07, real unit stevedoring revenue for 20-foot and 40-foot containers has decreased by around 17-18 per cent to $139.87 and $70.62 per TEU respectively. Unit stevedoring revenue earned on all containers has fallen by a greater amount (22.2 per cent) showing the effect of a shift towards 40-foot containers.

### 4.2.3. Non-stevedoring revenue

As noted in Section 4.2.1, non-stevedoring revenue has become an increasingly important source of income for the stevedores. A brief discussion of broad trends in the major components of non-stevedoring revenues is presented below.

A component of non-stevedoring revenues is derived from container storage services. Generally, stevedores provide a free storage period, but fees are applied if containers are not collected from the terminals during that time. On a per TEU basis, storage revenue decreased in real terms from $4.89 in 2006–07 to $2.35 in 2015–16. This decrease reflects a number of factors, including decreases in the number of containers remaining in terminals beyond the fee-free period and the move to larger containers.

Automated vehicle booking systems (VBS) are used to manage the road-based flow of containers in and out of Australia’s major container ports. On a per unit basis, VBS revenue has increased over the last ten years, from $1.60 to $2.91 in real terms. The increase would reflect higher VBS charges imposed by the stevedores.

Revenue from unspecified sources is a sizeable component of non-stevedoring revenue. The size of this component has remained around $5-6 per TEU since 2006-07.
4.3. Costs

4.3.1. Unit costs

Figure 4.4 below shows the trends in real unit costs during the ten-year period to 2015-16. The 2015-16 results show the largest increase in unit costs since the ACCC commenced its monitoring of the industry, increasing by 4.9 per cent to $99.06 per TEU. This unit cost increase was mainly driven by Hutchison’s relatively high fixed costs without accompanying volumes, as well as depreciation and other costs reported by the other stevedores.

Figure 4.4: Unit costs 2006-07 to 2015–16

![Chart showing unit costs]

Unit costs have declined substantially since the waterside reforms in 1998-99 when they were around $171 per TEU. Between 2006-07 and 2012-13, unit costs generally decreased as the industry enjoyed the benefit of higher levels of automation. However, unit costs have increased over the last three years, reflecting costs incurred by an additional stevedore and increased investment in automated handling equipment by the incumbent stevedores.

4.3.2. Relative cost shares

Figure 4.5 shows changes in the share of total costs attributed to key cost components. Labour costs have been the largest component of total costs since 2006-07, representing more than half of total costs. However, labour costs declined significantly as a proportion of total costs in 2015-16 to 52.7 per cent, the lowest level over the period. The decrease in labour costs is largely due to the extent of automation being implemented across the industry. Other costs were the second largest component of total costs, increasing to 19.3 per cent, while equipment costs (including depreciation) increased slightly to 17.9 per cent in 2015-16.
4.4. Profitability

4.4.1. Unit margins

The average margin that stevedores make per TEU can provide an indication of the level of competition in the industry and the degree to which the operators hold market power. Unit margins are calculated by subtracting average unit costs from average unit revenues. Figure 4.6 shows the overall downward trend in unit margins for the industry as a whole in real terms over the last decade. Real unit margins have fallen by 65.2 per cent over this time.
Real unit margins fell by 30.6 per cent to $12.0 per TEU in 2015–16. This is the lowest real value observed since the ACCC commenced its monitoring role and followed a significant fall in 2013–14. The reduction in margins in 2015-16 occurred as a result of a significant increase in real unit costs and the decline in real unit revenues.

As discussed earlier, unit costs for the industry have risen following the entry of a third stevedore in Sydney and Brisbane. The long term downward trend in real unit margins may also indicate a degree of pricing pressure as stevedores try to maintain market share and win new business, the downturn in the global shipping industry, and greater bargaining power on the part of shipping lines due to the increased number of stevedores and greater capacity at certain ports.

### 4.4.2. Rates of return on assets

Rate of return on assets is another measure of profitability for the stevedoring industry. The ACCC considers that the most appropriate measure of rate of return on assets for monitoring purposes is the ratio of earnings before interest, tax and amortisation (EBITA) to the average value (of opening and closing balances) of tangible assets. ‘Tangible assets’ refer to physical infrastructure used by the stevedores to provide stevedoring services. More information on the ACCC’s approach to estimating rates of return for the stevedoring industry is presented in Appendix C.

Figure 4.7 shows annualised EBITA for the Australian stevedores since 2006-07 expressed as a percentage of average tangible assets. The industry rate of return on average tangible assets decreased from 10.37 per cent in 2014–15 to 8.01 per cent in 2015-16. This represents the lowest industry return on tangible assets over the history of the ACCC’s monitoring program. The decline in the industry rate of return in 2015-16 was largely due to lower EBITA reported by the industry.
Figure 4.7 also shows that since 2011–12, there has been a significant decline in the rate of return on average tangible assets for the stevedoring industry. The decline is because the entry of Hutchison in Brisbane and then Sydney saw a significant increase in the industry asset base. A decline in EBITA for the industry over the last three years has also had a significant impact on the rate of return. It is expected that the expansion of the asset base associated with VICT’s commencement in Melbourne in 2016-17 will see the industry rate of return on assets fall further.

Figure 4.7 shows the rate of return on assets for the stevedoring industry as a whole. However, the incumbents’ profitability remains significantly higher than that of the new entrant Hutchison.

It is important to note that the return on average tangible assets measure should not be interpreted as a return on the funds invested by shareholders in the respective stevedoring businesses. Such investment would include the price that those owners paid to gain control of those businesses (which would include goodwill) as well as the market value of existing assets (which would include the effect of revaluations and intangibles). The value of intangible assets reported by the stevedores as part of the ACCC’s monitoring program is significant. It reflects goodwill and, for one of the major stevedores, long term and exclusive berth licenses. Based on publicly available information, the ACCC notes that around $1.5 billion of goodwill was allocated to Patrick’s container ports for the year ending 30 June 2016. An estimate based on the asset values provided by the stevedores that includes intangible assets (including goodwill and berth licenses) and asset revaluations would result in an industry rate of return of 2.77 per cent in 2015–16.

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A Company-specific data

A.1 Introduction

This appendix presents company-specific data received from the four stevedores involved in the monitoring program. Where appropriate, the data is indexed to protect commercially sensitive information.

Additional information on trends in industry revenue cost and margins and on specific cost categories for each of the stevedores can be found in separate spreadsheets on the ACCC’s website: https://www.accc.gov.au/regulated-infrastructure/waterfront-shipping/monitoring-reporting-for-container-stevedoring.

A.2 Patrick

A.2.1 Container volumes

In 2015–16, the number of TEUs handled by Patrick across all ports increased by 2.0 per cent to 3.1 million TEUs, following a 2.8 per cent increase in 2014–15. Patrick’s handling of 20-foot containers decreased by 2.9 per cent nationally, while the number of 40-foot containers increased by 4.6 per cent.

A.2.2 Revenue, costs and margins

Despite the increase in the number of TEUs handled by Patrick, its total revenue decreased across all ports by 2.1 per cent in 2015–16. On a per TEU basis, total revenue decreased in each of Patrick’s terminals and by 4.0 per cent nationally. Stevedoring revenue per TEU decreased by 4.1 per cent across all ports. Patrick also earned lower unit stevedoring revenue on 20-foot containers and 40-foot containers than it did in 2014–15.

Total costs increased by 1.4 per cent across all ports. On a per TEU basis, costs decreased by 0.6 per cent nationally. Total costs per TEU decreased in Brisbane and Melbourne but increased in Sydney and Fremantle.

In 2015–16, Patrick’s total margin decreased by 10.8 per cent nationally. This was due to a decrease in revenues and an increase in costs compared to last year. On a per unit basis, Patrick’s margin decreased by 12.6 per cent. Patrick’s unit margins also decreased in each of its ports at Fremantle (17.6 per cent), Sydney (15.8 per cent), Brisbane (13.8 per cent) and Melbourne (8.4 per cent).

A.2.3 Changes in Patrick’s unit cost components

As shown in Chart A.1, Patrick’s overall costs have remained largely unchanged between 2011-12 and 2014-15. The level of equipment costs has declined over the period, while property costs and labour costs have been increasing.
However, as shown in Chart A.1, there were some significant movements in cost components in 2015-16. For example, labour costs per TEU decreased by 10.4 per cent, which was significant compared to changes in the index in previous years. The largest decline was in Sydney (23.3 per cent), while labour costs also declined in the other terminals. The significant decline in labour costs per TEU reflects a decrease in the number of employees at the Port Botany terminal, as part of Patrick’s automation of the terminal. However, equipment costs per TEU increased across all ports by 22.1 per cent in 2015–16, with the largest increase in Sydney (53.7 per cent). The significant increase in equipment costs per TEU reflects the first full year of redevelopment depreciation at Patrick’s Port Botany terminal.

Property costs per TEU decreased marginally, by 0.7 per cent nationally in 2015–16. For individual ports, property costs per TEU increased in Sydney (by 17.1 per cent) and Fremantle (by 9.2 per cent), while decreasing in Melbourne and Brisbane (by 26.0 per cent and 2.9 per cent respectively). The increase in property costs per TEU in Sydney reflects the increase in the size of the lease area to include the 18ha ‘Knuckle’ area.

### A.3 DP World Australia

#### A.3.1 Container volumes

In 2015–16, the number of TEUs handled by DP World across all ports increased by 1.5 per cent to 3.2 million TEUs. Increases occurred in Brisbane, Fremantle and Melbourne, while volumes declined in Sydney. The largest increase in TEU volumes was in Brisbane. Across all ports, DP World’s handling of 20-foot containers declined by 1.4 per cent, while the number of 40-foot containers increased by 2.8 per cent.

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A.3.2 Revenue, costs and margins

In 2015–16, DP World’s total revenue across all ports increased by 1.1 per cent, while unit revenue decreased marginally (by 0.4 per cent). Stevedoring revenue per TEU decreased by 1.0 per cent across all ports. Other revenue per TEU increased by 2.7 per cent.

DP World’s total costs decreased by 1.2 per cent across all ports in 2015–16. On a per TEU basis, total costs decreased by 2.7 per cent. DP World’s terminals in each of the ports except Sydney experienced lower total unit costs in 2015–16.

In 2015–16, DP World’s total margin increased by 21.0 per cent across all ports. In 2015-16 margins increased on a per unit basis in each of the terminals except Sydney.

A.3.3 Changes in cost components

Chart A.2 below shows changes in DP World’s major costs categories between 2011-12 and 2015-16. The cost category with the most substantial change in the index was equipment costs.

Chart A.2: Changes in DP World’s unit cost components

As shown in Chart A.2, DP World’s equipment costs per TEU declined across all ports by 7.4 per cent in 2015–16. Equipment costs per TEU declined in each of the ports, with the most significant declines in Brisbane and Melbourne.

Property costs per TEU increased across all ports by 5.2 per cent in 2015-16, while labour costs per TEU also increased (by 4.3 per cent).

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95 DP World Australia’s accounting practices are such that, while revenues are broken down on the basis of container-specific activity at its terminals, costs are not. Therefore, DP World Australia’s general cost data relates to stevedoring and other activities at its respective terminals.
A.4 Flinders Adelaide Container Terminal Pty Ltd

A.4.1 Container volumes

In 2015–16, the number of TEUs handled by FACT at the Port of Adelaide increased by 6.1 per cent to 390,000 TEUs, following a decrease of 4.5 per cent in the preceding year. There was a marginal increase in the use of 20-foot containers (0.2 per cent) and a considerable increase in the use of 40-foot containers (10.2 per cent).

A.4.2 Revenue, costs and margins

FACT’s total revenue increased by 4.7 per cent in 2015–16, but on a per unit basis revenues decreased slightly (1.3 per cent). Stevedoring revenue per TEU decreased by 2.0 per cent in 2015–16. In 2015–16, FACT earned substantially similar levels of unit stevedoring revenue for 20-foot and 40-foot containers as compared to 2014–15.

In 2015–16, total costs for FACT increased by a slightly higher proportion than revenue (5.2 per cent). This led to a slight increase in total margin of 2.4 per cent. On a per unit basis, FACT’s margin decreased by 3.5 per cent, due to the decrease in unit revenue being greater than the decrease in unit cost.

A.4.3 Changes in cost components

As illustrated in Chart A.3, FACT’s total costs increased significantly between 2011-12 and 2012-13, and declined in the two subsequent years. During the most recent year, the total cost index declined slightly.

Chart A.3: Changes in FACT’s unit cost components

Stevedoring costs per TEU did not change materially in 2015–16, having decreased by 10.7 per cent in 2014–15. Labour costs per TEU decreased by 2.2 per cent in 2015–16. Equipment costs per TEU increased by 10.4 per cent in 2015–16, having decreased by 19.8 per cent the previous year. Property costs per TEU decreased by 12.3 per cent.
A.5 Hutchison Ports Australia

Hutchison has been included in the ACCC’s monitoring program since 2012–13. The time series comparison of information on Hutchison’s revenues, costs and volumes is limited in this report because the company is still establishing itself in the industry. This is the third full monitoring period that Hutchison has recorded volume data for Brisbane and the second full monitoring period for Sydney.

Hutchison reported to the ACCC that the industry is characterised by a small number of suppliers, relatively few customers and a low turnover of service agreements. Although shipping lines do occasionally create new services, the net result is that only four to six agreements come up each year, and not all are taken to the market, which limits Hutchison’s ability to secure business and raise revenue.

A.5.1 Container volumes

The number of TEUs handled by Hutchison at its two terminals declined significantly (42.5 per cent) in 2015–16 to around 193,000 TEU. This follows a significant increase in volumes during the previous year (170.7 per cent) from a low base, primarily due to subcontracting from Patrick.

A.5.2 Revenue, costs and margins

Hutchison’s total revenue decreased (by 18.4 per cent) due to lower TEU volumes. However, on a per unit basis, total revenues increased by 41.9 per cent. Stevedoring revenue per TEU increased by 5.4 per cent in 2015–16.

In 2015–16, total costs for Hutchison increased by 48.3 per cent. Total costs increased by even more on a per unit basis (157.8 per cent). The increase in unit costs reflects Hutchison’s low volumes and the high levels of fixed costs involved in stevedoring. This contributed to a further decline in Hutchison’s total and unit margins, which remained negative in 2015-16.

A.5.3 Changes in cost components

The most significant factor affecting Hutchison’s margins in 2015-16 is the 42.5 per cent decline in TEUs handled, and the fixed nature of some of Hutchison’s costs.

Hutchison reported that in 2015-2016, its business was majorly impacted in the first half with industrial action at both Fisherman Islands and Port Botany. Hutchison was also further impacted with changing services delivering lower volumes.

Hutchison noted that its terminals must have the equipment and the workforce to provide a competitive service to shipping lines so as to ensure their turnaround is within the scheduled windows. Hutchison reported that until it secures enough business to provide near continuous work for that workforce, it will have relatively high handling unit costs. Each of the major unit cost categories other than property unit costs increased in 2015-16:

- stevedoring costs per TEU increased by 13.0 per cent
- labour costs per TEU increased by 30.3 per cent
- equipment costs per TEU increased by 70.9 per cent, and
- property costs per TEU decreased by 104.6 per cent.
B Characteristics of the stevedoring industry

B.1 Supply of stevedoring services

Stevedoring services involves lifting of containerised cargo on and off ships. Stevedoring companies provide other related services such as storage, maintenance and repositioning of containers. Stevedores also provide services that facilitate the movement of containers from the terminals to road and rail transport links. Other services (e.g. towage) can also often be arranged by the stevedore.

In recent years, there has been an increased focus on increasing the capacity of Australia’s ports and container terminals to cope with expected growth in containerised trade. Capacity is determined by a number of factors, including:

- quay length and berth utilisation
- total number, size and type of cranes
- size and use of the container storage (yard) space
- size and skill of the labour force, and the type of technology used.

Quay length is likely to be the most significant factor because it provides an absolute constraint on the number of ships that can berth at any one time. Quay length is fixed in the short term and acts as a physical restraint on capacity. Port operators largely control the quay length available by allocating the quay length to the stevedore/s.

The utilisation rate of shipping berths is likely to be influenced by several factors. These include the arrival pattern of ships, whether they are part of a regular service, and the regularity with which ships arrive within or outside of their allocated windows. The length of time stevedores spend servicing the ship also influences berth utilisation rates.

While port operators determine the size of yard space allocated to the stevedores, the stevedores manage its use. The amount of yard space available for container storage has been limited by continued growth of other port activities and the encroachment of surrounding residential areas (particularly in metropolitan ports like Melbourne and Sydney). Some container storage facilities have been moved away from the immediate port area to nearby locations.

Other factors that influence terminal capacity include the size and skills of the stevedore’s labour force as well as the degree to which new technologies are employed at their terminals.

Because of the unpredictable nature of shipping services and growth in the size of ships, infrastructure to provide stevedoring services must have sufficient capacity and flexibility to process irregular and fluctuating levels of throughput. Periods of peak activity may become more frequent and intense. It is likely that in an efficiently configured stevedoring operation there will be some surplus capacity.
B.2 Demand for stevedoring services

The users of stevedoring services are most commonly international shipping lines. Some shipping lines that service Australian ports are part of consortia arrangements in which several lines participate to share space on vessels.

The demand for stevedoring services is based on the number of containers arriving in Australia via sea. This is in turn strongly influenced by general economic activity and competition from other forms of transport such as air, road and rail. Demand for stevedoring services is also influenced by the trading route decisions of shipping lines, in particular whether they will call into a certain port. Some locations may not be suitably situated for shipping lines—for example, a location may constitute too much of a diversion from the shipping line’s trade route, a direct shipping route may not be available to that location or the sea channel may not allow the passage of a particular size of vessel.

While it appears that shipping lines regularly change routes and regularity of cargo services, the largest Australian ports are not generally considered to be substitutable. Shipping lines consider a number of factors apart from price when determining whether to call into a port. These include their customers’ demands and charges incurred by the shipping line to reach that port (e.g. fuel costs).

B.2.1 Bargaining power: threat of moving business elsewhere

An important determinant of competition between stevedores is the extent to which their customers are able to exercise bargaining power. Some Australian ports are used by major shipping lines as well as groups of shipping lines that operate as part of a vessel sharing agreement. These can represent a substantial proportion of throughput at a given port. For example, when “K” Line announced that it had switched its Singapore shuttle service from DP World to Patrick in Fremantle, according to Patrick this resulted in an additional 90,000 lifts per year, which is nearly 20 per cent of the total number of container lifts in the container terminal in 2014-15. This means that the loss of a particular line’s business can potentially have significant financial consequences for a stevedore. It might therefore be argued that by threatening to shift their business, some shipping lines have bargaining power against stevedores.

Inter-port competition may be limited in Australia due to the large distances between major ports. A shipping line’s ability to switch to a stevedore in a different port will be influenced by any additional costs of steaming between ports as well as the land transport costs of moving the cargo to its ultimate destination. These costs may reduce the scope for shipping lines to switch easily to different ports, and so reduce shipping lines’ bargaining power. The extent to which shipping lines can switch stevedores may also be restricted by the shipping line’s contractual obligations with a stevedore.

B.2.2 Sensitivity to prices and quality of service

The extent of demand sensitivity to prices and service levels can have an important bearing on the competitive discipline faced by businesses. The evidence on sensitivity to prices and service levels in the stevedoring industry is mixed. Based on industry consultation, shipping lines are sensitive to the cost of waiting idly at a port or adjusting port visit times which means that a stevedore’s ability to provide efficient and reliable services within specified time windows is critical. That said, the ACCC has received views from industry that

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96 “K” Line Australia Pty. Ltd., Important Notice to “K” Line Container Trade Customers To / From Fremantle, 1 January 2014.
97 Generally, the more sensitive users are to prices, the greater is a business’s potential loss of revenue in response to a price rise. Businesses that face a relatively price sensitive demand are likely to have less discretion in setting prices.
price is also a key factor given reported current conditions in shipping markets, increased capacity, and improved customer service in stevedoring.

The ACCC is aware that shipping lines switch stevedores from time to time. One notable example is “K” Line switching from DP World to Patrick, which is referred to above. Another example is ANL’s decision to move its Tranztas service from Patrick to Hutchison and DP World citing the reason as “totally unsatisfactory” service. Most recently, Hutchison (together with DP World) secured a major contract in September 2016, with the A3 consortium, an alliance between three of Asia's biggest shipping lines.

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C ACCC monitoring methodology

C.1 Description of methodology

This appendix explains the ACCC’s monitoring methodology. In particular, it outlines the ACCC’s approach to assessing the profitability of stevedoring terminal operations in Australia.

The ACCC’s role, set out in the ministerial direction, is to monitor prices, costs and profits at container terminals operating in Adelaide, Brisbane, Burnie, Fremantle, Melbourne and Sydney. In undertaking this role, the ACCC does not collect data on actual prices charged for stevedoring services as these are negotiated privately between stevedores and users. Instead, unit revenue measures are used as indicators of average stevedoring charges. In addition to using quantitative data provided by the stevedores, the ACCC seeks qualitative information through informal contacts with stevedores.

The data collected by the ACCC from the stevedores is combined to obtain national average revenues, costs and margins, expressed on a per unit basis. There are typically two container sizes: the smaller 20-foot equivalent unit (one TEU) and the larger 40-foot equivalent unit (two TEUs). Stevedoring charges are normally calculated per lift and are not generally differentiated in terms of container size. The per TEU rate will tend to be lower for 40-foot containers than for 20-foot containers, which means that a trend towards higher utilisation of 40-foot containers will reduce the overall stevedoring revenue expressed per TEU. The expected mix of 20- and 40-foot containers can be a significant factor for stevedores for determining the per lift stevedoring rate to charge a shipping line. The ACCC receives data on revenues and costs for total terminal activities and for the stevedoring function. Stevedoring revenue, which makes up the largest proportion of a stevedore’s total revenue, is defined as the revenue attributable to the loading and unloading of cargo. It includes any rebates offered by the stevedores to shipping lines, as well as any penalties for non-performance imposed by the liner company on the stevedore.

However, stevedores may also conduct some break-bulk work (e.g. non-containerised cargo such as bags, crates, barrels) and provide other ancillary services related to the lifting of containers, such as storing and maintaining containers. They also receive revenue from land transport operators—for example, for trucks accessing the stevedores’ vehicle booking systems. Revenues from these types of services are not categorised as stevedoring revenue.

C.2 Measures of industry profitability

Different measures of profitability are appropriate depending on the reason why performance is being assessed. Where performance is assessed from a perspective of returns on assets employed in producing a good or service, rates of return on tangible assets are relevant. Alternatively, rates of return measures including both tangible and intangibles assets are more appropriate where performance is assessed from the perspective of the opportunity cost of capital invested in a business.

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99 The ACCC is provided with information to enable separate calculations of revenue per TEU on both 20-foot and 40-foot containers.
C.2.1 Treatment of intangible assets and asset valuation

As noted in Chapter 4, the ACCC considers that for monitoring purposes, an appropriate measure of industry profitability is earnings before interest tax and amortisation (EBITA) on the average value (of opening and closing balances) of tangible assets. EBITA is used as it is not affected by management decisions regarding financial capital structures, which can significantly affect interest expenses and tax payable (and thus post-tax returns), but do not reflect the operating profitability of providing stevedoring services.

By using assets as the basis for comparing those returns, the investment base represents the assets employed. The recognition of intangible assets is permissible under the Australian equivalent of the International Financial Reporting Standards (AIFRS). However, the ACCC excludes intangibles (which, for stevedoring, include mostly goodwill and berth licensing agreements) from the industry’s asset base when assessing operating performance. This is because of concerns that such intangibles may reflect an expectation at the time of purchase or acquisition of assets for a business to earn economic rents, which may obscure changes in the profitability of providing services.

The ACCC’s approach to exclude intangible assets will create a difference between measures reported in stevedores’ statutory reports and the ACCC’s stevedoring monitoring reports. However, such divergences are not unusual where prices oversight of infrastructure services is involved and is consistent with the ACCC’s approach in other industries (e.g. airport services).

The return on assets measure is affected by changes in asset values arising from asset revaluations, transfers and sales. Asset valuation methods may differ between businesses, which impacts comparability, and may change over time, which would raise issues in terms of time series analysis. The ACCC has not attempted to evaluate the appropriateness of stevedores’ asset valuations, which would be necessary if prices were regulated. However, it does require stevedores to report asset values on a depreciated historical cost basis over time so that the ACCC can assess trends in the profitability of the stevedoring terminals.

DP World has advised the ACCC that it is no longer able to provide assets measured at depreciated historical cost. As a result, the ACCC uses an estimate based on DP World’s historical asset value as an input in its rate of return calculation. The ACCC has undertaken sensitivity analysis on the impact of using this estimate and has found that the impact on the overall industry rate of return on assets is not material.

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100 While asset revaluations are permitted under international accounting standards, for the purposes of the ACCC’s monitoring program, the effect of any revaluations made in 2015–16 is excluded. The asset information provided by the stevedores for the period ending 30 June 2016 reflects the opening value of tangible assets as at 30 June 2015, plus additions to assets, less depreciation expenses and disposal of assets and write-downs of tangible assets that occurred in the 12 months to 30 June 2016.
D 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.
E Ministerial direction

COMMONWEALTH OF AUSTRALIA

Prices Surveillance Act 1983

DIRECTION NO 17

1. (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. (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. (3) The ACCC is to report to me on its monitoring activities referred to in paragraph (1) within four months after the end of each financial year.

PETER COSTELLO

January 1999

Federal Register of Legislative Instruments F2008B00402
Contacts

Infocentre: 1300 302 502
Website: [www.accc.gov.au](http://www.accc.gov.au)

Callers who are deaf or have a hearing or speech impairment can contact the ACCC through the National Relay Service, [www.relayservice.com.au](http://www.relayservice.com.au)

For other business information, go to [www.business.gov.au](http://www.business.gov.au)

Addresses

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