The Performance of Western Australian Ports

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1. Introduction

The purpose of this report is to describe and assess the performance of Western Australia's eight port authorities.[2] The context for this research is a February 2006 report by Access Economics prepared for the Australian Council for Infrastructure Development (AusCID) (*A Scorecard of the Design of Economic Regulation of Infrastructure*, July 2006). This report aimed to rate "the extent to which the regime [for third party access] in each jurisdiction is *designed* in a way that is likely to foster good decisions and outcomes"; it explicitly did "not rate the decisions, or outcomes, of each jurisdiction's regulatory regime or the industry that it regulates". In this very limited context it rated Australian ports generally as "poor", and those in Western Australia as "very poor". The AusCID report appears to have taken no account of the regulatory framework for port authorities in Western Australia (WA) contained in the *Port Authorities Act 1999* (WA) and elsewhere, or the ways in which this framework and its application are "likely to foster good decisions and outcomes" (Access Economics 2006, p i).

In light of this apparently incomplete analysis, it is appropriate to describe and assess the relevant governance framework applying to WA ports and to assess their performance, so as to place the comments concerning them made by the Access Economics report in an empirical performance-based context.

The current research reported here has three dimensions:

- It describes and examines the regulatory and policy context in which WA's port authorities operate, including the *Port Authorities Act 1999* and other relevant legislation and policy directives of governments.
- It reports empirical performance data for the eight ports governed by the *Port Authorities Act 1999*.
- It uses performance indicators to assess the performance outcomes of these ports, including their financial performance and relevant physical measures of output and service to principal stakeholders. As far as practicable this examination covers the twelve years from 1993-94 to 2004-05.

2. Port Authority functions and economic impact

For an island nation such as Australia, ports serve as vital gateways to the global economy. In an increasingly competitive world economy Australia's economic performance depends more than ever on access to efficient distribution networks, of which ports are an integral component.

The powers and responsibilities of public port authorities vary widely, from 'landlord' at one extreme to 'comprehensive' at the other (Goss, 1990b). A 'landlord' authority exercises overall control over the port and may plan and promote its development, but relies on private

1 The authors would like to thank Mr Sarjit Singh, Murdoch University, for research assistance with this project.

2 Albany, Broome, Bunbury, Dampier, Esperance, Fremantle, Geraldton and Port Hedland.

enterprise to conduct most activities connected with the port. By contrast a 'comprehensive' authority directly undertakes the majority of activities within the port, including employing the workforce, providing stevedoring services (loading and unloading vessels), and promoting the port's services to shippers and ship owners. In Australia, landlord ports, where the authority rents or leases land sites to private firms and exercises overall control, have predominated. However, the term 'landlord' is misleading in that it implies a relatively passive role for a port authority which is inappropriate in a competitive world economy. The world's most successful port 'landlords' have in reality acted as 'strategic managers' and undertaken pro-active leadership roles in port management and development (Meyrick, 1998).

Port authorities in Western Australia (WA) have adopted the 'strategic manager' model, aiming to ensure that all facilities and services in their respective ports are provided efficiently, and that the rate of investment in new capital assets is sufficient to cater for growing demand. Port assets are in mixed public and private ownership. Access to port infrastructure, land and services by third parties (e.g. stevedores and providers of towage and container storage services) is undertaken through negotiation of commercial contracts between users, service providers and infrastructure owners. Port authorities in WA also have strong roles in 'trade facilitation', including supply chain coordination and development (Charlton 1995).

Major ports in WA, including all those in this study, are publicly owned. Governments in WA have consistently rejected 'corporatisation' and 'privatisation' in favour of 'commercialisation' (Tull, 1997). Historically the majority of ports in Australia – and until recently virtually all worldwide – have been publicly owned, owing to the perception they are natural monopolies and that public ownership can potentially prevent abuse of their market power. Significantly for this research, Goss (1990a; 1990b) has shown that public ownership does not necessarily prevent such abuse; specifically, that economic rents can be obtained by a number of port-based actors, either singly or in combination, including public port authorities, private stevedoring firms operating within ports, and/or port workers (via restrictive work practices and overstaffing). Statutory 'regulation' in some form, including port governance arrangements, might therefore be necessary to prevent excessive rent extraction by port authorities.

Since the 1980s there has been a worldwide trend for governments to reduce their direct role in public utilities such as ports. By contrast, in Australia reform of port authorities has focussed on commercialisation, corporatisation and ultimately (in only a small number of cases) privatisation.[3] Only Victoria and South Australia have privatised previously publicly-owned ports; Geelong and Portland were sold in 1996 and all of South Australia's significant ocean ports were sold to Flinders Ports Pty Ltd in 2001. Privately-owned ports also exist in Queensland, in particular the Dalrymple Bay coal loading port. The empirical outcomes of infrastructure privatisation have been widely documented in a range of countries and industries, but there is relatively little empirical evidence specifically on ports and even less which is specifically aimed at evaluating the outcomes of the *non*-privatisation models for port reform (Brooks 2005) which have predominated in Australia.

3 'Commercialisation' involves clarifying the objectives of port authorities by requiring them to operate on a more commercial basis, in particular with regard to financial outcomes and freedom from government direction; 'corporatisation' involves commercialisation plus the restructuring of port authorities as separate legal entities accountable for clear financial and other objectives, governed by Boards appointed on the basis of their expertise with clear powers and functions; 'privatisation' can take a variety of forms but generally involves the sale or long-term lease of infrastructure and or operational assets to the private sector.

The UK has the largest proportion of privately-owned ports, with about 70% of port capacity in private hands. Since privatisation began the UK government has effectively left the running of the industry to market forces, subject to state regulatory policy that aims to "add value rather than unnecessary cost" (House of Commons Transport Committee 2003), and central government involvement in port planning and development has been largely absent since the demise of the National Ports Council in 1981 (Reveley and Tull 2002).

However, a number of concerns have been raised about the performance of UK's privatised ports, including the efficiency of planning processes, the lack of publicly available statistical information on port activities and performance and the adequacy of health and safety regulations. The UK Government's distribution strategy now emphasises sustainability, intermodal integration, environmental protection and better regional and local planning rather than privatisation, competition and deregulation (Department for Transport 1999).

Australia's intergovernmental National Competition Policy Agreement (1995) aimed to produce a coordinated approach to competition reform, with a primary but not exclusive focus on the public sector. However, for infrastructure involved in export trade, the experience of competition reform, in particular regulation of third-party access, has not been uniformly successful.

Clearly, seaports are vitally important economic infrastructure: more than 99% of Australia's exports by weight (79% by value) leave Australia by sea (Exports and Infrastructure Taskforce 2005). The infrastructure services provided by ports are especially important in WA, in which the economy is highly exposed to international trade. In 2005-06 the State's exports totalled over $38 billion or more than 30% of the national total. WA is especially dependent for its prosperity on commodity exports, the competitive performance of which depends on the efficient operation of complex multi-modal supply chains. The services provided by ports are key components in these national and international supply chains. Fremantle is one Australia's four key ports for international container trade; WA's largest bulk ports (Port Hedland and Dampier) provide services for very large-scale export of iron ore. The latter two ports are the only ones in Australia handling over 100 mt per annum.

According to a study carried out in 1999-2000 by Fremantle Ports (the trading name of the Fremantle Port Authority) for the Bureau of Transport and Regional Economics (BTRE) and the Association of Australian Ports and Marine Authorities (AAPMA), the direct and flow-on effects of activity in the port of Fremantle accounted for some 5,700 jobs (0.8% of total WA employment); the annual economic output from the port, taking into account the direct and flow-on effects, was estimated at $728 m annually (0.9% of Gross State Product); total trade handled through the port was valued at $13.7 billion p.a.(1998-99) (Fremantle Ports 2000).

3. AusCID-sponsored assessment of the economic regulation of Australian ports

3.1 Background and purposes of the AusCID-sponsored report

The AusCID-sponsored assessment by Access Economics 2006 of infrastructure regulation was narrowly focused and based solely on analysis of legislation and regulatory frameworks. The sole concern was with the *design* of regimes for economic regulation intended to implement Australia's 1995 National Competition Policy affecting the behaviour of public and private infrastructure owners. According to its authors, the focus of their report:

> … *is on* ***economic regulation which directly sets prices or revenue for access to, or use of, services provided by infrastructure owners*** *…. The focus is on scoring the enabling legislation and other guidelines underpinning each regime against good regulatory design principles.* [emphasis added] (Access Economics, 2006, pp i-ii)

The AusCID-sponsored report therefore did not examine the myriad of legislative means other than competition law by which the behaviour of port owners may be controlled in the interest of their users and other stakeholders, including the community at large. Nor did it examine the regulation of privately-owned port-based service providers such as stevedores and towage operators, despite considerable evidence that significant market power may be enjoyed by them (see for example Productivity Commission 1998). Ownership of public or private infrastructure is not stated to be a factor in the assessment, and the report states that "public ownership does not necessary [sic] have to go hand-in-hand with poor regulatory design" (p 10).

The value of the report's findings is therefore limited by its acknowledgement that its assessment of regulatory design is unsupported by any established need or by any examination of outcomes. In this regard, the report's authors acknowledge that:

> … *economic regulation should only be used where there is evidence of persistent structural impediments to achieving efficient use of, operation and investment in infrastructure by relying on market mechanisms alone.* (p 6)

However, as previously stated, the Access Economics report says that:

> … *its scorecard does not rate the decisions, or outcomes, of each jurisdiction's regulatory regime or the industry that it regulate.* (p i)

This exclusion from the assessments by the AusCID-sponsored report should also be read in the light of comments by the Exports and Infrastructure Report (2005, p 2) that

> *The greatest impediment to the development of infrastructure necessary for Australia to realise its export potential is the way in which the current economic regulatory framework is structured and administered. It is adversarial, cumbersome, complicated, time consuming, inefficient and subject to gaming by participants. … regulatory issues are slowing down investment in infrastructure used by export industries.*

3.2 The AusCID-sponsored assessment

In reporting on the specific factors taken into account in its assessments, the AusCID sponsored report states that:

> *Good decisions and outcomes are those which encourage efficient resource allocation by appropriately balancing the need of investors to earn a* ***reasonable rate of return on capital*** *and the interests of infrastructure users to obtain services at minimum feasible cost.* (p i) [Emphasis added]

Four specific design features are listed in relation to ports:

- **Independence** from government, industry and other stakeholders

- **Focus** on efficient resource allocation
- **Transparency,** predictability and consistency of regulatory processes
- **Accountability** of regulatory processes.

The AusCID-sponsored report rated the overall regulation of ports in Australia as 'poor' (the table below is extracted from the report, p 10; shading added).

Jurisdiction:	**NSW**	**VIC**	**QLD**	**SA**	**WA**	**TAS**	**NT**	**Overall**
Criteria:								
Independent	Poor	**V.Good**	Poor	V.Good	Poor	Poor	Poor	**Fair**
Focussed	Poor	**Good**	Poor	Good	V.Poor	V.Poor	V.Poor	**Poor**
Transparent	V.Poor	**V.Good**	Poor	V.Good	V.Poor	V.Poor	V.Poor	**Poor**
Accountable	V.Poor	**Good**	Fair	V.Good	V.Poor	V.Poor	V.Poor	**Poor**
Overall Jurisdiction Rating	**V.Poor**	**Good**	**Poor**	**V.Good**	**V.Poor**	**V.Poor**	**V.Poor**	**Poor**

WA received an overall 'very poor' rating. This is apparently a consequence mainly of perceived lack of independence (due to public ownership of port infrastructure in the state) and absence of direct regulation of competitive access to port infrastructure (due perhaps to a perceived lack of transparency). This assessment appears to take no account of other legislation available to government to achieve desired outcomes, in particular those relating to 'focus', 'transparency' and 'accountability'. As indicated previously, it also takes no account of actual performance outcomes.

Those states in which the report's assessment criteria indicate there are 'high performers' are South Australia and Victoria. Perhaps not coincidentally, these are the only states which have wholly or partially privatised their ports[4]:

> *In these States the prices charged for port services are monitored by an independent regulator with the option for port users to seek relief under an access regime if commercially negotiated prices cannot be agreed upon.* (p 10)

It appears likely the regulatory policies in those states were motivated by the desire to ensure that the newly privatised ports did not exploit their monopoly powers to extract excessive economic rents. Pointing to the significance of outcomes in any assessment of regulatory arrangements, it is significant in this regard that a recent evaluation of port reform in Victoria was critical of the state's regulatory regime for ports, arguing that it "has not delivered an overall reduction in costs to shippers" and had "created a less than level playing field between Victorian ports, favouring those in private ownership" (Victorian Department of Infrastructure (DOI), 2001, pp 73, 80 & 84-5). It also concluded that the regulatory framework had reduced the capacity of publicly-owned ports both to undertake new capital expenditure and also to provide for the maintenance of existing assets. It had also encouraged expansion of non-regulated services. The DOI assessment found that regulation did not consider service outcome performance measures and was narrowly focused on price caps for prescribed services. In this regard, it found there was some evidence that it had

4 For background see ESCOSA (2004), *Regulation of South Australian Ports. Information Paper*.

disadvantaged some stakeholders not using prescribed services; for example, from 1997 to 2001 Melbourne Port Corporation increased its non-regulated land rents from 28 per cent to 35 per cent of total revenue, the highest of the four capital city ports.

4. Port regulation and governance in Western Australia

This section of this report assesses the governance and policy framework in which WA's port authorities operate and the performance this framework has achieved. The aim has been to assess how well it is achieving "efficient use of, operation and investment in infrastructure", which was acknowledged by the authors of the AusCID-sponsored report (p 6) to be a key criterion for assessing the need for formal direct regulation. The assessment here examines three principal areas:

- The full range of State legislation available to the state government for managing the performance of WA's publicly-owned port infrastructure and for regulating the behaviour (including pricing) and accountability of port infrastructure managers.
- The financial performance of WA port infrastructure, to assess whether there is evidence of excessive (or inadequate) financial returns.
- The service performance outcomes produced.

4.1 Economic regulation

The assessment criteria used by Access Economics in the AusCID sponsored research would require a regime for economic regulation providing rules for a 'negotiate/arbitrate' process, both to facilitate access to the port by 'third parties' wishing to use port infrastructure, e.g. stevedores, pilots, other land users and service providers, and to regulate prices charged to these and other port users, e.g. wharfage.

There is no formal direct regulation of 'third party access' to port infrastructure in Western Australia or of pricing for the use of port infrastructure. In WA an independent body, the Economic Regulation Authority (ERA), was established in 2004 to administer industry-specific legislation regulating third party access to electricity, gas, rail and water infrastructure (the ERA's legislative charter does not include ports). However, the state government may request the ERA to inquire into matters relating to both regulated and non-regulated industries, including pricing, quality, business practices and compliance costs. In relation to the regulation of prices, to prevent excessive extraction of economic rent by port owners, relevant provisions exist in statutory governance arrangements (see below).

4.2 Governance of port authorities in Western Australia

Legislation provides a 'commercial' governance framework for WA part authorities. The *Port Authorities Act 1999* establishes and governs the business of WA's port authorities and provides for the state government to appoint governing authorities and key staff and to control prices and investment.

Focus, transparency and accountability

Several features of the *Port Authorities Act 1999* provide partial responses to the assessment criteria used in the AusCID-sponsored report, in particular its strong focus on efficient resource allocation, transparency and accountability. The 1999 Act was a major advance in

standardising the objectives and accounting standards of WA ports. It repealed the *Port Functions Act 1993* and seven other pre-existing port authority statutes to create a common approach to port authority management. Some elements of commercialisation had earlier been applied to Fremantle and Bunbury. In 1995 the government had spelled out the role of the Fremantle Port Authority (FPA), "to facilitate trade in an efficient and commercial manner", and in 1996 approved formal commercialisation of the FPA and the Bunbury Port Authority.

Sections 30 and 34 of the *Port Authorities Act 1999* prescribe the functions of port authoriies:

- *To facilitate trade within and through the Port and plan for future growth and development of the port*
- *To undertake or arrange for activities that will encourage and facilitate the development of trade and commerce generally for the economic benefit of the State through the use of the Port and related facilities*
- *To control business and other activities in the Port or in connection with the operation of the Port*
- *To be responsible for the safe and efficient operation of the port*
- *To be responsible for the maintenance and preservation of vested property and other property held by it*
- *To protect the environment of the port and minimise the impact of port activities on that environment.*
- *To act in accordance with prudent commercial principles [and] endeavour to make a* ***profit*** (Section 34) [emphasis added]

Significantly, the Act omits any requirement for the Dampier Port Authority to earn a profit:

> *The functions of the port authority include recovering as far a possible, the cost of the facilities and services provided by the port authority from the users of those facilities and services* (Schedule 6, 1.9).

In respect of the ports of Dampier and Port Hedland the Act also provides for major users (mining companies) to nominate directors for appointment to the boards of these authorities.

Annual reports are also required to fully disclose key financial accounting policies and outcomes, and report key performance measures. Notably, privatised entities, including ports in Australia, New Zealand and the UK, provide substantially lesser disclosure of financial and non-financial targets and outcomes.

According to WA's Department for Planning and Infrastructure:

> *The [1999] Act commercialised port authorities with an intent to better equip them to respond to market forces and thereby facilitate trade. The Act intended that ports be given the freedom to control the day-to-day running of the port, while allowing Government to retain strategic control, including the ability to set performance goals*

> *and broad limits for capital expenditure and to control the range of activities undertaken.*[6]

In addition to the requirements of the *Port Authorities Act 1999,* port authorities must also comply with a wide range of regulations including state and national competition laws governing competitive behaviour (including competitive neutrality), infrastructure planning and building codes, financial audit and reporting and environmental legislation. Annual reports are tabled in Parliament and provide generally good disclosure of financial and non-financial performance.

In practical terms ports have moved a substantial distance in response to 'commercialisation', both in terms of changing business models and in their financial and non-financial outcomes (see below). Beginning in the 1990s, Fremantle Ports commenced a long-term program of business process and 'cultural' reform to improve its economic and financial performance (Sanderson 2007). After 1996 Fremantle Ports contracted out many services including pilotage, maintenance of stevedoring equipment and forklift driver training. Outsourcing subsequently became accepted practice at all WA ports. Restructuring and contracting out caused the FPA's staff numbers to reduce from over 750 in 1990 to less than 200 ten years later (by the early 2000s staff numbers at Fremantle were creeping up again). Significantly, at Albany, in response to the requirements of the 1999 Act "the Board formed the view late in 2003, that a return to the direct employment of staff would give greater control over productivity, safety and training, at the same time, offering career paths for greater job satisfaction". Albany now directly employs its maintenance and general operations staff (Albany Port Authority, *Annual Report,* 2003-04, p 3).

All of the above statutory provisions are "likely to foster good decisions and outcomes", to borrow words from the AusCID-sponsored report (see the quotation at the top of page 4 above). This is even if their value may be compromised by powers of Ministerial approval and direction – an inevitable consequence of the limited 'commercialisation' model. The WA government has restricted the autonomy of its port authorities in a number of areas including the appointment of senior staff and retention of a power of veto over charges – arguably a form of price regulation tempered by the larger objectives of the Act.

Pricing policies

As indicated above, the 1999 Act requires port authorities to "act in accordance with prudent commercial principles [and] endeavour to make a profit" (Section.34). Pricing guidelines in the Act are consistent with this:

> *Port charges are to be determined by the port authority in accordance with prudent commercial principles and may allow for … the making of a profit [and] depreciation of assets.* (Section 37)

The Act also requires each port to describe its "pricing arrangements", the nature, costing and funding of 'community service obligations' and "performance targets and other measures by which performances may be judged and related to objectives". Each port is also required to prepare and publish an annual *Statement of Corporate Intent* (Section 60), which must include estimates of revenue and expenditure, borrowings and dividends.

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6 Source: www.slp.wa.gov.au/statutes/swans.nsf/ PDFbyName/03FFB12DE1A1E936482567 D2002BA6F0?OpenDocument. Accessed 24/11/06.

Competitive neutrality

A key feature of the national competition policy reforms is a requirement for 'competitive neutrality', that is, government enterprises must face market conditions with regard to competition, taxation and the like which are the same as those faced by competing organisations in the private sector.

Under the current arrangements, all WA ports are required to pay dividends and income tax-equivalent payments, as well as payments in lieu of local government rates (Section 82), and 'government efficiency dividends'. Since 2001 all WA port authorities have been required to pay 50% of after tax profits as a dividend to the State. However, a port authority may recommend a lower dividend if there exist some extenuating circumstances (an earlier dividend policy applying from 1994-95 used a sliding scale dividend payout ratio of 0% to 30% subject to the level of a port authority's debt ratio). Between 2001-02 and 2004-05 inclusive, the WA government also required port authorities to pay efficiency dividends. The payment of dividends provides a return on the public funds invested in ports and is consistent with National Competition Policy which requires public enterprises to meet expectations similar to those required of private sector businesses, which usually return a proportion of their surpluses to shareholders as dividends.

Section 60 of the Act requires that where ports are directed to undertake non-commercial activities they should receive payments to cover their net cost of these 'community service obligations' (CSOs).[7] The *Statutory Corporations (Liability of Directors) Act 1996* (Section 17) also requires that:

> *Where a direction is given under a written law to a corporation by a Minister and the governing body determines that … it would not be in the interests of the corporation for it to comply with the direction … the governing body is to notify the responsible Minister in writing … of its determination and the reasons [why the direction would not be in the best interests of the corporation].*

4.3 WA Ports' performance outcomes

A primary focus of this research has been to measure the actual performance of WA port authorities – a measure of their success in meeting the expectations of their stakeholders and balancing their competing interests – key indicators of the success of t heir governance arrangements. The areas examined in the remainder of this report are:

- Financial performance indicators: Return on assets; profit margin per cargo tonne; dividend payout ratio; current ratio; gearing (debt/equity ratio); and operating profit (before tax).
- Pricing: Revenue per unit of cargo; cost (i.e. expenditure) per unit of cargo.
- Non-financial performance indicators: Berth occupancy, turnround times and volume of trade, which taken together are key indicators of their proficiency in performing their 'facilitation' objectives.

7 Bunbury, the first WA port to receive CSO funding, was paid $85,000 in 2004-05 in return for providing leased areas to community-based organisations.

To assess these aspects of port performance, we have used 'performance indicators', that is measures of *actual performance* compared with *pre-set goals* related to their outputs and/or outcomes (Kearney, 1991). These are not 'benchmarks' comparing the performance of WA ports against that of ports elsewhere. As various port stakeholders (e.g. port users, employees and government) have differing interests, it is necessary to examine a range of performance indicators covering prices, service quality, profitability, community service obligations and employment. This methodology has previously been employed by Tull and Reveley (2001) to evaluate the performance of selected Australian and New Zealand ports.

Table 1 provides a long-term summary of key financial and other non-financial indicators. The Appendix at the rear of this report contains detailed data from the eight ports governed by the 1999 Act. Data sources employed include *Waterline* (Australian Bureau of Transport and Regional Economics), publications on the financial performance of government trading enterprises (Productivity Commission), and port authority annual reports.

Table 1: Summary Performance indicators, WA Ports (avg 1993-94 to 2004-05)

Port	Return on assets (% p.a.)	Profit margin per cargo tonne ($1989/90)	Turnaround times (Avg hours)	Turnaround times (Coefficient of variation %)
Albany	7.0	0.4	85	28.6
Broome	*	*	NA	NA
Bunbury	7.1	0.3	39	8.3
Dampier	1.8	*	24 #	8.6
Esperance	9.9	0.5	46	12.6
Fremantle	14.7	0.5	26	11.9
Geraldton	9.9	0.4	50	22.7
Port Hedland	-24.1	0.1	NA	NA

Notes: *****= less than 0.1; **#** = 3 years data only; NA = not available; Coefficient of variation = standard deviation/mean x 100. **Source**: Appendix A.

The 1999 Act was a major advance in standardising the objectives and accounting procedures of WA ports, but inter-port and inter-year performance comparisons are subject to many qualifications. In particular, as many of the indicators are ratios with activity-based denominators, variations in trade and shipping activity and in the scope of port authority responsibilities need to be taken into account when comparing performance. Small ports such as Albany (which handles only 3 mtpa) are unable to reap the economies of scale created by large ports like Port Hedland (which handles over 100 mtpa). Fremantle is the only port which handles high-value container traffic, while all the others are predominantly bulk ports.

Financial indicators

Table 1 shows that from 1993-94 to 2004-05, *return on assets* and *profit margins* varied considerably between Western Australian ports. The maximum return on assets of 15% does not suggest the existence of monopoly rents, although the majority of ports are complying with the statutory requirement that they "endeavour to make a profit".[8]

8 The WA Government requires ports to achieve a rate of return on assets between 5% and 8% per annum; only three ports failed to achieve this (Department for Planning and Infrastructure, 2006). Initially, this rate of return

Rates of return and profit margin data do not suggest monopoly profits are being extracted from WA port operations. Fremantle consistently reports the highest annual rate of return, averaging a commercial 15%, the highest of all WA ports. This reflects its position as WA's major mixed cargo port and the only one with container handling facilities. Fremantle is followed by Esperance and Geraldton which earned returns averaging about 10%, and Bunbury and Albany which averaged about 7%. Broome is the lowest performer but is handicapped by small cargo volumes (about 0.2 million tonnes per annum) and high fixed costs from the long jetty needed to cope with the large tidal range. In 2005 it began a $16.8 million jetty extension to allow berthing of larger vessels up to 50,000 dwt.

In Geraldton, the rate of return on assets dropped from an average of about 14% p.a. in the 1990s to about 4% after 2000 while the dividend payout ratio increased. Geraldton's financial performance after 2002-03 was adversely affected by the $103 million port enhancement project, which led to a large jump in the debt/equity ratio. Dampier's rate of return and profit margin declined after 2000, in spite of 58% growth in cargo tonnages from 60.5 mtpa in 1993-94 to 95.8 mtpa in 2004-05, although another key financial indicator, the current ratio (the ratio of current assets to current liabilities) improved during this time. By contrast, Bunbury's financial performance appears to have improved since 2000 with a declining debt/equity ratio and improving current ratio. Port Hedland's performance was distorted by a $134 million deficit in 2000-01 caused by the write-off of channel and dredging costs; if this year is excluded the rate of return is still low but positive at 3 per cent per annum.

Turning to *profit margin per tonne of cargo* (1989-90 prices), Fremantle and Esperance both averaged $0.50 per tonne, closely followed by Albany and Geraldton at $0.40 per tonne and Bunbury at $0.30 per tonne. Since 2000 Bunbury, Esperance, Fremantle and Port Hedland have maintained their profit margins in real terms.

As indicated above, an adverse effect of privatisation in Australia and other countries has been to reduce transparency, i.e. the scope and quantity of information available on port performance. For example, South Australian ports are no longer monitored by the Productivity Commission.

In 2004-05 South Australia's sole port operator privately-owned Flinders Ports reported a rate of return on assets of 12.0%, an operating profit of about $16 million, profit per tonne of cargo of $0.92 and a dividend payout ratio of 97.5 per cent.[9] By comparison, in the same year WA's most profitable port, Fremantle, earned a slightly lower rate of return on assets (10.5%), a similar operating profit ($16.5 million) and a lesser profit per tonne of cargo ($0.65); its dividend payout ratio was a much lower 40.1%, suggesting that more cash was left in the business to assist with investment in new capital for upgrading of facilities and for future growth.[10] Flinders Ports' stronger profit performance suggests there may be a link

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requirement was based on a current cost valuation; since 2001, valuations have been based on deprival value. From 2000-01 to 2004-05, the Australian port sector as a whole earned a rate of return on assets of about 6% per annum (Productivity Commission, *Financial performance of government trading enterprises*, 2006).

9 Calculated from Australian Securities & Investments Commission, Flinders Ports Pty Ltd, *Financial Report*, 2004-05. Unfortunately, the data are not sufficiently disaggregated to enable an assessment of the performance of individual ports.

10 This is consistent with recommendations that port authorities be permitted to use a portion of their cash reserves for capital investment (Department for Planning and Infrastructure, 2006).

between private ownership and higher financial returns, but the difference does not appear to be significant based on these figures. In any case, as New Zealand's experience suggests, good financial performance benefiting shareholders may conflict with passing efficiency gains to port users (Tull and Reveley, 2001).

One of the goals of Australia's port reforms was to decrease costs and charges to port users and in response to this, most Australian ports have expressed a commitment to reduce prices. In order to facilitate a comparative assessment of *trends in cost and charges* to port users, Figures 1-8 in Appendix B show expenditure (including debt servicing costs) per unit of cargo ($/tonne), and income per unit of cargo ($/tonne) in constant 1989-90 prices for the six principal ports between 1993-94 and 2004-05. If performance were trending favourably, with port charges to customers decreasing and efficiency increasing, one would expect a decline in both revenues per unit of output and costs per unit of output. It is important to note that the revenue and cost data relate to *port authority* services only; aggregate data on the revenues and costs of all port service providers are not available. Due to the different characteristics of each port, it may be more instructive to compare *trends* over time rather than *absolute* levels of revenues and costs per unit of output.

Table 2 below summarises the changes between 1993-94 and 2004-05, and shows that all ports except Dampier and Fremantle experienced falls (ranging from 15 to 30 per cent) in real costs per unit of cargo. Furthermore, comparing 1993-94 and 2004-05, all ports except Fremantle experienced substantial falls (ranging from 23 to 40 per cent) in real revenue per unit of cargo. Trends in unit costs and revenue at each port are shown in Figures 1 to 8 in Appendix B at the rear of this report.

Table 2: Changes in port authority cost and revenue comparing 1993-94 and 2004-05 (1989/90 prices)

Port	Change in real cost per unit of cargo (%)	Change in real revenue per unit of cargo (%)
Albany	-25	-23
Broome	NA	NA
Bunbury	-21	-28
Dampier	0	-40
Esperance	-30	-33
Fremantle	-2	-1
Geraldton	-28	-39
Port Hedland	-15	-33

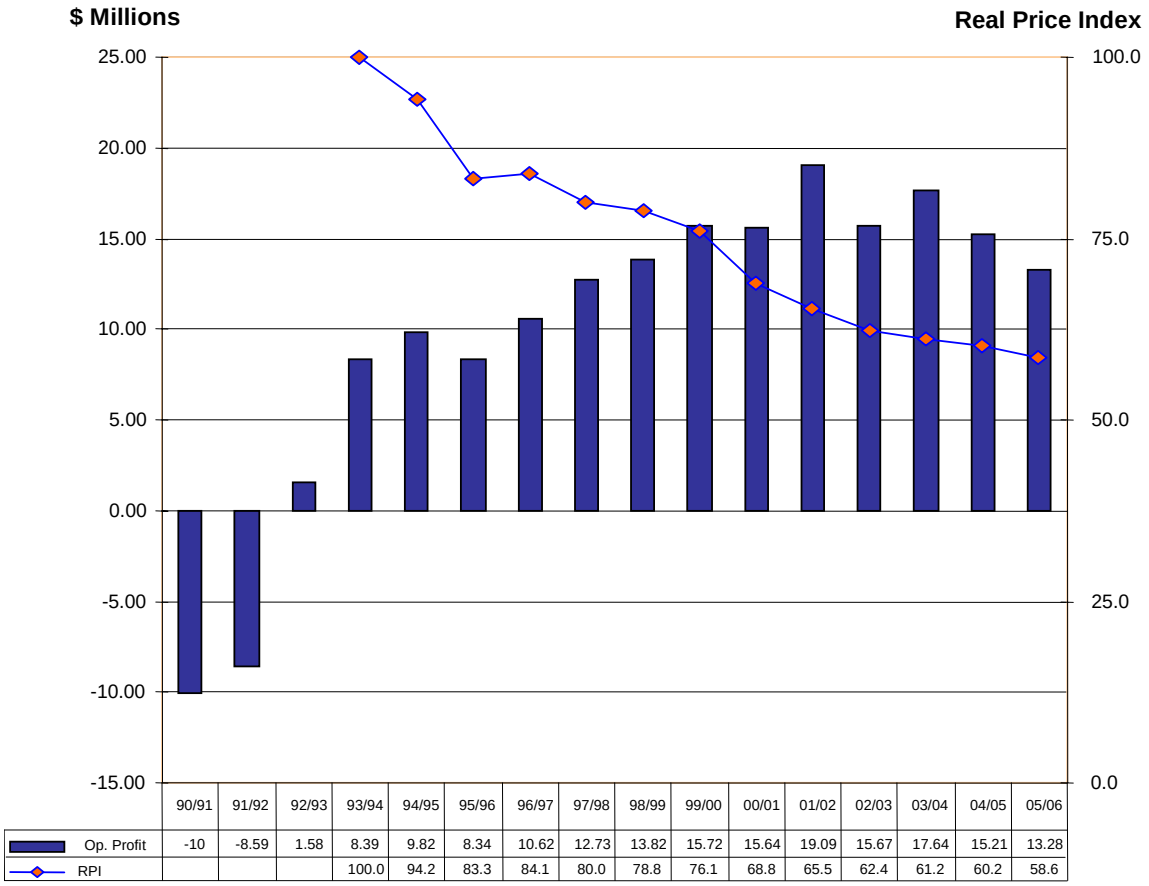
Notes: NA = not available. **Source:** Appendix A.

This evidence suggests that except at Fremantle, there were significant gains in operating efficiency over this period and most importantly, it appears the majority of the gains have been transferred to port users. This seems to reflect a charging policy which does not seek to exploit market power. In this regard, the Dampier Port Authority has stated:

> *… the Authority's financial goals are secondary to its role as a trade facilitator. To that end, the aim is to minimise revenue without affecting financial viability so as to provide the most cost-effective service to port users.* (Dampier Port Authority (2004), p 14)

At Fremantle, comparing 1993-94 and 2000-01, cost and revenue per tonne of cargo fell by 29 per cent and 20 per cent respectively in real terms, but since then the declining trend has reversed. It is possible that the momentum of waterfront reform, which began earlier at Fremantle than other WA ports, has slowed. However, as Figure 1 shows, the FPA, using a different methodology, claims that charges have fallen in real terms by almost 40 per cent from 1993-94 to 2004-05.[11] Figure 1 also shows that since the early 1990s the waterfront reform process has successfully transformed the FPA from a loss making to a profitable organisation.

Figure 1: Fremantle Ports Operating Profit and Real Price Index, 1990-91 to 2005-06



	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06
Op. Profit	-10	-8.59	1.58	8.39	9.82	8.34	10.62	12.73	13.82	15.72	15.64	19.09	15.67	17.64	15.21	13.28
RPI				100.0	94.2	83.3	84.1	80.0	78.8	76.1	68.8	65.5	62.4	61.2	60.2	58.6

Source: Fremantle Port Authority.

Other Non-financial indicators

It is widely recognised that ports compete on non-price as well as price characteristics and aspects of service quality such as speed (turnround time) and reliability can be decisive in port choice. The timeliness and reliability of port services can be gauged by examining indicators such as turnround times and berth occupancy. *Ship turnround time* captures the performance of a number of service providers including the port authority itself, pilots, tugs, stevedores

11 The FPA defines its real price index as "the weighted average price index deflated by the CPI for Perth. The average price equals the total of prices for individual Fremantle Ports' services weighted by their contribution to total revenue, excluding bulk cargo handling charges negotiated under commercial agreements."

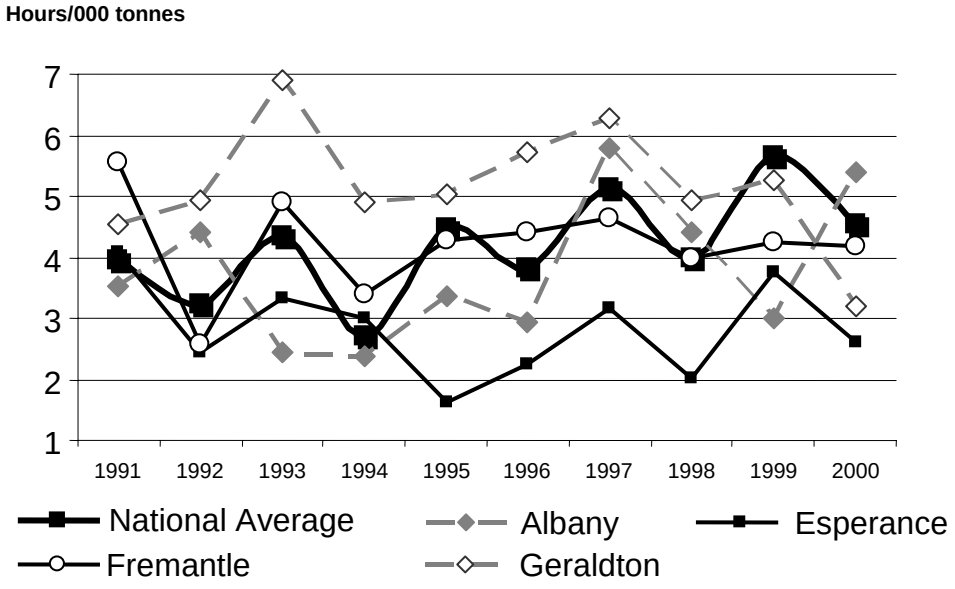
and the labour force (SCNPMGTE, 1998, p. 264). Unfortunately, data on turnround times are limited, especially for non-container ports not covered by data in *Waterline*.

Table 1 reveals significant differences between ports in turnround times. However, differences and variations in shipping and cargo volumes and composition limit the usefulness of a comparison based on absolute values. So it is more useful to examine the degree of variation and trends in this indicator of performance. The 'coefficient of variation', which measures relative rather than absolute variation, provides a better although still crude indication of reliability.

Data shown in the far right column of Table 1 show that turnround times are subject to more variation in Albany and Geraldton than in other ports. The trend in average turnround times between 1993-94 and 2004-05 (shown in Appendix A) appears to have improved at Esperance and Geraldton, been static at Bunbury and Fremantle (container only) and slightly deteriorated at Albany. Fremantle's turnround times improved in the late 1990s but crept up after 2003. Fremantle's turnaround times for containers are not unreasonable compared with other ports in Australia and it is important to note that all container terminals are operated by private enterprise. Again one interpretation is that nationally port reforms were beginning to lose their impetus.

Data collected by the Australian Wheat Board Ltd on grain make it possible to standardise turnround times for differences between ports and for differences in average grain cargoes. Figure 2 illustrates average turnround time per 1,000 tonnes of grain lifted between 1991 and 2000. The standardised turnround times have fluctuated from year to year with Fremantle performing close to the national average, Albany and Esperance usually performing above the national average and Geraldton below. There is no clearly discernable trend although Geraldton appears to have improved its performance in the late 1990s.

Figure 1: Average turnround time per '000 tonnes of grain lifted, 1991-2000



Source: Victorian Department of Infrastructure (2001), *The next wave of Port Reform in Victoria*, Appendix A, Meyrick and Associates Pty Ltd, Technical Paper: *Economic Impact of Port Reform*, Tables 5.11 and 5.12.

Analysis of the performance of the privatised Victorian ports of Geelong and Portland shows that they performed close to the national average and "it is difficult to attribute any causation from the Victorian port reforms other than to note the variability of the Victorian ports' performance has been reduced compared to the pre-reform period" (Victorian Department of Infrastructure (2001, Appendix A). These data suggest that ownership of ports may not be a critical determinant of performance. The Victorian regulatory regime which received an overall 'good' rating from Access Economics' is narrowly focused on pricing and arguably has held back investment in publicly owned ports.

There are major differences between WA ports in the scale and composition of trade and shipping flows and this complicates any comparisons of performance. The last comprehensive review of WA ports was undertaken jointly by the Bureau of Transport Economics and the WA Director General of Transport in 1981 (BTE, 1981); it is noted that a review of the WA Port Authorities Act is currently underway.

Trade Facilitation

An important aspect of 'strategic port management' is trade facilitation. This includes facilitating and directly undertaking investment in port infrastructure to ensure a balance between 'demand' and port capacity. In the words of the Prime Minister's Exports and Infrastructure Taskforce (2005, pp 2 & 16):

> *Australia's exporters operate in highly competitive global markets. They are reliant on infrastructure investment that is undertaken in a timely way, not a time frame dictated by regulatory processes. Waiting two or three years for regulatory decisions is as unacceptable as it is unnecessary…. The productivity of infrastructure assets is significantly affected by the extent to which investment in the infrastructure itself is consistent and coordinated with investment decisions being made by users.*

The relationship between demand (including latent demand) and capacity is difficult to measure directly (and beyond the scope of this research to do so). However, two indicators may be useful in reaching preliminary conclusions on performance in this regard. The first are the indicators of turnaround times shown in Table 1; the second are the trends in total tonnage processed through the key ports shown in Table 3.

Table 3: Changes in port throughput comparing 1993-94 and 2004-05

Port	Cargo throughput (mt) 1993-94	Cargo throughput (mt) 2004-05	Change in cargo throughput (%)
Albany	1.7	3.0	76.5
Broome	*	0.1	-
Bunbury	7.5	12.0	60.0
Dampier	60.5	95.8	58.3
Esperance	1.3	7.8	500.0
Fremantle	20.4	25.5	25.0
Geraldton	2.9	5.5	89.7
Port Hedland	53.3	108.5	103.6

Note: ***** = less than 0.1mt. **Source:** Appendix A.

With the exception of Broome all WA ports handled substantially increased cargo tonnages. Importantly, there is no evidence that rapid trade expansion has significantly outstripped the capacity of the infrastructure, and the quality of service provided has not attracted adverse public criticism from port users. The Fremantle Port Authority's annual customer surveys report high levels of satisfaction with service delivery and value for money from its services (FPA 2007). WA ports have also avoided the lengthy queues of ships waiting to load cargo that have become a regular feature at some east coast ports (*Australian*, 11 April 2007).

5. Conclusions

This review of port performance does not claim to be comprehensive and gives only a snapshot of a complex situation. Its purpose has been to provide an alternative wider perspective for assessing WA port authorities than was applied in the 2006 'scorecard' on the economic regulation of infrastructure. In contrast to the 2006 'scorecard', in which the focus was solely on arrangements for regulation of third party access, the perspective provided here emphasises the broader set of regulatory arrangements enacted in legislation governing the management of WA's port authorities, and the actual performance of these port authorities.

The conclusions of this research are that the "very poor" scorecard rating given to WA ports is inappropriate. The evidence shows that in the period examined in this report, major WA port authorities were providing levels of service which were reasonable compared with other ports in Australia. The evidence presented here relating the of WA's port authorities actual performance suggests there is no exclusive link between economic regulation and superior physical and economic performance. Performance indicators discussed in section 4 of this report show there were significant gains in operating efficiency from 1993-94 to 2004-05 and that these gains were passed onto port users.

The evidence presented in this report shows that the charges being made for services provided directly by port authorities were not excessive compared with other similar ports. Conversely, there is no evidence that WA port authorities were earning monopoly rents from their ownership and operation of WA's principal ports. The evidence also shows that a significant part of the financial benefits from reforms being made by major WA port authorities were being passed on to port users.

While there is no regime for direct regulation of access to WA's port infrastructure, there are two alternative statutory means by which objectives of such a regime can be achieved. The first of these is the *Port Authorities Act 1999*, which requires a focus on economic efficiency through commercialisation, transparency and accountability, albeit potentially qualified by powers of government direction. The second is the ability of government to request the WA Economic Regulation Authority (ERA) to examine the pricing, quality, business practices and compliance costs of non-regulated industries (assumed to include port authorities).

In relation to ports the 2006 AusCID-sponsored report gives the highest ranking to States in which a moderate to high degree of port privatisation has occurred (Victoria and South Australia), in which prima facie there is a greater need for independent regulation, owing to the absence of government supervision through direct ownership.

Overall, it is clear that the current model of public ownership, with ports acting as 'strategic managers' subject to statutory and governmental oversight, follows world best practice in the ports industry and is serving WA well.

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Appendix A

Notes for all tables: Definitions: return on assets = earnings before interest and tax and after abnormals (EBIT)/average total assets; dividend payout ratio = dividends paid or provided for/operating profit after tax; current ratio = current assets/ current liabilities; Debt/equity ratio = debt/total equity.

Sources for all tables: Steering Committee on National Performance of Government Trading Enterprises, (SCNPGTE) *Government trading enterprises performance indicators 1990-91 to 1994-95*, 2 vols. (Canberra, 1996), BTCE *Waterline*, various issues, Productivity Commission *Financial performance of government trading enterprises*, various issues, *Annual Reports* of Albany, Broome, Bunbury, Dampier, Esperance, Fremantle, Geraldton and Port Hedland port authorities.

Table A.1: Selected performance indicators, Albany Port Authority

Financial indicators	Units	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Return on assets	%	16.2	6.2	9.9	10.8	3.3	9.2	8.5	-1.7	0.8	3.0	7.9	9.7
Dividend payout ratio	%	0.0	0.0	0.0	35.7	0.0	38.5	28.6	0.0	0.0	0.0	0.0	0.0
Current ratio	%	14.9	10.2	2.5	1.8	4.0	3.7	4.5	1.3	0.4	0.3	0.5	0.4
Debt/ equity	%	0.3	0.8	14.8	10.5	10.5	7.1	6.5	33.9	59.1	68.7	54.5	41.2
Operating profit (before tax)	$ million	1.6	1.3	1.5	2.3	0.6	2.2	2.3	-0.6	-0.1	-1.5	2.3	3.0
Port authority costs/unit of cargo	$/Tonne	1.61	2.02	2.07	1.8	2.37	1.79	2.04	3.32	2.71	3.34	1.62	1.61
Port authority revenue/unit of cargo	$/Tonne	2.53	2.81	2.83	2.82	2.66	2.67	2.96	2.96	2.66	2.55	2.46	2.6
Non-financial indicators													
Total cargo throughput	million tonnes	1.7	1.6	1.8	2.3	1.9	2.6	2.5	1.7	1.6	2	2.8	3
Containerised cargo	‘000 TEUs												
Average turnround time	Hours	61	60	85	124	63	77	75	84	73	80	137	100
Average total employment		24	26	26	26	26		25	5	x	x	x	x

Table A.2: Selected performance indicators, Broome Port Authority

Financial indicators	Units	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Return on assets	%								0.2		-0.7		-1
Dividend payout ratio	%								0	0.0	0.0	0.0	0.0
Current ratio	%								-	3.3	1.2	1.2	2.5
Debt/ equity	%								-	0	0	-0.2	57.5
Operating profit (before tax)	$ million								0.01	-0.2	-0.2		-0.4
Port authority costs/unit of cargo	$/Tonne								17.90	17.80	18.90		
Port authority revenue/unit of cargo	$/Tonne								18.00	17.00	17.50		
Non-financial indicators													
Total cargo throughput	million tonnes					0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1
Containerised cargo	‘000 TEUs								0.8	0.5	0.4		
Average turnround time (container ships)	Hours												
Average total employment											17		

Table A.3: Selected performance indicators, Bunbury Port Authority

Financial indicators	Units	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Return on assets	%	11.9	12.2	8.3	5.2	6.1	4.1	5.9	7.4	5.7	6.6	5.7	6.0
Dividend payout ratio	%	3.1	2.8	0.0	0.0	11.5	10.2	35.5	30.0	50.0	50.0	46.1	55.4
Current ratio	%	386.0	1045.0	319.0	197.0	359.4	239.1	204.1	391.4	354.4	428.2	547.5	423.3
Debt/ equity	%	4.7	16.1	34.3	34.0	32.0	24.5	24.1	21.8	20.2	18.2	17.9	16.3
Operating profit (before tax)	$ million	4.2	5.2	3.5	2.1	2.9	1.9	4.4	6.1	4.8	5.6	4.8	5.3
Port authority costs/unit of cargo	$/Tonne	1.00	1.02	1.04	1.22	1.25	1.34	1.40	0.81	0.82	0.95	0.94	1.06
Port authority revenue/unit of cargo	$/Tonne	1.56	1.67	1.46	1.47	1.57	1.56	0.97	1.37	1.22	1.36	1.34	1.50
Non-financial indicators													
Total cargo throughput	million tonnes	7.5	7.9	8.5	8.6	8.9	9.0	10.0	11.3	11.4	11.8	11.9	12.0
Containerised cargo	‘000 TEUs												
Average turnround time	Hours	34	37	40	43	36	42	40	36	35	36	40	43
Average total employment		41	44	46	45			13	13	13	13	14	14

Table A.4: Selected performance indicators, Dampier Port Authority

Financial indicators	Units	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Return on assets	%	4.5	0.4	2.1	4.2	2.8	1.6	2.5	3.0	-1.2	1.6	1.5	-1.8
Dividend payout ratio	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-48.5	59.8	47.3	-3.3
Current ratio	%	1.2	2.2	2.8	3.1	3.5	3.5	5.0	6.7	692.2	368.5	29	41.6
Debt/ equity	%	5.7	30.1	24.6	18.7	14.9	0.0	7.41	0.0	0.0	0.0	71.5	235.9
Operating profit (before tax)	$ million	1.0	0.1	0.5	1.0	0.7	0.4	0.5	0.5	-0.3	0.4	0.5	-1.0
Port authority costs/unit of cargo	$/Tonne	0.04	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.05	0.05	0.06
Port authority revenue/unit of cargo	$/Tonne	0.06	0.06	0.06	0.06	0.06	0.05	0.04	0.04	0.04	0.05	0.06	0.05
Non-financial indicators													
Total cargo throughput	million tonnes	60.5	66.6	67.2	72.2	75.7	71.3	82.6	81.4	82.7	92.2	88.9	95.8
Containerised cargo	‘000 TEUs												
Average turnround time	Hours	22	26	25									
Average total employment		11	12	11	11	10	10					14	17

Table A.5: Selected performance indicators, Esperance Port Authority

Financial indicators	Units	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Return on assets	%	12.3	11.4	16.3	12.3	14.4	6.6	7.2	6.6	8.6	6.2	8.0	8.8
Dividend payout ratio	%	0.0	0.0	0.0	11.8	125.5	21.1	20.0	0.0	0.0	76.9	52.0	61.3
Current ratio	%	133.0	140.0	264.0	122.0	253.0	245.0	159.0	42.0	75.0	100.0	176.6	213.2
Debt/ equity	%	99.5	93.8	115.3	92.3	77.2	56.9	50.7	146.8	236.7	224.4	206.5	187.1
Operating profit (before tax)	$ million	1.1	1.1	1.9	2.3	3.2	2.9	3	2.1	3.1	1.8	3.5	4.4
Port authority costs/unit of cargo	$/Tonne	3.46	3.37	3.01	3	2.79	2.85	2.84	3.03	2.92	3.55	3.14	2.98
Port authority revenue/unit of cargo	$/Tonne	4.31	3.9	3.64	3.71	3.81	3.81	3.66	3.51	3.44	3.85	3.75	3.55
Non-financial indicators													
Total cargo throughput	million tonnes	1.3	2.1	2.8	3.1	3.1	3.1	3.5	4.3	6.2	6	7.3	7.8
Containerised cargo	‘000 TEUs												
Average turnround time (container ships)	Hours	54	45	42	51	47	57	48	40	42	38	42	44
Average total employment		33	33	32	33	33	33				18*	19*	20

Table A.6: Selected performance indicators, Fremantle Port Authority

Financial indicators	Units	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Return on assets	%	14.3	15.7	14.6	14.9	20.0	17.1	15.6	13.5	14.9	13.0	11.9	10.5
Dividend payout ratio	%	0.0	0.0	0.0	0.0	10.0	10.0	19.9	20.0	48.7	41.5	50.0	40.1
Current ratio		92.8	78.1	99.6	112.4	121.3	119.6	105.5	150.0	160.4	107.9	118.9	135.5
Debt/ equity	%	-248.3	-319.5	1490.2	109.1	64.9	38.8	22.9	26.8	32.6	25.9	24.5	42.5
Operating profit (before tax)	$ million	8.4	9.8	8.3	10.6	17.9	13.8	14.8	15.6	19.5	17.8	17.6	16.5
Port authority costs/unit of cargo	$/ Tonne	2.02	2.00	1.94	2.24	1.86	1.76	1.74	1.71	1.93	2.49	2.29	2.65
Port authority revenue/unit of cargo	$/ Tonne	2.49	2.46	2.52	2.41	2.44	2.34	2.37	2.40	2.78	3.25	2.96	3.30
Non-financial indicators													
Total cargo throughput	million tonnes	20.4	20.1	21.9	18.3	21.8	23.5	23.4	22.5	22.7	23.5	25.9	25.5
Containerised cargo	‘000 TEUs	169.17	189.27	198.27	209.56	250.8	275.7	300.1	354.2	383.1	431.7	466.0	468
Average turnround time (container ships)	Hours	27	30	30.7	24.8	24	23	24	22	21.5	25	28.5	27.5
Average total employment		300	226	211	196	188	175	168	167	180	205	222	236

Table A.7: Selected performance indicators, Geraldton Port Authority

Financial indicators	Units	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Return on assets	%	20.3	15.2	19.1	13.6	15.5	5.4	10.5	2.8	2.1	0.9	6.0	6.8
Dividend payout ratio	%	0.0	0.0	0.0	9.5	16.7	105.4	0.0	1800.0	0.0	117.8	3.5	0.0
Current ratio	%	363.0	267.0	269.0	213.0	252.0	488.0	266.0	275.0	131.2	76.0	128.7	219.5
Debt/ equity	%	101.8	87.1	120.0	95.0	62.0	51.0	51.4	48.9	46.2	441.2	504.1	483.8
Operating profit (before tax)	$ million	2.6	1.7	2.5	2.7	1.9	0.8	2.8	0.2	0.0	0.1	4.0	2.8
Port authority costs/unit of cargo	$/Tonne	4.30	4.79	4.28	4.21	3.70	3.08	2.41	3.57	3.83	3.96	3.41	4.22
Port authority revenue/unit of cargo	$/Tonne	5.17	5.38	4.97	5.00	4.22	3.29	3.12	3.64	3.85	4.00	4.32	4.73
Non-financial indicators													
Total cargo throughput	million tonnes	2.9	2.9	3.6	3.4	3.7	3.8	3.9	2.8	2.6	2.5	4.4	5.5
Containerised cargo	‘000 TEUs												
Average turnround time	Hours	77	48	65	57	49	49	41	46	38	44	42	42

Table A.8: Selected performance indicators, Port Hedland Port Authority

Financial indicators	Units	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Return on assets	%	2.0	2.3	2.9	2.1	1.3	1.2	1.2	-324	6.0	6.6	4.7	4.8
Dividend payout ratio	%	7.7	6.7	18.6	36.4	21.4	55.6	28.6	-0.3	50.0	50.0	96.4	50.7
Current ratio	%	4.6	5.3	4.9	5.7	7.1	6.3	6.9	3.3	378.5	285.7	256.9	100.3
Debt/ equity	%	3.3	3.1	2.1	1.9	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Operating profit (before tax)	$ million	2.6	3.0	4.3	3.4	1.9	2.0	2.2	-137.3	2.6	3.0	2.2	2.4
Port authority costs/unit of cargo	$/Tonne	0.15	0.14	0.14	0.14	0.15	0.14	0.16	0.19	0.14	0.15	0.15	0.16
Port authority revenue/unit of cargo	$/Tonne	0.2	0.19	0.21	0.19	0.18	0.17	0.19	0.19	0.18	0.19	0.19	0.18
Non-financial indicators													
Total cargo throughput	million tonnes	53.3	60.3	63.9	68.3	69.8	67.2	65.4	72.9	72.4	81.4	89.8	108.5
Containerised cargo	‘000 TEUs												
Average turnround time	Hours												
Average total employment					18				17	17	18	18	21

Appendix B: Comparisons of costs and revenues of WA port authorities, 1993-4 – 2004-05

Note: *All costs and revenues are in 1989/90 dollars. Costs' include debt servicing.*

Figure 1: Albany: Comparison of real costs and revenue

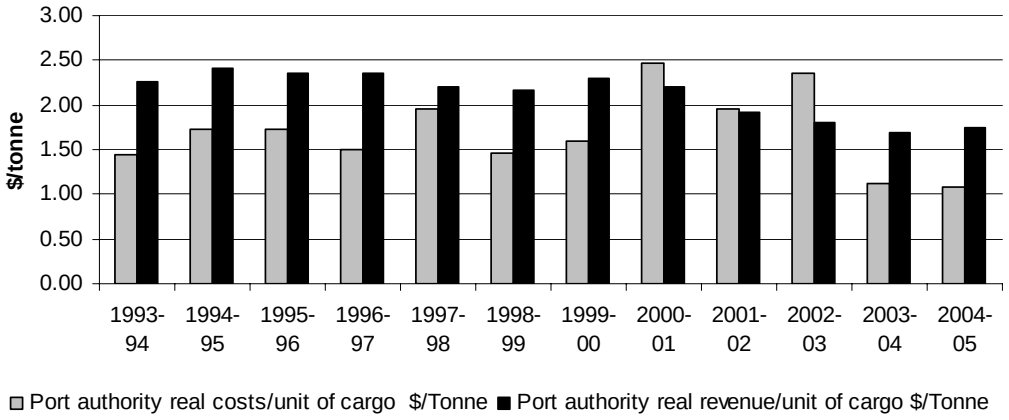

Figure 2: Broome: Comparison of real cost and revenue

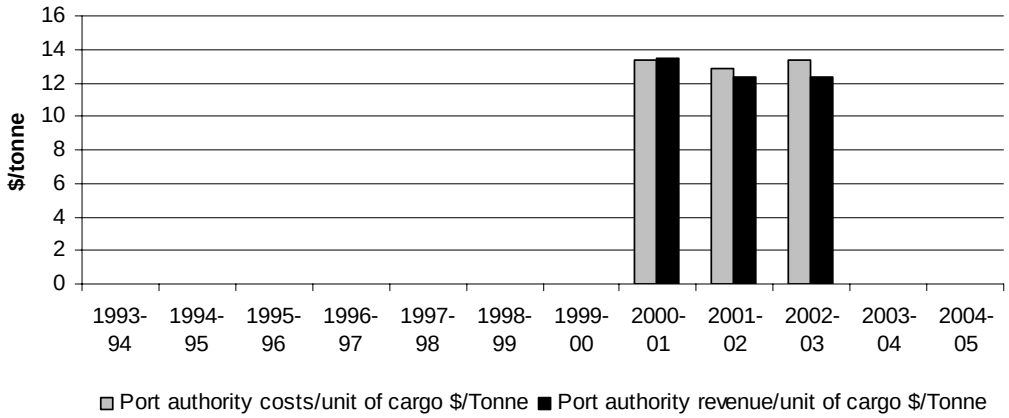

Figure 3: Bunbury: Comparison of real cost and revenue

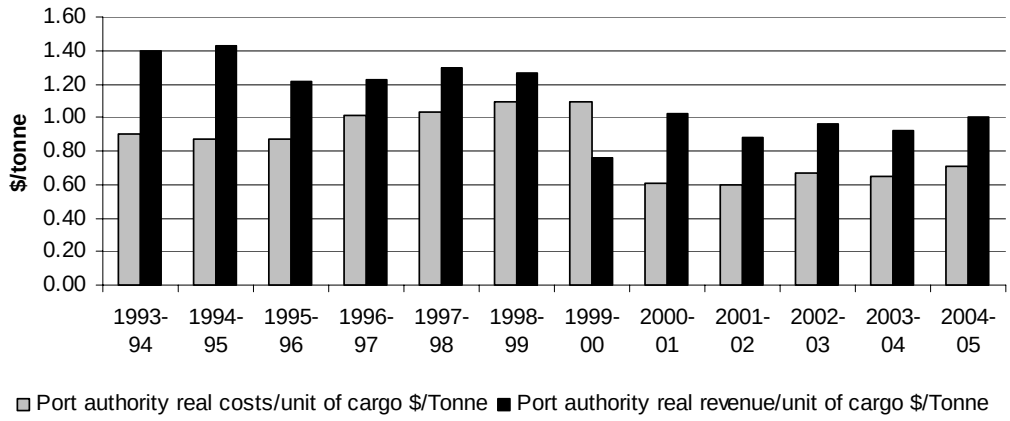

Figure 4: Dampier: Comparison of real cost and revenue

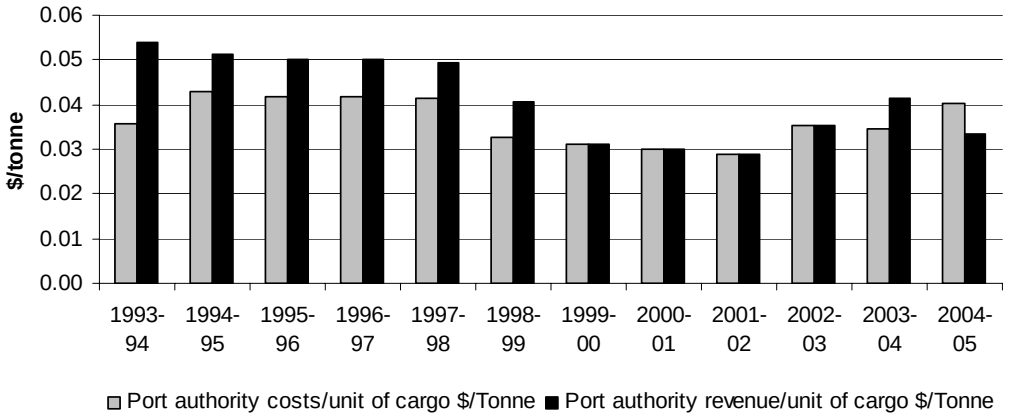

Figure 5: Esperance: Comparison of real cost and revenue

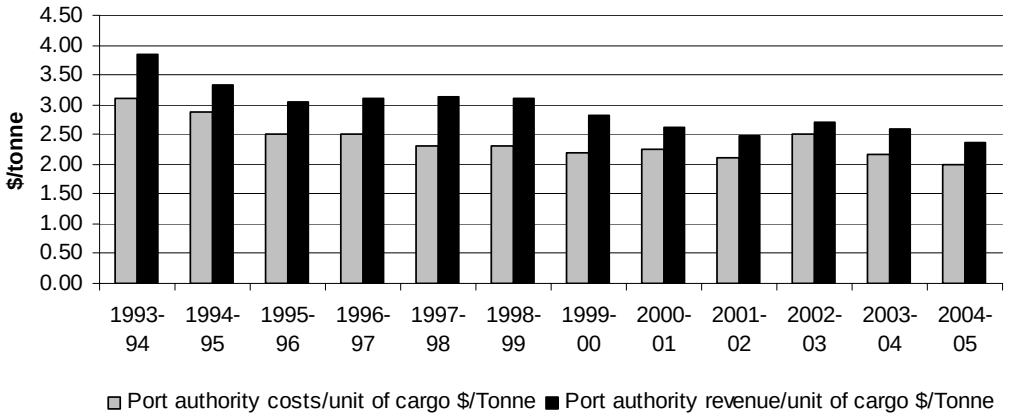

Figure 6: Fremantle: Comparison of real cost and revenue

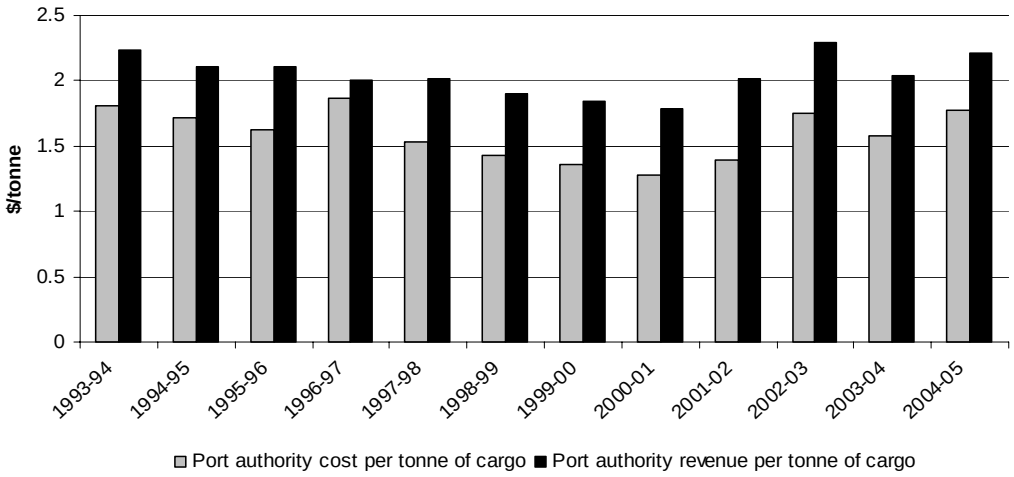

Figure 7: Geraldton: Comparison of real cost and revenue

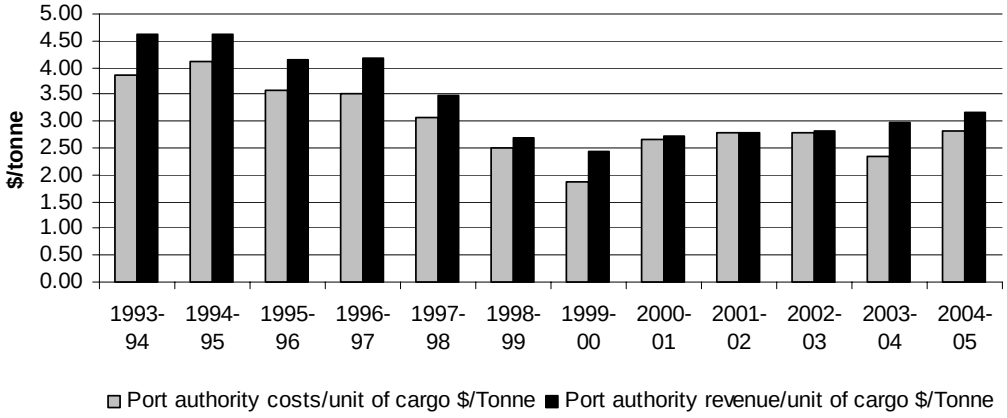

Figure 8: Port Hedland: Comparison of real cost and revenue